Lewis Retail Project

Draft EIR
(SCH No. 2017101024)

April 2018

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DRAFT ENVIRONMENTAL IMPACT REPORT

for the

Lewis Retail Project
State Clearinghouse Number:
2017101024

Prepared for:

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1.0 EXECUTIVE SUMMARY

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1.1 INTRODUCTION

Pursuant to the California Environmental Quality Act (CEQA), this Draft Environmental Impact Report (DEIR or EIR) evaluates and discloses potential environmental impacts resulting from construction and operation of the proposed Lewis Retail Project (Project). The Project would implement various commercial, retail, service, office, and civic uses within two noncontiguous properties, referred to as "Site 1" and "Site 2."[1] Unless otherwise differentiated herein, Sites 1 and 2 are collectively referred to here as the Project Site.

The Project is located within the southern portion of the City of Eastvale, in Riverside County. Project Site 1 is located east of the existing terminus of Schleisman Road and Hamner Avenue. Site 1 comprises Assessor's Parcel Numbers (APNs) 152-060-002, -003. Project Site 2 is located at the southwest corner of Riverboat Drive and Hamner Avenue, approximately one block north of Site 1. Site 2 comprises APNs 152-350-010, -011. Please refer also to EIR Section 3.0, *Project Description*, and Figure 3.2-1, *Project Location*.

This EIR Section summarizes relevant Project background issues, provides a brief description of the Project and its Objectives, and summarizes potential environmental impacts of the proposal. Table 1.10-1, *Summary of Impacts and Mitigation*, presented at the conclusion of this Section, lists these impacts and presents the mitigation measures recommended to eliminate or reduce the effects of those impacts which have been determined to be potentially significant. Alternatives to the Project which could reduce the extent or severity of the Project's identified environmental impacts are also briefly

[1] Site 2 is also commonly referred to as "Al's Corner."

described within this Section. For a full description of the Project, its impacts, recommended mitigation measures, and considered Alternatives, please refer to EIR Sections 3.0, 4.0, and 5.0, respectively.

1.2 PROJECT ELEMENTS

Primary elements comprising the Project are summarized below. Please refer also to the expanded characterization of Project facilities and operations presented at EIR Section 3.0, *Project Description*.

1.2.1 Development Concept

Table 1.2-1 summarizes the land uses and maximum potential Project development scope evaluated in this EIR. As an initial development action, the Applicant and Lead Agency are proposing a lesser increment of development summarized at Table 1.2-2 and illustrated at Figure 1.2-1. The locations, configurations, and sizes of proposed uses indicated at Figure 1.2-1 are approximate but are considered accurate for planning and environmental evaluation purposes. Impacts of this initial increment of development are fully addressed within the scope of analysis presented in this EIR. Future variations or revisions to later phases of development, or any substantive change to the Project evaluated in this EIR would, at the discretion of the Lead Agency, be subject to subsequent environmental analyses. Ultimate configuration and orientation of the uses proposed by the Project are subject to City review and approval.

Table 1.2-1
Project - Potential Maximum Development Summary

Site 1 - Approximately 23 Acres (Gross)	
Use	**Building Area/Scope**
Gas station w/market	8 Vehicle Fueling Positions (VFP)
Restaurant: Fast food w/drive-through	3,500 Square Feet (SF)
Restaurant: Coffee shop w/drive-through	2,000 SF
Restaurant: High-turnover sit-down	6,000 SF
Restaurant: Fast food w/o drive-through	4,000 SF
Retail	4,000 SF
Medical office	10,000 SF

Table 1.2-1
Project - Potential Maximum Development Summary

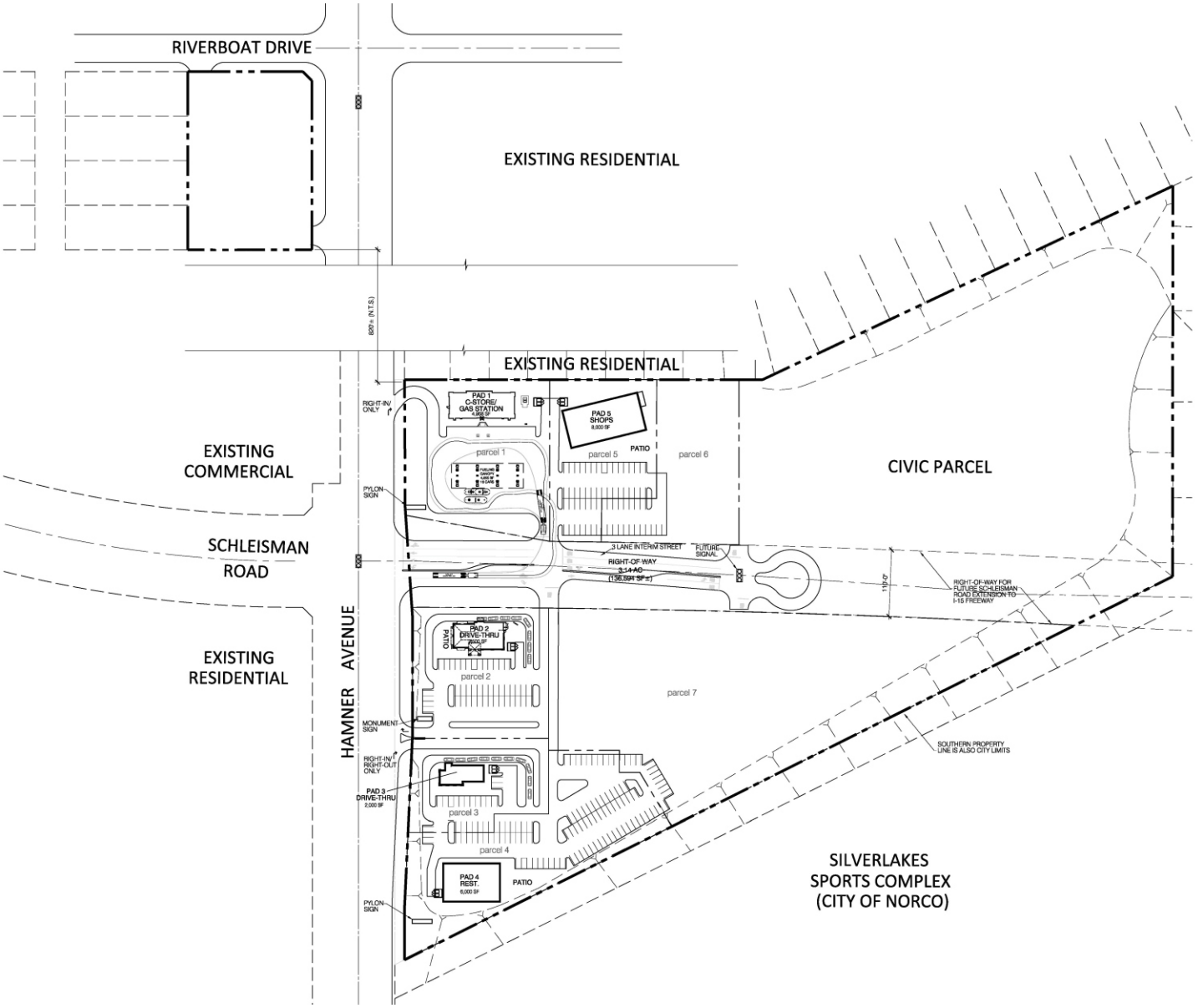
Hotel	130 Rooms
Civic: Government office (City Hall)	40,000 SF
Civic: Public library	25,000 SF
Site 2 - Approximately 1.38 Acres (Gross)	
Use	**Building Area/Scope**
Gas station w/market and carwash	16 VFP

Source: Lewis Retail Project Development Concept, February 2018.

Table 1.2-2
Initial Increment Development Summary

Site 1 - Approximately 23 Acres (Gross)	
Use	**Building Area/Scope**
Gas station w/market	8 Vehicle Fueling Positions (VFP)
Restaurant: Fast food w/drive-through	3,500 Square Feet (SF)
Restaurant: Coffee shop w/drive-through	2,000 SF
Restaurant: High-turnover sit-down	6,000 SF
Restaurant: Fast food w/o drive-through	4,000 SF
Retail	4,000 SF
Site 2 - Approximately 1.38 Acres (Gross)	
Use	**Building Area/Scope**
Drive-through Carwash	5,000 SF

Source: Lewis Retail Project Development Concept, February 2018.



Source: GK Pierce Architects (1/16/18)

Figure 1.2-1
Site Plan Concept

1.2.2 Demolition

As an initial action, all existing structures and surface improvements within the Project Site would be demolished. Demolition activities would occur over a period of approximately 20 work days. All demolition debris would be recycled, reclaimed, and/or disposed of consistent with CalGreen requirements, or as otherwise specified by the City.

1.2.3 Site Preparation/Grading

Following demolition activities, the Project Site would be cleared of any remaining surface features, graded and prepared for construction of the Project buildings and supporting facilities. Preliminary grading concepts indicate that cut (+/- 241,600 cubic yards) and fill (+/- 241,600 cubic yards) would be balanced within Site 1, with substantive import or export of soil. Grading earthwork estimates account for soil removal, over-excavation, compaction, etc. All grading activities would comply with City specifications and requirements. For the purposes of the EIR Analysis, site preparation and grading activities are estimated to occur over a period of approximately 30 working days (4 – 6 weeks).

1.2.4 Building/Facilities Construction/Paving

Construction of buildings, parking areas, landscape/hardscape, etc., within the Project Site is assumed to occur over a period of approximately 270 working days (9 – 10 months). For the purposes of the EIR analysis, it is assumed that all buildings and supporting facilities would be constructed and operational by the Project Opening Year (2019).

1.2.5 Access and Circulation

All Project access and circulation improvements would be designed and constructed consistent with City design and engineering standards. More specifically, roadways adjacent to the Project, site access points and site-adjacent intersections will be constructed to be consistent with the identified roadway classifications and respective cross-sections in the City of Eastvale General Plan Circulation Element. On-site traffic signing and striping plans would be subject to City review, with City-approved signing and striping plans to be incorporated in final Project construction plans. Sight distance at each Project access point would be reviewed for conformance with standard Caltrans and

City of Eastvale standards, with City-approved access plans to be incorporated in final Project construction plans. Improvements specific to Site 1 and Site 2 are summarized below.

1.2.5.1 Site 1

Primary access to Site 1 would be provided by the easterly extension of Schleisman Road at Hamner Avenue. Schleisman Road would be constructed as a 3-lane interim street, within a right-of-way of up to 134 feet, with a temporary cul-de-sac terminus in the central portion of Site 1.[2] The existing traffic signal at the intersection of Schleisman Road at Hamner Avenue would be maintained under the Project, modified as needed to reflect the improvements to Schleisman Road and Hamner Avenue at this location.

As part of the Project, lane geometrics at this intersection would be modified as summarized below:

- Northbound Approach: One left turn lane with 300-feet of storage, two through lanes, and a right turn lane with 200-feet of storage. The northbound right turn lane should accommodate overlap phasing;

- Southbound Approach: One left turn lane with 300-feet of storage, one through lane and one shared through-right turn lane;

- Eastbound Approach: Two left turn lanes with 300-feet of storage, one through lane, and one right turn lane. The eastbound right turn lane currently accommodates overlap phasing;

- Westbound Approach: Two left turn lanes with 300-feet of storage, one through lane and one right turn lane.

[2] The Project access/circulation concept also reserves dedication for Schleisman Road within Site 1, allowing for its planned construction on an alignment connecting easterly to the future interchange of Schleisman Road at Interstate 15 (I-15).

The Project internal circulation concept for Site 1 provides for future signalization of Schleisman Road at an anticipated north – south street alignment central to the Site. The current [February 2018] Site 1 access concept provides right-in, right-out access from Hamner Avenue southerly of Schleisman Road; and right-in only access from Hamner Avenue northerly of Schleisman Road.[3]

Adjacent to Site 1, the Project would also construct Hamner Avenue at its ultimate half-section pursuant to City requirements and as reflected in the City of Eastvale General Plan Circulation Element. Site adjacent improvements would include all pavement section(s), curb, gutter, sidewalks, landscaping, and other facilities as required by the City.

1.2.5.2 Site 2

Site 2 access would be provided by a STOP-controlled driveway connecting northerly to Riverboat Drive; and a STOP-controlled driveway connecting easterly to Hamner Avenue. The existing traffic signal and existing lane geometrics at the intersection of Hamner Avenue at Riverboat Drive would be maintained as currently configured.

1.2.6 Parking

Unless otherwise specified herein, all parking areas, to include parking stalls, drive aisles, parking lot landscaping, hardscaping, and covered parking would be designed and constructed pursuant to City design and development standards.

1.2.7 Signs

Varied Project sign types are anticipated, including freestanding multi-tenant pylon and monument signs, building tenant signs, and directional and informational signage. Unless otherwise specified herein, all Project signs would conform to standards and

[3] The Project Traffic Impact Analysis (TIA) conservatively assumes sole access to Site 1 via the above-noted easterly extension of Schleisman Road at Hamner Avenue. This effectively directs all Site 1 traffic to/through the Schleisman Road at Hamner Avenue intersection, establishing the likely maximum intersection level of service (LOS) impact at this location.

requirements for the General Commercial Zone District as well as general standards and requirements presented at Eastvale Zoning Code Section 5.7, *Signs*.

1.2.8 Other Site Improvements and Amenities

Other site improvements and amenities implemented by the Project are anticipated to include, would not be limited to: sound attenuation/screening walls; perimeter definition and security fencing; landscape/hardscape improvements, including sidewalks and decorative pavement treatments at Project entries; and decorative/security lighting.

1.2.9 Infrastructure/Utilities

Infrastructure and utilities that would serve the Project Site are summarized below. The Project would implement necessary utilities improvements to include connections to existing services, and/or necessary realignment or modification of existing service lines. All connections to, and modification of, utilities necessary to serve the Project would be accomplished consistent with City and purveyor requirements.

1.2.9.1 Water/Sanitary Sewer Services

Water and sewer services would be provided to the Project by the Jurupa Community Services District (JCSD). Water and sanitary sewer service extensions to the Project facilities would connect to existing facilities located in adjacent rights-of-way. Final locations and alignments of service lines, and connection to existing services would be as required by the City and JCSD. Wastewater would be conveyed from the Project for treatment at the Western Riverside County Regional Wastewater Authority (WRCRWA) plant.

1.2.9.2 Storm Water Management Systems

The Project stormwater management systems as approved by the City would implement drainage improvements, and facilities and programs acting to control and treat stormwater pollutants.

Site 1

To accommodate the anticipated initial increment of development, the developed portion of Site 1would drain generally westerly/southwesterly discharging to the "Line H" storm drain located in adjacent Hamner Avenue. More specifically, storm waters developed within Schleisman Road and the northwesterly portion of Site 1 would drain to an onsite storm drain connecting to Line H at the intersection of Schleisman Road and Hamner Avenue. The southwesterly portion of Site 1 would drain to the onsite storm drain system with connection to Line H at the southwesterly terminus Site 1. Prior to their discharge, developed storm waters would be treated via City-approved Modular Wetland systems.

Pending its ultimate development, the easterly portion of Site 1 would be mass-graded from northeast to southwest. The net effect of the proposed mass-grading would be to reduce stormwater runoff that currently discharges to properties located easterly of and southerly of Site 1. This is, under the mass-graded condition, approximately 0.7 acres would drain to an existing natural ditch along the Site 1 easterly boundary. This is less than the existing 1.9 acres that currently drains to this point. Under the mass-graded condition, approximately 1.5 acres would sheet flow southerly offsite. This is less than the 8.4 acres that drains southerly offsite in the existing condition. Developed on-site storm waters from the mass-graded area would be collected in two sediment basins to be constructed north and south of the proposed extension of Schleisman Road. Storm drains would be constructed connecting these basins westerly to the Line H storm drain located in Hamner Avenue.

Site 2

The Site 2 stormwater management system would direct developed storm waters southeasterly via an on-site storm drain that would connect to the proposed extension of Line H within Hamner Avenue. Prior to their discharge, developed storm waters would be treated via City-approved Modular Wetland systems.

To facilitate stormwater conveyance from the Project Site and surrounding properties, the Project would install a 36-inch storm drain line within Hamner Avenue that would

connect from the existing storm drain at the intersection of Hamner Avenue at Riverboat Drive to the intersection of Hamner Avenue at Schleisman Road.

The Project would implement a Storm Water Pollution Prevention Plan (SWPPP), and Water Quality Management Plan (WQMP) consistent with City requirements. In this manner, the Project would also comply with requirements of the City's National Pollutant Discharge Elimination System (NPDES) Permit and other water quality requirements or storm water management programs specified by the Santa Ana Regional Water Quality Control Board (SARWQCB, RWQCB). In combination, implementation of the Project SWPPP, WQMP, and compliance with NPDES Permit and RWQCB requirements act to protect and maintain City and regional water quality by preventing or minimizing potential stormwater pollutant discharges to the watershed.

1.2.9.3 Solid Waste Management

It is anticipated that Project-generated solid waste would be conveyed by existing service providers to either the El Sobrante Landfill in the City of Corona, or to the Lamb Canyon Landfill in Riverside County. The California Integrated Waste Management Act of 1989, with certain exceptions, required to diversion of 50% of all solid waste from landfill disposal or transformation by January 1, 2000. As of July 2012, AB 341 increased the State of California's waste diversion goal from 50 percent to 75 percent. AB 341 legislation also includes mandatory commercial and multi-family recycling to reduce greenhouse gas emissions.

The City is currently meeting or exceeding all state-mandated solid waste diversion targets acting to reduce potential impacts at serving landfills. The City remains committed to continuing its existing waste reduction and minimization efforts with the programs that are available through the City. The Project would comply with the California Integrated Waste Management Act and AB 341 as implemented by the City.

Additionally, consistent with Section 5.408 "Construction Waste Reduction, Disposal, and Recycling" of the California Green Building Standards Code (CALGreen Code), as adopted by the City of Eastvale, a minimum of 50 percent of the Project's nonhazardous

construction and demolition waste would be recycled or salvaged for reuse. To these ends, a Project Construction Waste Management Plan would be prepared consistent with Section 5.408.1.1 of the CALGreen Code. These measures would collectively reduce Project construction waste and would act to reduce demands on solid waste management resources.

1.2.9.4 Electricity

Electrical service to the Project would be provided by Southern California Edison (SCE). New lines installed by the Project would be placed underground. Alignment of service lines and connection to existing services would be as required by SCE. Any necessary surface-mounted equipment, such as transformers, meters, service cabinets, and the like, would be screened and would conform to building setback requirements.

To allow for and facilitate Project construction activities, provision of temporary SCE electrical services improvements would be required. The scope of such temporary improvements is considered to be consistent with, and is reflected within the total scope of development proposed by the Project. Similarly, impacts resulting from the provision of temporary SCE services would not be substantively different from, or greater than, impacts resulting from development of the Project in total.

1.2.9.5 Natural Gas

Natural gas service would be provided by The Gas Company. Existing service lines within Hamner Avenue would be extended to the Project uses. Alignment of service lines and connection to existing services would be as required by The Gas Company.

1.2.9.6 Communications Services

Communications services, including wired and wireless telephone and internet services are available through numerous private providers and would be provided on an as-needed basis. As with electrical service lines, all existing and proposed wires, conductors, conduits, raceways, and similar communications improvements within the Project Site would be installed underground. Any necessary surface-mounted equipment, e.g.,

terminal boxes, transformers, meters, service cabinets, etc., would be screened to the extent possible consistent with the need for access to these items.

1.2.10 Police, Fire Protection, and Emergency Medical Services

Police and fire protection services are currently available to the Project and are listed below.

- Fire Protection and Emergency Medical Services (CalFIRE/Riverside County Fire Department); and

- Police Protection Services (Eastvale Police Department, provided via contract with the Riverside County Sheriff's Department from the Jurupa Valley Station).

1.2.11 Energy Efficiency/Sustainability

The Project would comply with or would surpass standards established under the California Code Title 24, Part 6 (the California Energy Code) and California Green Building Standards Code (CALGreen; CCR, Title 24, Part 11) as implemented by the City of Eastvale.

1.2.12 Landscaping

Unless otherwise specified herein, all Project landscaping would conform to standards and requirements for the General Commercial Zone District as well as general standards and requirements presented at Eastvale Zoning Code Section 5.4, *Landscaping, General Provisions,* and Eastvale Municipal Code Section 14.24, *Water Efficient Landscape Regulations*.

Recognizing competing demands for available water resources, drought-tolerant plants would be used where appropriate, thereby reducing Project water consumption. The Project would install recycled water distribution system for landscaping and connect reclaimed water system(s) when available to the Project Site. Project use of reclaimed water for non-potable purposes reduces the Project's potable water demands act to increase the overall availability of potable water supplies within the JCSD service area.

1.3 DISCRETIONARY APPROVALS AND PERMITS

Discretionary actions, permits and related consultation(s) necessary to approve and implement the Project would include, but are not limited to, the following.

- CEQA Compliance/EIR Certification. The City must certify the EIR prior to, or concurrent with, any approval of the Project.

- Approval of a General Plan Amendment (Land Use) - From Medium Density Residential to Commercial Retail on both Sites 1 and 2. Existing and proposed General Plan Land Use designations are presented at Section 3, Figure 3.6-1.

- Approval of a Zone Change - For Site 1 from Watercourse, Watershed and Conservation Area (W-1) and Rural Residential (R-R) to General Commercial (C-1/C-P).[4] Existing and proposed Zoning designations are presented at Section 3, Figure 3.6-2.

- Approval of a Tentative Parcel Map (TPM) for Site 1.

- Major Development Plan Reviews for Site 2 and a portion of Site 1 (please refer to the Site Plan Concepts for Site 1 presented at Section 3, Figure 3.4-1).

- Conditional Use Permits (CUPs) for the sale of alcohol for on-site and off-site consumption (at one or more restaurants on Site 1 and at the proposed gas station convenience store on Site 1) and for drive-through operations on Sites 1 and 2.

- Approval of a Development Agreement (DA) between the City and the Applicant. Final terms of the DA are currently under negotiation.

- Additionally, the Project would require a number of non-discretionary construction, grading, drainage and encroachment permits from the City to allow implementation of the Project facilities.

[4] Site 2 is currently zoned General Commercial (C-1/C-P). The proposed General Plan Amendment (Land Use) for Site 2 would establish General Plan-Zoning consistency for the Site.

1.3.1 Other Consultation and Permits

Based on the current Project design concept, anticipated consultation and permits necessary to realize the proposal would likely include, but are not limited to, the following:

- Consultation with requesting Tribes as provided for under *AB 52, Gatto. Native Americans: California Environmental Quality Act*; and *SB 18, Burton. Traditional tribal cultural places*.

- Consultation with requesting Tribes as provided for under SB 18.

- Permitting may be required by/through the Regional Water Quality Control Board (RWQCB) pursuant to requirements of the City's National Pollutant Discharge Elimination System (NPDES) Permit;

- Permitting may be required by/through the South Coast Air Quality Management District (SCAQMD) for certain equipment or land uses that may be implemented within the Project Site;

- Permitting (i.e., utility connection permits) from serving utility providers including, but not limited to, approval from Jurupa Community Services District for water and wastewater connections;

- Other ministerial permits necessary to realize all on and offsite improvements related to the development of the site.

1.4 INITIAL STUDY

The City of Eastvale, through the Initial Study process, has determined that the Project has the potential to cause or result in significant environmental impacts, and warranted further analysis, public review, and disclosure through the preparation of an EIR.

An Initial Study (IS) and associated Notice of Preparation (NOP), dated October 10, 2017, were forwarded to the California Office of Planning and Research, State Clearinghouse (SCH), and circulated for public review and comment. The State Clearinghouse established the comment period for the October 10, 2017 NOP/IS as October 12 through November 13, 2017.

The Lead Agency subsequently further refined the Project to reflect the latest available Project design concepts and issued a subsequent NOP dated January 25, 2018. The State Clearinghouse established the comment period for the January 25, 2018 NOP/IS as January 26 through February 26, 2018.

The assigned State Clearinghouse reference for the Project is SCH No. 2017101024. The Initial Study, Notices of Preparation, and all NOP responses are presented at Appendix A of this Draft EIR.

1.5 IMPACTS NOT FOUND TO BE POTENTIALLY SIGNIFICANT

The following discussions identify those environmental issues determined not to be potentially significant, and consistent with *CEQA Guidelines* Section 15143, *Emphasis*, need not be addressed in detail in the EIR. Accordingly, the specific issues listed are not substantively discussed within the body of this EIR. Please refer also to related substantiating discussions and analyses presented within the EIR Initial Study, EIR Appendix A. Technical studies and references cited in the Initial Study are noted in the following discussions. A complete list of references is provided at the conclusion of the Initial Study. All cited materials are available at, or can be made available by contacting, the City of Eastvale Planning Department.

Aesthetics

As presented within the Initial Study, there are no scenic vistas identified in the City of Eastvale General Plan on or near the Project Site. The area surrounding the Project Site is developed with, or is designated for development with, urban/suburban uses. Neither the Project Site nor the surrounding areas contain any unique visual features that could represent a scenic vista.

More specifically, significant scenic resources in the region include the Santa Ana River and the Santa Ana Mountains. The Initial Study determined that the Project would have no potential to obscure views of either the River or the Mountains. The Project Site is not located in the vicinity of any highways that have been officially designated or are eligible for official designation as state scenic highway. The nearest scenic highway is State Route (SR 71), which is located approximately 13 miles to the southwest. The Project Site does not evidence any scenic resources such as trees, rock outcroppings, or historic buildings.

The Initial Study determined that the Project would be a logical extension of, and visually compatible with, existing similar development in the vicinity. Furthermore, the Project would be subject to the Eastvale Design Standards and Guidelines, which would ensure that the development exhibits high quality, visually appealing architecture, building materials, color palette, and landscaping, as well as visually screened parking areas, loading docks, storage areas, utilities, and rooftop equipment.

The Project would be subject to the standards contained in Eastvale Zoning Code Section 5.5, *Outdoor Lighting*. This section requires that all outdoor lighting fixtures for commercial use undergo development review approval by the City. All outdoor lighting must be fully shielded and/or recessed and directed downward to reduce light trespass to adjoining properties. All lighting must be designated to illuminate at the minimum level necessary for safety and security. Additionally, the height of all pole-mounted lighting fixtures would be limited based on proximity to residential uses. Compliance with these existing City lighting standards would reduce the potential for light and glare to affect adjacent uses and the nighttime sky to levels that would be less-than-significant.

As such, the Project would not result in potentially significant impacts for the following considerations:

- Have a substantial adverse effect on a scenic vista;

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

- Substantially degrade the existing visual character or quality of the site and its surroundings; and

- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Agriculture and Forest Resources

The Project Site is not zoned for agricultural uses; nor do they contain farmland of regional or statewide importance. Further, the Project site is not subject to, or otherwise affected by, Williamson Act contracts. No forest lands are located within the Project Site or vicinity. As such, the Project would have less-than-significant or no impacts for the following considerations:

- Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;

- Conflict with existing zoning for agricultural use, or a Williamson Act contract;

- Conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland-zoned "Timberland Production;"

- Result in the loss of forest land or conversion of forest land to non-forest use; or

- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

Biological Resources

Conclusions presented within the Initial Study pertaining to Site 1 were based on the Habitat Assessment prepared for that Site. Site 2 has been regularly cleared of weeds and debris for more than ten years; as a result, it was determined that there are no biological resources associated with the site.

The Initial Study determined that no special-status plant or wildlife are present on either site. Although the Initial Study concluded that burrowing owls are absent from the Project Site, mitigation (BIO-1) is included, requiring a burrowing owl pre-construction survey be conducted prior to ground disturbance. Additional mitigation (BIO-2) is included to prevent impacts to migrating/nesting birds. Please refer to Table 1.10-1, *Summary of Impacts and Mitigation*.

There are no riparian areas or sensitive vegetation communities within or adjacent to the Project Site. No jurisdictional drainage and/or wetland features were observed within the Project Site during the field survey.

The Santa Ana River is located approximately 0.56 mile to the south of the Site 1, which has been identified as a wildlife corridor in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). However, the site has not been identified as a wildlife corridor or linkage since the site's connection to the Santa Ana River has been eliminated by surrounding residential and recreational developments. As such, development of the Project is not expected to impact wildlife movement opportunities or prevent the Santa Ana River from continuing to function as a wildlife corridor.

There are no species or habitat regulated by the MSHCP within the Project Site. There are no other applicable local policies or ordinances with respect to biological resources.

The Project Site is located within the Eastvale Area Plan of the MSHCP, but not located within any Criteria Cells or MSHCP Conservation Areas. The Project Site is located within the designated survey area for Narrow Endemic Plant Species. No sensitive plant

species or suitable habitat for any sensitive plant species exists within the Project site. The Project Applicant would pay requisite MSHCP fees.

Based on the preceding, Project impacts would be less-than-significant, or would be mitigated to levels that would be less-than-significant for the following biological resources considerations:

- Potential to have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service;

- Potential to have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service;

- Potential to 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;

- Potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

- Potential to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and

- Potential to conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

Cultural Resources

The Project Initial Study determined that impacts to historical and archeological resources would be less-than-significant. In this regard, Site 1 has been developed since the early 1950s. The on-site buildings have deteriorated, and do not represent examples of national, state, or local history. All structures on Site 2 have been demolished. Additionally, the Initial Study found that potential impacts regarding encountering human remains would be less-than-significant. As required by California Health and Safety Code Section 7050.5, should human remains be found, no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. As such, the Project would have less-than-significant impacts for the following cultural resources considerations:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5;

- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5; and

- Disturbance of any human remains, including those interred outside of formal cemeteries.

The remaining impacts considered to be potentially significant are addressed in detail at EIR Section 4.9, *Cultural Resources/Tribal Cultural Resources*.

Geology and Soils

The Project Site is not located within an Earthquake Fault Zone as mapped by the California Geological Survey. Furthermore, no active faults are known to project toward

or extend across the Project Site. All new development would be subject to the requirements of the California Building Standards Code (CBC), which includes specific design measures intended to maximize structural stability in the event of an earthquake. Due to the relatively gentle terrain of the site and surrounding properties, the site is at little risk for landslide. The Project is not expected to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death from landslides.

All construction activities would be subject to compliance with the California Building Standards Code (CBC). Additionally, the Project would be subject to compliance with the requirements set forth in the National Pollutant Discharge Elimination System (NPDES) Storm Water General Construction Permit for construction activities. Compliance with the CBC and the NPDES would minimize the effects of erosion and would ensure consistency with the Water Quality Control Plan of the Santa Ana Regional Water Quality Control Board, which establishes water quality standards for the groundwater and surface water of the region. Additionally, the Project would be required to comply with Chapter 14.12, Stormwater Drainage System Protection Regulations, of the City of Eastvale Municipal Code, which requires new development or redevelopment projects to control stormwater runoff by implementing appropriate best management practices (BMPs) to prevent deterioration of water quality. Furthermore, the displacement of soil through cut and fill would be controlled by Chapter 33 of the 2013 CBSC related to grading and excavation, other applicable building regulations, and standard construction techniques.

A stormwater pollution prevention plan (SWPPP) would be required as part of the grading permit submittal package. The SWPPP would provide a schedule for the implementation and maintenance of erosion control measures and a description of the erosion control practices, including appropriate design details and a time schedule.

The City routinely requires the submittal of detailed erosion control plans with any grading plans. The implementation of this standard requirement is expected to address any erosional issues associated with grading and over excavation of the site.

Additionally, fugitive dust would be controlled in compliance with SCAQMD Rule 403. Further, in accordance with Clean Water Act and NPDES requirements, water erosion during construction would be minimized by limiting certain construction activities. Compliance with these existing regulations that are intended to minimize soil erosion and sedimentation and would reduce impacts to a less-than-significant level.

The Project Site and surrounding properties do not exhibit substantial gradient or elevation differences. There is therefore no potential risk for landslide, collapse, or rockfall. The Draft Geotechnical Report prepared for the Project concluded that the potential for earthquake-induced liquefaction lateral spreading, landsliding, or flooding at the site from off-site sources is considered low.

The Project would be served by the municipal sewer system of the Jurupa Community Services District (JCSD) and would have no need for a septic system or other alternative wastewater disposal system.

Based on the preceding, the Project would result in less-than-significant impacts, or have no impact for the following geology and soils considerations:

- Exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; or landslides;

- Substantial soil erosion or the loss of topsoil;

- Location on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse; and

- Soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

The remaining impacts considered to be potentially significant are addressed in detail at EIR Section 4.6, *Geology and Soils*.

Hazards and Hazardous Materials

The conclusions presented within the Initial Study were based on Environmental Site Assessments (ESAs) prepared for the Project.

No schools are located, or proposed to be located, within one-quarter mile of the Project Site. Therefore, the Project would not emit hazardous emissions or handle hazardous or acutely hazardous material within one-quarter mile of a school.

As part of the Project ESAs, a search of selected government databases was conducted using the Environmental Data Resources (EDR) Radius Report environmental database report system. The Project Site is not located on a list of hazardous materials sites compiled by the California Department of Toxic Substances Control (DTSC) or the State Water Resources Control Board (SWRCB) pursuant to Government Code Section 65962.5.

The Project Site is not located within any airport land use plan, nor are they in the vicinity of a private airstrip. The closest public airport is Chino Airport, which is located approximately 5 miles west of the Project Site. Given this distance, and because the Project Site is not located within the airport land use plan area for Chino Airport, there would be no impact.

Access to the Project Site is available via Hamner Avenue. The construction and operation of the Project would not place any permanent physical barriers on Hamner Avenue. Construction would take place on-site, and no roadway closures are anticipated. Temporary lane closures may be required to implement half-width road improvements and would be implemented via traffic control measures coordinated with the City. To

ensure compliance with zoning, building, and fire codes, the applicant is required to submit appropriate plans for plan review prior to the issuance of a building permit. Adherence to these requirements would ensure that the Project would not have a significant impact on emergency response and evacuation plans.

The Project Site is not designated as a high fire hazard area. The Project Site is located in an urbanized area served by a municipal fire department, further reducing the threat of exposure to wildfire.

Based on the preceding, the Project would have less-than-significant impacts for the following hazards/hazardous materials considerations:

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

- 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;

- 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, result in a safety hazard for the people residing or working in the project area;

- For a project within the vicinity of a private airstrip, result in a safety hazard for the people residing or working in the project area;

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and

- 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.

The remaining impacts considered to be potentially significant are addressed in detail at EIR Section 4.7, *Hazards and Hazardous Materials*.

Hydrology and Water Quality

The Project would not install any groundwater wells, or otherwise directly withdraw any groundwater. In addition, there are no known aquifer conditions at the Project Site or in the surrounding area that could be intercepted by excavation or development of the Project. Therefore, the Project would not physically interfere with any groundwater supplies.

The Project Site is not located in a 100-year flood hazard area, nor is the Project Site mapped as being within a dam inundation area. The Project Site is not located near any large inland bodies of water or the Pacific Ocean, so as to be inundated by seiches or tsunamis, nor is the Project Site located on or near steep slopes where rapid erosion could trigger mudflows.

Based on the preceding discussion, the Project would result in less-than-significant impacts, or have no impact for the following hydrology and water quality considerations:

- 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);

- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;

- Place within 100-year flood hazard area structures which would impede or redirect flood flows;

- 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; and

- Inundation by seiche, tsunami, or mudflow.

The remaining impacts considered to be potentially significant are addressed in detail at EIR Section 4.8, *Hydrology and Water Quality*.

Land Use

The physical division of an established community is typically associated with construction of a linear feature, such as a major highway, railroad tracks, or removal of a means of access, such as a local road or bridge, which would impair mobility within an existing community or between a community and an outlying area. In this case, the Project Site is largely surrounded by existing development, predominantly residences, but also recreation, and vacant land to a lesser extent. The Project would implement commercial, retail, service and civic uses within the defined Project Site and does not have the potential to physically divide the established community.

As detailed within the previous discussion of Biological Resources, the Project would not conflict with any applicable habitat conservation plan or natural community conservation plan.

Based on the preceding discussion, the Project would result in less-than-significant impacts, or have no impact for the following land use considerations:

- Physically divide an established community; and

- Conflict with any applicable habitat conservation plan.

The remaining impacts considered to be potentially significant are addressed in detail at EIR Section 4.1, *Land Use and Planning*.

Mineral Resources

The Project Site is not designated as containing mineral resources that would be of value to the region and the residents of the state. As such, the Project would result in no impacts for the following mineral resources considerations:

- Loss of availability of a known mineral resource that would be of value to the region and to the residents of the state; and

- Loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Noise

The Project Site is not located within two miles of a public airport or within the vicinity of a private airstrip. The Corona Municipal Airport is located approximately 5.0 miles south, the Ontario International Airport is located approximately 7.0 miles north, the Chino Airport is located approximately 5.0 miles west, and the Riverside Municipal Airport is located approximately 6.0 miles east. The Project Site is located well beyond of the noise impact zones from all four airports. The nearest private facility is the Southern California Helicopter and Wing, located approximately 5.0 miles west of the Project Site is. As such, the Project would have less-than-significant impacts for the following potential noise impact considerations:

- 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; and

- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

The remaining impacts considered to be potentially significant are addressed in detail at EIR Section 4.5, *Noise*.

Population and Housing

Construction of new housing is not a component of the Project. Employment generated by the Project may incidentally contribute to nominal population growth; however, Project-related employment demands would likely be filled by the existing personnel pool within the City of Eastvale and neighboring communities. Further, the Project Site is located within an area that is already served by roadways, utilities, and other infrastructure that can indirectly encourage population growth. As such, the Project would not contribute directly or indirectly to substantial population growth. Site 1 contains a single residence; Site 2 is vacant. As such, the Project would not displace substantial numbers of existing housing. Based on the preceding, the Project would have less-than-significant impacts for the following population and housing considerations:

- Induce substantial population growth in the area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through the extension of roads or other infrastructure);

- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; and

- Displace substantial numbers of people necessitating the construction of replacement housing elsewhere.

Public Services, Recreation

The Initial Study determined that payment of the City's development impact fees pursuant to Municipal Code Chapter 110.28 would mitigate the Project's impacts to fire and police protection services. Additionally, the fire and police department would have an opportunity to review specific design plans and identify project conditions for development. As a neighborhood-serving mixed use commercial and civic center, the Project is not expected to result in any unusual circumstances that may generate high demand for fire or police protection services.

Employment opportunities created by the Project may cause small increases in demand for school and park facilities. The Project Applicant would pay mandated school impact fees, along with development fees that may be used to support the City's existing recreational facilities. The Project is not anticipated to contribute substantially to the resident population base using school and park facilities. Further, the construction of recreational facilities is not included in the Project, nor would the Project require the construction or expansion of recreational facilities.

Regarding other public services, the development of the Project would require established public agency oversight including, but not limited to, plan check and permitting actions by the City's Planning Department, City Engineer, Public Works Department, Police Department, and Fire Department. These actions typically fall within routine tasks of these agencies and are paid for via plan check and inspection fees.
Based on the preceding, the Project would have less-than-significant impacts for the following public services and recreation considerations:

- Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, parks, or other public facilities;

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial deterioration of the facility would occur or be accelerated; and

- Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

Transportation/Traffic

The Project would not result in a change in air traffic patterns. The Project does not involve any unusual conditions, or hazardous design features, such as sharp curves or dangerous intersections, or incompatible uses. Project access and circulation features would accommodate emergency ingress and egress by fire trucks, police units, and ambulance/paramedic vehicles. All emergency access features are subject to City of Eastvale design requirements, as approved by the Fire Department. As such, the Project would have less-than-significant or no impacts for the following potential transportation considerations:

- 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;

- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); and

- Result in inadequate emergency access.

The remaining impacts considered to be potentially significant are addressed in detail at EIR Section 4.2, *Transportation/Traffic*.

Utilities and Service Systems

Wastewater disposal is regulated under the federal Clean Water Act and the state Porter-Cologne Water Quality Control Act. The Santa Ana Regional Water Quality Control Board (RWQCB) regulates wastewater discharges in Eastvale, including the Project site, and implements the Clean Water Act and the Porter-Cologne Act by administering the National Pollutant Discharge Elimination System (NPDES), issuing water discharge permits, and establishing best management practices (BMPs).

The Project would receive wastewater conveyance services from the Jurupa Community Services District (JCSD). The JCSD discharges Eastvale-generated wastewater flows to the River Road Lift Station, which pumps the wastewater to the Western Riverside County Regional Wastewater Authority (WRCRWA) treatment plant. The Initial Study

determined that Project wastewater would equal approximately 0.81 percent of current capacity, and that adequate capacity is available to serve the wastewater flows generated by the Project.

Water service would be provided to the Project Site by the JCSD. The Initial Study determined that the Project's total water demand would equal approximately 0.63 percent of current capacity; JCSD's supply far exceeds the Project's water needs.

The Project would include construction of an on-site drainage system to collect and convey site runoff to the City's municipal storm drain system. No off-site drainage facilities are proposed.

Using California Department of Resources Recycling and Recovery (CalRecycle) waste generation rates, the Initial Study presented waste generation estimates of the Project. These estimates were then compared to the capacity of the primary disposal sites for the Project (El Sobrante Landfill located in Corona, and the Lamb Canyon Sanitary Landfill located in Riverside). The Initial Study determined that the Project's contribution of solid waste would not substantially alter existing or future solid waste generation patterns and disposal services. Furthermore, the Project would be consistent with the County Integrated Waste Management Plan requirements and would be required to comply with the recommendations of the Riverside County Waste Management Department. Additionally, the Project would comply with all federal, state, and local statutes and regulations related to solid waste. The Project would not involve activities that would conflict with the applicable programmatic requirements.

As summarized above, the Project would have a less-than-significant impact regarding the following considerations:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;

- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;

- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;

- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;

- 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;

- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs;

- Comply with federal, state, and local statutes and regulations related to solid waste.

1.6 AREAS OF CONCERN OR CONTROVERSY

Section 15123 of the *CEQA Guidelines* requires that the EIR summary identify areas of potential concern or controversy known to the lead agency, including issues raised by other agencies and the public. Issues of concern were identified by the Lead Agency, through responses to the Project Initial Study/Notice of Preparation (NOP), and other communications addressing the Project and the Project EIR.

Responses received pursuant to distribution of the NOP are presented at EIR Appendix A. Table 1.6-1 lists NOP respondent agencies, organizations, and individuals. A corresponding summary of respondent comments is presented, indicated by *italicized text.* Responses to comments, together with correlating EIR references are indicated in subsequent statements. Unless otherwise noted, all respondent comments are addressed within the body of the EIR.

Table 1.6-1
List of NOP/AB52 Respondents and Summary of Comments/Responses

Respondent	Summary of Comments
State Agencies	
Office of Planning and Research-State Clearinghouse (SCH)	*SCH lists Responsible and Trustee Agencies receiving the NOP. SCH assigns the SCH No. 2017101024 to the Project environmental documents. SCH established the review and comment period for the initial, October 10, 2017 NOP/IS as October 12 through November 13, 2017. The State Clearinghouse established the comment period for the subsequent January 25, 2018 NOP/IS as January 26 through February 26, 2018.* EIR Appendix A includes a copy of the Project IS, NOPs and NOP Responses.
State of California Department of Transportation, District 8 (Caltrans)	*Caltrans recommends Project land uses that could potentially reduce vehicle miles traveled and Project-source GHG emissions. Caltrans provides general observations regarding the benefits of multi-modal accessibility.* Caltrans-recommended land uses for the Project are noted. The recommended land uses are not consistent with the Project as proposed by the Applicant and would not support the Project objectives. Please refer to EIR Section 3.0, *Project Description*. Multimodal accessibility benefits noted by Caltrans are recognized. The Project accommodates pedestrian and bicycle access consistent with City of Eastvale requirements and standards. The Applicant and City will coordinate Project final designs with RTA to evaluate propriety of Project transit access and amenities. Please refer also to EIR Section 4.2, *Transportation/Traffic* and the Project Traffic Impact Analysis provided at EIR Appendix B.
State of California, Native American Heritage Commission (NAHC) (letters dated Oct. 16, 2017 and January 30, 2018)	*NAHC provides procedural guidance in determining the Project's potential to impact cultural resources and tribal cultural resources.* The Project's potential to impact cultural/tribal cultural resources has been evaluated consistent with NAHC guidance and state law. Please refer to EIR Section 4.9, *Cultural Resources/Tribal Cultural Resources*.
Regional Agencies	
South Coast Air Quality Management District (SCAQMD)	*SCAQMD provides detailed guidance regarding the preparation of the Project air quality impact analysis and greenhouse gas analysis, and requests that modeling data and electronic copies air quality technical studies accompany submittal of the Draft EIR to SCAQMD.* The Project Air Quality Impact Analysis and Greenhouse Gas Analysis are presented at EIR Appendices C and D, respectively. Specific topics referenced by SCAQMD in their NOP response are addressed at EIR Section 4.3, *Air Quality*; and EIR Section 4.4, *Global Climate Change and Greenhouse Gas Emissions*. Modeling data files, technical studies and supporting air quality documentation have been provided to SCAQMD in electronic format(s) as requested.

Table 1.6-1
List of NOP/AB52 Respondents and Summary of Comments/Responses

Respondent	Summary of Comments
City/County Agencies	
City of Norco (letter dated Feb. 26, 2018)	*The City of Norco requests that access to the Project (Site 1) from Hamner Avenue be designed so as not to conflict or interfere with existing access to the SilverLakes Equestrian and Sports Park* [Sports Park], *located southerly adjacent to Site 1. The commentor requests copies of subsequent environmental documents and development plans.* The Project Site 1 primary access from Hamner Avenue would be via a proposed easterly continuation of Schleisman Road at the full-access signalized intersection of Schleisman Road at Hamner Avenue. This intersection is located approximately 700 feet northerly of the Sports Park access from Hamner Avenue. Separation of this Site 1 primary access from the Sports Park access and its configuration minimizes the potential to conflict with or interfere with access to the Sports Park. The current Project access concept also proposes secondary access to Site 1 via a "right-in, right-out" driveway located approximately 350 feet northerly of the Sports Park Hamner Avenue access drive. Separation of this Site 1 secondary access from the Sports Park and its configuration minimizes the potential to conflict with or interfere with access to the Sports Park. All Project access improvements and access controls would be designed and constructed consistent with City of Eastvale and Manual on Uniform Traffic Control Devices (MUTCD) standards and requirements. Please refer also to EIR Section 4.2, *Transportation/Traffic* and the Project Traffic Impact Analysis provided at EIR Appendix B. The commentor will be provided copies of subsequent environmental documents. Copies of development plans are available through the City of Eastvale.
City of Norco (letter dated March 5, 2018)	*The City of Norco restates SilverLakes Equestrian and Sports Park access concerns. The commentor notes further that the current Project (Site 1) access concept reserves right-of-way for the potential future easterly continuation of Schleisman Road through Site 1. The commentor notes deed restrictions affecting certain off-site Silverlakes properties located easterly of Site 1. The commentor requests copies of subsequent environmental documents and development plans.* Please refer to remarks above addressing Silverlakes Equestrian and Sports Park access concerns. The Project does not propose or require construction of Schleisman Road easterly of Site 1 within the City of Norco (Silverlakes). Any such future construction (should it be proposed) would necessarily be coordinated with all affected jurisdictions, including but not limited to the City of Norco. The concept right-of-way reservation for the potential alignment of Schleisman Road within Site 1 is

Table 1.6-1
List of NOP/AB52 Respondents and Summary of Comments/Responses

Respondent	Summary of Comments
	contingent on approval by the City of Eastvale. Please refer also to EIR Section 4.2, *Transportation/Traffic* and the Project Traffic Impact Analysis provided at EIR Appendix B. The commentor will be provided copies of subsequent environmental documents. Copies of development plans are available through the City of Eastvale.
Riverside County Flood Control and Water Conservation District (RCFCWCD)	*RCFCWCD notes that the Project Applicant would be required to pay Eastvale Area Drainage Plan fees. The commentor identifies various federal and state water quality, flood control, and floodplain/watercourse management standards and requirements.* The Project Applicant would pay all requisite impact fees including, but not limited to, Eastvale Area Drainage Plan fees. The Project Site is not subject to flooding or flood hazards. The Project does not propose or require alteration of floodplains or water courses. The Project would comply with all applicable water quality standards and requirements. Please refer also to EIR Section 4.8, *Hydrology and Water Quality*.
Riverside County Airport Land Use Commission (ALUC)	*The ALUC notes that the Project is located outside the Chino Airport Influence Area, and that unless structures 200 feet or greater in height are proposed, the Project would not be subject to ALUC review.* ALUC determination that the Project is located outside the Chino Airport Influence Area is noted. The Project does not propose or require structures 200 feet or greater in height. Based on ALUC criteria, the Project would not be subject to ALUC review.
<u>Other Agencies</u>	
Webb Associates on behalf of Jurupa Community Services District (JCSD)	*JCSD notes that the Project would be subject to JCSD rules, regulations, conditions, requirements, and fee payments applicable to commercial development proposals. Requirements would include, but would not be limited to, water and sewer availability letters and estimated fireflow demands. JCSD preliminarily indicates that sufficient water and sewer capacity exists to serve the Project.* The Project would comply with all applicable JCSD rules, regulations, conditions, requirements, and fee payments applicable to commercial development proposals. The Project Applicant would obtain water and sewer availability letters consistent with JCSD requirements. The Project Applicant will substantiate and provide Project fireflow demands consistent with JCSD requirements. JCSD's preliminary determination that water and sewer capacity exist to serve the Project is recognized.

Table 1.6-1
List of NOP/AB52 Respondents and Summary of Comments/Responses

Respondent	Summary of Comments
	March 27, 2018 "Will-Serve" letters issued by JCSD indicate that JCSD will provide water and sewer services to the Project upon compliance with District rules, regulations and payment of appropriate fees. JCSD Will-Serve letters are on file with the City of Eastvale Planning Department.
Riverside Transit Agency (RTA)	*RTA recommends that the Project Applicant and Lead Agency consider incorporation of an* [Americans with Disabilities Act] *ADA-compliant bus stop northbound Hamner Ave., north of Schleisman Rd.* Bus stop facility recommendation(s) provided by RTA are recognized. As part of the City's standard development review process, the need for and propriety of transit-related facilities including, but not limited to, bus shelters and bicycle parking would be coordinated between the City and the Project Applicant, with input from RTA. Please refer also to EIR Section 4.2, *Transportation/Traffic*.
Individuals and Organizations	
WITTWER/PARKIN LLP on behalf of the Southwest Regional Council of Carpenters (Southwest Carpenters)	*Southwest Carpenters provides comments on the Project Description, Aesthetics, Air Quality, Biological Resources, Greenhouse Gases, Utilities and Service Systems, Cumulative Impacts.* Comments regarding Aesthetics, Biological Resources, and Utilities and Service Systems are addressed within the EIR Initial Study. The Initial Study determinations regarding these topical issues are summarized within this EIR. Please refer to the EIR Initial Study, EIR Appendix A; and the discussion presented at EIR Section 1.5, *Impacts Not Found to be Potentially Significant*. Comments regarding air quality are addressed at EIR Section 4.3, *Air Quality* and EIR Appendix A, *Air Quality Impact Analysis*. Comments regarding greenhouse gases are addressed at EIR Section 4.4, *Global Climate Change and Greenhouse Gas Emissions* and EIR Appendix D, *Greenhouse Gas Analysis*. Comments regarding cumulative impacts are addressed at EIR Section 5.1, *Cumulative Impact Analysis.*
AB52 Consultation	
Soboba Band of Luiseño Indians; Gabrieleño Band of Mission Indians-KIZH Nation.	Pursuant to AB 52 requirements, the City has consulted with the Soboba Band of Luiseño Indians; and Gabrieleño Band of Mission Indians-KIZH Nation regarding potential impacts to Tribal Cultural Resources (TCRs). Potential impacts to TCRs are addressed at EIR Section 4.9, *Cultural Resources/Tribal Cultural Resources.*

1.7 EIR TOPICAL ISSUES

Based upon the Initial Study analysis, comments received pursuant to circulation of the NOP, and other public/agency input, the analysis of the EIR addresses the following topics:

- Air Quality;
- Geology and Soils;
- Global Climate Change and Greenhouse Gas Emissions;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use;
- Noise;
- Transportation/Traffic; and
- Cultural Resources/Tribal Cultural Resources.

Additionally, EIR Section 5.0, *Other CEQA Considerations*, presents discussions of other mandatory CEQA topics including:

- Cumulative Impact Analysis;
- Alternatives Analysis;
- Growth-Inducing Impacts of the Proposed Action;
- Significant Environmental Effects;
- Significant and Irreversible Environmental Changes; and
- Energy Conservation.

1.8 SUMMARY OF SIGNIFICANT PROJECT IMPACTS

Implementation of the Project would result in certain impacts determined to be significant. These impacts are discussed in detail in the body of the EIR text under their associated topical headings and are summarized at Table 1.8-1.

Table 1.8-1
Summary of Significant and Unavoidable Impacts

Environmental Topic	Comments
Transportation/ Traffic	**Intersection Level of Service (LOS) Impacts/Roadway Segment Impacts** The Project Applicant would construct improvements and would, where applicable, pay requisite fees to be directed toward completion of necessary off-site traffic intersection and roadway segment improvements within the Study Area. Payment of fees does not assure timely implementation of required improvements. In instances where payment of fees is identified as mitigation, pending completion of required improvements, the Project's contributions to Existing (2017) and Opening Year (2019) Intersection and Roadway Segment LOS impacts would be considered cumulatively significant and unavoidable. More specifically, absent recommended improvements, impacts would be cumulatively significant and unavoidable at the following Study Area facilities. **Intersections** **ID #** — **Location** 2 — Hamner Ave. & Limonite Ave. 6 — Hamner Ave. & Citrus Ave. 7 — Hamner Ave. & Norco Dr./6th St. **Roadway Segments** **ID #** — **Roadway** — **Segment Limits** 4 — Hamner Ave. — Riverboat Drive to Schleisman Rd. 6 — Hamner Ave. — Citrus St. to Norco Dr./6th St.
Air Quality	**NOx Regional Threshold Exceedance** Even after application of mitigation, Project operational-source emissions of nitrogen oxides (NO_x) would exceed applicable South Coast Air Quality Management District (SCAQMD) regional thresholds. This is a Project-level and cumulatively significant impact. **Contributions to Non-Attainment Conditions** The Project is located within ozone and PM_{10}/$PM_{2.5}$ non-attainment areas (NO_x is a precursor to ozone, PM_{10}, and $PM_{2.5}$). Project operational-source NO_x emissions exceedances would therefore result in a cumulatively considerable net increase in criteria pollutants (ozone, PM_{10}, and $PM_{2.5}$) for which the Project region is non-attainment. These are cumulatively significant air quality impacts. **AQMP Inconsistency** The Project land uses are not reflected in land use plans and regional development assumed in the South Coast Air Basin 2016 Air Quality Management Plan (AQMP). On this basis, the Project is conservatively assumed to generate operational-source emissions not reflected within the current AQMP regional emissions inventory for the Basin. The Project is therefore

Table 1.8-1
Summary of Significant and Unavoidable Impacts

Environmental Topic	Comments
	considered to be inconsistent with the 2016 AQMP. This is a Project-level and cumulatively significant impact.
GHG Emissions	Project GHG emissions would exceed the SCAQMD screening-level threshold of 3,000 MTCO2e. On this basis, quantified net GHG emissions generated by the Project would be cumulatively considerable, and the Project net GHG emissions impact would be cumulatively significant and unavoidable.
Noise	**Construction-Source Noise** Even after compliance with regulations and application of mitigation measures, Project construction-source noise levels received at nearby properties would represent a substantial temporary periodic increase in noise conditions compared to conditions without the Project. Construction-source noise impacts affecting these properties are recognized as significant. Project construction-source noise in combination with ambient noise levels would also represent a substantial temporary increase in noise conditions compared to conditions without the Project and would be considered cumulatively significant and unavoidable for the duration of construction activities. **Operational-Source Noise** Project-source incremental contribution to the ambient noise condition at a second-floor receiver location[5] proximate to the southwesterly boundary of Site 2 (location of a proposed car wash use) would be individually and cumulatively significant.

All other potential environmental effects of the Project are determined to be less-than-significant as substantiated within this EIR and accompanying Initial Study or are reduced below levels of significance with application of mitigation measures identified herein. A summary of all Project impacts and proposed mitigation measures is presented at EIR Section 1.10, *Summary of Impacts and Mitigation*.

1.9 ALTERNATIVES TO THE PROJECT

Consistent with provisions of the *CEQA Guidelines*, the EIR Alternatives Analysis presents and evaluates alternatives to the Project that would lessen its significant

[5] The Project Noise Impact Analysis specifically identifies the significant impact affecting the second-floor façade at receiver location "R6." Receiver location R6 represents the residential home located at 7042 College Park Drive, approximately 10 feet southwesterly of Site 2.

environmental effects while allowing for attainment of the basic Project Objectives. The rationale underlying the selection of alternatives is presented together with a summary description of each alternative. Merits of the alternatives compared with the Project are described and evaluated.

1.9.1 Description of Alternatives

Alternatives to the Project evaluated in this EIR are listed below and are subsequently described. Please refer also to the discussions presented at EIR Section 5.2, *Alternatives Analysis.*

- No Project Alternative;
- No Build Alternative;
- Reduced Intensity Alternative;
- Alternative Sites;
- Avoidance Significant Traffic Impacts Alternative;
- Avoidance of Significant Air Quality Impacts Alternative;
- Avoidance of AQMP Inconsistency Impacts Alternative;
- Avoidance of Significant GHG Emissions Impacts Alternative;
- Avoidance of Significant Noise Impacts Alternative.

1.9.1.1 No Project Alternative

Overview

The *CEQA Guidelines* specifically require that the EIR include in its evaluation a No Project Alternative. The No Project Alternative should make a reasoned assessment as to future disposition of the subject site should the Project under consideration not be developed. In this latter regard, the *CEQA Guidelines* state in pertinent part:

If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the "no project" alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against

environmental effects which would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this "no project" consequence should be discussed. In certain instances, the no project alternative means "no build" wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment (*CEQA Guidelines*, Section 15126.6 (e)(3)(b)).

No Project/No Build Alternative

In the case considered here, the subject site is a vacant and available property absent any significant environmental or physical constraints. Further, the Project Area is fully served by proximate available utilities and supporting public services; and is provided appropriate access. Areas around the subject site are developed with or are being developed with urban uses. The Project Area is not substantively constrained by physical conditions or environmental considerations.

Given the availability of infrastructure/services, lack of environmental or physical constraints; and proximity of other urban development, it is considered unlikely that the subject site would remain vacant or in a "No Build" condition, and evaluation of a No Build condition would "analyze a set of artificial assumptions that would be required to preserve the existing physical environment." This is inconsistent with direction provided at *CEQA Guidelines*, Section 15126.6 (e)(3)(b), as presented above.

If, however, a hypothetical No Project/No Build scenario were maintained, its comparative environmental impacts would replicate the existing conditions discussions for each of the environmental topics evaluated in this EIR; and comparative impacts of the Project would be as presented under each of the EIR environmental topics. In all instances, a No Build scenario would result in reduced environmental impacts when compared to the Project. A No Build condition would achieve none of the basic Project Objectives.

Evaluated No Project Alternative

In light of the preceding discussions, for the purposes of this Alternatives Analysis, and to provide for analysis differentiated from the Project, the No Project Alternative considered herein assumes development of Sites 1 and 2 as would be permitted under the Sites' respective existing Zoning designations (Site 1: Rural Residential [R-R] and Watercourse, Watershed, and Conservation Area [W-1]; Site 2: General Commercial [C-1/C-P]). While any number of development scenarios could be implemented under the No Project Alternative, it is assumed that the westerly portion of Site 1 designated as R-R (approximately 7.5 acres) would be developed pursuant to City Zoning Code R-R Zone standards. Assuming the maximum allowable residential density based on a minimum lot size of 21,780 square feet, this would yield approximately 15 single-family residential units. The remaining, easterly portion of Site 1 (approximately 15.5 acres) would remain in a substantively undeveloped condition pursuant to City Zoning Code W-1 Zone standards.

Site 2 is assumed to be developed with commercial uses pursuant to City Zoning Code C-1/C-P standards. For analysis purposes, development of Site 2 is assumed to conform to the Site 2 gas station/car wash development concept currently proposed by the Project.

1.9.1.2 Reduced Intensity Alternative

Overview

The Project would result in certain cumulatively significant traffic impacts (roadway segments and intersections), air quality impacts (operational-source regional NOx threshold exceedance, cumulative contributions to Basin non-attainment conditions, Air Quality Management Plan inconsistency); GHG emissions impacts (exceedance of SCAQMD screening-level threshold, 3,000 MTCO2e/year); construction-source noise impacts and operational-source noise impacts. As summarized below, the Reduced Intensity Alternative considered in this EIR is directed at reduction of the Project's significant NOx emissions impacts and would coincidentally act to globally diminish the scope of Project impacts in general. However, there are no feasible means to completely

avoid significant impacts otherwise occurring under the Project; or to reduce these impacts to levels that would be less-than-significant.

Evaluated Reduced Intensity Alternative

In the context of the significant Project impacts noted above, the Reduced Intensity Alternative considered herein focuses on potential alternatives to the Project that would reduce the Project's significant air quality impacts. More specifically, the Reduced Intensity Alternative considered herein reflects a development scenario that would diminish operational-source NOx emissions exceedances otherwise occurring under the Project. The Reduced Intensity Alternative would also address and reduce coincident traffic, GHG emissions, non-attainment pollutant contributions, and AQMP inconsistency issues otherwise resulting from the Project.

Of the total operational-source NOx emissions generated by the Project, more than 97 percent (by weight) are due to Project-related traffic. Project operational-source NOx emissions could therefore likely be reduced through a reduction in the Project scope that would also reduce Project traffic (expressed as Average Daily Trips [ADT]) and associated vehicular-source emissions.

While this could be achieved through a variety of potential scope reduction schemes, for the purposes of this Alternatives Analysis, for purposes of the EIR Alternatives Analysis, the Reduced Intensity Alternative reflects elimination of the Project proposed Fast-Food restaurant uses (with and without drive through), the two greatest individual Project trip generators. This provides a readily envisioned Reduced Intensity Alternative that would act to incrementally reduce Project operational-source NOx emissions while maintaining the Project's retail focus. Under the Reduced Intensity Alternative, total Project trips (gross trip generation) would be reduced by approximately 4,600 ADT, or by approximately 29.5 percent. The Reduced Intensity Alternative would also act to incrementally reduce the extent of significant traffic and GHG emissions impacts otherwise occurring under the Project; would reduce incremental contributions to Basin pollutant non-attainment conditions; would reduce the scope development considered inconsistent with the adopted AQMP; and may also reduce the duration of significant

construction-source noise impacts otherwise occurring under the Project. These impacts, while diminished under the Reduced Intensity Alternative, would not be reduced to levels that would be less-than-significant, and would therefore be considered significant and unavoidable.

1.9.1.3 Alternatives Considered and Rejected

Alternative Sites Considered and Rejected

As stated in the *CEQA Guidelines* §15126.6 (f)(1)(2)(A), the "key question and first step in [the] analysis [of alternative locations] 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 be considered for inclusion in the EIR." *CEQA Guidelines* §15126.6 (f) (1) also provides that when considering the feasibility of potential alternative sites, the factors that may be taken into account include: "site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent). None of these factors establishes a fixed limit on the scope of reasonable alternatives."

As stated at *CEQA Guidelines* Section 15126.6 (f)(1)(2)(A), the "key question and first step in [the] analysis [of alternative locations] is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location." As discussed in the body of the Draft EIR and summarized previously in Table 5.2-1, the Project will result in the following significant impacts:

- Cumulatively significant traffic impacts;
- Operational-source NO_x emissions exceeding SCAQMD regional thresholds and related cumulative air quality impacts and nonattainment impacts;
- AQMP inconsistency impacts;

- Cumulatively significant GHG emissions impacts;
- Individually and cumulatively significant construction-source and operational-source noise impacts.

All other potential Project impacts are determined to be either less-than-significant, or less-than-significant after mitigation.

The Project considered herein is not subject to relocation to an alternative site. Notably, as summarized below, relocation of the Project would not substantively or materially reduce the Project's significant environmental impacts, the basis for the consideration of Alternative sites under CEQA.

Relocation to an Alternative Site is not likely to achieve any measurable reduction in the Project's traffic impacts. Specifically, implementation of traffic improvements, including intersection signalization and roadway segment widening as envisioned under the City General Plan Circulation Element, are on-going processes undertaken in conjunction with the development of vacant or underutilized properties throughout the City. As such, it is unlikely that a suitable Alternative Site could be identified that would distribute Project trips only to roadways that have already been improved to their ultimate General Plan configurations, thus completely avoiding the Project's cumulatively significant impacts at transportation facilities. Further, there are no feasible alternative sites under control or likely control of the Applicant that would allow for relocation of the Project and associated reassignment of traffic.

Relocation to an Alternative Site is not likely to achieve any measurable reduction in the Project's operational-source air quality impacts. Specifically, Project operational-source NOx emissions would exceed the applicable SCAQMD regional threshold. The Project operational-source NOx exceedance is a regional air quality impact. Relocation of the Project anywhere within the South Coast Air Basin would not alter or diminish the significance of this impact.

The AQMP land use inconsistency resulting from the Project could not be feasibly avoided by relocation of the Project to an alternative site. That is, there are no alternative sites under control or likely control of the Applicant that would allow for relocation of the Project and that would preclude a changes or changes in land use designations.

GHG emissions impacts are by definition cumulative and global in their effects. Relocation of the Project would not alter or diminish the significance of its GHG emissions impacts.

Individually and cumulatively significant construction-source noise impacts are equipment- and equipment operations-based. Relocation of the Project would not alter or diminish noise levels generated by Project construction equipment. Conceivably, the Project could be relocated to a site removed from proximate sensitive receptors, thereby potentially avoiding significant construction-source noise impacts at residential uses otherwise resulting from the Project. However, there are no feasible alternative sites under control or likely control of the Applicant that would allow for relocation of the Project and associated potential avoidance of the Project's significant construction-source noise impacts.

Individually and cumulatively significant operational-source noise impacts resulting from the carwash at Site 2 would affect the second-story of a residential use located southwesterly of the Site. Mitigation is proposed that would likely reduce this impact to levels that would be less-than-significant. However, at this preliminary Project design concept stage, the efficacy of this mitigation cannot be assured. As noted previously in this Section, location of the carwash at Site 2 at its present location is an integral component of the Project and is not subject to substantive alteration.

Based on the preceding considerations, analysis of an Alternative Site was not further considered.

Avoidance of Significant Traffic Impacts Alternative Considered and Rejected

Specific improvements identified in the Project TIA (EIR Appendix B) and summarized at Draft EIR Section 4.2 would, to the extent feasible, provide a physical solution to identified potentially significant cumulative traffic impacts. Notwithstanding, timely implementation of improvements required as mitigation for potentially significant cumulative traffic impacts cannot be assured, and impacts are therefore considered cumulatively significant and unavoidable pending completion of the required improvements.

Any measurable additional traffic contributed to the facilities noted previously in this Section would result in cumulatively significant transportation/traffic impacts similar to those occurring under the Project, requiring some manner of currently infeasible mitigation. Any viable development of the subject site would generate trips likely affecting some or all of the facilities that would be affected by Project traffic.

Based on the preceding, there are no feasible means to or alternatives to avoid this impact or reduce the impacts noted above to levels that would be less-than-significant. However, these impacts would be diminished under the EIR Reduced Intensity Alternative.

Avoidance of Significant Air Quality Impacts Alternative Considered and Rejected

Operational-source NOx Threshold Exceedances

Of the total operational-source NOx emissions generated by the Project, approximately 97 percent (by weight) are due to Project-related traffic. Responsibility and authority for regulation of vehicular-source NOx emissions resides with the State of California (CARB, et al.). Neither the Applicant nor the Lead Agency can effect or mandate substantive reductions in vehicular-source NOx emissions, much less reductions that would achieve the SCAQMD regional threshold for NOX emissions. At a minimum, an approximate 70 percent reduction in Project ADT and correlating reduction in Project scope would be required to achieve the SCAQMD operational-source NOx regional emissions threshold. At such a reduction in scope, the Project Objectives would be substantively marginalized and/or not realized in any meaningful sense; and the Project would likely not be further

pursued by the Applicant. In terms of its practical application, such a reduction in scope would constitute a "no build" condition.

Based on the preceding, there are no feasible means to or alternatives to avoid this impact or reduce the impact to levels that would be less-than-significant. However, this impact would be diminished under the EIR Reduced Intensity Alternative.

Cumulative Contributions to Basin Pollutant Non-Attainment Conditions

The Project operational-source NOx emissions exceedances noted above would result in cumulatively considerable contributions to existing Basin pollutant non-attainment conditions. For the same reasons noted above, there are no feasible means to or alternatives to avoid this impact or reduce the impact to levels that would be less-than-significant. However, this impact would be diminished under the EIR Reduced Intensity Alternative.

Avoidance of AQMP Inconsistency Impacts Alternative Considered and Rejected

The Project incorporates the necessary City of Eastvale General Plan Land Use and Zoning amendments that would allow for implementation of the Project uses. Because the change in land use designation proposed by the Project allow for greater developments not reflected in the current AQMP, the Project is considered to be inconsistent with AQMP emissions assumptions and projected emissions inventory.

Avoidance of the Project proposed changes in land use designations in order to maintain AQMP consistency would effectively negate the Project in total. There are no alternative locations under control or likely control of the Applicant that would preclude any potential change in land use designations, thereby avoiding potential inconsistencies with the AQMP.

Based on the preceding, there are no feasible means to or alternatives to avoid this impact or reduce the impact to levels that would be less-than-significant. However, the effects of AQMP inconsistency in terms of the AQMP emissions assumptions and projected emissions inventory would be diminished under the EIR Reduced Intensity Alternative.

Avoidance of Significant GHG Emissions Impacts Alternative Considered and Rejected

The Project cannot feasibly achieve no net increase in GHG emissions, nor can the applicable SCAQMD screening-level threshold (3,000 MTCO2e/year) be achieved. In this regard, the majority (approximately 81.2 percent) of the Project GHG emissions would be generated by vehicular traffic from employees and patrons that would access the Project. Responsibility and authority for regulation of vehicular-source emissions resides with the State of California (CARB, et al.). Neither the Applicant nor the Lead Agency can effect or mandate substantive reductions in vehicular-source GHG emissions, much less reductions that would achieve no net increase condition or achieve the SCAQMD screening-level 3,000 MTCO2e/year threshold. In effect, all Project traffic would need to be eliminated or be "zero GHG emissions sources" in order to achieve the SCAQMD threshold. Clearly, there is no feasible means to or alternatives to eliminate all Project traffic, or to ensure that Project traffic would zero GHG emissions sources. In terms of its practical application, this would constitute a "no build" condition. Based on the preceding, there are no feasible means to or alternatives to avoid this impact or reduce the impact to levels that would be less-than-significant. However, this impact would be diminished under the EIR Reduced Intensity Alternative.

Avoidance of Significant Noise Impacts Alternative Considered and Rejected

Construction-Source Noise

Project construction-source noise impacts reflect maximum noise levels generated by operations of typical construction equipment. The types and quantities of equipment employed, and associated maximum noise levels generated, would not differ substantively under any reasonable development scenario for the subject site. As such, under any reasonable development scenario, construction-source noise impacts would remain significant.

Based on the preceding, there are no feasible means to or alternatives to avoid this impact or reduce the impact to levels that would be less-than-significant.

Operational-Source Noise

Operational-source noise generated by the carwash at Site 2 would result in a significant increase in ambient noise conditions that would affect a 2-story residential use located southwesterly of the carwash. To attenuate received noise at the affected residence, construction of a 14-foot high wall would be required. Construction of such a barrier would result in land use and aesthetic incompatibilities; and is generally considered cost-prohibitive. At this preliminary stage, the Project design concepts do not provide sufficient detail that would ensure that this impact could otherwise be reduced to levels that would be less-than-significant.

While elimination of the carwash at Site 2 could avoid this impact, the Applicant and Lead Agency consider the carwash at this location to be an integral Project component, without which, the Project in total would not be pursued.

Based on the preceding, there are no feasible means to or alternatives to avoid this impact or reduce the impact to levels that would be less-than-significant.

1.10 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table 1.10-1 summarizes potential impacts resulting from implementation and operations of the Project. The impacts identified at Table 1.10-1 correspond with environmental topics and impacts discussed at EIR Section 4.0, *Environmental Impact Analysis*. Table 1.10-1 also lists measures proposed to mitigate potentially significant environmental impacts of the Project and indicates the level of significance after application of proposed mitigation.

Table 1.10-1
Summary of Impacts and Mitigation

Potential Impact	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
4.1 Land Use			
Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.	Less-Than-Significant	No Mitigation Measures Are Required	Not Applicable
4.2 Transportation/Traffic			
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.			
• Study Area Intersections	Potentially Cumulatively Significant (Intersections 2, 6, 7)	*4.2.1 Prior to the issuance of the final Certificate of Occupancy for each building, the Project Applicant shall pay that building's fair share fee amounts toward the construction of City of Eastvale improvements required under Existing With-Project (+Project) listed at EIR Table 4.2-12.*	***Significant and Unavoidable*** **Remarks:** Payment of fees, including Project Fair Fees pursuant to Mitigation Measures 4.2.1, 4.2.3; and mandated fee payments pursuant to City TUMF and DIF Ordinances would fulfill the

Table 1.10-1
Summary of Impacts and Mitigation

Potential Impact	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
		4.2.3 Prior to the issuance of the final Certificate of Occupancy for each building, the Project Applicant shall pay that building's fair share fee amounts toward the construction of City of Eastvale improvements required under Opening Year With-Project (+Project) listed at EIR Table 4.2-18.	Applicant's mitigation responsibilities, but would not ensure timely completion of required improvements within the City of Eastvale or at affected extra-jurisdictional locations. In this latter regard, there does not exist an extra-jurisdictional fee-sharing mechanism between the City of Eastvale and extra-jurisdictional agencies that would provide for construction of extra-jurisdictional improvements; nor do the City or Applicant have plenary control for funding of, or construction of extra-jurisdictional improvements. Impacts are therefore recognized as significant and unavoidable.
• Study Area Roadway Segments	Potentially Cumulatively Significant (Segments 4, 6)	*4.2.2 Prior to the issuance of the final Certificate of Occupancy for each building, the Project Applicant shall pay that building's fair share fee amounts toward the construction of City of Eastvale improvements required under Existing With-Project (+Project) listed at EIR Table 4.2-15.*	***Significant and Unavoidable*** **Remarks:** Payment of fees, including Project Fair Fees pursuant to Mitigation Measures 4.2.2, 4.2.4; and mandated fee payments pursuant to City TUMF and DIF Ordinances would fulfill the Applicant's mitigation responsibilities, but would not

Table 1.10-1
Summary of Impacts and Mitigation

Potential Impact	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
		4.2.4 Prior to the issuance of the final Certificate of Occupancy for each building, the Project Applicant shall pay that building's fair share fee amounts toward the construction of City of Eastvale improvements required under Opening Year With-Project (+Project) listed at EIR Table 4.2-21.	ensure timely completion of required improvements within the City of Eastvale or at affected extra-jurisdictional locations. In this latter regard, there does not exist an extra-jurisdictional fee-sharing mechanism between the City of Eastvale and extra-jurisdictional agencies that would provide for construction of extra-jurisdictional improvements; nor do the City or Applicant have plenary control for funding of, or construction of extra-jurisdictional improvements. Impacts are therefore recognized as significant and unavoidable.
• Study Area Freeway Ramps	Less-Than-Significant	No Mitigation Measures Are Required	Not Applicable
Conflict with an applicable congestion management program, including, but not limited to a level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	Less-Than-Significant	No Mitigation Measures Are Required	Not Applicable
Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	Less-Than-Significant	No Mitigation Measures Are Required	Not Applicable

Table 1.10-1
Summary of Impacts and Mitigation

Potential Impact	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
4.3 Air Quality			
Conflict with or obstruct implementation of the applicable air quality plan.	Potentially Significant	No Feasible Mitigation	***Significant and Unavoidable*** **Remarks:** Because the Medium Density Residential land use designation reflected in the 2016 AQMP differs from the proposed Commercial land use designation for the Project site, there is no basis for a determination that the Project would not exceed the assumptions in the AQMP or increments based on the years of Project build-out phase. Nonetheless, Project emissions-reducing design features, and operational programs are consistent with and support overarching AQMP air pollution reduction strategies.
Violate any air quality standard or contribute substantially to an existing or projected air quality violation.			
• Construction-Source Emissions- (Regional Significance Thresholds)	Potentially Significant (VOC Emissions Only)	*4.3.1 Only "Low-Volatile Organic Compounds" paints (no more than 50 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications consistent with South Coast Air Quality Management District Rule 1113 shall be used.*	Less-Than-Significant
• Construction-Source Emissions- (Localized Significance Thresholds)	Potentially Significant (PM_{10}/ $PM_{2.5}$ Emissions Only)	*4.3.2 Contractor(s) shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least four (4) times daily during dry*	Less-Than-Significant

Table 1.10-1
Summary of Impacts and Mitigation

Potential Impact	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
		weather. Watering, shall occur preferably in the mid-morning, afternoon, and after work is done for the day. Contractor (s) shall install and maintain project contact signage that meets the minimum standards of SCAQMD Rule 403 including a 24-hour manned toll-free or local phone number, prior to initiating any type of earth-moving operations.	
• Operational-Source Emissions-(Regional Significance Thresholds)	Potentially Significant (NOx Emissions Only)	No Feasible Mitigation	***Significant and Unavoidable*** **Remarks:** NO_x emissions are byproducts of fuel combustion, and the primary source of these emissions from the Project are tail pipe emissions from vehicles accessing the site. Neither the Project Applicant nor Lead Agency has any regulatory control over these vehicular-source emissions. Rather, vehicular-source NO_x emissions are regulated by CARB and USEPA.
• Operational-Source Emissions-(Localized Significance Thresholds)	Less-Than-Significant	No Mitigation Measures Are Required	Not Applicable
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	Potentially Significant (Contributions to ozone, $PM_{10}/PM_{2.5}$ nonattainment conditions)	No Feasible Mitigation	***Significant and Unavoidable*** **Remarks:** Unmitigable Project NOx emissions exceedances would contribute to regional

Table 1.10-1
Summary of Impacts and Mitigation

Potential Impact	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
(including releasing emissions, which exceed quantitative thresholds for ozone precursors).			nonattainment conditions for ozone, $PM_{10}/PM_{2.5}$. See above re: NOx Emissions.
Expose sensitive receptors to substantial pollutant concentrations.	Less-Than-Significant	No Mitigation Measures Are Required	Not Applicable
Create objectionable odors affecting a substantial number of people.	Less-Than-Significant	No Mitigation Measures Are Required	Not Applicable
4.4 Global Climate Change and Greenhouse Gas Emissions			
Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Potentially Significant	No Feasible Mitigation	***Significant and Unavoidable*** **Remarks:** The Project cannot feasibly achieve the SCAQMD screening level threshold of 3,000 MTCO2e. Conformance with Title 24 Energy Efficiency requirements, CalGreen mandates, and other energy efficiency measures implemented by the state, as well as conservation measures implemented through City Ordinances (e.g., City of Eastvale Water Conservation Ordinance) would act to generally reduce area-source and energy-source GHG emissions, but would have no substantive effect on mobile-source GHG emissions, the primary contributor to the Project GHG emission impact.

Table 1.10-1
Summary of Impacts and Mitigation

Potential Impact	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Less-Than-Significant	No Mitigation Measures Are Required	Not Applicable
4.5 Noise			
Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; or result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project.			
• Construction-Source Noise	Potentially Significant	*4.5.1 The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.*	***Significant and Unavoidable*** **Remarks:** Measure 4.5.1 would generally and qualitatively reduce Project construction-source noise impacts. The Project would also comply with all City of Eastvale Ordinance requirements that would generally act to reduce effects of construction-source noise. However, even with application of mitigation, and compliance with Ordinance requirements, Project construction-source noise received at proximate receptors would exceed 12 dBA Leq. Project

Table 1.10-1
Summary of Impacts and Mitigation

Potential Impact	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
			construction-source noise impacts are therefore recognized as significant and unavoidable.
• Operational-Source Noise	Potentially Significant (Site 2 Carwash Area/Stationary Source Noise Only)	*4.5.2 No car wash activities shall be permitted between the hours of 10:00 p.m. and 7:00 a.m.*	***Significant and Unavoidable*** (Increase in ambient noise condition at Receptor "R6" location only) **Remarks:** Mitigation measure 4.5.2 in combination with City Noise Ordinance requirements would act to generally and qualitatively reduce noise generated by the proposed Site 2 carwash; and with the exception of the increase in noise at Receptor "R6," would reduce impacts to levels that would be less-than-significant. At the R6 second-floor receiver location, a physical noise barrier exceeding 14 feet would be required to ensure that the incremental noise increase would not exceed 5 dBA, and therefore remain less than significant. Construction of such a barrier would of itself result in land use and aesthetic incompatibilities; and is generally considered unreasonably cost-prohibitive.

Table 1.10-1
Summary of Impacts and Mitigation

Potential Impact	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
			It is therefore considered infeasible to fully mitigate operational-source noise impacts at the potentially affected R6 receiver location. The increase in ambient noise conditions at receiver R6 (second-floor façade) would exceed 5 dBA, and the incremental increase in the ambient noise condition would be significant and unavoidable.
Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise.	Less-Than-Significant	No Mitigation Measures Are Required	Not Applicable
4.6 Geology and Soils			
Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.	Less-Than-Significant	No Mitigation Measures Are Required	Not Applicable
Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.			

Table 1.10-1
Summary of Impacts and Mitigation

Potential Impact	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.			
4.7 Hazards and Hazardous Materials			
Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Potentially Significant	*4.7.1 All stained soils within Site 1 impacted with TPH shall be excavated and properly disposed of to an offsite facility. It is assumed that approximately 30 cubic yards of soil in the vicinity of the swimming pool will require removal. Any additional stained or odorous soil identified during site development activities shall also be appropriately removed and disposed of offsite.*	Less-Than-Significant
Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment.			
4.8 Hydrology and Water Quality			
Violate any water quality standards or waste discharge requirements.	Less-Than-Significant	No Mitigation Measures Are Required	Not Applicable
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 or substantial erosion or siltation on- or off-site; or create or contribute runoff water which would exceed the capacity	Less-Than-Significant	No Mitigation Measures Are Required	Not Applicable

Table 1.10-1
Summary of Impacts and Mitigation

Potential Impact	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
of the existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or otherwise substantially degrade water quality.			
4.9 Cultural Resources/Tribal Cultural Resources			
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Potentially Significant	*4.9.1 A paleontological monitoring program shall be required during all earth-moving operations reaching beyond the depth of two feet in all but the southernmost portion of the Project site (and in that portion as well if paleontologically sensitive sediments are identified in the field). The monitoring program shall be developed in accordance with the provisions of CEQA as well as the proposed guidelines of the Society of Vertebrate Paleontology (2010), and shall include but not be limited to the following components:* • *Excavations in sediments identified as likely to contain fossil remains shall be monitored for potential paleontological resources. The monitor shall be prepared to quickly salvage fossils as they are unearthed to avoid construction delays, and shall collect samples of sediments that are likely to contain fossil remains of small vertebrates or in vertebrates. However, the monitor must have the power to temporarily halt or divert grading equipment to allow for the removal of abundant or large specimens.*	Less-Than-Significant

Table 1.10-1
Summary of Impacts and Mitigation

Potential Impact	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
		• *Collected samples of sediment shall be processed to recover small fossils, and all recovered specimens shall be identified and curated at a repository with permanent retrievable storage.* • *A report of findings, including an itemized inventory of recovered specimens, shall be prepared upon completion of the procedures outlined above. The report shall include a discussion of the significance of the paleontological findings, if any. The report and the inventory, when submitted to the City of Eastvale, would signify completion of the program to mitigate potential impacts on paleontological resources.*	
Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: • Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). • A resource determined by the lead agency, in its discretion and supported	Potentially Significant	*4.9.2 Monitoring Agreement. Prior to the issuance of a grading permit, the Project Applicant (Applicant) shall contact each consulting Native American tribe that has requested monitoring through consultation with the City during the AB 52 process and shall develop and implement a Tribal Monitoring Agreement (Agreement) with requesting tribe(s). Consulting tribes include Soboba Band of Luiseño Indians and Gabrieleño Band of Mission Indians-KIZH Nation. A copy of the Agreement shall be provided to the City of Eastvale Planning Department prior to the issuance of a grading permit.* *4.9.3 Tribal Cultural Resources (TCR) Monitor and Monitoring Plan. At least 30 days prior to application for a grading permit and before any*	Less-Than-Significant

Table 1.10-1
Summary of Impacts and Mitigation

Potential Impact	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		*grading, excavation, and/or ground-disturbing activities, the Applicant shall retain a Secretary of Interior Standards-qualified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown Tribal Cultural Resources (TCRs). The Project archaeologist, in consultation with the interested tribes identified at Mitigation Measure 4.9.2, and the developer(s), shall implement a TCR Monitoring Plan (Monitoring Plan).* *The Monitoring Plan shall include:* *A. Project[1] grading and development scheduling.* *B. Cultural sensitivity training for the construction staff to be held during required pre-grading/ground disturbance meeting(s).* *C. The development of a rotating or simultaneous schedule in coordination with the Applicant and the Project archaeologist for designated Native American tribal monitors representing consulting tribes during grading, excavation, and ground-disturbing activities on the site.* *D. The safety requirements, duties, scope of work, and Native American tribal monitors' authority to stop and redirect grading activities in coordination with all Project archaeologists.* *E. The protocols and stipulations that the developer(s), tribes, and Project archaeologist will follow in the event of TCR discoveries.*	

[1] Project and Project site include both Site 1 and Site 2 as described within this EIR.

Table 1.10-1
Summary of Impacts and Mitigation

Potential Impact	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
		4.9.4 Treatment and Disposition of Tribal Cultural Resources. If TCRs as defined at Public Resources Code section 21074, are encountered during Project ground-disturbing activities, the following TCR treatment and disposition procedures shall be implemented: *A. Temporary Curation and Storage. During construction, all encountered TCRs shall be temporarily curated in a secure location on-site or at the offices of the Project archaeologist. Any TCRs removed from the Project site shall be thoroughly inventoried with tribal monitor oversight of the process.* *B. Treatment and Final Disposition. The Applicant shall relinquish ownership of all TCRs, including sacred items, burial goods, and all archaeological artifacts and non-human remains. The Applicant shall relinquish the artifacts through reburial and/or curation as indicated below and shall provide the City Planning Department with documentation of same in a Final Report as specified below. If more than one tribe is involved with the Project and cannot come to a consensus as to the disposition of TCRs, TCRs in dispute shall be curated at the Western Science Center.* *1. Reburial on-site. If TCR reburial on-site is possible without adversely affecting the Project's design, in consultation with consulting tribe(s), accommodate the process for such on-site*	

Table 1.10-1
Summary of Impacts and Mitigation

Potential Impact	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
		reburial. The process for reburial shall include measures and provisions to protect the reburial area from any future impacts. Reburial shall not occur until all cataloguing and basic recordation have been completed. *2. Permanent Curation. A curation agreement with a qualified repository (Repository) in Riverside County that meets federal standards based on 36 Code of Federal Regulations Part 79. Any curated TCRs and associated records shall be transferred, including title, to the Repository, to be accompanied by payment of the fees necessary for permanent curation.* *3. Monitoring Report. Within 60 days of the completion of Project ground-disturbing activities, a Phase IV Monitoring Report (Report) shall be submitted to the City documenting monitoring activities conducted by the Project archaeologist and tribal monitors. The Report shall:* *a. Document the impacts to TCRs;* *b. Describe how each TCR mitigation measure was fulfilled;* *c. Document the type of recovered TCRs and the disposition of such resources;* *d. Provide evidence of the required cultural sensitivity training for the construction staff held during the required pre-grading/ground disturbance meeting(s);* *e. In a confidential appendix, include the*	

Table 1.10-1
Summary of Impacts and Mitigation

Potential Impact	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
		daily/weekly monitoring notes from the Project archaeologist. *f. Be submitted to the City, Eastern Information Center, and consulting tribes.* *4.9.5 Human Remains. Complementing mandated requirements of California Health and Safety Code Section 7050.5, and California Public Resources Code Section 5097.98(b), the following measure shall be implemented if any human remains are encountered in the course of Project development:* • *Following discovery and during assessment of any encountered human remains, work shall be diverted at least 50 feet from the site of encountered remains. The location(s) of encountered human remains shall be kept confidential and shall be secured to prevent disturbance. If left overnight, remains shall be covered with a muslin cloth and steel plate over the excavation to protect the remains. If this method of protection is not feasible, a guard shall be posted.*	

2.0 INTRODUCTION

2.0 INTRODUCTION

2.1 OVERVIEW

This Environmental Impact Report (DEIR or EIR) evaluates and discloses potential environmental impacts of the Lewis Retail Project (the Project). In summary, the Project would implement various commercial, retail, service, office, and civic uses within two noncontiguous properties, referred to as "Site 1" and "Site 2." Elements of the Project are further described at EIR Section 3.0, *Project Description*.

This EIR is an informational document intended to advise decision-makers and the general public of potentially significant environmental impacts of the Project. The EIR also identifies possible ways to preclude or minimize these potentially significant impacts (referred to as mitigation) and describes reasonable alternatives to the Project that may also reduce or avoid significant impacts. Having the authority to take action on the Project, the City of Eastvale will consider the information in this EIR in their evaluations of the proposal. The EIR findings and conclusions regarding environmental impacts do not control the City's discretion to approve, deny, or modify the Project, but instead are presented as information to aid the decision-making process.

2.2 AUTHORIZATION

This EIR has been prepared by the City of Eastvale in accordance with the *Guidelines for the Implementation of the California Environmental Quality Act (Guidelines)*, (Sections 15000-15387 of the California Code of Regulations), and the City *CEQA Guidelines (Guidelines)*. The Lewis Retail Project considered in this EIR is a "project," as defined at Section 15378 of the *Guidelines*. The *Guidelines* stipulate that an EIR must be prepared for any project that may have a significant impact on the environment. Upon its initial environmental

review, the City determined that the Lewis Retail Project may have a significant adverse impact on the environment and, therefore, the preparation of an EIR was required.

2.3 LEAD AND RESPONSIBLE AGENCIES

CEQA defines a "lead agency" as the public agency which has the principal responsibility for carrying out or approving a Project which may have a significant effect upon the environment. Other agencies, e.g., the California Department of Transportation (Caltrans), the South Coast Air Quality Management District (SCAQMD) or the Regional Water Quality Control Board (RWQCB), having certain authority or responsibility to issue permits for Project implementation, are designated as "responsible agencies." Both the lead agency and responsible agencies must consider the information contained in the EIR prior to acting upon or approving the Project. The City of Eastvale is the lead agency for the proposed Lewis Retail Project.

The City's address is:

City of Eastvale
12363 Limonite Avenue, Suite 910
Eastvale, CA 91752
Contact Person: Mr. Eric Norris, Planning Director

2.4 PROJECT APPLICANT

The Project Applicant is:

Lewis Development, LLC
1156 North Mountain Avenue
Upland, CA 91786

2.5 THE EIR PROCESS

When a public agency determines that there is substantial evidence that a project may have a significant effect on the environment, the agency must prepare an EIR before a decision is made to approve or deny the project. The purpose of the EIR is to disclose a project's potential environmental impacts and recommend measures to reduce effects of or avoid potentially significant impacts. The basic content of an EIR includes a description of the project under consideration and its objectives, a description of the existing project site and vicinity environmental conditions, a discussion of the potentially significant environmental effects of the project, recommended measures for reducing these effects, and identification and evaluation of feasible alternatives to the project which may also reduce potentially significant impacts of the proposal.

Typically, EIRs consist of two documents: a Draft EIR, distributed by the lead agency for review and comment by the general public and any interested governmental agencies; and a Final EIR, comprising responses to comments received on, together with any necessary modifications to, the Draft EIR. After the Draft EIR has been circulated for review and the Final EIR has been prepared, the EIR must be certified by the lead Agency as having complied with CEQA and considered by the agency's decision-making body before any action can be taken on a project.

When a public agency receives a complete project application or decides to undertake a project of its own, it first determines if the project is subject to environmental review under CEQA and, if it is, the agency then typically prepares an Initial Study (IS) to determine if the project has the potential to cause significant adverse environmental effects. The IS serves as a tool to help the agency determine if an EIR is needed and also helps determine what issues should be examined in the EIR. An agency may skip the Initial Study process if it is evident in the preliminary assessment of a project that an EIR will be required.

The EIR process is initiated by the distribution of a Notice of Preparation (NOP). Together with the Initial Study, the NOP is sent to agencies and interested individuals

to solicit their suggestions for appropriate issues and types of analysis to be included in the Draft EIR. When preparation of the Draft EIR has been completed, it is circulated to responsible agencies, other affected or interested agencies, and interested members of the public for review and comment. The review period for a Draft EIR is typically 45 days. To provide for appropriate consideration in the Final EIR, all comments and concerns regarding the Draft EIR should be received by the lead agency during this 45-day period.

Responses to comments received on the Draft EIR are prepared by the lead agency and included in the Final EIR. The Final EIR may also contain some additional information about the project's potential impacts and minor corrections or modifications to the Draft EIR. The Final EIR must be certified by the lead agency's decision-making body before, or in conjunction with, any action to approve or deny a project.

CEQA requires that the EIR only address significant adverse impacts. The *CEQA Guidelines* suggest thresholds or standards which define the significance of various types of impacts. The *CEQA Guidelines* also state that the significance of impacts should be considered in relation to their severity and probability of occurrence. However, ultimately, the determination of the significance of impacts is at the discretion of the lead agency. The identification of significant impacts in the EIR does not prevent an agency from approving a project. A project may be approved if the lead agency determines that impacts cannot be feasibly mitigated below a level of significance and if the agency determines that there are important overriding considerations, such as social and economic benefits, which are sufficient to justify approval of the considered project.

2.6 EIR CONTENT AND FORMAT

This Draft EIR is organized into seven Chapters or Sections, each dealing with a separate aspect of the required content of an EIR as described in the *Guidelines*. A summary of the project's impacts and recommended mitigation measures is included in Chapter 1.0. An introduction and general overview of the environmental process and the format of this EIR can be found within Chapter 2.0. Chapter 3.0 contains a complete

description of the Project, including its location, objectives, and physical and operational characteristics. The complete and detailed impact analysis is presented in Chapter 4.0. The topical issues mandated by CEQA dealing with cumulative impacts, alternatives, long-term implications of the Project, and energy conservation are found in Chapter 5.0. Chapter 6.0 lists and defines the acronyms and abbreviations contained in this document. Chapter 7.0 lists the information sources and persons consulted during the environmental analysis process, and presents a list of the persons who prepared the Draft EIR. The Initial Study and responses to the NOP, with supporting technical studies, are provided at EIR Appendix A.

Chapter 4.0, *Environmental Impact Analysis*, is the focal component of the Draft EIR. The environmental impact analysis has been organized into a series of sections, each addressing an environmental topic or area of concern identified through the Initial Study process (e.g., Land Use and Planning, Traffic and Circulation, Air Quality, Noise, etc.). To assist the reader in understanding the organization and basis of the analysis, the sections covering each individual environmental topic are typically divided into the following subsections:

- **Reader's Abstract:** An introductory reader's abstract, summarizing content and findings, is provided at the beginning of each topical section.

- **Introduction:** The introduction summarizes the content of the section and references other important studies and reports, such as technical studies appended to the EIR.

- **Setting:** This subsection describes existing environmental conditions that may be subject to change as a result of implementation of the Project. Regulatory settings are also discussed where applicable. Separate descriptions of existing environmental conditions are provided for each environmental topic.

- **Standards of Significance:** Before potential impacts are evaluated, the standards which will serve as the basis for judging significance are presented.

- **Potential Impacts and Mitigation Measures:** This subsection discusses and substantiates potential Project environmental impacts. Based on the standards of significance, impacts are categorized as either potentially significant or less-than-significant. If the impacts are considered to be potentially significant, mitigation measures are proposed to reduce the impacts. At the conclusion of each discussion for a potentially significant impact, a determination is made as to whether the impact can be reduced to a less-than-significant level with the application of feasible mitigation measures. Potentially significant impacts that cannot be mitigated to levels that would be less-than-significant are identified as significant and unavoidable.

The summary presented in Chapter 1.0 provides a comprehensive overview of the Project's environmental impacts. For a more detailed description of Project impacts, it is recommended that the reader review the Project Description (Chapter 3.0), and then read the sections on the topics of interest presented in the environmental impact analysis (Chapter 4.0).

2.7 INTENDED USE OF THIS EIR

This EIR addresses the potential environmental effects of the implementation and operation of the proposed Lewis Retail Project (the Project). The City of Eastvale (City) is the lead agency for the purposes of CEQA because it has the principal responsibility and authority for deciding whether or not to approve the Project, and how it will be implemented. As the lead agency, the City is also responsible for preparing the environmental documentation for the Project in compliance with CEQA.

The lead agency will employ this EIR in its evaluation of potential environmental impacts resulting from, or associated with, approval and implementation of the Project, to include potential effects of the Project's component elements. It is anticipated that

this EIR may also be employed by responsible agencies, e.g., the Air Quality Management District(s), Regional Water Quality Control Board(s), *et al*., for their related or dependent environmental analyses.

2.8 DOCUMENTS INCORPORATED BY REFERENCE

Section 15150 of the State *CEQA Guidelines* permits and encourages an environmental document to incorporate, by reference, other documents that provide relevant data. The documents summarized below are incorporated by reference, and the pertinent material is summarized within this EIR, where that information is relevant to the analysis of potential Project impacts. All documents incorporated by reference are available for review at, or can be obtained through, the City of Eastvale Planning Department. Technical studies cited below were specifically developed in conjunction with the Project, and are included in their entirety in the CD-ROM attached to the EIR's back cover.

2.8.1 Eastvale General Plan and Zoning Code

The City of Eastvale General Plan (General Plan) establishes Goals and Policies and provides guidance for future development of the City. The General Plan provides the guidance necessary for successful implementation of General Plan Policies.

The Eastvale General Plan was developed consistent with State of California General Plan Guidelines and contains the following state-mandated elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety. The City's General Plan also includes the topics of Design, Economic Development, Healthy Community, and Sustainability. All proposed development projects within the City are evaluated for consistency with the intent and purpose of the applicable General Plan land use designation(s) and related General Plan Policies.

2.8.2 Project Technical Studies/EIR Appendices

Following are summary descriptions of documents and supporting technical studies which are appended to the main body of the Draft EIR. Working titles of these documents generically refer to the Project and its physical attributes, and may not necessarily reflect the currently assigned "Lewis Retail Project" development title.

2.8.2.1 Initial Study, NOP, and NOP Responses - EIR Appendix A

The Project Initial Study (IS), Notice of Preparation (NOP) and responses received pursuant to distribution of the IS/NOP are presented at EIR Appendix A. Based on the Initial Study and responses to the NOP, the EIR has been focused on the topics of: Land Use and Planning; Transportation/Traffic; Air Quality; Global Climate Change and Greenhouse Gas Emissions; Noise; Geology and Soils; Hazards and Hazardous Materials; Hydrology and Water Quality; and Cultural Resources/Tribal Resources.

2.8.2.2 Traffic Impact Analysis - EIR Appendix B

The detailed evaluation of Project-related traffic/transportation impacts is documented in *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018 (TIA). The traffic issues related to the Project have been evaluated within the TIA in the context of the California Environmental Quality Act and as directed by the City of Eastvale.

2.8.2.3 Air Quality Impact Analysis - EIR Appendix C

Potential air quality impacts of the Project, including potential short-term construction-source emissions impacts and potential long-term operational-source emissions impacts are assessed within the *Polopolus Air Quality Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018.

2.8.2.4 Greenhouse Gas Analysis - EIR Appendix D

Detailed analysis of the Project's potential Greenhouse Gas and Global Climate Change impacts are presented in *Polopolus Greenhouse Gas Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018.

2.8.2.5 Noise Impact Analysis - EIR Appendix E

Potential noise impacts of the Project, including potential short-term construction-source noise impacts and potential long-term operational-source noise impacts are assessed within the *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018.

2.8.2.6 Geotechnical Investigation - EIR Appendix F

An assessment of the soils and geological conditions affecting the Project site and vicinity properties is presented in: *Draft Geotechnical Investigation Report for 21.22-acre Polopolus Site Proposed Commercial Development* (Converse Consultants) May 12, 2017. The Geotechnical Investigation also provides recommendations pertaining to geotechnical aspects of constructing the Project.

2.8.2.7 Phase I /Phase II Environmental Assessments - EIR Appendix G

Potential hazards/hazardous conditions affecting the Project site and surrounding properties are evaluated in: *Phase I Environmental Site Assessment Report, 7270 Hamner Avenue, Eastvale, California* (Converse Consultants) August 4, 2017; *Limited Phase II Environmental Site Assessment Report, Polopolus Eastvale, 7270 Hamner Avenue, Eastvale, California, APN 152-060-003* (Converse Consultants) May 5, 2017; *Phase I Environmental Site Assessment, Riverside County Department of Facilities Management, Proposed Fire Station – Al's Corner, 7010 Hamner Avenue, Corona, Riverside County, California 92880, APN 152-050-003* (EEI Geotechnical & Environmental Solutions) December 13, 2007; *Phase II Environmental Site Assessment Report, Potential County Fire Station Purchase (County #30-EO), Al's Corner Project Site, 7010 Hamner Road - APN 152-050-003, Corona, California* (EEI Geotechnical & Environmental Solutions) December 12, 2007; and *Comprehensive Asbestos Containing Materials Survey and Limited Lead-Based Paint Investigation, Al's Corner Project, Located at 7010 Hamner Ave, Corona, California* (Altec Testing and Engineering, Inc.) December 3, 2007.

2.8.2.8 Hydrology Study - EIR Appendix H

Hydrology and water quality considerations, respectively, are addressed in *Polopolus Commercial Project, TPM 37492, Preliminary Hydrology Report, Eastvale* (Albert A. Webb Associates) March 2018; and *Preliminary Water Quality Memorandum for the Polopolus Project Site* (Albert A. Webb Associates) March 7, 2018.

2.8.2.9 Cultural Resources/Tribal Cultural Resources

A Cultural Resources Investigation of the Project site was completed in June 2017. This Investigation, prepared by CRM TECH, included a visual survey of the Project site, a review of previous cultural resource studies, and correspondence with Native American tribal representatives. In order to prevent the inappropriate public exposure of sensitive cultural resource locations, the Cultural Resources survey report has not been included in the appendices of this Draft EIR. Rather, these reports listed below, are available upon request through the City of Eastvale Planning Department.

- *Paleontological Resources Assessment Report: Polopolus-Eastvale Project, Assessor's Parcel Numbers 152-060-002 and -003, 7270 Hamner Ave, City of Eastvale, Riverside County, California* (CRM TECH) June 19, 2017.
- *Phase I Historical/Archaeological Resources Survey: Polopolus-Eastvale Project, Assessor's Parcel Numbers 152-060-002 and -003, 7270 Hamner Ave, City of Eastvale, Riverside County, California* (CRM TECH) June 19, 2017.

3.0 PROJECT DESCRIPTION

3.0 PROJECT DESCRIPTION

3.1 OVERVIEW

The proposed Lewis Retail Project (Project), including all proposed facilities, on- and off-site supporting improvements, and associated discretionary actions comprise the Project considered in this Draft Environmental Impact Report (Draft EIR, EIR). The Project would implement various commercial, retail, service, office, and civic uses within two noncontiguous properties, referred to as "Site 1" and "Site 2."[1] Unless otherwise differentiated herein, Site 1 and Site 2 are referred to collectively as the Project Site. A summary of proposed land uses and scope of development within both Sites is presented at Table 3.1-1.

Development of Site 1 and Site 2 is anticipated to proceed independently. Nonetheless, to establish a likely maximum impact scenario and provide for full disclosure of the Project's potential environmental impacts, concurrent development of Sites 1 and 2 is assumed in this EIR. The City has determined that comprehensive evaluation of the Project within this single EIR, rather than evaluation of the various Project components under multiple CEQA documents, is the appropriate, factual, and most effective means to evaluate and disclose the Project's potential environmental impacts.

[1] Site 2 is also commonly referred to as "Al's Corner."

Table 3.1-1
Project Development Summary

Site 1 - Approximately 23 Acres (Gross)	
Use	**Building Area/Scope**
Gas station w/market	8 Vehicle Fueling Positions (VFP)
Restaurant: Fast food w/drive-through	3,500 Square Feet (SF)
Restaurant: Coffee shop w/drive-through	2,000 SF
Restaurant: High-turnover sit-down	6,000 SF
Restaurant: Fast food w/o drive-through	4,000 SF
Retail	4,000 SF
Medical office	10,000 SF
Hotel	130 Rooms
Civic: Government office (City Hall)	40,000 SF
Civic: Public library	25,000 SF
Site 2 - Approximately 1.38 Acres (Gross)	
Use	**Building Area/Scope**
Gas station w/market and carwash	16 VFP (Market +/- 3000 SF)

Source: Lewis Retail Project Development Concept, February 2018.

For analytic purposes, a Project Opening Year of 2019 is assumed. Unless otherwise noted, the analyses presented assume Project facilities would be open and operating 24-hours/day, 7 days/week.

3.2 PROJECT LOCATION

Project Site 1 is located east of the existing terminus of Schleisman Road and Hamner Avenue, in the City of Eastvale. Site 1 comprises Assessor's Parcel Numbers (APNs) 152-060-002, -003. Project Site 2 is located at the southwest corner of Riverboat Drive and Hamner Avenue, approximately one block north of Site 1. Site 2 comprises APNs 152-350-010, -011. Regional and vicinity contexts of Sites 1 and 2 are presented at Figures 3.2-1 and 3.2-2, respectively.

Source: Google Earth; Applied Planning, Inc.

Figure 3.2-1
Regional Location

Project Site Boundary

N

NOT TO SCALE

Source: Google Earth; Applied Planning, Inc.

Figure 3.2-2
Project Location

3.3 EXISTING LAND USES

Aerial photos of the Project Sites are presented at Figure 3.3-1 and are described below. Existing vicinity land uses are denoted at Figure 3.3-2.

3.3.1 Project Site Land Use

3.3.1.1 Site 1

Site 1 comprises approximately 23 acres (gross) under private ownership. Multiple structures exist in the westerly portion of the Site, including a private residence, abandoned greenhouse, storage sheds and in-ground swimming pool. Site 1 also evidences several abandoned storage tanks, two groundwater wells, irrigation risers and above-ground utilities. Debris piles containing soil, rebar, concrete, and wood are present in the southeasterly portion of Site 1. Other debris piles composed of dead trees and potting containers exist in various other Site 1 locations.

Site 1 elevations range from 645 feet above mean sea levels (MSL) to approximately 596 feet MSL. The westerly portion of the Site is essentially level, with a gentle gradient sloping away from the center of the Site towards the south and west. The gradient in the easterly portion of Site 1 trends moderately downward from north to south.[2]

3.3.1.2 Site 2

Site 2 comprises approximately 1.38 acres (gross) and is owned by the City. Site 2 is a vacant disturbed property populated with scattered non-native vegetation. Site 2 elevations range from approximately 625 – 630 feet MSL. Site 2 evidences no distinctive features, topographic or otherwise.[3]

[2] *Draft Geotechnical Investigation Report for 21.22-Acre Polopolus Site Proposed Commercial Development* (Converse Consultants) May 12, 2017, Executive Summary, p. iii.

[3] Google Earth aerial photography, imagery date 10/21/2016; accessed February 12, 2018.

Site 1 - View Easterly

Site 1 - View Southeasterly

Site 2 - View Southerly

Source: City of Eastvale

appliedplanning inc

Figure 3.3-1
Project Area Aerial Photos

Source: Google Earth; Applied Planning, Inc.

Figure 3.3-2
Vicinity Land Uses

3.3.2 Vicinity Land Uses

3.3.2.1 Site 1

Properties abutting Site 1 to the north and east are developed with single-family residential uses. Site 1 is bounded by Hamner Avenue to the west. Westerly of Site 1, across Hamner Avenue and north of Schleisman Road, properties are vacant; south of Schleisman Road, properties are developed with single-family residential uses. Southerly of Site 1 is the Silverlakes Sports Complex, a major soccer and equestrian sports facility in the City of Norco.

3.3.2.2 Site 2

Properties abutting Site 2 to the west are developed with single-family residences. Southerly of Site 2 is Riverside County Fire Station No. 27. Northerly of Site 2, at the northwest corner of Riverboat Drive at Hamner Avenue are commercial/retail uses. Westerly of these commercial/retail uses, properties are developed with single-family residences. Northeasterly of Site 2, across the intersection of Riverboat Drive at Hamner Avenue, and easterly of Site 2, across Hamner Avenue, properties are developed with single-family residences.

3.4 PROJECT ELEMENTS

3.4.1 Development Concept

Table 3.4-1 summarizes the land uses and the maximum potential Project development scope evaluated in this EIR. As an initial development action, the Applicant and Lead Agency are proposing a lesser increment of development summarized at Table 3.4-2, and illustrated at Figure 3.4-1. For all proposed uses, the proposed increment of development is less than or equal to the maximum potential development scope evaluated in this EIR, therefore, impacts of this initial increment of development are fully addressed within the scope of analysis presented in this EIR. Future variations or revisions to later phases of development, or any substantive change to the Project evaluated in this EIR would, at the discretion of the Lead Agency, be subject to subsequent environmental analysis.

Table 3.4-1
Project - Potential Maximum Development Summary

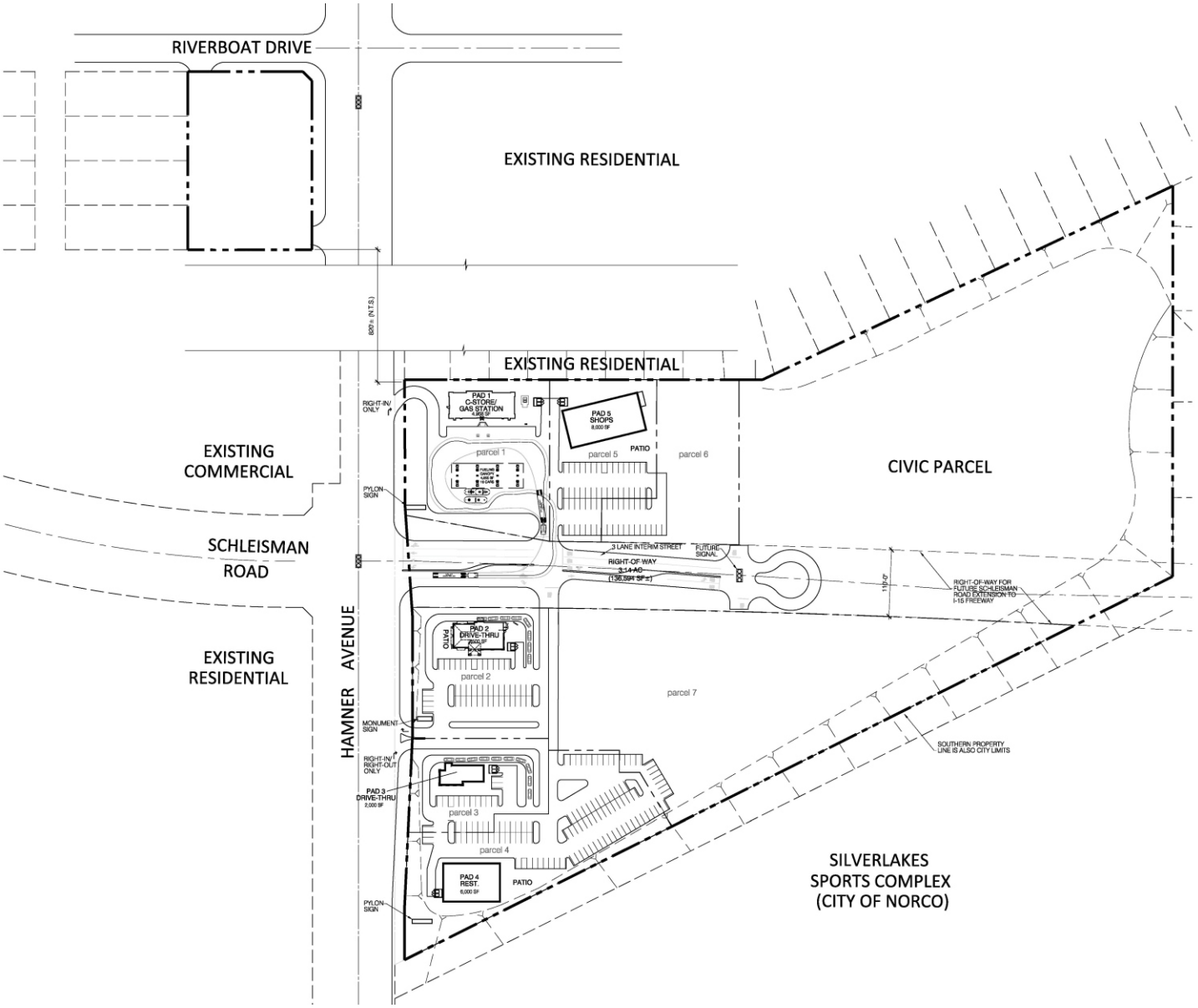
Site 1 - Approximately 23 Acres (Gross)	
Use	**Building Area/Scope**
Gas station w/market	8 Vehicle Fueling Positions (VFP)
Restaurant: Fast food w/drive-through	3,500 Square Feet (SF)
Restaurant: Coffee shop w/drive-through	2,000 SF
Restaurant: High-turnover sit-down	6,000 SF
Restaurant: Fast food w/o drive-through	4,000 SF
Retail	4,000 SF
Medical office	10,000 SF
Hotel	130 Rooms
Civic: Government office (City Hall)	40,000 SF
Civic: Public library	25,000 SF
Site 2 - Approximately 1.38 Acres (Gross)	
Use	**Building Area/Scope**
Gas station w/market and carwash	16 VFP

Source: Lewis Retail Project Development Concept, February 2018.

Table 3.4-2
Initial Increment Development Summary

Site 1 - Approximately 23 Acres (Gross)	
Use	**Building Area/Scope**
Gas station w/market	8 Vehicle Fueling Positions (VFP)
Restaurant: Fast food w/drive-through	3,500 Square Feet (SF)
Restaurant: Coffee shop w/drive-through	2,000 SF
Restaurant: High-turnover sit-down	6,000 SF
Restaurant: Fast food w/o drive-through	4,000 SF
Retail	4,000 SF
Site 2 - Approximately 1.38 Acres (Gross)	
Use	**Building Area/Scope**
Drive-through Carwash	5,000 SF

Source: Lewis Retail Project Development Concept, February 2018.



Source: GK Pierce Architects (1/16/18)

Figure 3.4-1
Site Plan Concept

3.4.2 Demolition

As an initial action, all existing structures and surface improvements within the Project Site would be demolished. Demolition activities would occur over a period of approximately 20 work days. All demolition debris would be recycled, reclaimed, and/or disposed of consistent with CalGreen requirements, or as otherwise specified by the City.

3.4.3 Site Preparation/Grading

Following demolition activities, the Project Site would be cleared of any remaining surface features, graded and prepared for construction of the Project buildings and supporting facilities. Preliminary grading concepts indicate that cut (+/- 241,600 cubic yards) and fill (+/- 241,600 cubic yards) would be balanced within Site 1, with substantive import or export of soil. Grading earthwork estimates account for soil removal, over excavation, compaction, etc. All grading activities would comply with City specifications and requirements.. For the purposes of the EIR Analysis, site preparation and grading activities are estimated to occur over a period of approximately 30 working days (4 – 6 weeks).

3.4.4 Building/Facilities Construction/Paving

Construction of buildings, parking areas, landscape/hardscape, etc., within the Project Site is assumed to occur over a period of approximately 270 working days (9 – 10 months). For the purposes of the EIR analysis, it is assumed that all buildings and supporting facilities would be constructed and operational by the Project Opening Year (2019).

Construction equipment; equipment maintenance areas; fuel, solvents, lubricants, etc. and shall be staged as far as practical from adjacent residential areas. Fuels, solvents, lubricants shall be stored, used, and disposed of consistent with City and manufactures requirements.

3.4.5 Access and Circulation

All Project access and circulation improvements would be designed and constructed consistent with City design and engineering standards. More specifically, roadways adjacent to the Project, site access points and site-adjacent intersections will be

constructed to be consistent with the identified roadway classifications and respective cross-sections in the City of Eastvale General Plan Circulation Element. On-site traffic signing and striping plans would be subject to City review, with City-approved signing and striping plans to be incorporated in final Project construction plans. Sight distance at each Project access point would be reviewed for conformance with standard Caltrans and City of Eastvale standards, with City-approved access plans to be incorporated in final Project construction plans. Improvements specific to Site 1 and Site 2 are summarized below.

3.4.5.1 Site 1

Primary access to Site 1 would be provided by the easterly extension of Schleisman Road at Hamner Avenue. Schleisman Road would be constructed as a 3-lane interim street, within a right-of-way of up to 134 feet, with a temporary cul-de-sac terminus in the central portion of Site 1.[4] The existing traffic signal at the intersection of Schleisman Road at Hamner Avenue would be maintained under the Project, modified as needed to reflect the improvements to Schleisman Road and Hamner Avenue at this location.

As part of the Project, lane geometrics at this intersection would be modified as summarized below:

- Northbound Approach: One left turn lane with 300-feet of storage, two through lanes, and a right turn lane with 200-feet of storage. The northbound right turn lane should accommodate overlap phasing;

- Southbound Approach: One left turn lane with 300-feet of storage, one through lane and one shared through-right turn lane;

[4] The Project access/circulation concept also reserves dedication for Schleisman Road within Site 1, allowing for its planned construction on an alignment connecting easterly to the future interchange of Schleisman Road at Interstate 15 (I-15).

- Eastbound Approach: Two left turn lanes with 300-feet of storage, one through lane, and one right turn lane. The eastbound right turn lane currently accommodates overlap phasing;

- Westbound Approach: Two left turn lanes with 300-feet of storage, one through lane and one right turn lane.

The internal circulation concept for Site 1 provides for future signalization of Schleisman Road at an anticipated north – south street alignment central to the Site. The current [February 2018] Site 1 access concept provides right-in, right-out access from Hamner Avenue southerly of Schleisman Road; and right-in only access from Hamner Avenue northerly of Schleisman Road.[5]

Adjacent to Site 1, the Project would also construct Hamner Avenue at its ultimate half-section pursuant to City requirements and as reflected in the City of Eastvale General Plan Circulation Element. Site adjacent improvements would include all pavement section(s), curb, gutter, sidewalks, landscaping, and other facilities as required by the City.

3.4.5.2 Site 2

Site 2 access would be provided by a STOP-controlled driveway connecting northerly to Riverboat Drive; and a STOP-controlled driveway connecting easterly to Hamner Avenue. The existing traffic signal and existing lane geometrics at the intersection of Hamner Avenue at Riverboat Drive would be maintained as currently configured.

[5] The Project Traffic Impact Analysis (TIA) conservatively assumes sole access to Site 1 via the above-noted easterly extension of Schleisman Road at Hamner Avenue. This effectively directs all Site 1 traffic to/through the Schleisman Road at Hamner Avenue intersection, establishing the likely maximum intersection level of service (LOS) impact at this location.

3.4.6 Parking

Unless otherwise specified herein, all parking areas, to include parking stalls, drive aisles, parking lot landscaping, hardscaping, and covered parking would be designed and constructed pursuant to City design and development standards.

3.4.7 Signs

Varied Project sign types are anticipated, including freestanding multi-tenant pylon and monument signs, building tenant signs, and directional and informational signage. Unless otherwise specified herein, all Project signs would conform to standards and requirements for the General Commercial Zone District as well as general standards and requirements presented at Eastvale Zoning Code Section 5.7, *Signs*.

3.4.8 Other Site Improvements and Amenities

Other site improvements and amenities implemented by the Project are anticipated to include, but would include but would not be limited to: sound attenuation/screening walls; perimeter definition and security fencing; landscape/hardscape improvements, including sidewalks and decorative pavement treatments at Project entries; and decorative/security lighting.

3.4.9 Infrastructure/Utilities

Infrastructure and utilities that would serve the Project Site are summarized below.

3.4.9.1 Water/Sanitary Sewer Services

Water and sewer services would be provided to the Project by the Jurupa Community Services District (JCSD). Water and sanitary sewer service extensions to the Project facilities would connect to existing facilities located in adjacent rights-of-way. Final locations and alignments of service lines, and connection to existing services would be as required by the City and JCSD. Wastewater would be conveyed from the Project for treatment at the Western Riverside County Regional Wastewater Authority (WRCRWA) plant.

3.4.9.2 Storm Water Management Systems

The Project stormwater management systems as approved by the City would implement drainage improvements, and facilities and programs acting to control and treat stormwater pollutants.

Site 1

To accommodate the anticipated initial increment of development, the developed portion of Site 1would drain generally westerly/southwesterly discharging to the "Line H" storm drain located in adjacent Hamner Avenue. More specifically, storm waters developed within Schleisman Road and the northwesterly portion of Site 1 would drain to an onsite storm drain connecting to Line H at the intersection of Schleisman Road and Hamner Avenue. The southwesterly portion of Site 1 would drain to the onsite storm drain system with connection to Line H at the southwesterly terminus Site 1. Prior to their discharge, developed storm waters would be treated via City-approved Modular Wetland systems.

Pending its ultimate development, the easterly portion of Site 1 would be mass-graded from northeast to southwest. The net effect of the proposed mass-grading would be to reduce stormwater runoff that currently discharges to properties located easterly of and southerly of Site 1. This is, under the mass-graded condition, approximately 0.7 acres would drain to an existing natural ditch along the Site 1 easterly boundary. This is less than the existing 1.9 acres that currently drains to this point. Under the mass-graded condition, approximately 1.5 acres would sheet flow southerly offsite. This is less than the 8.4 acres that drains southerly offsite in the existing condition. Developed on-site storm waters from the mass-graded area would be collected in two sediment basins to be constructed north and south of the proposed extension of Schleisman Road. Storm drains would be constructed connecting these basins westerly to the Line H storm drain located in Hamner Avenue.

Site 2

The Site 2 stormwater management system would direct developed storm waters southeasterly via an on-site storm drain that would connect to the proposed extension of

Line H within Hamner Avenue. Prior to their discharge, developed storm waters would be treated via City-approved Modular Wetland systems.

To facilitate stormwater conveyance from the Project Site and surrounding properties, the Project would install a 36-inch storm drain line within Hamner Avenue that would connect from the existing storm drain at the intersection of Hamner Avenue at Riverboat Drive to the intersection of Hamner Avenue at Schleisman Road.

The Project would implement a Storm Water Pollution Prevention Plan (SWPPP), and Water Quality Management Plan (WQMP) consistent with City requirements. In this manner, the Project would also comply with requirements of the City's National Pollutant Discharge Elimination System (NPDES) Permit and other water quality requirements or storm water management programs specified by the Santa Ana Regional Water Quality Control Board (SARWQCB, RWQCB). In combination, implementation of the Project SWPPP, WQMP, and compliance with NPDES Permit and RWQCB requirements act to protect and maintain City and regional water quality by preventing or minimizing potential stormwater pollutant discharges to the watershed.

3.4.9.3 Solid Waste Management

It is anticipated that Project-generated solid waste would be conveyed by existing service providers to either the El Sobrante Landfill in the City of Corona, or to the Lamb Canyon Landfill in Riverside County. The California Integrated Waste Management Act of 1989, with certain exceptions, required to diversion of 50% of all solid waste from landfill disposal or transformation by January 1, 2000. As of July 2012, AB 341 increased the State of California's waste diversion goal from 50 percent to 75 percent. AB 341 legislation also includes mandatory commercial and multi-family recycling to reduce greenhouse gas emissions.

The City is currently meeting or exceeding all state-mandated solid waste diversion targets acting to reduce potential impacts at serving landfills. The City remains committed to continuing its existing waste reduction and minimization efforts with the

programs that are available through the City. The Project would comply with the California Integrated Waste Management Act and AB 341 as implemented by the City.

Additionally, consistent with Section 5.408 "Construction Waste Reduction, Disposal, and Recycling" of the California Green Building Standards Code (CALGreen Code), as adopted by the City of Eastvale, a minimum of 50 percent of the Project's nonhazardous construction and demolition waste would be recycled or salvaged for reuse. To these ends, a Project Construction Waste Management Plan would be prepared consistent with Section 5.408.1.1 of the CALGreen Code. These measures would collectively reduce Project construction waste and would act to reduce demands on solid waste management resources.

3.4.9.4 Electricity

Electrical service to the Project would be provided by Southern California Edison (SCE). New lines installed by the Project would be placed underground. Alignment of service lines and connection to existing services would be as required by SCE. Any necessary surface-mounted equipment, such as transformers, meters, service cabinets, and the like, would be screened and would conform to building setback requirements.

To allow for and facilitate Project construction activities, provision of temporary SCE electrical services improvements would be required. The scope of such temporary improvements is considered to be consistent with, and is reflected within the total scope of development proposed by the Project. Similarly, impacts resulting from the provision of temporary SCE services would not be substantively different from, or greater than, impacts resulting from development of the Project in total.

3.4.9.5 Natural Gas

Natural gas service would be provided by The Gas Company. Existing service lines within Hamner Avenue would be extended to the Project uses. Alignment of service lines and connection to existing services would be as required by The Gas Company.

3.4.9.6 Communications Services

Communications services, including wired and wireless telephone and internet services are available through numerous private providers and would be provided on an as-needed basis. As with electrical service lines, all existing and proposed wires, conductors, conduits, raceways, and similar communications improvements within the Project Site would be installed underground. Any necessary surface-mounted equipment, e.g., terminal boxes, transformers, meters, service cabinets, etc., would be screened to the extent possible consistent with the need for access to these items.

3.4.10 Police, Fire Protection, and Emergency Medical Services

Police and fire protection services are currently available to the Project and are listed below.

- Fire Protection and Emergency Medical Services (CalFIRE/Riverside County Fire Department); and

- Police Protection Services (Eastvale Police Department, provided via contract with the Riverside County Sheriff's Department from the Jurupa Valley Station).

3.4.11 Energy Efficiency/Sustainability

The Project would comply with or would surpass standards established under the California Code Title 24, Part 6 (the California Energy Code) and California Green Building Standards Code (CALGreen; CCR, Title 24, Part 11) as implemented by the City of Eastvale.

3.4.12 Landscaping

Unless otherwise specified herein, all Project landscaping would conform to standards and requirements for the General Commercial Zone District as well as general standards and requirements presented at Eastvale Zoning Code Section 5.4, *Landscaping, General Provisions,* and Eastvale Municipal Code Section 14.24, *Water Efficient Landscape Regulations*.

Recognizing competing demands for available water resources, drought-tolerant plants would be used where appropriate, thereby reducing Project water consumption. The Project would install recycled water distribution system for landscaping and connect reclaimed water system(s) when available to the Project Site. Project use of reclaimed water for non-potable purposes reduces the Project's potable water demands act to increase the overall availability of potable water supplies within the JCSD service area.

3.5 PROJECT OBJECTIVES

The primary goal of the Project is the development of the subject site(s) with a productive mix of commercial, retail, service, and civic uses. Complementary Project Objectives include the following:

- To provide commercial, retail, and service uses that serve the local market area and beyond; and that attract new customers and businesses into Eastvale;

- Provide a new Civic Center accommodating Eastvale government offices and a County of Riverside public library;

- Improve and maximize economic viability of the currently vacant and underutilized Project Site through the establishment of commercial, retail, service, and civic uses;

- Maximize and broaden the City's sales tax base by providing local and regional tax-generating uses and by increasing property tax revenues;

- Provide commercial, retail, service, and civic uses within contemporary energy efficient buildings, at a location that is readily accessible by patrons and employees;

- Create additional employment-generating opportunities for the citizens of Eastvale and surrounding communities.

3.6 DISCRETIONARY APPROVALS AND PERMITS

Discretionary actions, permits and related consultation(s) necessary to approve and implement the Project would include, but are not limited to, the following.

3.6.1 Lead Agency Discretionary Actions and Permits

- CEQA Compliance/EIR Certification. The City must certify the EIR prior to, or concurrent with, any approval of the Project.

- Approval of a General Plan Amendment (Land Use) - From Medium Density Residential to Commercial Retail on both Sites 1 and 2. Existing and proposed General Plan Land Use designations are presented at Figure 3.6-1.

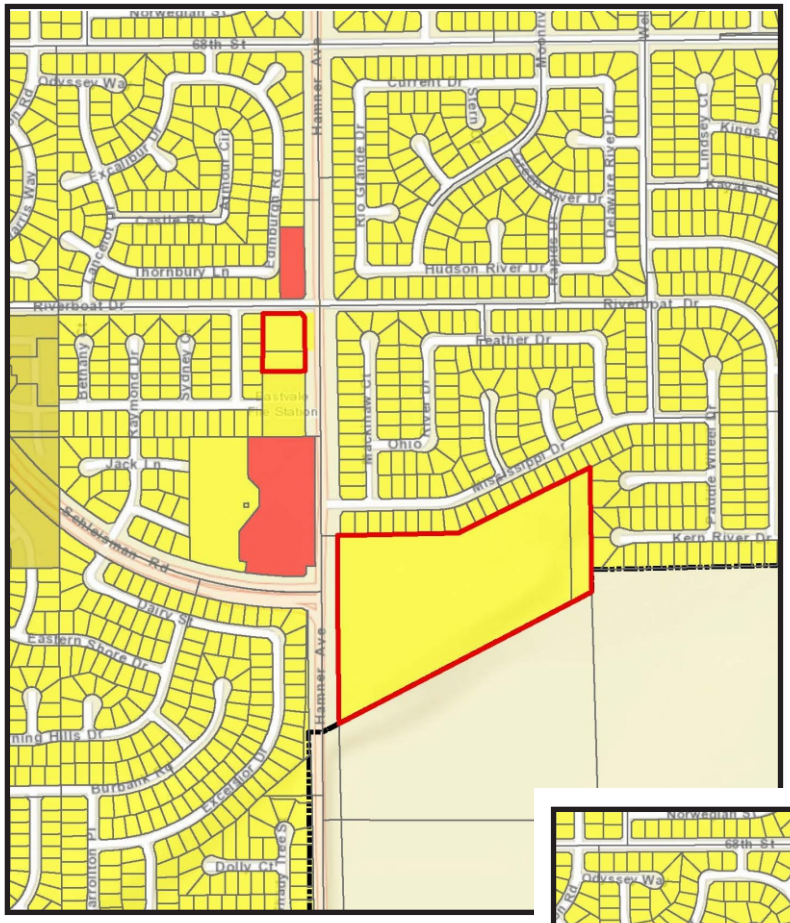
- Approval of a Zone Change - For Site 1 from Watercourse, Watershed and Conservation Areas (W-1) and Rural Residential (R-R) to General Commercial (C-1/C-P).[6] Existing and proposed Zoning designations are presented at Figure 3.6-2.

- Approval of a Tentative Parcel Map (TPM) for Site 1.

- Major Development Plan Reviews for Site 2 and a portion of Site 1 (please refer to the Site Plan Concepts for Site 1 presented previously at EIR Figure 3.4-1).

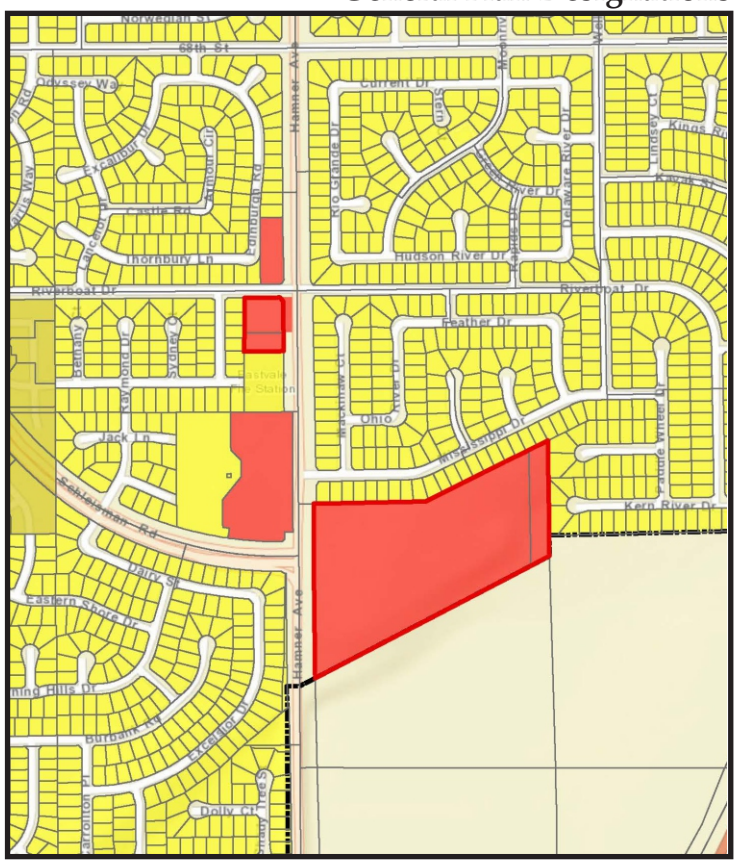
- Conditional Use Permits (CUPs) for the sale of alcohol for on-site and off-site consumption (at one or more restaurants on Site 1 and at the proposed gas station convenience store on Site 1) and for drive-through operations on Sites 1 and 2.

[6] Site 2 is currently zoned General Commercial (C-1/C-P). The proposed General Plan Amendment (Land Use) for Site 2 would establish General Plan-Zoning consistency for the Site.



Existing General Plan Designations

Proposed General Plan Designations



Legend

- Project Site
- Parcel Boundary
- Eastvale City Limit

General Plan Land Use

- Commercial Retail
- Medium Density Residential
- Medium High Density Residential

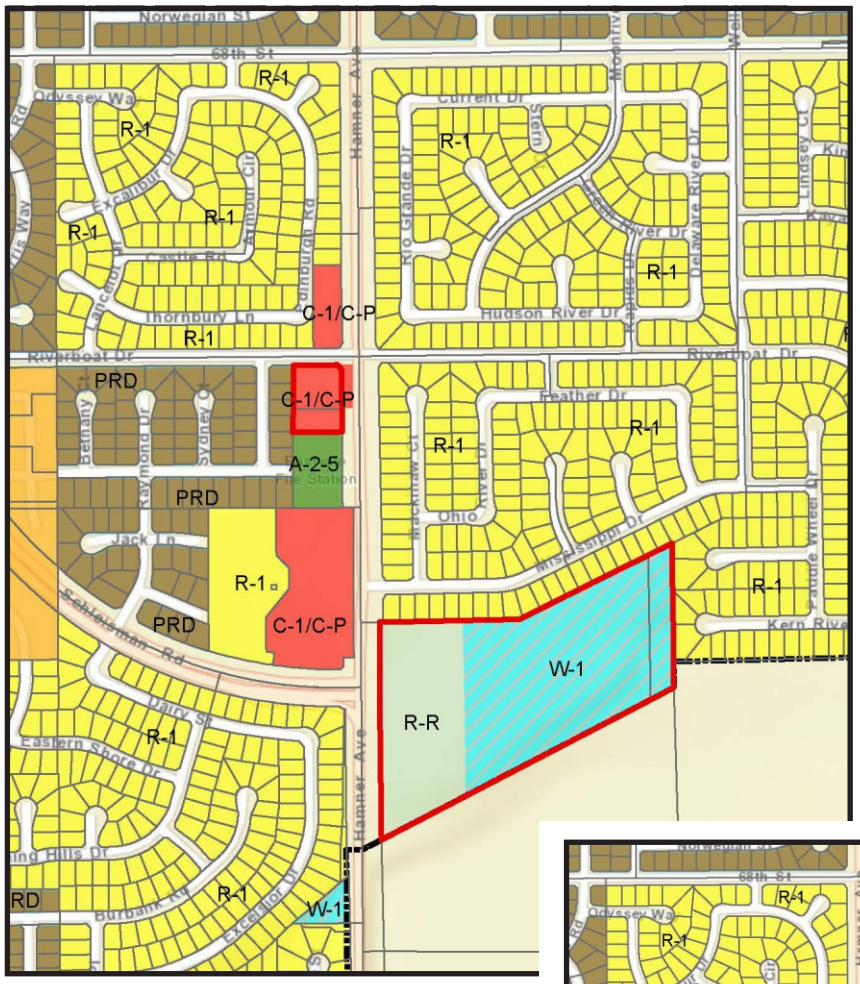
N

NOT TO SCALE

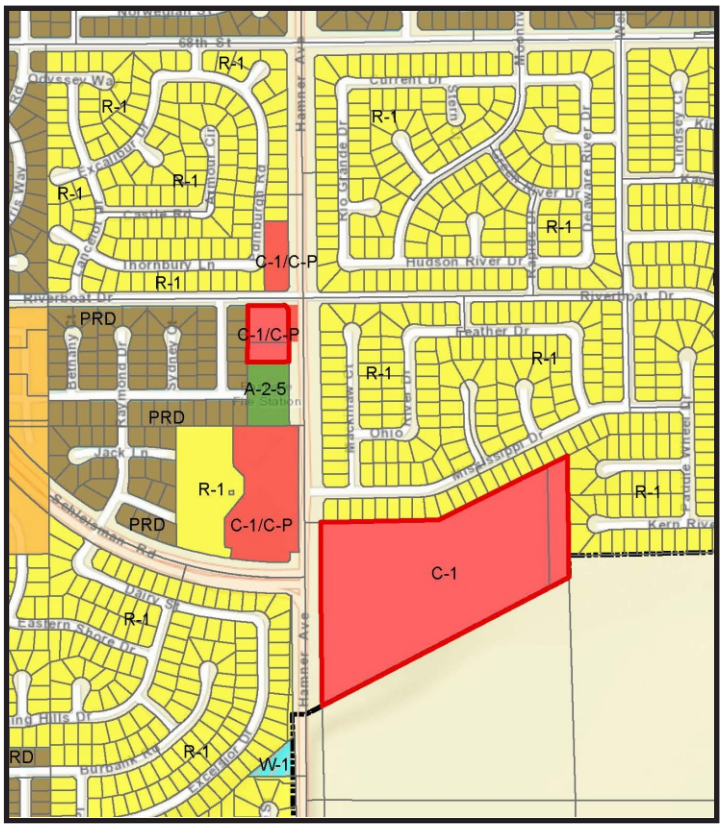
Source: Michael Baker; Applied Planning, Inc.

applied planning inc

Figure 3.6-1
Existing and Proposed General Plan Designations



Existing Zoning Designations



Proposed Zoning Designations

Legend

- Project Site
- Parcel Boundary
- Eastvale City Limit

Zoning Districts

- A-2-5 - Heavy Agriculture
- C-1/C-P - General Commercial
- PRD - Planned Residential Developments
- R-1 - One-Family Dwellings
- R-3 - General Residential
- R-R - Rural Residential
- W-1 - Watercourse/Watershed/Conservation

N

NOT TO SCALE

Source: Michael Baker; Applied Planning, Inc.

applied planning inc

Figure 3.6-2
Existing and Proposed Zoning Designations

- Approval of a Development Agreement (DA) between the City and the Applicant. Final terms of the DA are currently under negotiation.

- Additionally, the Project would require a number of non-discretionary construction, grading, drainage and encroachment permits from the City to allow implementation of the Project facilities.

3.6.2 Other Consultation and Permits

Based on the current Project design concept, anticipated consultation and permits necessary to realize the proposal would likely include, but are not limited to the following:

- Consultation with requesting Tribes as provided for under *AB 52, Gatto. Native Americans: California Environmental Quality Act*; and *SB 18, Burton. Traditional tribal cultural places*.

- Consultation with requesting Tribes as provided for under SB 18.

- Permitting may be required by/through the Regional Water Quality Control Board (RWQCB) pursuant to requirements of the City's National Pollutant Discharge Elimination System (NPDES) Permit;

- Permitting may be required by/through the South Coast Air Quality Management District (SCAQMD) for certain equipment or land uses that may be implemented within the Project Site;

- Permitting (i.e., utility connection permits) from serving utility providers including but not limited to approval from Jurupa Community Services District for water and wastewater connections;

- Other ministerial permits necessary to realize all on- and off-site improvements related to the development of the site.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

4.0 ENVIRONMENTAL IMPACT ANALYSIS

This chapter of the EIR analyzes and describes the potential environmental impacts associated with the adoption and implementation of the Lewis Retail Project (Project). The environmental impact analysis has been organized into a series of sections, each addressing a separate environmental topic. Environmental topics addressed in this EIR are presented in the following sections:

Section	Topic
4.1	Land Use and Planning
4.2	Transportation/Traffic
4.3	Air Quality
4.4	Global Climate Change and Greenhouse Gas Emissions
4.5	Noise
4.6	Geology and Soils
4.7	Hazards and Hazardous Materials
4.8	Hydrology and Water Quality
4.9	Cultural Resources/Tribal Cultural Resources

Within each of the above topical Sections, the discussion is typically divided into subsections which: describe the "setting" or existing environmental conditions; identify regulations and policies, which through their observance typically resolve many potential environmental concerns; identify thresholds of significance applicable to potential environmental effects of the Project; describe the significance of Project-related environmental effects in the context of applicable significance thresholds; and for impacts which are potentially significant or significant, recommend mitigation measures to eliminate or reduce their effects. In this latter regard, it is recognized that

the intent of the California Environmental Quality Act (CEQA) is to focus on significant, or potentially significant adverse effects of the Project, and therefore, mitigation is proposed only for potential impacts of this magnitude.

As noted above, before potential impacts are evaluated, the standards or thresholds which will serve as the basis for judging the relative significance of impacts are presented. Often thresholds serve as a general guide or gauge for determining an impact's potential relative significance, rather than defining its absolute effects. Subsequent to identification of relevant significance thresholds, potential Project-related effects and impacts are identified and explained. If an impact is considered to be potentially significant, mitigation measures are proposed to avoid the impact, or reduce its effects to the extent feasible. In determining the potential significance of impacts, the adequacy of existing policies and regulations in addressing each impact is taken into consideration. At the conclusion of each discussion for a potentially significant impact, a determination is made as to whether the impact can be reduced to a less-than-significant level with the application of mitigation measures.

In the environmental analysis, the following terms are used to describe the potential effects of the Project:

- **Less-Than-Significant Impacts**: Minor changes or effects on the environment caused by the Project which do not meet or exceed the criteria, standards, or thresholds established to gauge significance are considered to be less-than-significant impacts. Less-than-significant impacts do not require mitigation. In some cases, these impacts may appear to be potentially significant. However, existing public policies, regulations, and procedures adequately address these potential effects, thereby reducing them to a less-than-significant level, without the need for additional mitigation.

- **Potentially Significant Impacts**: Potentially significant impacts are defined as a substantial, or potentially substantial, adverse change in the environment. The *CEQA Guidelines* and various responsible agencies provide guidance for

determining the significance of impacts. However, the determination of impact significance is ultimately based on the judgment of the lead agency. Similarly, the establishment of any criteria to be used in evaluating the significance of impacts is the responsibility of the lead agency. Wherever possible, mitigation is proposed in the EIR to avoid or reduce the magnitude of potentially significant impacts.

- **Significant Impacts**: Impacts identified in the EIR which cannot be mitigated below thresholds of significance through the application of feasible mitigation measures are categorized as "significant."

- **Cumulative Impacts**: A discussion of cumulative impacts is provided in Section 5.0 of this environmental analysis. Cumulative impacts refer to the impacts of the Project as they are combined or interact with anticipated impacts of other vicinity projects and physical effects of projected ambient regional growth.

4.1 LAND USE AND PLANNING

4.1 LAND USE AND PLANNING

Abstract

This Section identifies and addresses potential impacts that may result from land use and planning decisions necessary to implement the Lewis Retail Project (the Project). Potential land use impacts that may occur due to the type of development proposed, its location or scale are discussed. Specifically, the discussion in this Section seeks to determine whether the Project would:

- *Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.*

Additionally, as substantiated in the Initial Study (EIR Appendix A), the Project's potential impacts under the following topics were previously determined to be less-than-significant and are not further discussed here:

- *Physically divide an established community; and*

- *Conflict with any applicable habitat conservation plan or natural community conservation plan.*

As supported by the analysis presented in this Section, potential land use and planning impacts of the Project are determined to be less-than-significant.

4.1.1 INTRODUCTION

Land use refers to occupation and employment of properties for various purposes such as commerce, industry, open space, community services, infrastructure, and residential uses. Local land use plans, policies, and development regulations control the types, configurations, and intensities of land uses within the community. Changes in land use patterns resulting from new development can affect overall characteristics of an area, and may result in physical impacts to the environment. This Land Use and Planning Section of the EIR focuses on the Project's consistency with applicable land use plans, policies and regulations, and its potential incompatibilities with land use districts and existing and proposed vicinity development.

4.1.2 SETTING

4.1.2.1 Location

The Project Site 1 component is located at the existing terminus of Schleisman Road and Hamner Avenue, within the City of Eastvale. Site 1 comprises Assessor's Parcel Numbers (APNs) 152-060-002, -003. The Project Site 2 component is located at the southwest corner of Riverboat Drive and Hamner Avenue, approximately one block north of Site 1. Site 2 comprises APNs 152-350-010, -011. Please refer to Figure 3.2-2, *Vicinity Location*, included in the preceding Section 3.0, *Project Description*.

4.1.2.2 Existing Land Uses

Existing vicinity and Project Area land uses are denoted at Figure 4.1-1.

Project Site Land Uses

Site 1

Site 1 comprises approximately 23 acres (gross) under private ownership. As described in the Project Draft Geotechnical Investigation, multiple structures exist in the westerly portion of the Site, including a private residence, abandoned greenhouse, storage sheds and in-ground swimming pool. Site 1 also evidences several abandoned storage tanks, two groundwater wells, irrigation risers and above-ground utilities. Debris piles containing soil, rebar, concrete, and wood are present in the southeasterly portion of Site 1. Other

debris piles composed of dead trees and potting containers exist in various other Site 1 locations.

Site 1 elevations range from 645 feet above mean sea levels (MSL) to approximately 596 feet MSL. The westerly portion of the Site is essentially level, with a gentle gradient sloping away from the center of the Site towards the south and west. The gradient in the easterly portion of Site 1 trends moderately downward from north to south.

Site 2

Site 2 comprises approximately 1.38 acres (gross) and is owned by the City. Site 2 is a vacant disturbed property populated with scattered non-native vegetation. Site 2 elevations range from approximately 625 – 630 feet MSL. Site 2 evidences no distinctive features, topographic or otherwise.

Vicinity Land Uses

Site 1

Properties abutting Site 1 to the north and east are developed with single-family residential uses. Site 1 is bounded by Hamner Avenue to the west. Westerly of Site 1, across Hamner Avenue and north of Schleisman Road, properties are vacant; south of Schleisman Road, properties are developed with single-family residential uses. Southerly of Site 1 is the Silverlakes Sports Complex.

Site 2

Properties abutting Site 2 to the west are developed with single-family residences. Southerly of Site 2 is Riverside County Fire Station No. 27. Northerly of Site 2, at the northwest corner of Riverboat Drive at Hamner Avenue are commercial/retail uses. Westerly of these commercial/retail uses, properties are developed with single-family residences. Northeasterly of Site 2, across the intersection of Riverboat Drive at Hamner Avenue, and easterly of Site 2, across Hamner Avenue, properties are developed with single-family residences.

Source: Google Earth; Applied Planning, Inc.

Figure 4.1-1
Existing Land Uses

4.1.2.3 General Plan Land Use and Zoning Designations

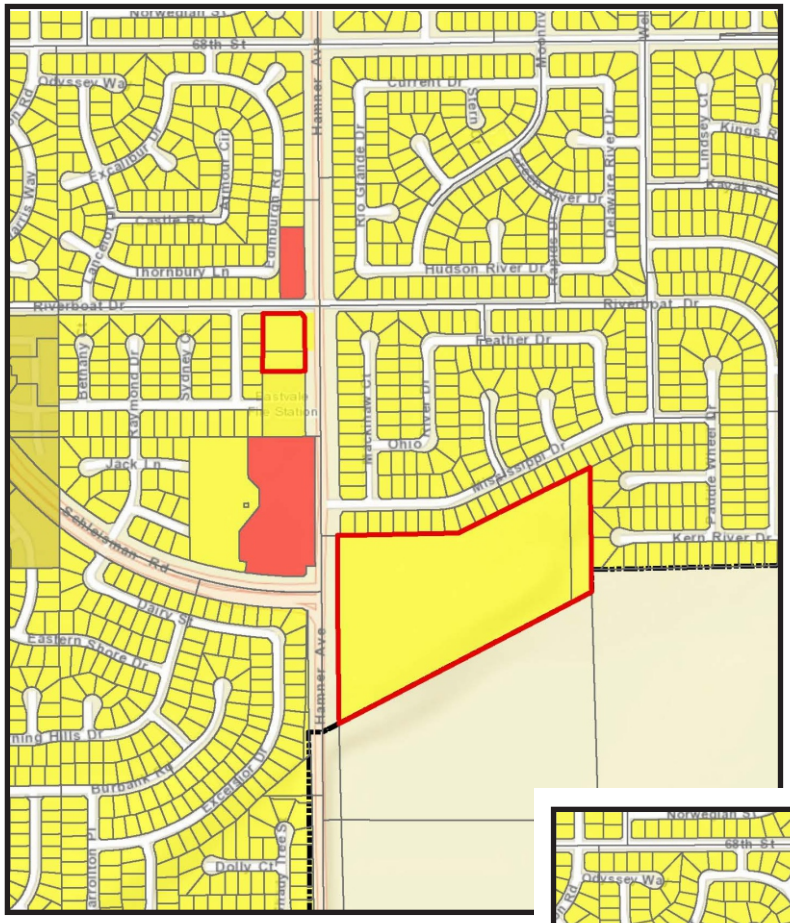
Certain land use designation amendments would be necessary to support the Project, as discussed below. Figures 4.1-2 and 4.1-3 illustrate the existing and proposed General Plan and Zoning designations of the Project site(s).

Site 1

Site 1 is currently designated as Medium Density Residential on the City of Eastvale General Plan land use map. Zoning of the site is Watercourse, Watershed, and Conservation Area (W-1) and Rural Residential (R-R). The Project would require amendments to these designations. Specifically, the General Plan land use designation would be changed to Commercial Retail, and the Zoning would become General Commercial (C-1/C-P).

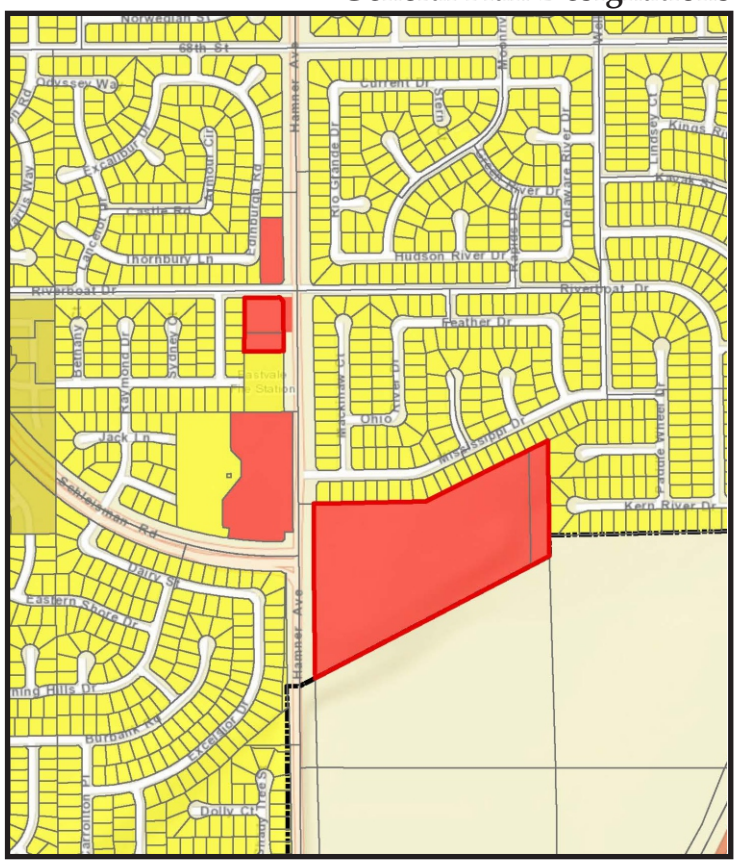
Site 2

The General Plan land use designation of Site 2 is Medium Density Residential. Current zoning is General Commercial (C-1/C-P). As part of the Project, the General Plan land use designation would become Commercial Retail. No zone change for Site 2 is necessary.



Existing General Plan Designations

Proposed General Plan Designations



Legend

- Project Site
- Parcel Boundary
- Eastvale City Limit

General Plan Land Use

- Commercial Retail
- Medium Density Residential
- Medium High Density Residential

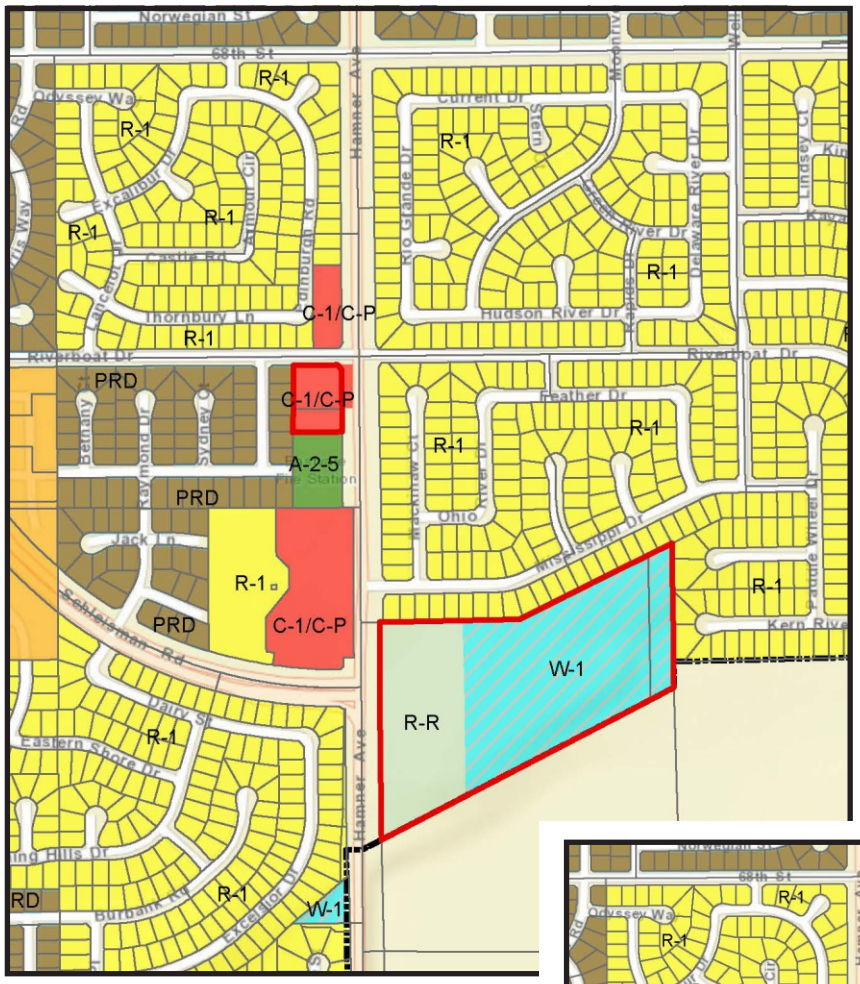
N

NOT TO SCALE

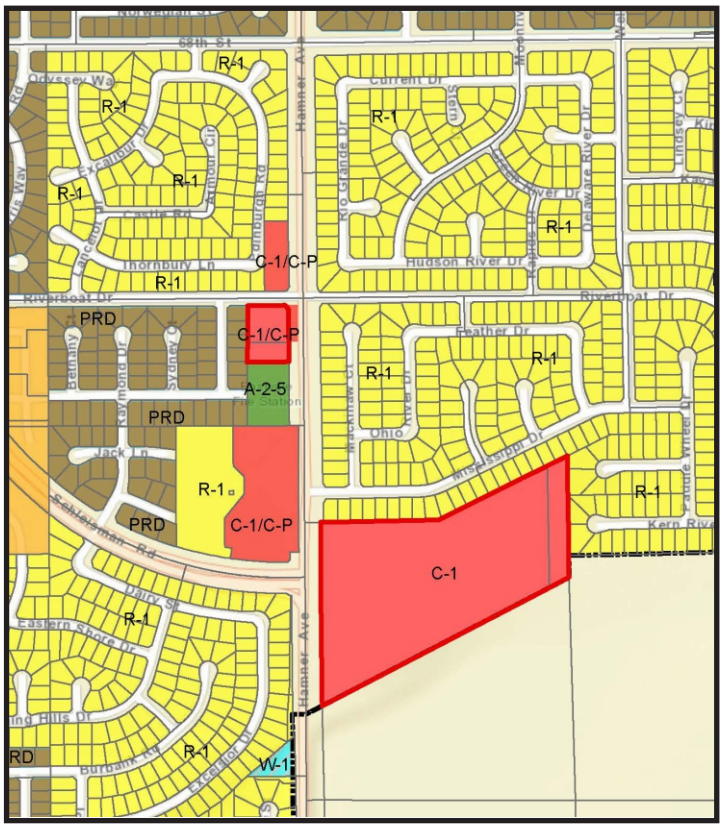
Source: Michael Baker; Applied Planning, Inc.

applied planning inc

Figure 4.1-2
Existing and Proposed General Plan Designations



Existing Zoning Designations



Proposed Zoning Designations

Legend

- Project Site
- Parcel Boundary
- Eastvale City Limit

Zoning Districts

- A-2-5 - Heavy Agriculture
- C-1/C-P - General Commercial
- PRD - Planned Residential Developments
- R-1 - One-Family Dwellings
- R-3 - General Residential
- R-R - Rural Residential
- W-1 - Watercourse/Watershed/Conservation

N

NOT TO SCALE

Source: Michael Baker; Applied Planning, Inc.

applied planning inc

Figure 4.1-3
Existing and Proposed Zoning Designations

4.1.3 LAND USE PLANS, GOALS, POLICIES, AND REGULATIONS

The Project would be subject to, and would be required to comply with, applicable land use plans, goals, policies, and regulations. Germane to the Project, these would include the City of Eastvale General Plan and the Eastvale Zoning Code. In many instances, compliance with existing policies and regulations eliminates, or substantially reduces, potential environmental effects. Existing policies and regulations, to some extent, also indicate community and regional values and prerogatives relative to environmental concerns.

4.1.3.1 Regional Planning

The Southern California Association of Governments (SCAG) is the federally recognized metropolitan planning organization (MPO) for this region, which encompasses over 38,000 square miles, and comprises representatives of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their potential impacts on regional planning programs. As Southern California's MPO, SCAG cooperates with the Southern California Air Quality Management District (SCAQMD), the California Department of Transportation (Caltrans), and other agencies in preparing regional planning documents.

In 2016, SCAG adopted the *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).* The 2016 – 2040 RTP/SCS vision encompasses general principles and themes that collectively work to shape the Southern California region. The 2016 – 2040 RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with Senate Bill 375, improve public health, and meet the National Ambient Air Quality Standards as set forth by the federal Clean Air Act.

4.1.3.2 City of Eastvale General Plan

The City of Eastvale General Plan (General Plan) was developed consistent with State of California General Plan Guidelines, and contains the following State-required elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety. The City's General Plan also includes the topics of Design, Economic Development, Healthy Community, and Sustainability. General Plan land use designations direct the general character and intensities of land uses within the City boundaries. Consistency with applicable General Plan Land Use Goals and Policies are addressed subsequently within this Section at Table 4.1-1.

4.1.3.3 Eastvale Zoning Code

Zoning is generally considered the primary tool for implementing a General Plan. In contrast to the long-term, broad-based outlook of the General Plan, zoning is a site-specific device designed to control the locations, densities, and intensities of various land uses. To prevent incompatible land use relationships, the zoning ordinance and accompanying map(s) designate different areas or zones for different types of land uses, and establish standards for development. These standards may specify requirements for lot sizes, lot coverages, building heights, setbacks, parking, landscaping, and other development parameters. The California Government Code, Section 65860, requires the City zoning designations to be consistent with the City General Plan.

The Eastvale Zoning Code provides zoning definitions and performance standards for all land uses within the City. Prior to issuance of building permits, the City would review the final Project site plan(s), facilities designs, and operations, to ensure consistency with applicable zoning requirements and performance standards.

4.1.4 STANDARDS OF SIGNIFICANCE

Appendix G of the California Environmental Quality Act Guidelines (*CEQA Guidelines*), as applied by the City of Eastvale, indicates that a Project will normally have a significant effect related to land use if it would:

- Physically divide an established community;

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or

- Conflict with any applicable habitat conservation plan or natural community conservation plan.

4.1.5 POTENTIAL IMPACTS AND MITIGATION MEASURES

4.1.5.1 Introduction

The following discussions focus on those areas where it has been determined that the Project may result in potentially significant land use and planning impacts, based on the previous discussions included within this Section and analysis included within the EIR Initial Study (EIR Appendix A). Of the CEQA threshold considerations identified above at Section 4.1.4, the Project's potential impacts under the following topics are determined to be less-than-significant, and are not further substantively discussed here: Please refer also to Initial Study Checklist Item 10., *Land Use and Planning*.

- Physically divide an established community; and

- Conflict with any applicable habitat conservation plan or natural community conservation plan.

4.1.5.2 Impact Statements

Potential Impact: *Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.*

Impact Analysis:

General Plan Consistency

The City of Eastvale General Plan Land Use Map currently designates both Site 1 and Site 2 as Medium Density Residential. The Project would require amendments to these designations. Specifically, the General Plan land use designations for both sites would be changed to Commercial Retail. The existing and proposed General Plan designations are illustrated at previous Figure 4.1-2.

The purpose of the General Plan Amendment is to provide a single land use designation that would permit the types of commercial retail uses contemplated by the Project. In this case, the Commercial Retail allows commercial retail uses at a neighborhood, community, and regional level, and therefore is the most appropriate land use designation for the Project land uses. Moreover, the Project's FAR of 0.22 would be within the General Plan's allowable FAR range of 0.20 to 0.35 for the Commercial Retail land use designation.

The City of Eastvale General Plan acknowledges (p. 1-9) that General Plan Amendments will occur over the life of the document in order to remain up to date and reflective of local issues and policies, and notes that Amendments may be initiated by the City, property owners, developers, and residents.

Zoning Consistency

The City of Eastvale Zoning Map designates Site 1 as Watercourse, Watershed, and Conservation Area (W-1) and Rural Residential (R-R). Under the Project, the zoning of Site 1 would become General Commercial (C-1/C-P). Site 2 is currently zoned C-1/C-P; no zone change for Site 2 is necessary.

The purpose of the zone change proposed for Site 1 is to provide a single zoning district for the entire site that would permit the types of commercial retail uses contemplated by the Project. In this case, the C-1/C-P will allow for uses proposed by the Project including banks, grocery stores, restaurants (including drive-through), retail sales and service, gas stations, hotels, car washes, and professional offices. The Project would comply with all regulations set forth by the City of Eastvale Zoning Code for the C-1/C-P zone.

SCAG RTP/SCS Consistency

As demonstrated at Table 4.1-1, the Project is consistent with Goals of the 2016 – 2040 SCAG Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS).

Table 4.1-1
Consistency with SCAG RTP/SCS Goals

RTP/SCS Goals	Remarks
Goal 1: Align the plan investments and policies with improving regional economic development and competitiveness.	Consistent: The Project proposes contemporary retail/civic uses providing an opportunity for development investment on currently underutilized vacant land.
Goal 2: Maximize mobility and accessibility for all people and goods in the region.	Consistent: The transportation network in the Project area has been developed and maintained to meet local and regional transportation demands, and to ensure efficient mobility. Draft EIR Section 4.2, *Traffic and Circulation*, addresses local and regional transportation, traffic, and transit in more detail.
Goal 3: Ensure travel safety and reliability for all people and goods in the region.	**Consistent:** The Project TIA identifies improvements that would promote and facilitate the safe movement of people and goods. All transportation modes within the Project area

Table 4.1-1
Consistency with SCAG RTP/SCS Goals

RTP/SCS Goals	Remarks
	would be required to comply with incumbent regulatory safety standards.
Goal 4: Preserve and ensure a sustainable regional transportation system.	**Consistent:** The Project TIA assesses all new and existing roadways and identifies required improvements to the existing transportation network. The Project would offset its incremental transportation system impacts through payment of requisite transportation/traffic impact fees acting to ensure sustainable local and regional transportation systems.
Goal 5: Maximize the productivity of our transportation system.	**Consistent:** Pursuant to adopted plans and programs, local and regional transportation systems would be improved and maintained to encourage their efficiency and productivity. The City oversees the improvement and maintenance of all aspects of the public right-of-way on an as-needed basis.
Goal 6: Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).	**Consistent:** The Project would accommodate and would not interfere with existing or planned bicycle facilities and improvements. The Project would provide a pedestrian access network that internally links all uses and connects to the existing off-site pedestrian network.
Goal 7: Actively encourage and create incentives for energy efficiency, where possible.	**Consistent:** EIR Section 3.4.11, *Energy Efficiency/Sustainability,* notes that the Project in total would surpass incumbent performance standards established under the Building Energy Efficiency Standards contained in the California Code of Regulations (CCR), Title 24, Part 6 (Title 24, Title 24 Energy Efficiency Standards).
Goal 8: Encourage land use and growth patterns that facilitate transit and non-motorized transportation.	**Consistent:** The Project proposes retail/civic development with proximate access to local and regional transportation facilities. Intensified development of the Project site in combination with existing proximate urban development acts to focus transit ridership base, thereby supporting existing and future transit opportunities.

Table 4.1-1
Consistency with SCAG RTP/SCS Goals

RTP/SCS Goals	Remarks
Goal 9: Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	**Consistent:** The City of Eastvale is responsible for monitoring of roadways and transit routes to determine the adequacy and safety of these systems. The City and other local and regional agencies and organizations (e.g., RTA, Caltrans, and SCAG) cooperatively manage these systems. Security situations involving roadways and evacuations would be addressed through City emergency response plans.

Sources: Goal Statements from: 2016–2040 RTP/SCS); Remarks by Applied Planning, Inc.

Conclusion

In summary, the proposed General Plan Amendment is intended to achieve a single land use designation that best represents the development and land use activities contemplated by the Project. When a project includes amendments to the applicable land use designation(s), inconsistency with the existing designation(s) is an element of the project itself, which then requires a legislative policy decision of the agency. The request and subsequent approval of a change in designation in this regard does not signify a potential environmental effect. Additionally, the Project would be consistent with goals established by the 2016 – 2040 RTP/SCS. On this basis, the potential for the Project to conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect is considered less-than-significant.

Level of Significance: Less-Than-Significant.

4.2 TRAFFIC AND CIRCULATION

4.2 TRANSPORTATION/TRAFFIC

Abstract

Detailed analysis of the Project's potential transportation/traffic impacts is presented in Polopolus Traffic Impact Analysis, City of Eastvale *(Urban Crossroads, Inc.) [Revised] March 23, 2018 (Project TIA, TIA). Within the TIA, potential transportation/traffic impacts are evaluated under Existing (2017) Conditions and Opening Year (2019) Conditions, without and with the Project. The TIA is provided at EIR Appendix B. This Section summarizes analysis and findings of the TIA, and substantiates whether the Project would:*

- *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;*

- *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; and*

- *Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.*

Additionally, as substantiated in the Initial Study (EIR Appendix A), the Project's potential impacts under the following topics were previously determined to be less-than-significant and are not further discussed here:

- *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;*

- *Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); and*

- *Result in inadequate emergency access.*

Summary of Findings

The Project would construct all necessary site access and site adjacent roadway improvements as summarized in the EIR Project Description (please refer generally to EIR Section 3.0, Project Description*, and specifically to Section 3.4.5,* Access and Circulation*). Final design and construction of these improvements would be as directed by the City of Eastvale (City) through the Project Conditions of Approval. Construction of these improvements ensures safe and efficient Project access and that adequate operations of adjacent roadways is maintained. Construction of these improvements would also fulfill the Applicant responsibilities for completion of frontage right-of-way improvements consistent with requirements of the City.*

Mitigation responsibilities for traffic impacts at off-site locations are fulfilled by Project Applicant payment of requisite fees[1] to be directed toward the completion of those improvements necessary to achieve acceptable performance standards (e.g., Level of Service, vehicle delay, vehicle densities). Project Applicant payment of fees would however, not ensure timely completion of required off-site improvements. Pending completion of required circulation system improvements, Project contributions to deficiencies affecting off-site locations under Existing Conditions and Opening Year Conditions would be considered significant and unavoidable.

Caltrans intersections within the Study Area are designated Congestion Management Program (CMP) facilities. Project impacts to these facilities are coincident with the TIA analyses of

[1] Certain of the improvements identified here would be funded through the City of Eastvale Development Impact Fee Program and/or the Western Riverside Council of Governments (WRCOG) Transportation Uniform Mitigation Fee (TUMF) Program.

intersections generally. As substantiated in the TIA, Project impacts to Study Area CMP facilities would be less-than-significant.

The Applicant and City will coordinate Project final designs with RTA to evaluate propriety of Project transit access and amenities. The Project would also construct pedestrian access and bicycle facilities improvements consistent with City standards and requirements. On this basis, the potential for the Project to conflict with policies, plans, or programs for public transit, bicycle, or pedestrian facilities, would be less-than-significant.

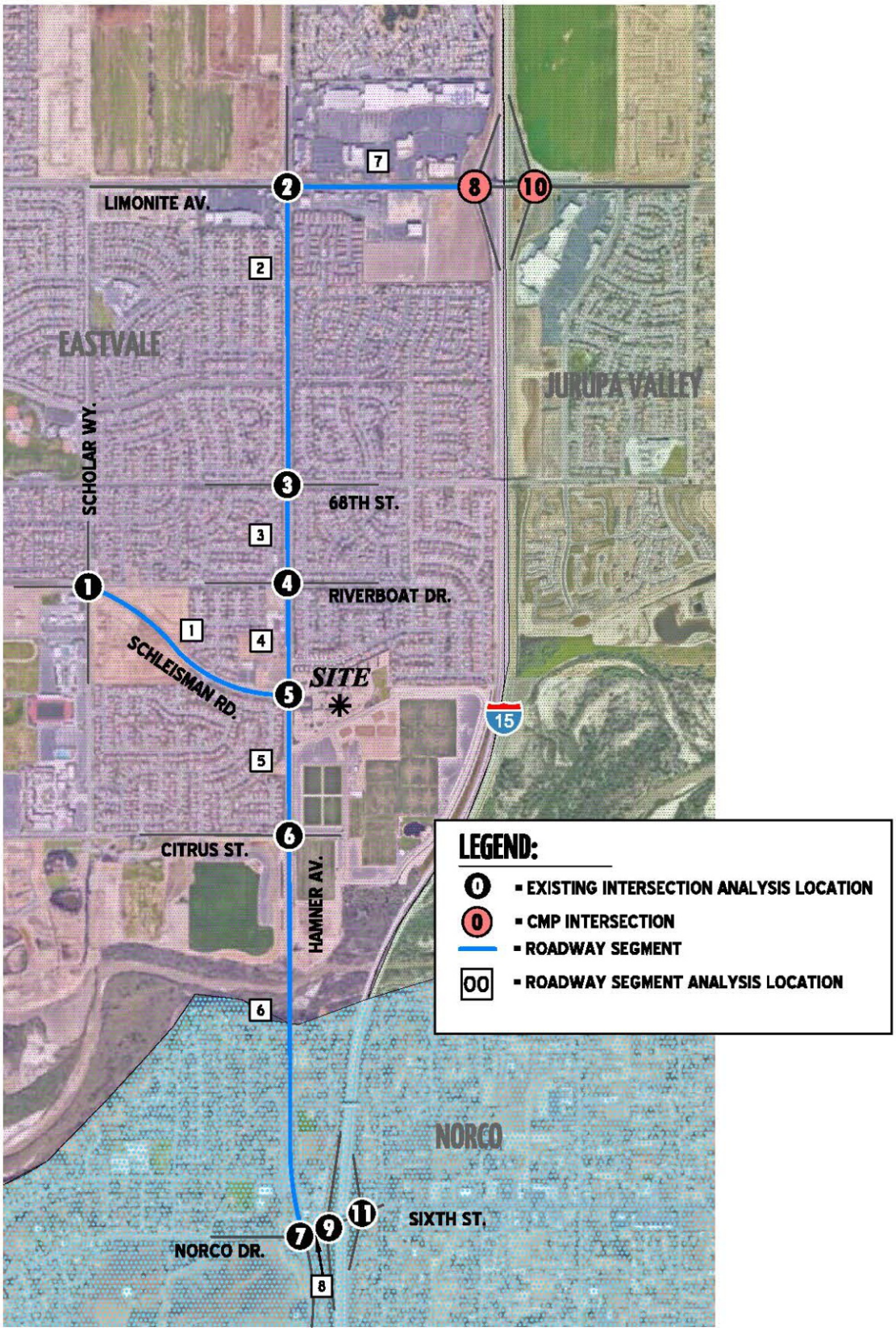
4.2.1 INTRODUCTION

This Section presents existing and future transportation/traffic conditions within the TIA Study Area (Study Area) and identifies potential transportation/traffic impacts resulting from implementation of the Project. Study Area circulation system facilities are discussed, and effects of Project traffic on circulation system Level of Service (LOS) conditions are evaluated. Where the Project would result in, or substantively contribute to, deficient LOS conditions, circulation system improvements are recommended. The detailed evaluation of potential Project-related transportation/traffic impacts is documented in *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018, EIR Appendix B.

4.2.2 STUDY AREA AND METHODOLOGIES

4.2.2.1 Overview

Discussions were held with the City and the Project Applicant to establish a comprehensive understanding of the Project, determine the Scope of Work and Methodology and for the TIA, and define the TIA Study Area. The TIA Study Area is presented at Figure 4.2-1. The TIA was prepared in consultation with the City and in accordance with the County of Riverside Traffic Impact Analysis Preparation Guidelines, and the California Department of Transportation (Caltrans) Guide for the Preparation of Traffic Impact Studies. The approved Traffic Study Scoping Agreement is presented at TIA Appendix 1.1.



Source: Urban Crossroads, Inc.

Figure 4.2-1
Study Area

Discussions with the City defined the TIA Level-Of-Service (LOS) analysis methodology, and the determination of traffic impact significance. Approved or planned projects which would be considered as part of the cumulative development setting were also identified. The Project is expected to be built in one phase and, for the purposes of the TIA, is assumed to be open by 2019.

Pursuant to the TIA Scope of Work and City requirements, analyses of traffic conditions are presented for Existing Conditions (2017) and Project Opening Year (2019) Conditions.

4.2.2.2 Intersection and Roadway Segment Analysis

Intersection Level of Service (LOS) Descriptors

Traffic operations of roadway intersection facilities are described in terms of levels 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. Tables 4.2-1 and 4.2-2 present LOS descriptors for signalized and unsignalized intersections within the Study Area.

Table 4.2-1
Signalized Intersection LOS Descriptors

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	35.01 to 55.00

Table 4.2-1
Signalized Intersection LOS Descriptors

Level of Service	Description	Average Control Delay (seconds)
	noticeable.	
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 Dr.rs occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up

Source: *Highway Capacity Manual* (Chapter 16).

Table 4.2-2
Unsignalized Intersection LOS Descriptors

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; intersection capacity exceeded.	50.01 and up

Source: *Highway Capacity Manual* (Chapter 17).

Study Area Intersections

Table 4.2-3 lists the evaluated Study Area intersections and indicates the jurisdiction for each. Riverside County Congestion Management Program (CMP) facilities are also identified.

Table 4.2-3
Study Area Intersections

ID No.	Intersection Location	Jurisdiction	CMP Facility
1	Scholar Way & Schleisman Road	Eastvale	No
2	Hamner Ave. & Limonite Ave.	Eastvale	No
3	Hamner Ave. & 68th St.	Eastvale	No

Table 4.2-3
Study Area Intersections

ID No.	Intersection Location	Jurisdiction	CMP Facility
4	Hamner Ave. & Riverboat Dr.	Eastvale	No
5	Hamner Ave. & Schleisman Road	Eastvale	No
6	Hamner Ave. & Citrus Ave.	Eastvale, Norco	No
7	Hamner Ave. & Norco Dr./6th St.	Norco	No
8	I-15 Southbound Ramps & Limonite Ave.	Eastvale, Caltrans	Yes
9	I-15 Southbound Ramps & 6th St.	Norco, Caltrans	No
10	I-15 Northbound Ramps & Limonite Ave.	Jurupa Valley Caltrans	Yes
11	I-15 Northbound Ramps & 6th St.	Norco, Caltrans	No

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.

Roadway Segment Capacities

Roadway segment operations have been evaluated using the daily roadway segment capacities for each type of roadway as summarized in Table 4.2-4.

Table 4.2-4
Roadway Capacities by Classification*

Roadway Classification	Roadway Capacity
4-Lane Urban Arterial/Major Highway	35,900
6-Lane Urban Arterial	53,900
8-Lane Urban Arterial	71,800

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.
* Based on LOS E maximum two-way traffic volume (ADT) thresholds from the City of Eastvale General Plan (Table C-1). The same capacities have been utilized for the City of Jurupa Valley and City of Norco.

The roadway capacities listed at Table 4.2-4 are "rule of thumb" estimates for planning purposes and are affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian bicycle traffic.

Study Area Roadway Segments

Table 4.2-5 identifies the evaluated Study Area roadway segments and indicates the jurisdiction for each.

Table 4.2-5
Study Area Roadway Segments

ID No.	Roadway Segment	Jurisdiction
1	Schleisman Road: Scholar Way to Hamner Ave.	Eastvale
2	Hamner Ave.: Limonite Ave. to 68th St.	Eastvale
3	Hamner Ave.: 68th St. to Riverboat Dr.	Eastvale
4	Hamner Ave.: Riverboat Dr. to Schleisman Road	Eastvale
5	Hamner Ave.: Schleisman Road to Citrus St.	Eastvale, Norco
6	Hamner Ave.: Citrus St. to Norco Dr./6th St.	Eastvale, Norco
7	Limonite Ave.: Hamner Ave. to I-15 Freeway	Eastvale
8	6th St.: Hamner Ave. to I-15 Freeway	Norco

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.

4.2.2.3 Freeway Ramp Progression Analysis

Freeway ramp facilities in the Study Area include the freeway-to-arterial interchanges of the I-15 Freeway at Limonite Ave. and 6th St. off-ramps. Consistent with Caltrans requirements, the TIA includes an off-ramp queuing analysis to identify any potential freeway ramp storage deficiencies, which could result in "spill back" onto the I-15 Freeway mainline the noted freeway-to-arterial interchanges.

Storage (turn-pocket) length recommendations at the ramps have been based upon the 95th percentile queue resulting from the vehicle progression analysis. The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. The queue length reported is for the lane with the highest queue in the lane group. A vehicle is considered queued whenever it is traveling at less than 10 feet/second. A vehicle will only become queued when it is either at the stop bar or behind another queued vehicle.

4.2.2.4 Jurisdictional Definitions for System Capacity and Operational Standards

Definitions for circulation system facilities capacities established by the City and other potentially affected jurisdictions are presented below. For facilities located outside of the City, this EIR evaluates Project transportation/traffic impacts consistent with performance standards adopted by the agency with jurisdiction over the facility(ies) under consideration.

City of Eastvale

Pursuant to the City General Plan, City-maintained roads should (where possible) maintain a peak hour level of service (LOS) "C." LOS "D" may be allowed in commercial and employment areas, and at intersections of any combination of major highways, urban arterials, secondary highways, or freeway ramp intersections (General Plan, p. 4-9).

In light of the Project use types (commercial, retail, service, civic); and the classifications of analyzed roadways and intersections within the TIA Study Area (major highways, urban arterials, secondary highways and freeway ramp intersections); the City has determined that LOS D is the appropriate level of service to be maintained at TIA Study Area intersections and roadway segments.

City of Jurupa Valley and City of Norco

Consistent with standards established under the City of Jurupa Valley and City of Norco General Plans, Study Area facilities located in those municipalities are also subject to LOS D operational standards.[2] Facilities operating at LOS E or worse are considered deficient.

Caltrans

Caltrans guidelines (excerpted below) were employed in the analysis of Caltrans facilities in the Study Area.

[2] Jurupa Valley General Plan Update, 2017, p. 3-10; Norco 2000 General Plan Circulation Element, p. 12.

> The LOS for operating State highway facilities is based upon Measures of Effectiveness (MOE) identified in the Highway Capacity Manual (HCM). Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than this target LOS, the existing MOE should be maintained.[3]

Within these analyses, LOS D is also considered to be the limit of acceptable traffic operations for Caltrans-maintained facilities. Caltrans facilities operating at LOS E or worse are therefore considered deficient.

4.2.2.5 Deficiency Criteria

Intersections

To determine whether Project traffic would cause deficient intersection LOS conditions, or would substantively contribute to pre-existing intersection LOS deficiencies, the following deficiency criteria were utilized at Study Area intersections (other than Caltrans facilities):

- If the evaluated intersection LOS deteriorates from acceptable LOS (LOS D or better) to unacceptable LOS (LOS E or F) a deficiency would occur; or

- If the evaluated intersection is already operating at an unacceptable LOS (LOS E or F) under "Without Project" conditions and the addition of Project traffic increases the delay by more than 5.0 seconds a deficiency would occur.

[3] *Guide for the Preparation of Traffic Impact Studies* (State of California, Department of Transportation) December 2002.

At Caltrans facilities and CMP facilities:

- If the evaluated intersection LOS deteriorates from acceptable LOS (LOS D or better) to unacceptable LOS (LOS E or F) a deficiency would occur; or

- If the evaluated intersection is already operating at an unacceptable LOS (LOS E or F) under "Without Project" conditions and the Project would contribute 50 or more peak hour trips a deficiency would occur.

Roadway Segments

To determine whether Project traffic would cause deficient roadway segment LOS conditions, or would substantively contribute to pre-existing intersection LOS deficiencies, the following deficiency criteria were utilized:

- If the evaluated roadway segment LOS deteriorates from acceptable LOS (LOS D or better) to unacceptable LOS (LOS E or F); or

- If the evaluated roadway segment is already operating at an unacceptable LOS (LOS E or F) in "Without Project" conditions and the addition of Project traffic increases the volume-to-capacity ratio by 0.01 or greater.

Freeway Off-Ramps

Freeway off-ramps with queues exceeding the 95th percentile, resulting in spill back on the serving freeway would be considered deficient.

Other

This Section also evaluates the potential for the Project to conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Deficiencies in these regards would occur if the Project demonstrably would not or could not conform to applicable policies and programs.

4.2.3 EXISTING CONDITIONS

4.2.3.1 Overview

The following discussions summarize the existing Study Area roadway network and describe other transportation modes that exist within, or are available to, the Study Area.

4.2.3.2 Existing Roadway System

The major factors affecting access to the Project site are the location of the site and the efficiency of the roadway system serving the site. Efficiency of access is a function of travel time, convenience, directness, and available capacity of the routes utilized in accessing the development.

Regional Access

Interstate 15 (I-15) provides regional access to the City of Eastvale and surrounding communities generally. I-15 interchanges with Limonite Ave. approximately 1.7 road miles northeasterly of the Project; and with 6th St. approximately 1.5 road miles southerly of the Project. I-215 is currently a six-lane freeway in the Project vicinity, traveling through western Riverside County. Access to I-15 to/from the Project would be provided via Hamner Ave. to Limonite Road to the Limonite Road/I-15 interchange; or via Hamner Ave. to 6th St. to the 6th St./I-15 interchange.

Local Access and Site Adjacent Improvements

Site 1

Primary access to Site 1 would be provided by the easterly extension of Schleisman Road at Hamner Avenue. Within Site 1, Schleisman Road would be constructed as a 3-lane interim Street with a temporary cul-de-sac terminus in the central portion of Site 1.[4] The existing traffic signal at the intersection of Schleisman Road at Hamner Ave. would

[4] The Project access/circulation concept also reserves full-width dedication for Schleisman Road within Site 1, allowing for its planned construction on an alignment connecting easterly to the future interchange of Schleisman Road at Interstate 15 (I-15).

be maintained under the Project. As part of the Project, lane geometrics at this intersection would be modified as summarized below:

- Northbound Approach: One left turn lane with 300-feet of storage, two through lanes, and a right turn lane with 200-feet of storage. The northbound right turn lane should accommodate overlap phasing;

- Southbound Approach: One left turn lane with 300-feet of storage, one through lane and one shared through-right turn lane;

- Eastbound Approach: Two left turn lanes with 300-feet of storage, one through lane, and one right turn lane. The eastbound right turn lane currently accommodates overlap phasing;

- Westbound Approach: Two left turn lanes with 300-feet of storage, one through lane and one right turn lane.

The internal circulation concept for Site 1 provides for future signalization of Schleisman Road at an anticipated north – south Street alignment central to the Site. The current [February 2018] Site 1 access concept provides right-in-right out access from Hamner Ave. southerly of Schleisman Road; and right-in only access from Hamner Ave. northerly of Schleisman Road.[5]

Adjacent to Site 1, the Project would also construct Hamner Ave. at its ultimate half-section pursuant to City requirements and as reflected in the City of Eastvale General Plan Circulation Element. Site adjacent improvements would include all pavement section(s), curb, gutter, sidewalks, landscaping, and other facilities as required by the City.

[5] The Project TIA conservatively assumes sole access to Site 1 via the above-noted easterly extension of Schleisman Road at Hamner Avenue. This effectively directs all Site 1 traffic to/through the Schleisman Road at Hamner Ave. intersection, establishing the likely maximum intersection level of service (LOS) impact at this location.

Site 2

Site 2 access would be provided by a STOP-controlled driveway connecting northerly to Riverboat Dr.; and a STOP-controlled driveway connecting easterly to Hamner Avenue. The existing traffic signal and existing lane geometrics at the intersection of Hamner Ave. at Riverboat Dr. would be maintained as currently configured. Pursuant to the Project Conditions of Approval, all required site-adjacent right-of-way improvements would be in place prior to issuance of the first Certificate of Occupancy (CO).

4.2.3.3 Alternative Transportation

Alternative transportation modes and services available to the Project site and vicinity are described below.

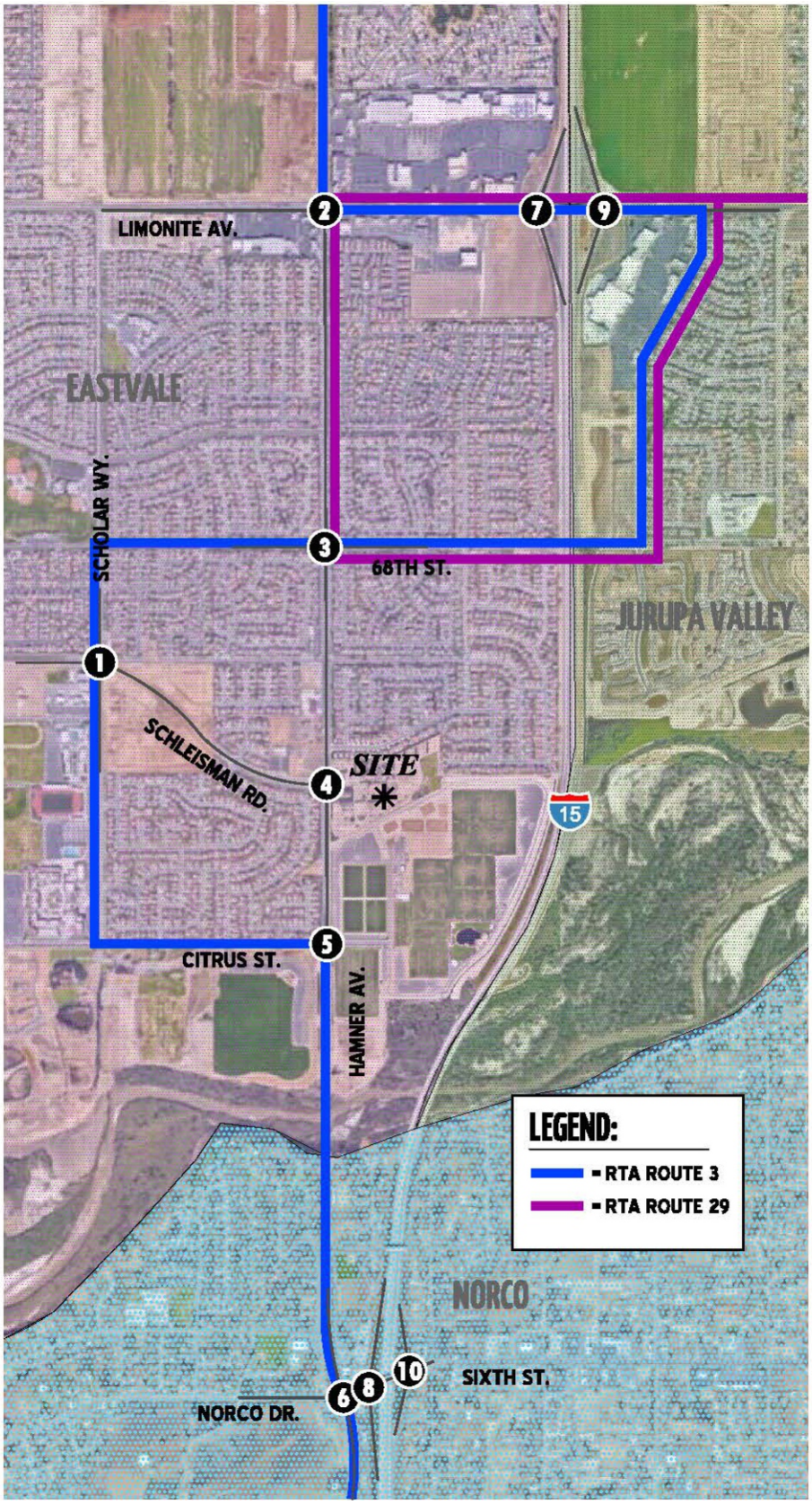
Bus Services

Bus service available to the Study Area is illustrated at Figure 4.2-2. The Study Area is currently served generally by the Riverside Transit Authority (RTA) RTA Routes 3 and 29. RTA Route 3 runs along portions of Hamner Ave., Limonite Ave., Pats Ranch Road, 68th St., Scholar Way, and Citrus St. RTA Route 29 runs along portions of Limonite Ave., Hamner Ave., 68th St., and Pats Ranch Road.

RTA regularly reviews ridership demands and travel patterns to assure convenient and efficient bus transportation within its Service Area. Current (2018) RTA bus routes and schedules are available at: http://www.riversidetransit.com/index.php/riding-the-bus/maps-schedules.

Pedestrian and Bicycle Facilities

Figure 4.2-3 illustrates Study Area bike routes, sidewalks, and roadway crosswalks. Project bicycle facilities would be provided consistent with City of Eastvale *Design Standards and Guidelines*. Field observations conducted in June 2017 indicate nominal pedestrian and bicycle activity within the Study Area.



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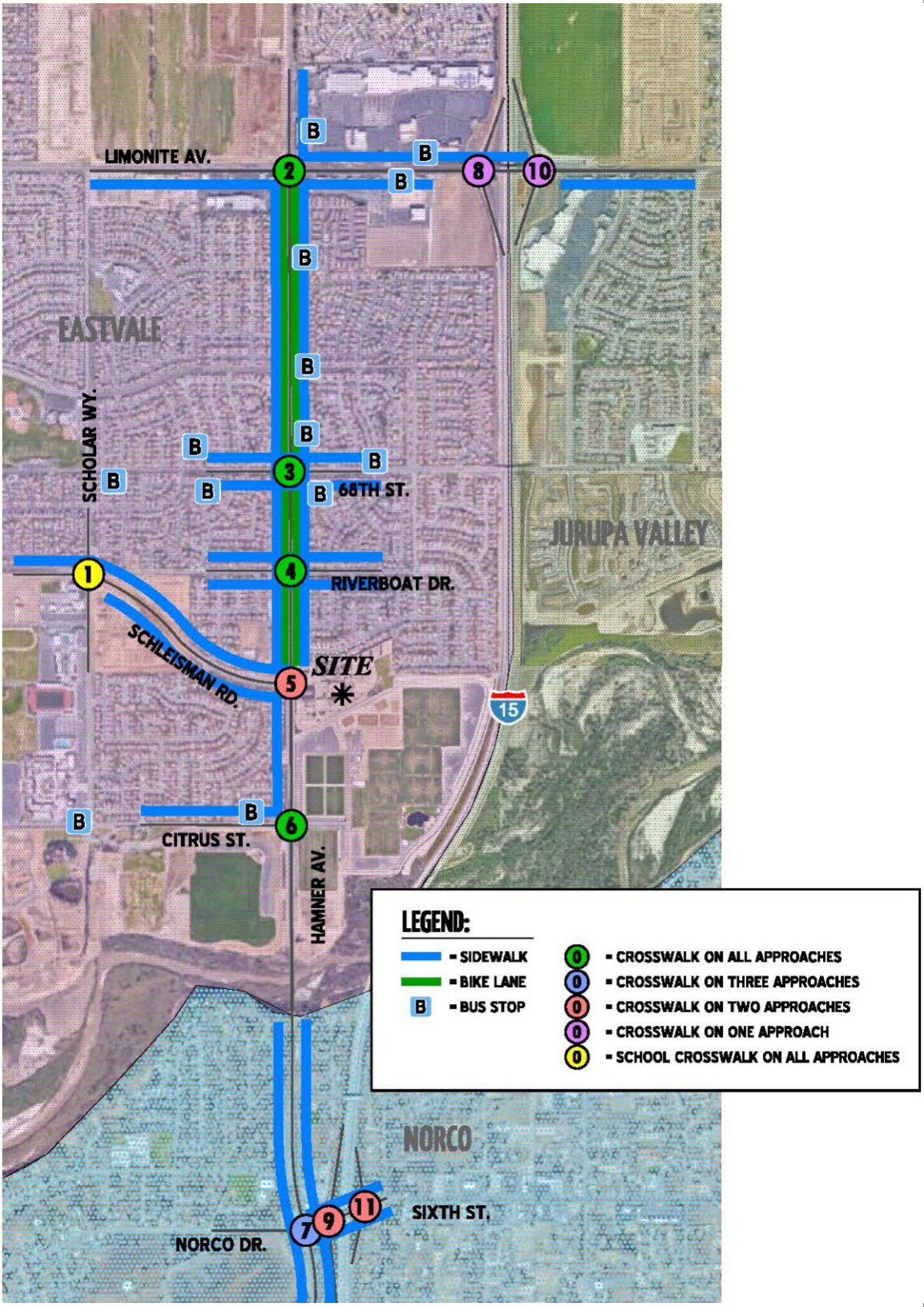
NOT TO SCALE

Source: Urban Crossroads, Inc.

Figure 4.2-2
Study Area Bus Routes



Source: Urban Crossroads, Inc.

Figure 4.2-3
Pedestrian & Bicycle Facilities

4.2.3.4 Existing Traffic Volumes

Existing peak hour traffic volumes within the Study Area were determined by field traffic counts conducted May 2017 (while schools were in session). Weekday morning (AM) peak traffic conditions are represented by traffic counts conducted for the two-hour period between 7:00 and 9:00 a.m. Similarly, weekday evening (PM) peak hour traffic conditions are represented by traffic counts conducted for the two-hour period from 4:00 to 6:00 p.m. The TIA traffic count data is considered representative of peak hour traffic conditions in the Study Area. There were no observations made in the field that would indicate atypical traffic conditions on the count dates, such as construction activity that would prevent or limit roadway access and detour routes. Diagrammatic representations of existing intersection traffic volumes are presented at TIA Exhibit 3-12. Raw manual peak hour turning movement traffic count data sheets are provided at TIA Appendix 3.1.

4.2.3.5 Existing Conditions-Intersection Operations

Intersection deficiencies based on volume/capacity ratios and delay conditions were evaluated under Existing Conditions (2017). Table 4.2-6 summarizes existing intersection LOS deficiencies within the Study Area. All other Study Area intersections operate acceptably during the peak hour periods. For a complete listing of all existing Study Area intersection LOS conditions, please refer to TIA Table 3-1.

Table 4.2-6
Intersection Deficiencies, Existing Conditions

		Traffic Control	ICU (v/c)		Level of Service		Delay (secs.)		Level of Service		Jurisdiction/ LOS Std.
ID #	Intersection		AM	PM	AM	PM	AM	PM	AM	PM	
6	Hamner Ave. & Citrus Ave.	TS	0.78	0.59	C	A	**127.3**	**99.8**	**F**	**F**	Eastvale/ LOS D
7	Hamner Ave. & Norco Dr./6th St.	TS	0.79	0.90	C	D	43.8	**62.9**	D	**E**	Eastvale; Norco/ LOS D

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.
Notes: BOLD = Deficient operations; ICU- Intersection Capacity Utilization; v/c-volume/capacity.

4.2.3.6 Existing Conditions-Roadway Segment Analysis

Roadway segment deficiencies based on volume/capacity ratios were evaluated for Existing Conditions (2017). Table 4.2-7 summarizes existing roadway LOS deficiencies within the Study Area. All other Study Area roadway operate acceptably during the peak hour periods. For a complete listing of all existing Study Area roadway segment LOS conditions, please refer to TIA Table 3-2.

Table 4.2-7
Roadway Segment Deficiencies, Existing Conditions

ID #	Roadway	Segment Limits	Roadway Section	Capacity (ADT)	Existing ADT	V/C	LOS	Jurisdiction/ LOS Std.
6	Hamner Ave.	Citrus St. to Norco Dr./6th St.	2U	17,950	**30,703**	**1.71**	**F**	Eastvale; Norco/ LOS D

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.
Notes: BOLD = Deficient operations; ICU- Intersection Capacity Utilization; v/c-volume/capacity. The segment of Hamner Ave. from Citrus St. to Norco Dr./6th St. is 3 lanes just south of Citrus Ave. and narrows to 2 lanes (one lane in each direction) from just north of the Santa Ana River to Norco Dr./6th St..

4.2.3.7 Existing Conditions-Freeway Ramp Queuing Analysis

To assess vehicle queues for the ramps that may potentially impact peak hour operations at the ramp-to-arterial intersections, a queue length analysis was performed. Under Existing Conditions, all Study Area freeway ramp queue lengths analyzed would perform acceptably. For a complete listing of all existing Study Area roadway segment LOS conditions, please refer to TIA Table 3-2.

4.2.4 FUTURE TRAFFIC VOLUMES

The following discussions address traffic volumes anticipated to be generated by the Project, and traffic attributable to other growth and development within the Study Area.

4.2.4.1 Project Trip Generation

Trip generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Institute of Transportation Engineers (ITE) trip generation rates and equations for different land uses are utilized by the City in determining development-related trip generation characteristics and were employed in the Project TIA in estimating the Project's trip

generation.[6] The Project gross trip generation estimates were then adjusted to reflect appropriate pass-by trip rates, internal trip capture rates, and transportation mode shift rates.

Pass-by trips are defined as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent Street or roadway that offers direct access to the generator. Pass-by trip reductions for the Project Land Uses have been reviewed and approved by the City.

Internal capture trip reductions account for trips internal to the site. In other words, trips may be made between individual uses on-site and can be made either by walking or using internal roadways without using external Streets. For example, patrons of the proposed retail uses may also access fast food restaurants without leaving the site. Internal capture trip reductions for the Project Land Uses have been reviewed and approved by the City.

Mode shift trip reductions account for patrons who will walk or bike between the Project and other near-by uses. Mode shift trip reductions for the Project Land Uses have been reviewed and approved by the City.

As indicated at Table 4.2-8, the Project would generate an estimated net total of 6,864 trip-ends per day on a typical weekday; and approximately 534 AM peak hour trips. Project traffic volumes considered in this analysis represent the likely maximum traffic generation and traffic impact condition. The assumptions and methods used to estimate the Project trip generation characteristics are discussed in greater detail at TIA Section 4.1, *Project Trip Generation*.

[6] With the exception of the proposed Civic Center (Government Office) Land Use, Project trip generation rates were obtained from ITE *Trip Generation* Manual, 9th Edition, 2012. The ITE Trip Generation Manual has limited data for the Government Office Land Use. Relevant Government Office Land Use trip generation information is however presented in *The (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002; and was employed for the Government Office Land Use trip generation estimates presented in the TIA.

Table 4.2-8
Project Trip Generation

Land Use	Quantity	Metric	Weekday AM Peak Hour			Weekday PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Site 1									
Parcel 1: Gas Station w/ Market	8	VFP	41	41	82	54	54	108	1,302
Internal Capture:			-6	-7	-13	-32	-20	-52	-633
Pass-by Reduction (AM-68%; PM-56%):			*-21*	*-21*	*-42*	*-12*	*-12*	*-24*	*-375*
Net External Trips:			14	13	27	10	22	32	294
Parcel 2: Fast-Food w/ Dr.-Thru	3.500	TSF	81	78	159	59	55	114	1,736
Mode Shift:			-4	-4	-8	-3	-3	-6	-87
Internal Capture:			-6	-7	-13	-13	-19	-32	-483
Pass-by Reduction (AM-49%; PM-50%):			*-33*	*-33*	*-66*	*-17*	*-17*	*-34*	*-583*
Net External Trips:			38	34	72	26	16	43	583
Parcel 3: Coffee Shop w/ Dr.-Thru	2.000	TSF	103	99	202	43	43	86	1,637
Mode Shift:			-5	-5	-10	-2	-2	-4	-82
Internal Capture:			-5	-5	-10	-9	-14	-23	-447
Pass-by Reduction (AM/PM-89%):			*-79*	*-79*	*-158*	*-24*	*-24*	*-48*	*-986*
Net External Trips:			14	10	24	7	3	10	122
Parcel 4: High-Turnover Restaurant	6.000	TSF	36	29	65	35	24	59	763
Mode Shift:			-2	-1	-3	-2	-1	-3	-38
Internal Capture:			-3	-4	-7	-7	-10	-16	-212
Pass-by Reduction (PM-43%):			*0*	*0*	*0*	*-6*	*-6*	*-11*	*-220*
Net External Trips:			31	24	55	21	7	29	292
Parcel 5: Shopping Center	4.000	TSF	14	8	22	33	36	69	838
Mode Shift:			-1	0	-1	-2	-2	-4	-42
Internal Capture[3]:			-4	-4	-8	-21	-13	-34	-407
Pass-by Reduction (PM-34%):			*0*	*0*	*0*	*-4*	*-4*	*-8*	*-132*
Net External Trips:			9	3	12	6	17	23	257
Parcel 5: Fast-Food w/o Dr.-Thru	4.000	TSF	105	70	175	53	51	104	2,864
Mode Shift:			-5	-4	-9	-3	-3	-6	-143
Internal Capture:			-5	-7	-12	-11	-18	-29	-809
Pass-by Reduction (AM-49%; PM-50%):			*-29*	*-29*	*-58*	*-15*	*-15*	*-30*	*-956*
Net External Trips:			65	31	96	24	16	40	956
Parcel 6: Medical Office	10.000	TSF	19	5	24	10	26	36	361

Table 4.2-8
Project Trip Generation

Land Use	Quantity	Metric	Weekday AM Peak Hour			Weekday PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Internal Capture:			-4	-3	-7	-1	-2	-3	-33
Net External Trips:			15	2	17	9	24	33	328
Parcel 7: Hotel	130	Room	40	29	69	40	38	78	1,062
Mode Shift:			-2	-1	-3	-2	-2	-4	-53
Internal Capture:			-2	-8	-10	-17	-12	-29	-395
Net External Trips:			36	20	56	21	24	45	614
Civic: Government Office	40.000	TSF	97	11	108	43	101	144	1,200
Internal Capture:			-20	-11	-31	-6	-9	-15	-123
Net External Trips:			77	0	77	37	92	129	1,077
Civic: Library	25.000	TSF	19	8	27	88	95	183	1,406
Internal Capture (10% reduction):			-2	-1	-3	-9	-10	-18	-141
Net External Trips:			17	7	24	79	86	165	1,265
Subtotal Net External Trips			***316***	***144***	***460***	***240***	***307***	***547***	***5,788***
Site 2									
Gas Station w/ Market & Car Wash	16	VFP	97	93	189	113	109	222	2,445
Pass-by Reduction (AM-68%; PM-56%):			*-58*	*-58*	*-116*	*-61*	*-61*	*-122*	*-1,369*
Subtotal Net External Trips			***39***	***35***	***73***	***52***	***48***	***100***	***1,076***
TOTAL NET EXTERNAL TRIPS			**355**	**179**	**534**	**292**	**355**	**647**	**6,864**

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.

4.2.4.2 Project Trip Distribution

The trip distribution process establishes the directional orientation of traffic approaching and departing the site. Trip distribution is influenced by the location of the site in relation to nearby residential, employment and recreational opportunities, and proximity to the regional freeway system. Based on the trip distribution patterns, peak hour trips were assigned at Study Area intersections. Configurations of roadways and land uses within the Study Area would influence trip distribution characteristics over time. The assumptions and methods used to determine the Project trip distribution characteristics are discussed in greater detail at TIA Section 4.2, *Project Trip Distribution.*

4.2.4.3 Opening Year (2019) Traffic Conditions

Per the TIA Scoping Agreement, Opening Year (2019) traffic conditions reflect 2 years of background (ambient) traffic growth at 1.6 percent per year[7] for the period 2017–2019, yielding an approximate compounded 3.23 percent increase in traffic when comparing Existing (2017) and Opening Year (2019) traffic conditions. Estimated ambient growth in traffic has been added to existing traffic volumes to account for traffic growth not otherwise assigned to specific related development projects.[8]

To establish Opening Year traffic volumes, the assumed ambient background traffic growth was then added to existing daily and peak hour traffic volumes on Study Area roadways in addition to traffic generated by the development of related projects that have been approved but not yet constructed, and/or for which development applications have been filed and are under consideration by governing agencies. Only certain of the identified cumulative projects have been approved by the applicable governing agency, and not these would be completed prior to the Project's anticipated opening in 2019. Nonetheless, the TIA conservatively assumes that all cumulative projects would be complete, fully occupied, and generating traffic by the Project Opening Year. Please refer to TIA Table 4-3 for a complete listing of all related development projects considered within the analysis.

4.2.5 PROJECT IMPROVEMENTS

As discussed at EIR Section 3.0, *Project Description*, Project implementation would involve the construction of supporting roadway and intersection improvements occurring on or adjacent to the Project site. The Project would construct all required access improvements and site-adjacent road/right-of-way improvements.

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[7] The assumed 1.6 percent ambient traffic growth rate employed in the TIA is consistent with the projected ambient traffic growth for the County in total and is line with City of Eastvale growth rates reflected in the Southern California Association of Governments (SCAG) *2016 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS)* (SCAG) April 2016.

[8] Related development projects are those approved or anticipated development proposals that would generate traffic interacting with traffic generated by the Project.

All site-adjacent improvements, driveways, traffic controls, internal circulation improvements proposed by, or required of the Project would be designed and implemented consistent with the requirements of the City Engineering Department.

4.2.6 STANDARDS OF SIGNIFICANCE

Consistent with the standards of significance outlined in the *CEQA Guidelines,* the following discussions address the Project's potential to:

- 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;

- 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;

Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

All other CEQA topics concerning the Project's potential traffic/transportation impacts are discussed below. Please also refer to Initial Study Checklist Item 16., *Transportation/Traffic.*

4.2.7 POTENTIAL IMPACTS AND MITIGATION MEASURES

4.2.7.1 Introduction

The following discussions focus on topical issues where it has been determined that the Project may result in potentially significant transportation/traffic impacts, pursuant to

comments received through the NOP process, and based on the analysis presented within this Section and included within the Initial Study.

4.2.7.2 Impact Considerations

Study Area traffic conditions without and with the Project are summarized within the subsequent discussions, followed by identification of the Project's potential impacts to Study Area transportation/circulation systems and facilities.

Under the CEQA topic: "Potential to conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system . . ." potential impacts are identified for Existing and Opening Year Conditions. Sub-topics evaluated under each of these scenarios include:

- Intersection LOS Analysis;
- Roadway Segment Analysis; and
- Freeway Ramp Progression Analysis.

Under the CEQA topic: "Conflict with an applicable congestion management program [CMP] but not limited to a level of service standards and travel demand measures. . ." CMP facilities within the Study Area are identified, and potentially significant Project impacts affecting these facilities are summarized. Project impacts to Study Area CMP facilities are coincident with analyses of Intersection LOS and Freeway Ramp Progression noted above.

Under the CEQA topics: "Substantially increase hazards to a design feature . . ." and "Result in inadequate emergency access . . ." the analysis presented summarizes Project design and operational concepts that act to avoid hazardous conditions and ensure adequate emergency access.

Under the CEQA topic: "Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities . . ." the analysis presented summarizes Project design and operational concepts that act to support, and would not conflict

with, City and area policies, plans, and programs regarding public transit, bicycle, and pedestrian facilities.

4.2.7.3 Mitigation Considerations

Mitigation or avoidance of potentially significant transportation/circulation system impacts attributable to the Project would be achieved through Project construction of necessary improvements and/or Project fee payments that would be assigned to construction of required improvements.

Site-Adjacent and Site Access Improvements Constructed as Part of the Project

The Project would construct improvements necessary to ensure safe and efficient access and operating conditions along roadways and at intersections adjacent to the Project site. As discussed at EIR Section 3.0, *Project Description*, Project implementation would involve the construction of necessary access, roadway, and intersection improvements occurring on or adjacent to the Project site.

Other Required Improvements Funded by Fee Assessments and Constructed Consistent Pursuant to Capital Improvements Programs and Consistent with Demonstrated Demands

The Project would also pay all requisite fees directed to the completion of other necessary Study Area traffic improvements at locations where Project traffic would contribute to existing or projected circulation system deficiencies. Required Study Area improvements and associated fee payments are identified for each of the analysis timeframes (Existing, Opening Year); fees would, however, be assessed and collected in total prior to Project implementation or as otherwise stipulated by the City.

Improvements under each of the analysis scenarios (Existing, Opening Year) tier off the preceding scenario. That is, Opening Year improvements reflect improvements required under Existing Conditions, plus any additional improvements addressing increased traffic demands under Opening Year Conditions. This structure provides the City with an estimated scope of required improvements and an approximate timeframe for their implementation. The final configuration and timing for implementation of

improvements identified herein is, however, subject to priorities of the City and other affected jurisdictions.

Fee assessment mechanisms and fee programs applicable to the Project would include: "Fair Share" Fees, Riverside County Transportation Uniform Mitigation Fee (TUMF) Program and the City of Eastvale Development Impact Fee (DIF) Program. Notwithstanding the Project's full compliance with fee assessments and fee programs noted above, Project payment of fees would not ensure timely completion of required improvements. Within these discussions, potentially significant impacts that are addressed through Project fee payments are considered to remain significant and unavoidable pending completion of the required traffic/transportation system improvements. Traffic/transportation fees that would be assessed of the Project, along with a description of fee programs assessment and fee assignment mechanisms are summarized below.

Fair Share Fees

The Project TIA identifies the recommended improvements for each potentially impacted intersection or freeway facility within the Study Area and compares these with improvements already identified and included in established fee programs (i.e., TUMF, City of Eastvale DIF). If an impacted facility requires improvements other than, or in addition to, those already identified within a regional or local fee program, the Project would contribute a "fair-share" percentage toward the costs of the recommended improvements.

Tables 4.2-9 and 4.2-10 identify respectively, Project fair share traffic volumes at Study Area intersections that would require improvements; and Project fair share traffic volumes at Study Area roadway segments that would require improvements. Fair share traffic volumes are expressed as a percentage of new traffic volumes that would be generated between Existing and Opening Year Conditions. The Project fair share traffic volumes provide an indication of the relative effects of the Project in the context of traffic that would be generated by other existing uses and anticipated development. The Project's greatest traffic volume contributions (indicated in **bold**) represent the Project's

proportional impacts at affected intersections and would be the basis for fair share fee assessments. These fees would be assessed in instances where the costs of improvements are not otherwise funded through Project payment of DIF, TUMF, or other established fee assessment mechanisms.

It is noted generally that the TIA and the discussions presented here, in certain instances, indicate fair share fees payable to extra-jurisdictional entities. These "fair share" calculations represent the Project's proportional contributions to extra-jurisdictional impacts rather than monies that would be assessed of the Project for construction of extra-jurisdictional improvements. In this latter regard, there does not exist an extra-jurisdictional fee-sharing mechanism between the City of Eastvale and extra-jurisdictional agencies that would provide for construction of extra-jurisdictional improvements; nor do the City or Applicant have plenary control for funding of, or construction of extra-jurisdictional improvements.

Table 4.2-9
Project Opening Year (2019) Fair Share Traffic Volumes-Intersections

ID No.	Intersection	Existing Traffic	Project Traffic	Opening Year (2019) With-Project Traffic	Total New Traffic	Project % of New Traffic
6	Hamner Ave. & Citrus Ave.					
	AM:	2,967	247	3,689	722	**34.2%**
	PM:	2,748	270	3,800	1,052	25.7%
7	Hamner Ave. & Norco Dr./6th St.					
	AM:	3,146	144	3,720	574	**25.1%**
	PM:	3,397	171	4,224	827	20.7%

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.
Highest fair share percentage identified in **BOLD**.

Table 4.2-10
Project Opening Year (2019) Fair Share Traffic Volumes-Roadway Segments

ID No.	Roadway Segment	Existing Traffic	Project Traffic	Opening Year (2019) With-Project Traffic	Total New Traffic	Project % of New Traffic
6	Hamner Ave.: Citrus St. to Norco Dr./6th St.					
	AM:	2,425	143	2,973	548	**26.1%**
	PM:	2,365	97	3,161	796	12.2%

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.
Highest fair share percentage identified in **BOLD**.

Riverside County Transportation Uniform Mitigation Fee (TUMF) Program

The TUMF program is administered by Western Riverside Council of Governments (WRCOG) based on a regional Nexus Study completed in early 2003 and updated in 2009 to address major changes in right of way acquisition and improvement cost factors. The TUMF Program (Program) identifies a network of backbone and local roadways that are needed to accommodate growth of the region through 2035. The Program was established to ensure that new development contributes equitably to construction of area-serving facilities needed to maintain requisite level of services and considered critical to regional mobility.

TUMF assessments are imposed on new residential, industrial, and commercial development through application of the TUMF Ordinance, and assessed fees are collected at the building or occupancy permit stage. TUMF assessments are adjusted on a regular basis to ensure that fees collected keep pace with inflation, and local construction and labor costs. Pursuant to the City TUMF Ordinance (Ordinance No. 2017-05 and updates) the Project Applicant would pay requisite TUMF assessments at the prevailing rate. Payment of fees pursuant to the City TUMF Ordinance is required prior to the issuance of a building permit by the City.

In total, the TUMF Program is anticipated to generate nearly $5 billion for construction of transportation projects for Western Riverside County. Project payment of requisite TUMF assessments satisfies its obligations under the TUMF Ordinance. The Project TUMF payments constitute its "fair share" toward sustaining the regional transportation system. As noted previously, WRCOG is responsible for administration

of the TUMF program, to include assignment of fees toward completion of TUMF-funded improvements within the region.

Study Area facilities programmed for improvements through the TUMF Program are listed at Table 4.2-23, *Summary of Intersection Improvements*; and Table 4.2-24, *Summary of Roadway Segment Improvements,* presented subsequently in this Section.

City of Eastvale Development Impact Fee (DIF) Program

The City has established a Development Impact Fee (DIF) program to impose and collect fees from new residential, commercial and industrial development to fund roadways and intersections necessary to accommodate City growth anticipated under the City General Plan Circulation Element.[9] The City DIF program would fund construction of facilities that are not part of, or which may exceed improvements identified and covered by, the WRCOG TUMF program. The pairing of the WRCOG regional TUMF program and the City DIF program provides a more comprehensive funding and implementation plan to ensure an adequate and interconnected transportation system. Under the City DIF program, the City may grant developers a credit against specific fee components when those developers construct certain facilities identified in the list of improvements funded by the DIF program.

Prioritized use of City DIF monies is established through the City Capital Improvement Program (CIP) overseen by the City Manager and implemented by the City Engineering Department. Periodic traffic counts, review of traffic accidents, and a review of traffic trends throughout the City are also periodically performed by City staff and consultants. The City uses this data to determine the timing of CIP traffic/transportation facilities.

Study Area facilities programmed for improvements through the City DIF Program are listed at Table 4.2-23, *Summary of Intersection Improvements*; and Table 4.2-24, *Summary of Roadway Segment Improvements,* presented subsequently in this Section. Pursuant to City

[9] Payment of DIF is required pursuant to City of Eastvale Municipal Code, Chapter 110.28 Development Impact Fee Program, Section 110.28.070.

Municipal Code requirements, the Project Applicant would pay the requisite City DIF at the rate(s) then in effect pursuant to the City's DIF Ordinance. Payment of fees pursuant to the DIF Ordinance is required prior to the issuance of a building permit by the City.

4.2.7.4 Impact Statements

Potential Impact: *The Project would 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.*

Impact Analysis:

Existing (2017) and Opening Year (2019) Traffic Conditions

OVERVIEW

The following discussions summarize traffic conditions within the Study Area reflecting implementation of the Project under Existing Conditions as well as the anticipated Opening Year scenario. For each of the considered scenarios, potentially significant traffic impacts (deficient conditions) are identified. Less-than-significant impacts are noted, and mitigation measures are proposed for those impacts determined to be potentially significant. For both analytic scenarios, intersection improvements and roadway segment improvements respectively are summarized at Tables 4.2-23 and 4.2-24 presented at the conclusion of these discussions.

EXISTING CONDITIONS (2017) TRAFFIC ANALYSIS

The Existing Conditions (2017) analysis provides an indication of the incremental effects of the Project without the addition of assumed future cumulative traffic growth reflected under the Opening Year scenario. In this manner, instances where Project traffic alone would cause or result in new potentially significant impacts can be identified.

The Existing Conditions With-Project analysis identifies currently deficient LOS conditions to which the Project would contribute additional traffic. Project Driveways, frontage right-of-way improvements, and other facilities to be constructed by the Project (e.g., intersection turn lane improvements at Project Driveways) are assumed to be in place.

In the following analysis of Existing With-Project Conditions, the following subtopics are discussed:

- Intersection LOS Analysis;
- Roadway Segment LOS Analysis; and
- Freeway Ramp Progression Analysis.

Intersection LOS Analysis-Existing With-Project Conditions

Intersections with identified deficiencies under Existing or Existing With-Project Conditions are presented at Table 4.2-11 together with applicable jurisdictional LOS standards.

Table 4.2-11
Intersection Deficiencies
Existing Conditions and Existing Conditions With-Project

		Existing Conditions								Existing Conditions With-Project								Jurisdiction/ LOS Std.
		ICU (v/c)		Level of Service		Delay (secs.)		Level of Service		ICU (v/c)		Level of Service		Delay (secs.)		Level of Service		
ID #	Intersection	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
1	Scholar Wy. & Schleisman Rd.	0.61	0.27	B	A	30.3	15.7	C	B	0.62	0.28	B	A	32.4	16.0	C	B	Eastvale/ LOS D
2	Hamner Ave. & Limonite Ave.	0.63	0.65	B	B	35.4	41.3	D	D	0.67	0.72	B	C	39.0	45.7	D	D	Eastvale/ LOS D
3	Hamner Ave. & 68th St.	0.65	0.49	B	A	27.2	20.8	C	C	0.68	0.53	B	A	29.3	22.1	C	C	Eastvale/ LOS D
4	Hamner Ave. & Riverboat Dr.	0.53	0.39	A	A	20.1	15.9	C	B	0.64	0.48	B	A	24.3	19.6	C	B	Eastvale/ LOS D
5	Hamner Ave. & Schleisman Rd.[4]	0.75	0.58	C	A	22.8	13.1	C	B	0.78	0.63	C	B	34.0	23.6	C	C	Eastvale/ LOS D
6	Hamner Ave. & Citrus Ave.	0.78	0.59	C	A	**127.3**	**99.8**	**F**	**F**	0.82	0.64	D	B	**162.8**	**103.8**	**F**	**F**	Eastvale/ LOS D
7	Hamner Ave. & Norco Dr./6th St.	0.79	0.90	C	D	43.8	**62.9**	D	**E**	0.84	**0.98**	D	**E**	51.4	**78.3**	D	**E**	Eastvale; Norco/ LOS D

Table 4.2-11
Intersection Deficiencies
Existing Conditions and Existing Conditions With-Project

		Existing Conditions								Existing Conditions With-Project								Jurisdiction/ LOS Std.
		ICU (v/c)		Level of Service		Delay (secs.)		Level of Service		ICU (v/c)		Level of Service		Delay (secs.)		Level of Service		
ID #	Intersection	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
8	I-15 SB Ramps & Limonite Ave.	Caltrans does not employ ICU Metric				26.2	30.6	C	C	Caltrans does not employ ICU Metric				27.4	32.9	C	C	Eastvale, Caltrans/ LOSD
9	I-15 SB Ramps & 6th St.	Caltrans does not employ ICU Metric				34.4	28.9	C	C	Caltrans does not employ ICU Metric				34.7	29.0	C	C	Norco, Caltrans/ LOS D
10	I-15 NB Ramps & Limonite Ave.	Caltrans does not employ ICU Metric				28.1	27.7	C	C	Caltrans does not employ ICU Metric				28.4	28.5	C	C	Jurupa Valley Caltrans/ LOS D
11	I-15 NB Ramps & 6th St.	Caltrans does not employ ICU Metric				22.2	23.3	C	C	Caltrans does not employ ICU Metric				24.8	25.0	C	C	Norco, Caltrans/ LOS D

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.
Notes: Deficiencies identified in **BOLD**.

Level of Significance: ***Potentially Cumulatively Significant.*** As indicated at Table 4.2-11, under Existing With-Project Conditions, Project traffic would contribute to existing intersection LOS deficiencies. These are potentially significant cumulative impacts.

Mitigation Measure:

4.2.1 Prior to the issuance of the final Certificate of Occupancy for each building, the Project Applicant shall pay that building's fair share fee amounts toward the construction of City of Eastvale improvements required under Existing With-Project (+Project) listed at EIR Table 4.2-12.

Table 4.2-12
Summary of Existing + Project Intersection Improvements

ID #	Intersection Location	Jurisdiction	Recommended Improvements	Improvements in DIF or TUMF Programs	Project Fair Share %
			Existing With-Project		
6	Hamner Ave. & Citrus Ave.	Eastvale, Norco	Contribute fair share for Eastvale portion of 2nd NB left turn lane	No	34.2%
7	Hamner Ave. & Norco Dr./6th St.	Norco	Fair share for striping a NB right turn lane.	No	25.1%
			Fair share for modifying the traffic signal to accommodate overlap phasing for the NB and WB right turn lanes	No	

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.

Level of Significance After Mitigation: ***Significant and Unavoidable.***

Table 4.2-13 presents a comparison of Existing With-Project Conditions, without and with recommended improvements.

Table 4.2-13
Summary of Existing With-Project Intersection Conditions
Without and With Recommended Improvements

		Traffic Control	ICU (v/c)		Level of Service		Delay (secs.)		Level of Service	
ID #	Intersection		AM	PM	AM	PM	AM	PM	AM	PM
6	Hamner Ave. & Citrus Ave.									
	- Without Improvements	TS	0.82	0.64	D	B	**162.8**	**103.8**	**F**	**F**
	- With Improvements	TS	0.82	0.60	D	B	44.8	30.1	D	C
7	Hamner Ave. & Norco Dr./6th St.									
	- Without Improvements	TS	0.84	**0.98**	D	**E**	51.4	**78.3**	D	**E**
	- With Improvements	TS	0.76	0.75	C	C	36.5	39.3	D	D

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.
Note: Deficiencies identified in **BOLD**.

As indicated at Table 4.2-13, completion of recommended improvements would achieve acceptable LOS conditions under Existing With-Project Conditions.

The Project Applicant would pay all requisite fees, offsetting the Project's proportional contributions to cumulative traffic impacts projected to occur under Existing With-Project Conditions, thereby fulfilling the Applicant mitigation responsibilities. Notwithstanding, payment of fees pursuant to City TUMF and DIF mandates, and fair

share fees pursuant to Mitigation Measure 4.2.1 would not ensure timely completion of required improvements. Moreover, there are no current plans to improve the affected intersection(s), and the City does not have an existing agreement with extra-jurisdictional agencies regarding the funding of improvements, construction of improvements, or timing of improvements at locations along, or beyond the City corporate boundaries. Thus, while the physical improvements identified would be capable of mitigating potentially significant impacts, these improvements cannot be timely assured.

Based on the preceding, pending completion of the required improvements, Project contributions to cumulative intersection LOS impacts under Existing With-Project Conditions are recognized as significant and unavoidable at the deficient Study Area intersections listed at previous Table 4.2-11.

Roadway Segment LOS Analysis, Existing With-Project Conditions

Roadway segments with identified deficiencies under Existing or Existing With-Project Conditions are indicated at Table 4.2-14 together with applicable jurisdictional LOS standards.

Table 4.2-14
Roadway Segment Deficiencies
Existing Conditions and Existing Conditions With-Project

			Roadway	LOS	Existing Conditions			Existing Conditions With-Project			Jurisdiction/ LOS Std.
ID #	Roadway	Segment Limits	Section	Capacity	ADT	V/C	LOS	ADT	V/C	LOS	
1	Schleisman Road	Scholar Way to Hamner Avenue	5D	44,900	9,997	0.22	A	11,097	0.25	A	Eastvale/ LOS D
2	Hamner Avenue	Limonite Avenue to 68th Street	6D	53,900	22,751	0.42	A	24,881	0.46	A	Eastvale/ LOS D
3		68th Street to Riverboat Drive	6D	53,900	18,207	0.34	A	20,959	0.39	A	Eastvale/ LOS D
4		Riverboat Drive to Schleisman Road	4D	35,900	27,069	0.75	C	30,007	0.84	D	Eastvale/ LOS D
5		Schleisman Road to Citrus Street	4D	35,900	22,383	0.62	B	25,359	0.71	C	Eastvale, Norco/LOS D
6		Citrus Street to Norco Drive/6th Street	2U	17,950	**30,703**	**1.71**	**F**	**32,535**	**1.81**	**F**	Eastvale, Norco/LOS D
7	Limonite Avenue	Hamner Avenue to I-15 Freeway	8D	71,800	42,612	0.59	C	43,922	0.61	B	Eastvale/ LOS D
8	6th Street	Hamner Avenue to I-15 Freeway	4D	35,900	25,154	0.70	C	26,464	0.74	C	Norco/LOS D

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.
Notes: #U- # Lane Undivided. #D- # Lane Divided. Deficiencies identified in **BOLD**.

Level of Significance: ***Potentially Cumulatively Significant.*** As indicated at Table 4.2-14, under Existing With-Project Conditions, Project traffic would contribute to existing roadway segment LOS deficiencies. These are potentially significant cumulative impacts.

Mitigation Measure:

4.2.2 Prior to the issuance of the final Certificate of Occupancy for each building, the Project Applicant shall pay that building's fair share fee amounts toward the construction of City of Eastvale improvements required under Existing With-Project (+Project) listed at EIR Table 4.2-15.

Table 4.2-15
Summary of Existing + Project Roadway Segment Improvements

ID #	Roadway Segment	Jurisdiction	Recommended Improvements	Improvements in DIF or TUMF Programs	Project Fair Share %
			Existing Plus Project		
6	Hamner Avenue, between Citrus Street and Norco Drive/6th Street	Eastvale, Norco	Contribute fair share for Eastvale portion of 2nd and 3rd NB through lanes	No	26.1%
			Contribute fair share for Eastvale 2nd and 3rd SB through lanes	No	

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.

Level of Significance After Mitigation: ***Significant and Unavoidable.***

Table 4.2-16 presents a comparison of Existing With-Project Conditions, without and with recommended improvements.

Table 4.2-16
Summary of Existing With-Project Roadway Segment Conditions
Without and With Recommended Improvements

ID #	Roadway	Segment Limits	Roadway Section	LOS Capacity (ADT)	ADT	V/C	LOS
6	Hamner Ave.	Citrus St. to Norco Dr. /6th St.					
		Without Improvements	2U	17,950	32,535	**1.81**	**F**
		With Improvements	**6D**	53,900	32,535	0.60	B

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.
Notes: 2U- Two Lane Undivided; 6D-Six Lane Divided. Deficiencies identified in **BOLD**.

As indicated at Table 4.2-16, completion of the recommended improvements would achieve acceptable LOS conditions under Existing With-Project Conditions.

The Project Applicant would pay all requisite fees, offsetting the Project's proportional contributions to cumulative traffic impacts projected to occur under Existing With-Project Conditions, thereby fulfilling the Applicant mitigation responsibilities. Notwithstanding, payment of fees pursuant to City TUMF and DIF mandates, and fair share fees pursuant to Mitigation Measure 4.2.2 would not ensure timely completion of required improvements. Moreover, there are no current plans to improve the affected roadway segment, and the City does not have an existing agreement with extra-jurisdictional agencies regarding the funding of improvements, construction of improvements, or timing of improvements at locations along, or beyond the City corporate boundaries. Thus, while the physical improvements identified may be capable of mitigating potentially significant impacts, these improvements cannot be timely assured.

Based on the preceding, pending completion of the required improvements, Project contributions to cumulative roadway segment LOS impacts under Existing With-Project Conditions are recognized as significant and unavoidable at the deficient Study Area roadway segment listed at previous Table 4.2-14.

Freeway Ramp Progression Analysis, Existing With-Project Conditions

Freeway ramp operations were evaluated for all peak hour periods under Existing With-Project Conditions. All Study Area freeway ramps would experience acceptable queue lengths under Existing With-Project Conditions. Please refer to TIA Table 5-3.

Level of Significance: Less-Than-Significant.

OPENING YEAR (2019) TRAFFIC ANALYSIS

Opening Year (2019) traffic volumes and levels of service reflect anticipated conditions at Project completion and opening in the year 2019. The Opening Year (without Project) condition reflects existing (2017) traffic volumes, plus additional background traffic that

would be generated by generalized ambient growth within the region as well as traffic generated by known or probable cumulative projects. Cumulative projects comprise approved or anticipated development proposals that could generate traffic potentially interacting with Project traffic.

In the following analysis of Opening Year With-Project Conditions, the following subtopics are discussed:

- Intersection LOS Analysis;
- Roadway Segment LOS Analysis; and
- Freeway Ramp Progression Analysis.

Intersection LOS Analysis – Opening Year With-Project Conditions

Intersections with identified deficiencies under Opening Year Without-Project and Opening Year With-Project Conditions are identified at Table 4.2-17. These are considered potentially significant cumulative impacts resulting from existing traffic, ambient traffic growth within the region, traffic generated by known or probable cumulative projects and traffic generated by the Project. Applicable jurisdictional LOS standards are also noted.

Table 4.2-17
Intersection Deficiencies
Opening Year Conditions and Opening Year Conditions With-Project

		Opening Year Conditions								Opening Year Conditions With-Project								Jurisdiction/ LOS Std.
		ICU (v/c)		Level of Service		Delay (secs.)		Level of Service		ICU (v/c)		Level of Service		Delay (secs.)		Level of Service		
ID #	Intersection	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
1	Scholar Wy. & Schleisman Rd.	0.52	0.29	A	A	34.3	16.1	C	B	0.53	0.29	A	A	36.7	16.4	D	B	Eastvale/ LOS D
2	Hamner Ave. & Limonite Ave.	0.75	0.80	C	C	51.3	**70.9**	D	**E**	0.77	0.86	C	D	**55.4**	**77.9**	**E**	**E**	Eastvale/ LOS D
3	Hamner Av. & 68th St.	0.49	0.51	A	A	20.1	21.6	C	C	0.58	0.61	A	B	24.3	26.4	C	C	Eastvale/ LOS D
4	Hamner Av. & Riverboat Dr.	0.72	0.72	C	C	31.2	20.5	C	C	0.75	0.77	C	C	45.5	35.9	D	D	Eastvale/ LOS D
5	Hamner Av. & Schleisman Rd.[4]	0.72	0.72	C	C	31.2	20.5	C	C	0.75	0.77	C	C	45.5	35.9	D	D	Eastvale/ LOS D

Table 4.2-17
Intersection Deficiencies
Opening Year Conditions and Opening Year Conditions With-Project

		Opening Year Conditions								Opening Year Conditions With-Project								Jurisdiction/ LOS Std.
		ICU (v/c)		Level of Service		Delay (secs.)		Level of Service		ICU (v/c)		Level of Service		Delay (secs.)		Level of Service		
ID #	Intersection	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
6	Hamner Ave. & Citrus Ave.	0.76	0.72	C	C	**140.3**	**131.5**	**F**	**F**	0.79	0.77	C	C	**177.9**	**134.0**	**F**	**F**	Eastvale/ LOS D
7	Hamner Ave. & Norco Dr./6th St.	0.78	**0.98**	C	**E**	50.2	**86.0**	D	**F**	0.85	**1.06**	D	**F**	**59.1**	**101.6**	**E**	**F**	Eastvale; Norco/ LOS D
8	I-15 SB Ramps & Limonite Av.	Caltrans does not employ ICU Metric				34.3	35.5	C	D	Caltrans does not employ ICU Metric				36.3	41.8	D	D	Eastvale, Caltrans/ LOSD
9	I-15 SB Ramps & 6th St.	Caltrans does not employ ICU Metric				35.0	30.2	C	C	Caltrans does not employ ICU Metric				36.0	30.9	D	C	Norco, Caltrans/ LOS D
10	I-15 NB Ramps & Limonite Av.	Caltrans does not employ ICU Metric				32.6	36.5	C	D	Caltrans does not employ ICU Metric				33.4	38.7	C	D	Jurupa Valley Caltrans/ LOS D
11	I-15 NB Ramps & 6th St.	Caltrans does not employ ICU Metric				26.8	26.5	C	C	Caltrans does not employ ICU Metric				34.7	28.2	C	C	Norco, Caltrans/ LOS D

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.
Notes: Deficiencies identified in **BOLD**.

Level of Significance: *Potentially Cumulatively Significant.*

Under Opening Year With-Project Conditions, traffic generated by the Project in combination with traffic from regional growth and related projects would result in potentially significant cumulative impacts at the Study Area intersections listed at Table 4.2-17.

Mitigation Measure:

4.2.3 *Prior to the issuance of the final Certificate of Occupancy for each building, the Project Applicant shall pay that building's fair share fee amounts toward the construction of City of Eastvale improvements required under Opening Year With-Project (+Project) listed at EIR Table 4.2-18.*

Table 4.2-18
Summary of Opening Year + Project Intersection Improvements

ID #	Intersection Location	Jurisdiction	Recommended Improvements	Improvements in DIF or TUMF Programs	Project Fair Share %
			Opening Year With-Project		
2	Hamner Ave. & Limonite Ave.	Eastvale	Pay fees towards 3rd NB through lane	Yes (TUMF)	---
			Pay fees towards 3rd WB through lane	Yes (TUMF)	
			Pay fees towards modifying the traffic signal to accommodate overlap phasing for the NB, SB, EB, and WB right turn lanes	Yes (DIF)	
6	Hamner Ave. & Citrus Ave.	Eastvale, Norco	*Contribute fair share for Eastvale portion of 2nd NB left turn lane (Same as Existing + Project)*	No	34.2%
			Contribute fair share for Eastvale portion of 3rd NB through lane	No	
			Contribute fair share for Eastvale portion of 3rd SB through lane	No	
			Contribute fair share for Eastvale portion of 2nd EB left turn lane	No	
			Contribute fair share for Eastvale portion of modifying the traffic signal to accommodate left turn phasing for the EB and WB approaches		
7	Hamner Ave. & Norco Dr./6th St.	Norco	*Fair share for striping a NB right turn lane (Same as Existing + Project)*	No	25.1%
			Fair share for modifying the traffic signal to accommodate overlap phasing for the NB and WB right turn lanes (Same as Existing + Project)	No	
			Fair share for 2nd SB left turn lane	No	

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.

Level of Significance After Mitigation: ***Significant and Unavoidable.***

Table 4.2-19 presents a comparison of Opening Year Without-Project and Opening Year With-Project Conditions, reflecting completion of recommended improvements.

Table 4.2-19
Summary of Opening Year With-Project Intersection Conditions
Without and With Recommended Improvements

		Traffic Control	ICU (v/c)		Level of Service		Delay (secs.)		Level of Service	
ID #	Intersection		AM	PM	AM	PM	AM	PM	AM	PM
2	Hamner Ave. & Limonite Ave.									
	- Without Improvements	TS	0.77	0.86	C	D	**55.4**	**77.9**	**E**	**E**
	- With Improvements	TS	0.67	0.73	B	C	37.1	39.4	D	D
6	Hamner Ave. & Citrus Ave.									
	- Without Improvements	TS	0.79	0.77	C	C	**177.9**	**134.0**	**F**	**F**
	- With Improvements	TS	0.59	0.57	A	A	27.7	23.0	C	C
7	Hamner Ave. & Norco Dr./6th St.									
	- Without Improvements	TS	0.85	**1.06**	D	**F**	**59.1**	**101.6**	**E**	**F**
	- With Improvements	TS	0.66	0.79	B	C	34.3	36.2	C	D

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.
Notes: Deficiencies identified in **BOLD**.

As indicated at Table 4.2-19, completion of the recommended improvements would achieve acceptable LOS conditions under Opening Year With-Project Conditions.

The Project Applicant would pay all requisite fees, offsetting the Project's proportional contributions to cumulative traffic impacts projected to occur under Existing With-Project Conditions, thereby fulfilling the Applicant mitigation responsibilities. Notwithstanding, payment of fees pursuant to City TUMF and DIF mandates, and fair share fees pursuant to Mitigation Measure 4.2.3 would not ensure timely completion of required improvements. Thus, while the physical improvements identified may be capable of mitigating potentially significant impacts, these improvements cannot be timely assured. Moreover, there are no current plans to improve the affected intersection(s), and the City does not have an existing agreement with extra-jurisdictional agencies regarding the funding of improvements, construction of improvements, or timing of improvements at locations along, or beyond the City corporate boundaries.

Based on the preceding, pending completion of the required improvements, Project contributions to cumulative intersection LOS impacts under Opening Year With-Project Conditions are recognized as significant and unavoidable at the deficient Study Area intersections listed at previous Table 4.2-17.

Roadway Segment LOS Analysis, Opening Year With-Project Conditions

Roadway segments with identified deficiencies under Opening Year or Opening Year With-Project Conditions are identified at Table 4.2-20 together with applicable jurisdictional LOS standards.

Table 4.2-20
Roadway Segment Deficiencies
Opening Year Conditions and Opening Year Conditions With-Project

			Roadway	LOS	Existing Conditions			Existing Conditions With-Project			Jurisdiction/ LOS Std.
ID #	Roadway	Segment Limits	Section	Capacity	ADT	V/C	LOS	ADT	V/C	LOS	
1	Schleisman Road	Scholar Way to Hamner Avenue	5D	44,900	11,700	0.26	A	12,800	0.29	A	D
2	Hamner Avenue	Limonite Avenue to 68th Street	6D	53,900	30,138	0.56	A	32,268	0.60	A	D
3		68th Street to Riverboat Drive	6D	53,900	25,610	0.48	A	28,362	0.53	A	D
4		Riverboat Drive to Schleisman Road	4D	35,900	**34,867**	**0.97**	**E**	**37,805**	**1.05**	**F**	D
5		Schleisman Road to Citrus Street	4D	35,900	29,266	0.82	D	32,242	0.90	D	D
6		Citrus Street to Norco Drive/6th Street[5]	2U	17,950	**37,393**	**2.08**	**F**	**39,225**	**2.19**	**F**	D
7	Limonite Avenue	Hamner Avenue to I-15 Freeway	8D	71,800	50,375	0.70	C	51,685	0.72	C	D
8	6th Street	Hamner Avenue to I-15 Freeway	4D	35,900	26,992	0.75	C	28,302	0.79	C	D

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.
Notes: #U- # Lane Undivided. #D- # Land Divided. Deficiencies identified in **BOLD**.

Level of Significance: ***Potentially Cumulatively Significant.*** As indicated at Table 4.2-20, under Opening Year With-Project Conditions, Project traffic would contribute to projected roadway segment LOS deficiencies. These are potentially significant cumulative impacts.

Mitigation Measure:

4.2.4 Prior to the issuance of the final Certificate of Occupancy for each building, the Project Applicant shall pay that building's fair share fee amounts toward the construction of City of Eastvale improvements required under Opening Year With-Project (+Project) listed at EIR Table 4.2-21.

Table 4.2-21
Summary of Opening Year With Project Roadway Segment Improvements

ID #	Roadway Segment	Jurisdiction	Recommended Improvements	Improvements in DIF or TUMF Programs[2]	Project Fair Share %[3]
			Opening Year With Project		
4	Hamner Avenue, between Riverboat Drive and Schleisman Road	Eastvale	Pay fees towards 3rd NB through lane	Yes (TUMF)	N/A
			Pay fees towards 3rd SB through lane	Yes (TUMF)	
6	Hamner Avenue, between Citrus Street and Norco Drive/6th Street[6]	Eastvale, Norco	Contribute fair share for Eastvale Portion of 2nd and 3rd NB through lanes *(Same as Existing + Project)*	No	26.1%
			Contribute fair share for Eastvale Portion of 2nd and 3rd SB through lanes *(Same as Existing + Project)*	No	

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.

Level of Significance After Mitigation: ***Significant and Unavoidable.***

Table 4.2-22 presents a comparison of Existing With-Project Conditions, without and with recommended improvements.

Table 4.2-22
Summary of Opening Year With-Project Roadway Segment Conditions
Without and With Recommended Improvements

ID #	Roadway	Segment Limits	Roadway Section	LOS Capacity (ADT)	ADT	V/C	LOS
4	Hamner Ave.	Riverboat Drive to Schleisman Road					
		Without Improvements	4D	35,900	37,805	**1.05**	**F**
		With Improvements	**6D**	53,900	37,805	0.70	C
6	Hamner Ave.	Citrus St. to Norco Dr. /6th St.					
		Without Improvements	2U	17,950	39,225	**2.19**	**F**
		With Improvements	**6D**	53,900	39,225	0.73	C

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.
Notes: Deficiencies identified in **BOLD**.

As indicated at Table 4.2-22, completion of the Opening Year With-Project improvements would achieve acceptable LOS conditions under Opening Year With-Project Conditions.

The Project Applicant would pay all requisite fees, offsetting the Project's proportional contributions to cumulative traffic impacts projected to occur under Opening Year With-Project Conditions, thereby fulfilling the Applicant mitigation responsibilities. Notwithstanding, payment of fees pursuant to City TUMF and DIF mandates, and fair share fees pursuant to Mitigation Measure 4.2.4 would not ensure timely completion of required improvements. Thus, while the physical improvements identified may be capable of mitigating potentially significant impacts, these improvements cannot be timely assured. Moreover, there are no current plans to improve the affected intersection(s), and the City does not have an existing agreement with extra-jurisdictional agencies regarding the funding of improvements, construction of improvements, or timing of improvements at locations along, or beyond the City corporate boundaries.

Based on the preceding, pending completion of the required improvements, Project contributions to cumulative roadway segment LOS impacts under Existing With-Project Conditions are recognized as significant and unavoidable at the deficient Study Area roadway segment listed at previous Table 4.2-20.

Freeway Ramp Progression Analysis, Opening Year With-Project Conditions

Peak hour freeway ramp operations were evaluated under Opening Year With-Project Conditions. All Study Area freeway ramps would experience acceptable queue lengths under Opening Year With-Project Conditions. Please refer to TIA Table 6-3.

Level of Significance: Less-Than-Significant.

FEE-BASED MITIGATION REQUIREMENTS AND ASSOCIATED INTERSECTION IMPROVEMENTS

Tables 4.2-23 and 4.2-24, following, summarize required intersection mitigation improvements and required roadway segment mitigation improvements. Required improvements are identified for each development/analytic scenario considered herein (Existing Conditions and Opening Year Conditions). As applicable, Riverside County TUMF, City DIF, and Fair Share Fees paid by the Project would be directed to fund the required improvements. For ease of reference and comprehensive presentation, improvements that would be constructed as part of the Project, and therefore not considered to be mitigation, are also identified and are indicated by italicized text.

Project "fair share" traffic contributions at extra-jurisdictional locations are also identified. As discussed previously, these fair share calculations represent the Project's proportional contributions to extra-jurisdictional impacts rather than monies that would be assessed of the Project for construction of extra-jurisdictional improvements. In this latter regard, there does not exist an extra-jurisdictional fee-sharing mechanism between the City of Eastvale and extra-jurisdictional agencies that would provide for construction of extra-jurisdictional improvements; nor do the City or Applicant have plenary control for funding of, or construction of extra-jurisdictional improvements.

Table 4.2-23
Summary of Intersection Improvements

ID #	Intersection Location	Jurisdiction	Recommended Improvements		Improvements in DIF or TUMF Programs	Project Fair Share %
			Existing With-Project	Opening Year With-Project		
2	Hamner Ave. & Limonite Ave.	Eastvale	None	Pay fees towards 3rd NB through lane	Yes (TUMF)	---
				Pay fees towards 3rd WB through lane	Yes (TUMF)	---
				Pay fees towards modifying the traffic signal to accommodate overlap phasing for the NB, SB, EB, and WB right turn lanes.	Yes (DIF)	---
5	*Hamner Ave. & Schleisman Rd.*	*Eastvale*	*3rd NB through lane*	*Same*	Improvements to be constructed as part of the Project.	
			SB left turn lane	*Same*		
			EB through lane	*Same*		

Table 4.2-23
Summary of Intersection Improvements

ID #	Intersection Location	Jurisdiction	Recommended Improvements		Improvements in DIF or TUMF Programs	Project Fair Share %
			Existing With-Project	**Opening Year With-Project**		
			1st and 2nd WB left turn lanes	*Same*		
			WB through lane	*Same*		
			WB right turn lane	*Same*		
6	Hamner Ave. & Citrus Ave.	Eastvale, Norco	Contribute fair share for Eastvale portion of 2nd NB left turn lane	Same	No	34.2%
				Contribute fair share for Eastvale portion of 3rd NB through lane	No	
				Contribute fair share for Eastvale portion of 3rd SB through lane	No	
				Contribute fair share for Eastvale portion of 2nd EB left turn lane	No	
				Contribute fair share for Eastvale portion of modifying the traffic signal to accommodate left turn phasing for the EB and WB approaches.		
7	Hamner Ave. & Norco Dr./6th St.	Norco	Fair share for striping a NB right turn lane	Same	No	25.1%
			Fair share for modifying the traffic signal to accommodate overlap phasing for the NB and WB right turn lanes	Same	No	
				Fair share for 2nd SB left turn lane	No	

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.

Table 4.2-24
Summary of Roadway Segment Improvements

ID #	Roadway Segment	Jurisdiction	Recommended Improvements		Improvements in DIF or TUMF Programs	Project Fair Share %
			Existing Plus Project	**2019 With Project**		
4	Hamner Avenue, between Riverboat Drive and Schleisman Road	Eastvale	None	Pay fees towards 3rd NB through lane	Yes (TUMF)	N/A[5]
				Pay fees towards 3rd SB through lane	Yes (TUMF)	
6	Hamner Avenue, between Citrus Street and Norco Drive/6th Street[6]	Eastvale, Norco	Contribute fair share for Eastvale portion of 2nd and 3rd NB through lanes	Same	No	26.1%
			Contribute fair share for Eastvale portion of 2nd and 3rd SB through lanes	Same	No	

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.

Despite the incorporation of Mitigation Measures 4.2.1 through 4.2.4 and Project payment of all requisite fees, the Project's contribution to cumulative traffic impacts would be considered significant and unavoidable, as noted previously in these discussions.

Potential Impact: *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.*

Impact Analysis: Caltrans facilities within the Study Area are the only designated Riverside County Congestion Management Plan (CMP) components. These CMP facilities include:

Study Area CMP Intersections

- Intersection No. 8: I-15 Southbound Ramps & Limonite Ave.
- Intersection No. 10: I-15 Northbound Ramps & Limonite Ave.

As discussed within this Section, impacts at the intersections noted above would be less-than-significant under Existing and Opening Year Conditions.

Level of Significance: Less-Than-Significant.

Potential Impact: *Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.*

Impact Analysis: Alternative transportation modes and services available to the Project site and vicinity are described below.

Bus Services

Bus service available to the Study Area is illustrated at previous Figure 4.2-2. The Study Area is currently served generally by the Riverside Transit Authority (RTA) RTA Routes 3 and 29. RTA Route 3 runs along portions of Hamner Ave., Limonite Ave., Pats

Ranch Road, 68th St., Scholar Way, and Citrus St. RTA Route 29 runs along portions of Limonite Ave., Hamner Ave., 68th St., and Pats Ranch Road.

RTA regularly reviews ridership demands and travel patterns to assure convenient and efficient bus transportation within its Service Area. Current (2018) RTA bus routes and schedules are available at: http://www.riversidetransit.com/index.php/riding-the-bus/maps-schedules.

Pedestrian and Bicycle Facilities

Previous Figure 4.2-3 illustrates Study Area bike routes, sidewalks, and roadway crosswalks. Project bicycle facilities would be provided consistent with City of Eastvale *Design Standards and Guidelines*. Field observations conducted in June 2017 indicate nominal pedestrian and bicycle activity within the Study Area.

The Applicant and City will coordinate Project final designs with RTA to evaluate propriety of Project transit access and amenities. The Project would also construct pedestrian access and bicycle facilities improvements consistent with City standards and requirements. On this basis, the potential for the Project to conflict with policies, plans, or programs for public transit, bicycle, or pedestrian facilities, would be less-than-significant.

Level of Significance: Less-Than-Significant.

4.3 AIR QUALITY

4.3 AIR QUALITY

Abstract

This Section identifies and addresses potential air quality impacts that may result from construction and implementation of the Project. More specifically, the air quality analysis evaluates the potential for the Project to result in the following impacts:

- *Conflict with or obstruct implementation of the applicable air quality plan;*
- *Violate any air quality standard or contribute substantially to an existing or projected air quality violation;*
- *Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard, including releasing emissions which exceed quantitative thresholds for ozone precursors;*
- *Expose sensitive receptors to substantial pollutant concentrations; or*
- *Create objectionable odors affecting a substantial number of people.*

Based on the analysis presented herein, because the Medium Density Residential land use designation reflected in the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP) differs from the Project's proposed Commercial land use designation, the Project is considered inconsistent with the AQMP. Additionally, the Project would generate operational-source emissions of Oxides of Nitrogen (NO_x) that would exceed applicable SCAQMD regional thresholds. Moreover, the Project is located within ozone and

PM_{10}/$PM_{2.5}$ nonattainment areas (NO_x is a precursor to ozone and PM_{10}/$PM_{2.5}$). Project operational-source NO_x emissions exceedances would therefore result in a cumulatively considerable net increase in criteria pollutants (ozone and PM_{10}/$PM_{2.5}$) for which the Project region is nonattainment. These are significant and unavoidable air quality impacts.

Other potential air quality impacts of the Project are either less-than-significant or can be reduced to levels that are less-than-significant with application of the mitigation measures recommended herein.

4.3.1 INTRODUCTION

This Section presents existing air quality conditions and identifies potential air quality impacts resulting from construction and operation of the Project. Local and regional climate, meteorology and air quality are discussed, as well as existing federal, state and regional air quality regulations. The information presented in this Section is summarized from the *Polopolus Air Quality Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018 (Project AQIA). The Project AQIA, including all supporting air quality modeling data, are presented in their entirety at EIR Appendix C.

4.3.2 AIR QUALITY FUNDAMENTALS

Air pollution comprises many substances generated from a variety of sources, both man-made and natural. Industrialization occurring in the twentieth century, and especially activities relying on the burning of fossil fuels, creates air pollution. Most air pollutant contaminants are wasted energy in the form of unburned fuels or by-products of the combustion process. Motor vehicles are by far the most significant source of air pollutants in urban areas, emitting photochemically reactive hydrocarbons (unburned fuel), carbon monoxide, and oxides of nitrogen. These primary pollutants chemically react in the atmosphere with sunlight and the passage of time to form secondary pollutants such as ozone.

Although substantive air quality improvements have been made in California over the past twenty years, Southern California still experiences severe air pollution problems. As

discussed in greater detail in the following paragraphs, oxidants and suspended particulates represent the major air quality problems within the South Coast Air Basin (SCAB, Basin) in which the Project site is located.

Air pollutants are generally classified as either primary or secondary pollutants. Primary pollutants are generated daily and emitted directly from the source, whereas secondary pollutants are created over time and occur within the atmosphere as chemical and photochemical reactions take place. Examples of primary pollutants include carbon monoxide (CO), oxides of nitrogen (NO_2 and NO), sulfur dioxide (SO_2), particulate matter (PM_{10} and $PM_{2.5}$), and various hydrocarbons or reactive organic gases (ROG). Examples of secondary pollutants include ozone (O_3), which is a product of the reaction between NO_x and ROG in the presence of sunlight. Other secondary pollutants include photochemical aerosols.

To aid in the review of discussions presented subsequently in this Section, recurring terms, abbreviations, and acronyms are defined as follows: PPM - Parts per Million; $\mu g/m^3$ - Micrograms Per Cubic Meter; PM_{10} - Particulate Matter Less Than 10 Microns In Diameter; $PM_{2.5}$ - Particulate Matter Less Than 2.5 Microns In Diameter.

4.3.2.1 Criteria Air Pollutants

Criteria air pollutants are those air contaminants for which air quality standards currently exist. Currently, state and federal air quality standards exist for ozone, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), carbon monoxide (CO), suspended particulate matter (PM_{10} and $PM_{2.5}$), and lead. California has also set standards for visibility, sulfates, hydrogen sulfide, and vinyl chloride. Evaluated criteria air contaminants, or their precursors, typically also include reactive organic gases (ROG), oxides of nitrogen (NO_x), sulfur oxides (SO_x), and respirable particulate matter (PM_{10}, $PM_{2.5}$). Pollutant characteristics, mechanisms of pollutant origination and potential health effects of air pollutants are described below.

Carbon Monoxide

Properties and Sources

Carbon monoxide (CO) is a colorless, odorless, toxic gas formed by incomplete combustion of fossil fuels. CO levels tend to be highest during the winter mornings, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest CO concentrations are generally found near congested transportation corridors and intersections. Other sources include aircraft, off-road vehicles, stationary equipment (e.g., fuel-fired furnaces, gas water heaters, fireplaces, gas stoves, gas dryers, charcoal grills), and landscape maintenance equipment such as lawnmowers and leaf blowers.

Human Health Effects

A consistent association between increased ambient CO levels and higher-than-average rates of hospital admissions for heart diseases (such as congestive heart failure) has been observed. Carbon monoxide can cause decreased exercise capacity, and adversely affects conditions with an increased demand for oxygen supply (fetal development, chronic hypoxemia, anemia, and diseases involving the heart and blood vessels). Exposure to CO can cause impairment of time interval estimation and visual function.

Ozone

Properties and Sources

Ozone (O_3) is a highly reactive and unstable gas that is formed when volatile organic compounds (VOC) and oxides of nitrogen (NO_x), which are 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, light wind, and warm temperature conditions are favorable to the formation of the pollutant.

Human Health Effects

Short-term exposure to ozone can cause a decline in pulmonary function in healthy individuals including breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue and immunological changes. Additionally, an increase in the frequency of asthma attacks, cough, chest discomfort and headache can result.

A correlation has been reported between elevated ambient ozone levels and increases in daily hospital admission rates and mortality because of long-term ozone exposure. A risk to public health implied by altered connective tissue metabolism and host defense in animals has also been reported.

Oxides of Nitrogen

Properties and Sources

Oxides of nitrogen (NO_x) are integral to the process of photochemical smog production. During combustion, oxygen reacts with nitrogen to produce NO_x. Two major forms of NO_x are nitric oxide (NO) and nitrogen dioxide (NO_2). Natural causal sources or originators of NO_x include lightning, soils, wildfires, stratospheric intrusion, and the oceans. Natural sources accounted for approximately seven percent of 1990 emissions of NO_x for the United States (EPA 1997). Atmospheric deposition of NO_x occurs when atmospheric or airborne nitrogen is transferred to water, vegetation, soil, or other materials. Acid deposition involves the deposition of nitrogen and/or sulfur acidic compounds that can harm natural resources and materials. The major source of NO_x in the Basin is on-road vehicles. Stationary commercial and service source fuel combustion are other contributors.

Human Health Effects

Exposure to NO_x may alter sensory responses or impair pulmonary function and may increase incidence of acute respiratory disease including infections and respiratory symptoms in children. Difficulty in breathing in healthy individuals as well as bronchitic groups may also occur. NO_x is also a precursor to ozone and PM_{10}/$PM_{2.5}$. As noted above,

health effects of ground-level ozone include: aggravated asthma; reduced lung capacity; increased respiratory illness susceptibility; increased respiratory and cardiovascular hospitalizations; and premature deaths.

Sulfur Dioxide

Properties and Sources

Sulfur dioxide (SO_2) is a colorless, pungent gas. At levels greater than 0.5 ppm, SO_2 has a strong odor. Sulfuric acid is formed from sulfur dioxide, which is an aerosol particle component that affects acid deposition. Anthropogenic, or human-caused, sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. SO_2 is a precursor to sulfates and PM_{10}.

Human Health Effects

Health effects of SO_2 include higher frequencies of acute respiratory symptoms (including airway constriction in some asthmatics and reduction in breathing capacity leading to severe difficulties) and diminished ventilatory function in children. Extreme exposure can cause lung edema (fluid accumulation), lung tissue damage, and damage to lining the respiratory tract.

Particulate Matter

Properties and Sources

Particulate matter is a generic term that defines a broad group of chemically and physically different particles (either liquid droplets or solids) that can exist over a wide range of sizes. Examples of atmospheric particles include those produced from combustion (diesel soot or fly ash), light (urban haze), sea spray (salt particles), and soil-like particles from re-suspended dust. Fugitive dust is defined as any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly because of human activities (Rule 403, Fugitive Dust, SCAQMD).

Within air quality analyses, particulate matter is categorized by diameter: PM_{10} and $PM_{2.5}$. PM_{10} refers to particulate matter that is 10 microns or less in diameter (1 micron is one millionth of a meter, or one micrometer [μm]). $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter. The size of particles can determine the residence time of the material in the atmosphere. $PM_{2.5}$ has a longer atmospheric lifetime than PM_{10} and, therefore, can be transported over longer distances.

Particulate matter originates from a variety of stationary and mobile sources. Stationary sources that generate particulate matter include: fuel combustion for electric utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal and recycling. Mobile or transportation-related sources that generate particulate matter include highway vehicles, non-road vehicles and fugitive dust from paved and unpaved roads.

Human Health Effects

A consistent correlation between elevated ambient PM_{10} levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed.

Diesel Particulate Matter (DPM), a subcategory of particulate matter, is a mixture of many exhaust particles and gases that is produced when an engine burns diesel fuel. Many compounds found in diesel exhaust are carcinogenic, including sixteen compounds that are classified as possibly carcinogenic by the International Agency for Research on Cancer. DPM includes the particle-phase constituents in diesel exhaust. Some short-term (acute) effects of diesel exhaust include eye, nose, throat and lung irritation, as well as coughs, headaches, light-headedness and nausea. Diesel exhaust is a major source of ambient particulate matter pollution, and numerous studies have linked elevated particle levels in the air to increased hospital admission, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. DPM in the Basin poses the greatest cancer risk of all identified toxic air pollutants.

Reactive Organic Gases

Properties and Sources

Reactive Organic Gases (ROGs) (also termed Volatile Organic Compounds [VOCs]) are defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. It should be noted that there is no state or national ambient air quality standard for ROGs because they are not classified as criteria pollutants. They are regulated, however, because a reduction in ROG emissions reduces certain chemical reactions that contribute to the formulation of ozone. ROGs are also transformed into organic aerosols in the atmosphere, which contribute to higher PM_{10} and lower visibility. The major sources of ROGs in the Basin are on-road motor vehicles and solvent evaporation. ROGs are also an ozone and $PM_{10}/PM_{2.5}$ precursor.

Human Health Effects

As described previously, health effects of ground-level ozone include: aggravated asthma; reduced lung capacity; increased respiratory illness susceptibility; increased respiratory and cardiovascular hospitalizations; and premature deaths.

Benzene is an ROG and a known carcinogen. Typical sources of benzene emissions include: gasoline service stations (fuel evaporation), motor vehicle exhaust, tobacco smoke, and oil and coal incineration. Benzene is also sometimes employed as a solvent for paints, inks, oils, waxes, plastic, and rubber. It is used in the extraction of oils from seeds and nuts. It is also used in the manufacture of detergents, explosives, dyestuffs, and pharmaceuticals. Short-term (acute) exposure to high doses from inhalation of benzene may cause dizziness, drowsiness, headaches, eye irritation, skin irritation, and respiratory tract irritation, and at higher levels, unconsciousness can occur. Long-term (chronic) occupational exposure to high doses by inhalation has caused blood disorders, including aplastic anemia and lower levels of red blood cells.

4.3.3 SETTING

4.3.3.1 Local and Regional Climate

The Project site is within the South Coast Air Basin (SCAB, Basin) and the jurisdiction of SCAQMD. The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. The SCAQMD has jurisdiction over an area of approximately 10,743 square miles, consisting of the four-county Basin (Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino Counties), and the Riverside County portions of the Salton Sea Air Basin and Mojave Desert Air Basin.

The approximately 6,745-square-mile SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bounded by the San Gabriel Mountains to the south and west, the Los Angeles/Kern County border to the north, and the Los Angeles/San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley.

Regional climate and variations in temperature, wind, humidity, precipitation, and amount of sunshine influence air quality within the SCAB. The annual average temperatures throughout the Basin vary from the low to mid 60s (degrees Fahrenheit). Due to a decreased marine influence, the eastern portion of the SCAB experiences greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, 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 conversion of sulfur dioxide to sulfates is heightened in air with high relative humidity. 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 percent along the coast and 59 percent inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. It should be noted that these effects decrease with distance from the coast.

More than 90 percent of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB, with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14-½ hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind 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 (counterclockwise) 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 areas.

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.

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 NO_x and CO from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

4.3.3.2 Existing Air Quality

Existing air quality is monitored and evaluated in the context of National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). 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. For further information

regarding NAAQS and CAAQS currently in effect, please refer to the Project Air Quality Impact Analysis at Table 2-1, *Ambient Air Quality Standards*; and http://www.arb.ca.gov/research/aaqs/aaqs.htm. 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.

Regional Air Quality

The SCAQMD monitors levels of various criteria pollutants at 38 permanent monitoring stations and 5 single-pollutant source Lead (Pb) air monitoring sites throughout the air district. In 2015, the federal and state ambient air quality standards (NAAQS and CAAQS) were exceeded on one or more days for ozone, PM_{10}, and $PM_{2.5}$ at most monitoring locations. No areas of the Basin exceeded federal or state standards for NO_2, SO_2, CO, sulfates or lead. Attainment designations for the SCAB are provided at Table 4.3-1.

Table 4.3-1
SCAB Attainment Status-City of Eastvale

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

Source: *Polopolus Air Quality Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018.

Local Air Quality

Relative to the Project area, the nearest long-term air quality monitoring site for Particulate Matter ≤10 microns (PM_{10}) is the SCAQMD Corona/Norco Area monitoring station, located approximately 2.75 miles southwest of the Project area in Norco (SRA 22). The nearest long-term air quality monitoring site for Ozone (O_3), Carbon Monoxide (CO),

Nitrogen Dioxide (NO_2), and Particulate Matter ≤2.5 microns ($PM_{2.5}$) is the SCAQMD Metropolitan Riverside County monitoring station, located approximately 8.85 miles northeast of the Project area in Riverside (SRA 13). It should be noted that the Metropolitan Riverside County monitoring station was utilized in lieu of the Corona/Norco Area monitoring station only in instances where data was not available from the Corona/Norco Area site.

The most recent three years of available air quality monitoring data is shown at Table 4.3-2 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality in the Project area. Data for SO_2 has been omitted as attainment is regularly met in the Basin and few monitoring stations measure SO_2 concentrations.

Table 4.3-2
Ambient Air Quality Conditions

Pollutant	Standard	Year		
		2014	2015	2016
Ozone (O_3)				
Maximum 1-Hour Concentration (ppm)		0.141	0.132	0.142
Maximum 8-Hour Concentration (ppm)		0.104	0.105	0.104
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	29	31	33
Number of Days Exceeding State 8-Hour Standard	> 0.07 ppm	69	59	71
Number of Days Exceeding Federal 8-Hour Standard	> 0.07 ppm	66	55	69
Number of Days Exceeding Health Advisory	≥ 0.15 ppm	0	0	0
Carbon Monoxide (CO)				
Maximum 1-Hour Concentration (ppm)		2.0	2.5	1.7
Maximum 8-Hour Concentration (ppm)		1.9	2.3	1.3
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)				
Maximum 1-Hour Concentration (ppm)		0.060	0.057	0.073
Annual Arithmetic Mean Concentration (ppm)		0.015	0.014	0.028

Table 4.3-2
Ambient Air Quality Conditions

Pollutant	Standard	Year		
		2014	2015	2016
Number of Days Exceeding State 1-Hour Standard	> 0.18 ppm	0	0	0
Particulate Matter ≤ 10 Microns (PM_{10})				
Maximum 24-Hour Concentration (μg/m³)		65	87	62
Number of Samples		59	44	51
Number of Samples Exceeding State Standard	> 50 μg/m³	3	3	7
Number of Samples Exceeding Federal Standard	> 150 μg/m³	0	0	0
Particulate Matter ≤ 2.5 Microns ($PM_{2.5}$)				
Maximum 24-Hour Concentration (μg/m³)		48.9	54.7	39.1
Annual Arithmetic Mean (μg/m³)		12.48	13.34	12.54
Number of Samples Exceeding Federal 24-Hour Standard	> 35 μg/m³	5	17	4

Source: *Polopolus Air Quality Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018.

4.3.4 REGULATORY BACKGROUND

4.3.4.1 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 California Air Resource Board (CARB).

The Federal Clean Air Act (CAA) was first enacted in 1955, and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the 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 demonstrating how standards would 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 (Nonattainment 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 $PM_{2.5}$.[1]

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 nitrogen oxides (NO_x). NO_x 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.

4.3.4.2 California Regulations

The 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 to attain the state ambient air quality standards by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes

[1] Current NAAQS are identified at Project Air Quality Impact Analysis at Table 2-1, *Ambient Air Quality Standards*, or can be accessed at: http://www.arb.ca.gov/research/aaqs/aaqs.htm.

standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. At present, 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.

Local air quality management districts, such as the SCAQMD, regulate air emissions from commercial and light industrial facilities. All air pollution control districts have been formally designated as attainment or nonattainment for each CAAQS.

Serious nonattainment areas are required to prepare air quality management plans that include specified emission reduction strategies to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g., motor vehicle use generated by residential and commercial development);
- A District-permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a five percent or more annual reduction in emissions or 15 percent or more in a period of three years for ROGs, NO_x, CO and PM_{10}. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than five percent per year under certain circumstances.

4.3.4.3 Regional Air Quality Management Planning

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards. AQMPs are updated regularly to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. Further discussion on the AQMP and Project consistency with the AQMP is provided subsequently at Section 4.3.6, *Potential Impacts and Mitigation Measures*.

4.3.5 STANDARDS OF SIGNIFICANCE

As identified within the *CEQA Guidelines*, air quality impacts would be considered potentially significant if the Project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard, including releasing emissions which exceed quantitative thresholds for ozone precursors.

- Expose sensitive receptors to substantial pollutant concentrations; or

- Create objectionable odors affecting a substantial number of people.

4.3.5.1 SCAQMD Thresholds

To determine if a given project would cause a significant effect on air quality, the impact of the project must be determined by examining the types and levels of emissions generated and their impacts on factors that affect air quality. To accomplish this determination of significance, the SCAQMD has established air pollution thresholds

against which a proposed project can be evaluated and assist lead agencies in determining if the impacts of a project are significant. If the project's air pollutant emissions exceed applicable SCAQMD thresholds, then the impact should be considered significant. While the final determination of significance thresholds is within the purview of the lead agency pursuant to the State *CEQA Guidelines*, the SCAQMD recommends that its regional and local air quality thresholds for regulated pollutants (summarized below) be employed by lead agencies in determining whether criteria air pollutant emissions impacts generated by construction or operations of a given project are significant.

Regional Thresholds

The SCAQMD has developed regional significance thresholds for regulated pollutants, as summarized at Table 4.3-3. The SCAQMD's CEQA Air Quality Significance Thresholds (March 2015) indicate that any projects in the SCAB with daily emissions that exceed applicable thresholds should be considered as having an individually and cumulatively significant air quality impact. Conversely, projects in the SCAB with daily emissions not exceeding applicable thresholds should be considered as having an individually and cumulatively less-than-significant air quality impact.

Table 4.3-3
Maximum Daily Emissions Regional Thresholds

Pollutant	Construction	Operational
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

Source: *Polopolus Air Quality Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018.

Carbon Monoxide Concentrations (CO "hot spots") Thresholds

CO "hot spots" are areas of carbon monoxide concentrations exceeding national or state air quality standards. CO hotspots typically occur because of excessive vehicular idling, often associated with traffic backups at underperforming intersections or congested roadway links. SCAQMD also recommends an evaluation of potential localized CO "hot spot" impacts for projects that may adversely affect, or substantially contribute to, level of service impacts along area roadway segments or at area intersections. Based on the SCAQMD's *CEQA Air Quality Handbook* (1993), a project's localized CO emissions impacts would be significant if they exceed the following California standards for localized CO concentrations:

- 1-hour CO standard of 20.0 parts per million (ppm);
- 8-hour CO standard of 9.0 ppm.

Localized Significance Thresholds (LSTs)

The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses. LSTs apply to carbon monoxide (CO), nitrogen dioxide (NO_2), particulate matter less than 10 microns (PM_{10}), and particulate matter less than 2.5 microns ($PM_{2.5}$). LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard (NAAQS or CAAQS) at the nearest residence or sensitive receptor.

4.3.6 POTENTIAL IMPACTS AND MITIGATION MEASURES

4.3.6.1 Introduction

The following discussions focus on areas where it has been determined that the Project may result in potentially significant air quality impacts, pursuant to comments received through the NOP process, and based on the analysis presented within this Section and included within the EIR Initial Study. Under all air quality topical issues listed at *CEQA Guidelines* Appendix G, Project impacts were determined to be potentially significant

warranting further analysis, and are discussed below. Please also refer to Initial Study Checklist Item 3, *Air Quality.*

4.3.6.2 Impact Statements

Following is an analysis of potential air quality impacts that are expected to result from the Project. Potential emissions are considered for Project construction and operation. For each topical discussion, potential impacts are evaluated under applicable criteria established above at Section 4.3.5, *Standards of Significance*.

Potential Impact: *Conflict with or obstruct implementation of the applicable air quality plan.*

Impact Analysis: The Project area is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743-square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what used to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the SCAG, county transportation commissions, and local governments, as well as state and federal agencies, to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the Basin. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) outlining strategies to achieve state and federal ambient air quality standards. AQMPs are periodically updated to reflect technological advances, recognize new or pending regulations, more effectively reduce emissions, accommodate growth, and minimize any negative fiscal impacts of air pollution control on the economy.

AQMP Consistency

The AQMP was last updated in 2016 and incorporates the latest scientific and technical information and planning assumptions, including the 2016 Regional Transportation Plan/Sustainable Communities Strategy ("2016 RTP/SCS") and updated emission

inventory methodologies for various source categories. Air quality conditions and trends presented in the 2016 AQMP assume that regional development will occur in accordance with population growth projections identified by SCAG in the 2016 RTP/SCS.

The SCAG 2016 RTP/SCS in turn derives its assumptions, in part, from general plans of cities located within the SCAG region. Accordingly, if a project is consistent with the development and growth projections reflected in the adopted general plan, it is considered consistent with the growth assumptions in the SCAG 2016 RTP/SCS and 2016 AQMP. The 2016 AQMP further assumes that development projects within the region will implement appropriate strategies to reduce air pollutant emissions, thereby promoting timely implementation of the AQMP.

Criteria for determining consistency with the AQMP are identified at Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's *CEQA Air Quality Handbook* (1993), as listed below. Project consistency with, and support of these criteria is presented subsequently.

- **Criterion No. 1:** The project under consideration 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.

- **Criterion No. 2:** The project under consideration will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

Criterion No. 1: The violations that Criterion No. 1 refers to are the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS). The CAAQS and NAAQS comprise Localized Significance Thresholds (LSTs). As discussed subsequently in this Section, the Project LST analysis substantiates that Project mitigated construction-source emissions would not exceed applicable LSTs. And even without mitigation, operational-source emissions would not exceed applicable LSTs. Further, the Project would implement applicable best available control measures

(BACMs), and would comply with applicable SCAQMD rules, acting to further reduce potential LST impacts. On this basis, the Project would not result in an increase in the frequency or severity of existing air quality violations, or cause or contribute to new violations.

With regard to timely attainment of AQMP air quality standards and interim emissions, the Project site's current General Plan Land Use designation is "Medium Density Residential." The Medium Density Residential General Plan Land Use, which is reflected in the 2016 AQMP, would allow for development of conventional single-family residential uses at densities ranging from 2.1 to 5.0 dwelling units per acre. As proposed by the Applicant, the current Medium Density Residential General Plan Land use designation would be amended to "Commercial" to allow for the various Project commercial, retail, service, office, and civic uses.

Accordingly, the 2016 AQMP, which assumes the Project site would be developed with Medium Density Residential uses, does not reflect the Project's proposed Commercial General Plan land use designation. Nor do the 2016 AQMP air quality standards and interim emissions reductions targets reflect the Project's proposed Commercial General Plan Land Use designation. For this reason, there lacks an opportunity to determine whether or not the Project would delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

In conclusion, the Project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations. However, because the Medium Density Residential land use designation reflected in the 2016 AQMP differs from the Commercial land use designation proposed under the Project, there is no opportunity to determine whether or not the Project would delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP. As the Project's potential to delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP is indeterminate and cannot be

assured at this time, for the purposes of this analysis, the Project is considered to be inconsistent with Criterion No.1.

Criterion No. 2: Criterion No. 2 addresses consistency of a given project with approved local and regional land use plans, and associated potential AQMP implications. That is, AQMP emissions models and emissions control strategies are based in part on land use data provided by local general plan documentation; and regional plans, which reflect and incorporate local general plan information. Projects that propose general plan amendments may increase the intensity of use and/or result in higher traffic volumes, thereby resulting in increased stationary area source emissions and/or vehicle source emissions when compared to the AQMP assumptions. However, if a given project is consistent with and does not otherwise exceed the growth projections in the applicable local general plan, then that project would be considered consistent with the growth assumptions in the AQMP.

Criterion No. 2 addresses consistency of a given project with approved local and regional land use plan and associated potential AQMP implications. That is, AQMP emissions models and emissions control strategies are based in part on land use data provided by local general plan documentation; and regional plans, which reflect and incorporate local general plan information. Projects that propose general plan amendments may increase the intensity of use and/or result in higher traffic volumes, thereby resulting in increased stationary area source emissions and/or vehicle source emissions when compared to the AQMP assumptions. However, if a given project is consistent with and does not otherwise exceed the growth projections in the applicable local general plan, then that project would be considered consistent with the growth assumptions in the AQMP.

As noted above, the current Medium Density Residential General Plan Land use designation for the Project site would be amended to "Commercial" to allow for the various Project commercial, retail, service, office, and civic uses.

Accordingly, the 2016 AQMP does not reflect the proposed land use designation for the Project site. For this reason, there is no basis for a determination that the Project would not exceed the assumptions in the AQMP or increments based on the years of Project build-out phase. Consequently, the commercial/retail/service/civic use development of the subject site as proposed by the Project is conservatively assumed to generate operational-source emissions not reflected within the current 2016 AQMP regional emissions inventory for the Basin.

Because the Medium Density Residential land use designation reflected in the 2016 AQMP differs from the proposed Commercial land use designation for the Project site, there is no basis for a determination that the Project would not exceed the assumptions in the AQMP or increments based on the years of Project build-out phase. Based on the preceding, the Project is considered to be inconsistent with AQMP Consistency Criterion No. 2.

AQMP Consistency Summary and Conclusion

The Project would be inconsistent with AQMP Criterion No's. 1 and 2, resulting in a determination that impacts in this regard would be considered significant. The Project would implement development-specific air quality mitigation measures identified in this analysis, acting to generally reduce the Project's construction-source and operational-source air pollutant emissions. Additionally, incorporation of contemporary energy-efficient technologies and operational programs, and compliance with SCAQMD emissions reductions and control requirements act to reduce Project air pollutant emissions generally.

In combination, the Project air quality mitigation measures; and Project emissions-reducing design features, and operational programs are consistent with and support overarching AQMP air pollution reduction strategies. Project support of these strategies promotes timely attainment of AQMP air quality standards and would bring the Project into conformance with the AQMP to the extent feasible. Notwithstanding, based on the analysis presented here, the Project is considered to be inconsistent with applicable AQMP Consistency Criteria.

Level of Significance: ***Significant and Unavoidable.***

Potential Impact: *Violate any air quality standard or contribute substantially to an existing or projected air quality violation.*

Impact Analysis: The latest SCAQMD/California Air Pollution Control Officers Association (CAPCOA)-approved version of the California Emissions Estimator Model (CalEEMod, v2016.3.2) was utilized to estimate Project-related air pollutant emissions levels. Project emissions levels were then compared to applicable SCAQMD thresholds to determine if air quality standards would be violated; or if Project emissions would contribute substantially to existing or projected air quality violations. Unless otherwise noted, CalEEMod default values and assumptions were applied throughout.

Regional Impacts

Construction-Source Air Pollutant Emissions

Typical Project construction activities (listed below) would generate emissions of CO, VOC, NO_x, SOx, PM_{10}, and $PM_{2.5}$.

- Demolition;
- Site Preparation;
- Grading;
- Building Construction;
- Paving;
- Architectural Coating; and
- Construction Workers Commuting.

Modeled construction-source emissions levels reflect peak levels of construction activity and equipment use, and account for construction worker commutes and vendor deliveries. Estimated maximum daily Project construction-source emissions are summarized at Table 4.3-4. Per CalEEMod protocols, modeled maximum daily emissions summarized at Table 4.3-4 do not reflect or take credit for emissions reductions achieved through implementation of BACMs and SCAQMD Rules.

Table 4.3-4
Construction-Source Emissions Summary
Maximum Daily (lbs./day)

Year	Pollutants					
	VOC	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
2018	6.16	71.68	25.68	0.07	23.51	13.08
2019	133.34	45.35	24.43	0.07	3.45	2.17
Maximum Daily Emissions	133.34	71.68	25.68	0.07	23.51	13.08
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**Yes**	No	No	No	No	No

Source: *Polopolus Air Quality Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018.

As indicated at Table 4.3-4, unmitigated Project construction-source air pollutant emissions would exceed the applicable SCAQMD regional threshold for VOC emissions. This is a potentially significant impact.

Level of Significance: Potentially Significant.

Mitigation Measure:

4.3.1 Only "Low-Volatile Organic Compounds" paints (no more than 50 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications consistent with South Coast Air Quality Management District Rule 1113 shall be used.

Level of Significance After Mitigation: Less-Than-Significant. Table 4.3-5 summarizes Project construction-source emissions after the implementation of Mitigation Measure 4.3.1.

Table 4.3-5
Construction-Source Emissions Summary–With Mitigation
Maximum Daily (lbs./day)

Year	Pollutants					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
2018	6.16	71.68	25.68	0.07	8.57	5.56
2019	66.91	45.35	24.43	0.07	3.45	2.17
Maximum Daily Emissions	66.91	71.68	25.68	0.07	8.57	5.56
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Source: *Polopolus Air Quality Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018.

As indicated at Table 4.3-5, mitigated construction-source emissions would not exceed applicable SCAQMD regional thresholds.

Operational-Source Air Pollutant Emissions

Project operations would result in emissions of ROG, NO_x, CO, SO_X, PM_{10}, and $PM_{2.5}$. Operational emissions would be expected from area, energy, and mobile sources.

Each of these operational emissions sources are described in the following paragraphs, and the estimated emissions from each source are summarized subsequently. Unless otherwise noted, CalEEMod default parameters were employed throughout.

Area Source Emissions

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.

Consumer Products

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products

contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants.

Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project.

Energy Source Emissions

Electricity and natural gas are used by almost every 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 Basin, criteria pollutant emissions from offsite generation of electricity is generally excluded from the evaluation of significance and only natural gas use is considered.

Mobile Source Emissions

Project vehicular impacts are dependent on both overall daily vehicle trip generation and the effect of the Project on peak hour traffic volumes and traffic operations in the vicinity of the Project. Project-related operational air quality impacts derive primarily from vehicle trips.

Operational Emissions Summary

Maximum daily Project operational-source air pollutant emissions are summarized at Table 4.3-6. Applicable SCAQMD regional significance thresholds are also indicated.

Table 4.3-6
Operational-Source Emissions Summary
Maximum Daily Winter/Summer (lbs./day)

Emissions Sources	Pollutants					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Summer Scenario						
Area Sources	6.41	2.40E-04	0.026	0.00	0.90E-04	0.90E-04
Energy Sources	0.49	4.45	3.74	0.027	0.338	0.338
Mobile Sources	30.72	192.73	243.92	0.837	51.90	14.46
Maximum Daily Emissions	37.62	197.18	247.69	0.864	52.24	14.80
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	No	**Yes**	No	No	No	No
Winter Scenario						
Area Sources	6.41	2.40E-04	0.026	0.00	0.90E-04	0.90E-04
Energy Sources	0.49	4.45	3.74	0.027	0.338	0.338
Mobile Sources	25.64	190.64	225.06	0.768	51.92	14.48
Maximum Daily Emissions	32.54	195.09	228.83	0.805	52.26	14.82
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	No	**Yes**	No	No	No	No

Source: *Polopolus Air Quality Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018.

Level of Significance: Potentially Significant. As indicated at Table 4.3-6, unmitigated Project operational-source emissions would exceed the applicable SCAQMD regional threshold for NO_x. This is a potentially significant impact.

Mitigation Measures: No feasible mitigation.

NO_x emissions are byproducts of fuel combustion, and the primary source of these emissions from the Project are tail pipe emissions from vehicles accessing the site. Neither the Project Applicant nor Lead Agency has any regulatory control over these vehicular-source emissions. Rather, vehicular-source NO_x emissions are regulated by CARB and USEPA. CARB and USEPA regulatory action have effectively reduced NO_x emissions from vehicle sources over the past years. Further reductions in these and other vehicular-

source emissions are anticipated as clean vehicle and fuel technologies improve. The Project implements all feasible measures and complies with all applicable regulations directed toward reduction of vehicular-source NO_x emissions. Notwithstanding, as substantiated herein, Project operational-source NO_x emissions would exceed applicable SCAQMD regional thresholds.[2] This impact is therefore considered significant and unavoidable.

Level of Significance After Mitigation: ***Significant and Unavoidable.***

Regional Air Quality Impact Summary

As substantiated in the preceding discussions, mitigated Project construction-source emissions would not exceed applicable SCAQMD regional thresholds. Mitigated Project construction-source emissions impacts would therefore be less-than-significant. However, Project operational-source NO_x emissions would exceed applicable SCAQMD regional thresholds. Project operational-source NO_x exceedances would therefore be considered a significant and unavoidable impact of the Project.

Localized Impacts

Localized Significance Threshold (LST) Analysis

The SCAQMD considers localized air quality impacts to be potentially significant if exceedances of federal and/or state ambient air quality standards (NAAQS/CAAQS) would occur. Collectively, the NAAQS/CAAQS establish Localized Significance Thresholds (LSTs).

LSTs were developed in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4. More specifically, to address potential Environmental Justice implications of localized air pollutant impacts, the SCAQMD adopted LSTs indicating

[2] While Project operational-source NOx emissions would exceed applicable SCAQMD regional thresholds, Localized Significance Thresholds (LSTs) for these emissions would not be exceeded. Please refer also to subsequent discussions of the Project's potential localized emissions impacts.

whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. LSTs represent the maximum project-source emissions that would not cause or contribute to an exceedance of the most stringent National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). 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. Though not required, lead agencies may employ LSTs as another indicator of significance in air quality impact analyses.

Methodology/Emissions Considered

The Project's Air Quality Analysis utilizes the methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (Methodology) (SCAQMD, June 2003). The SCAQMD Methodology clearly states that "off-site mobile emissions from the Project should NOT be included in the emissions compared to LSTs." For purposes of the LST analysis, only CalEEMod "on-site" emissions were considered. LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$.

Receptors

Localized air quality impacts were evaluated at sensitive receptor land uses. Proximate receptor land uses, and their relation to the Project site(s) are presented at Figure 4.3-1. Nearby sensitive receptors include existing residential homes, a fire station, a church, and a park, as described below. The closest sensitive receiver locations are represented by R3 and R7 to R9.

R1: Located approximately 88 feet north of Site 2, R1 represents existing outdoor living areas (backyards) of residential homes on Thornbury Lane.

R2: Location R2 represents existing outdoor living areas (backyards) of residential homes located approximately 197 feet northeast of Site 2 on Hudson River Drive.

R3: Location R3 represents existing outdoor living areas (backyards) of residential homes located approximately 10 feet west of Site 2 on College Park Drive.

R4: Location R4 represents existing outdoor living areas (backyards) of residential homes located approximately 173 feet east of Site 2 on Mackinaw Court.

R5: Location R5 represents existing fire station located approximately 146 feet south of Site 2 on Hamner Avenue.

R6: Location R6 represents the existing church located approximately 537 feet west of Site 1 on Schleisman Road.

R7: Location R7 represents the existing outdoor living areas (backyards) of residential homes located approximately 19 feet north of Site 1 on Mississippi Drive.

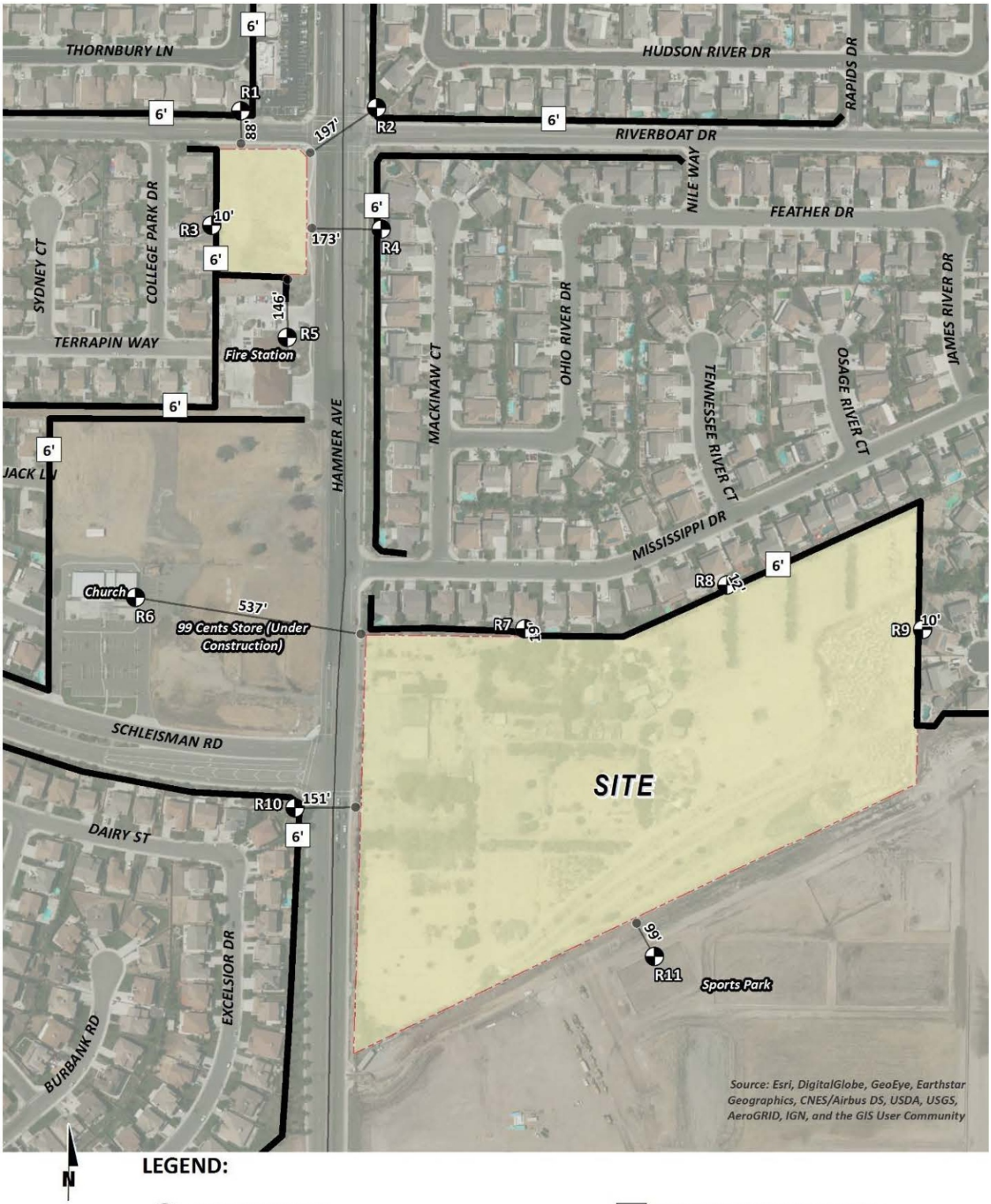
R8: Location R8 represents the existing outdoor living areas (backyards) of residential homes located approximately 12 feet north of Site 1 on Mississippi Drive.

R9: Location R9 represents existing outdoor living areas (backyards) of residential homes located approximately 10 feet east of Site 1 on Kern River Drive.

R10: Location R10 represents the existing outdoor living areas (backyards) residential homes located approximately 151 feet west of Site 1 across Hamner Avenue.

R11: Location R11 represents the existing Silverlakes Sports Complex located approximately 99 feet south of Site 1, east of Hamner Avenue.

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 nearby residential land uses were established at 25 meters.



Source: Urban Crossroads, Inc.

Figure 4.3-1
Proximate Receptor Land Uses

Construction-Source Emissions LST Analysis

The Project LST analysis of construction-source emissions employs the SCAQMD LST "mass rate lookup tables." In summary, the "lookup tables" establish allowable emissions (lbs./day) as a function of receptor distance (meters) from a construction site boundary. Related, the SCAQMD has issued guidance on applying CalEEMod to LST analyses employing the lookup tables. In this regard, CalEEMod calculates construction-source emissions (off-road exhaust and fugitive dust) based on equipment daily operational hours and the estimated maximum daily soil disturbance for each piece of equipment.

In order to determine the appropriate methodology for determining localized impacts that could occur as a result of Project-related construction, the following process is undertaken:

- CalEEMod is utilized to determine the maximum daily on-site emissions that will occur during construction activity.

- The SCAQMD's Fact Sheet for Applying CalEEMod to Localized Significance Thresholds is used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod.

- If the total acreage disturbed is less than or equal to five acres per day, then the SCAQMD's screening look-up tables are utilized to determine if a Project has the potential to result in a significant impact. The look-up tables establish a maximum daily emissions threshold in pounds per day that can be compared to CalEEMod outputs.

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.

The Air Quality Impact Analysis determined that the Project would disturb approximately 1.0 acres per day during demolition, 3.5 acres per day during site preparation, and 2.5 acres per day during the grading phase of construction. Table 4.3-7 summarizes maximum daily localized construction-source emissions impacts at the nearest sensitive receptor.

Table 4.3-7
Construction LST Summary (Without Mitigation)

	Emissions (pounds per day)			
	NO_x	**CO**	**PM_{10}**	**$PM_{2.5}$**
Demolition Emissions				
Maximum Daily Emissions	38.32	22.30	1.94	1.80
SCAQMD Localized Threshold	118	674	4	3
Threshold Exceeded?	No	No	No	No
Site Preparation Emissions				
Maximum Daily Emissions	71.60	23.73	23.30	13.03
SCAQMD Localized Threshold	220	1,354	9	7
Threshold Exceeded?	No	No	**Yes**	**Yes**
Grading Emissions				
Maximum Daily Emissions	48.23	17.52	10.10	5.34
SCAQMD Localized Threshold	187	1,123	7	6
Threshold Exceeded?	No	No	**Yes**	No

Source: *Polopolus Air Quality Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018.

As shown above, without BACMS, regulatory requirements, and mitigation, emissions during construction activity will exceed the SCAQMD's localized significance thresholds for emissions of PM_{10} and $PM_{2.5}$.

Level of Significance: Potentially Significant.

Mitigation Measure:

4.3.2 Contractor(s) shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least four (4) times daily during dry weather. Watering, shall occur preferably in the mid-morning, afternoon, and after work is done for the day. Contractor (s) shall install and maintain project contact signage that meets the minimum standards of SCAQMD Rule 403 including a 24-hour manned toll-free or local phone number, prior to initiating any type of earth-moving operations.

Level of Significance After Mitigation: Less-Than-Significant. Table 4.3-8 identifies the maximum daily localized construction-source emissions impacts at the nearest receptor, as mitigated. With the implementation of proposed mitigation, maximum-daily construction-source emissions would not exceed applicable LSTs.

Table 4.3-8
Construction LST Summary (With Mitigation)

	Emissions (pounds per day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
On-Site Demolition Emissions				
Maximum Daily Emissions	38.32	22.30	1.94	1.80
SCAQMD Localized Threshold	118	674	4	3
Threshold Exceeded?	No	No	No	No
On-Site Site Preparation Emissions				
Maximum Daily Emissions	71.60	23.73	8.36	5.51
SCAQMD Localized Threshold	220	1,354	9	7
Threshold Exceeded?	No	No	No	No
On-Site Grading Emissions				
Maximum Daily Emissions	52.54	18.32	5.37	3.37
SCAQMD Localized Threshold	187	1,123	7	6
Threshold Exceeded?	No	No	No	No

Source: *Polopolus Air Quality Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018.

Operational-Source Emissions LST Analysis

The proposed Project includes library, restaurant, hotel, and office uses, as well as supporting parking and landscape areas. According to SCAQMD LST methodology, LSTs would apply to the operational phase of a proposed project, if the project includes stationary sources, or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., transfer facilities and warehouse buildings). The proposed Project does not include such uses, and thus, due to the lack of significant stationary source emissions, no long-term localized significance threshold analysis is needed.

Level of Significance: Less-Than-Significant.

CO "Hot Spot" Analysis

Adverse localized CO concentrations ("hot spots") are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions 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 increasingly sophisticated and efficient emissions control technologies, CO concentrations in the Project vicinity have declined over time.

To establish a more accurate record of baseline CO concentrations affecting the Basin, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon traffic periods. Peak hour traffic volumes reflected in the 2003 Los Angeles CO hot spot analysis are presented at Table 4.3-9. The 2003 Los Angeles CO hot spot analysis did not predict any violation of CO standards (please refer to Table 4.3-10). It can, therefore, be reasonably concluded that projects (such as the proposed Project) that are not subject to the extremes in vehicle volumes and vehicle congestion that was evidenced in the 2003 Los Angeles hot spot analysis would similarly not result in CO hot spots.

Table 4.3-9
2003 Los Angeles Study-Peak Hour Intersection Traffic Volumes

Intersection Location	Peak Traffic Volumes (vehicles per hour)				
	Northbound (AM/PM)	Southbound (AM/PM)	Eastbound (AM/PM)	Westbound (AM/PM)	Total (AM/PM)
Wilshire-Veteran	560/933	721/1,400	4,954/2,069	1,830/3,317	8,062/7,719
Sunset-Highland	1,551/2,238	2,304/1,832	1,417/1,764	1,342/1,540	6,614/5,374
La Cienega-Century	821/1,674	1,384/2,029	2,540/2,243	1,890/2,728	6,634/8,674
Long Beach-Imperial	756/1,150	479/944	1,217/2,020	1,760/1,400	4,212/5,514

Source: *Polopolus Air Quality Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018.

Table 4.3-10
2003 Los Angeles Study-Hot Spot Model Results

Intersection Location	Carbon Monoxide Concentrations (parts /million)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire-Veteran	4.6	3.5	3.7
Sunset-Highland	4.0	4.5	3.5
La Cienega-Century	3.7	3.1	5.2
Long Beach-Imperial	3.0	3.1	8.4

Source: *Polopolus Air Quality Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018.

Table 4.3-11
TIA Study Area Intersection Maximum Peak Hour Traffic Volumes

Intersection Location	Northbound (AM/PM)	Southbound (AM/PM)	Eastbound (AM/PM)	Westbound (AM/PM)	Total (AM/PM)
I-15 Southbound Ramps & Limonite Avenue	--/--	635/1,119	1,886/2,084	1,721/1,719	4,242/4,921
Hamner Avenue & Schleisman Road	1,319/1,354	1,085/1,383	622/489	306/385	3,332/3,611
Hamner Avenue & Norco Drive/ Sixth Street	958/1,596	1,412/1,295	323/264	1,003/1,039	3,697/4,194

Source: *Polopolus Air Quality Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018.

As indicated at Table 4.3-11, the Project Study Area intersections would not experience traffic volumes and traffic congestion reflected in the 2003 Los Angeles hot spot analysis;

as with the Los Angeles Study, the Project would similarly not create or result in CO hot spots. CO hot spots are not an environmental concern for the Project.

It is further noted that as the result of the SCAQMD Air Quality Management Plan strategies and requirements, levels of all criteria pollutant (including CO) within the Basin have steadily improved and are expected to continue to do so, further reducing the potential for occurrence of CO hot spots.

Level of Significance: Less-Than-Significant.

Gasoline Dispensing Emissions

Gasoline fueling stations are required by the SCAQMD Rule 461, *Gasoline Storage and Dispensing*, to include an enhanced vapor recovery and diagnostic system. The purpose of this system is to collect and store gasoline vapors during both bulk deliveries and vehicle operations. In general, fuel dispensing systems are required to include dripless nozzles that seal to the vehicle during filling. A vacuum system forces the vapors created by the vehicle filling back to the underground storage tank (UST). The storage tank is vented by a mechanical filtration system that scrubs and neutralizes the vapors before their release.

Similarly, during bulk delivery operations, the delivery truck's filling tubes are sealed to the storage tank and all vapors are returned to the UST. This process stems the release of vapors. The vapors created by the filling operation are then subject to mechanical scrubbing and neutralization prior to release. The final component of the vapor recovery process is the diagnostic system. This electronic system provides 24-hour monitoring of the vapor recovery system, including collection of vapors during fueling operations and assurances that vapors in the UST are not leaking. The system identifies failures automatically, notifies the station operator, and reduces emissions by early detection and prompt repair. Compliance with SCAQMD Rule 461, *Gasoline Storage and Dispensing*, ensures that impacts due to gasoline dispensing emissions are less-than-significant.

Level of Significance: Less-Than-Significant.

Potential Impact: *Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard, including releasing emissions which exceed quantitative thresholds for ozone precursors.*

Impact Analysis: The Project area is designated as a nonattainment area for ozone, PM_{10}, and $PM_{2.5}$. Germane to these nonattainment conditions, the Project-specific evaluation of emissions presented previously demonstrates that the Project's construction-source emissions would not exceed regional significance thresholds with implementation of mitigation. Project construction-source emissions would therefore not contribute to a cumulatively considerable net increase in PM_{10}, $PM_{2.5,}$ or the PM_{10}, $PM_{2.5,}$ and ozone precursors VOC and NO_x within the encompassing nonattainment areas.

However, Project operational-source NO_x emissions would exceed applicable SCAQMD regional thresholds. NO_x is an ozone and $PM_{10}/PM_{2.5}$ precursor.

The fact that the Project generates long-term emissions of NO_x exceeding applicable SCAQMD thresholds indicates that the Project impact is significant on an individual basis and would therefore contribute to cumulatively significant ozone and $PM_{10}/PM_{2.5}$ air quality impacts within the affected nonattainment areas. On this basis, Project operational-source emissions of NO_x in exceedance of applicable SCAQMD regional thresholds would result in a cumulatively considerable net increase in criteria pollutants within a nonattainment area. This is a potentially significant cumulative air quality impact. Please refer also to the discussion of cumulative air quality impacts presented at EIR Section 5.0, *Other CEQA Considerations*.

Level of Significance: Potentially Significant.

Mitigation Measures: No feasible mitigation measures exist that would substantively reduce Project operational-source NOx threshold exceedances.

Level of Significance After Mitigation: Significant and Unavoidable. Operational-source NO_x emission exceedances would persist, and would be cumulatively considerable. Please refer also to previous discussions regarding Project operational-source NO_x emissions.

Potential Impact: *Expose sensitive receptors to substantial pollutant concentrations.*

Impact Analysis: Sensitive receptors can include uses such as long-term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, child care centers, and athletic facilities can also be considered as sensitive receptors.

Results of the LST analysis indicate that mitigated Project construction-source emissions would not exceed the SCAQMD localized significance thresholds. Therefore, sensitive receptors would not be subject to a significant air quality impact during Project construction.

Results of the LST analysis indicate that the Project would not exceed the SCAQMD localized significance thresholds during operational activity. Additionally, the proposed Project would not result in a CO "hotspot" as a result of Project related traffic during ongoing operations, nor would the Project result in a significant adverse health impact. On this basis, the potential for the Project to expose sensitive receptors to substantial pollutant concentrations is considered less-than-significant.

Level of Significance: Less-Than-Significant.

Potential Impact: *Create objectionable odors affecting a substantial number of people.*

Impact Analysis: The Project may generate localized odors due to construction equipment exhaust and application of asphalt and architectural coatings during construction activities. Standard construction materials use, storage, and disposal requirements would minimize odor impacts from construction. Moreover, any

construction-source odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction.

Gasoline fueling stations are required by SCAQMD Rule 461, *Gasoline Storage and Dispensing*, to include an enhanced vapor recovery and diagnostic system. As previously described, the purpose of this system is to collect and store gasoline vapors during both bulk deliveries and vehicle operations, helping to prevent odors in this regard.

The Project may also generate odors associated with fast-food/restaurants, and the temporary storage of typical solid waste (refuse). Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with City solid waste regulations. Further, any other odors that may be generated during Project operations would disperse rapidly and would likely be limited to the immediate vicinity of the odor source.

Mandated compliance with SCAQMD Rule 402 (acting to minimize potential occurrences of public nuisance odors) and Rule 461 (requiring an enhanced vapor recovery and diagnostic system) ensures that the potential for the Project to create objectionable odors affecting a substantial number of people is considered less-than-significant.

Level of Significance: Less-Than-Significant.

4.4 GLOBAL CLIMATE CHANGE AND GREENHOUSE GAS EMISSIONS

4.4 GLOBAL CLIMATE CHANGE AND GREENHOUSE GAS EMISSIONS

Abstract

This Section identifies and addresses potential global climate change (GCC) and greenhouse gas (GHG) emissions impacts that may result from construction and implementation of the Project. More specifically, the analysis evaluates the potential for the Project to cause or result in the following impacts:

- *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or*

- *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

Based on the analysis presented within Polopolus Greenhouse Gas Analysis, City of Eastvale *(Urban Crossroads, Inc.) March 27, 2018 (Project GHG Analysis), and summarized herein, quantified Project-source GHG emissions would exceed 3,000 $MTCO_2E$/year; and the Project cannot feasibly achieve the SCAQMD screening-level threshold of 3,000 $MTCO_2E$/year. The SCAQMD 3,000 $MTCO_2E$/year screening-level threshold is the most conservative metric available and is employed in this analysis in the evaluation of GHG emissions significance. On this basis, the Project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. Impacts in this regard are therefore considered to be significant and unavoidable.*

As also discussed in the Project GHG Analysis, and summarized herein, the Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Project impacts in this regard would therefore be less-than-significant.

4.4.1 INTRODUCTION

Global Climate Change (GCC) is defined as the change in average meteorological conditions on the Earth with respect to temperature, precipitation, and storms. Scientific evidence suggests that GCC is the result of increased concentrations of greenhouse gases (GHG) in the atmosphere, including carbon dioxide, methane, nitrous oxide, and fluorinated gases. Most scientists believe that recent increases in greenhouse gases resulting from human activity and industrialization have accelerated and amplified GCC effects.

An individual development proposal, such as the Project considered herein, cannot generate enough greenhouse gas emissions to effect a discernible change in the global climate. However, the Project may contribute to GCC through its increment of GHG in combination with the cumulative increase in GHG from all other sources, which when taken together constitute potential influences on GCC. This Section summarizes the potential for the Project to have a significant effect upon the environment as a result of its potential contribution to GCC. Detailed analysis of the Project's potential GHG/GCC impacts is presented in *Polopolus Greenhouse Gas Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018 (Project GHG Emissions Analysis); EIR Appendix D.

4.4.2 EXISTING CONDITIONS

4.4.2.1 Global Climate Change

GCC refers to the change in average meteorological conditions with respect to temperature, wind patterns, precipitation and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO_2 (Carbon Dioxide), N_2O (Nitrous Oxide), CH_4 (Methane), hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. These particular gases are important due to their residence time (duration)

in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the atmosphere, but prevent heat from escaping, thus warming the atmosphere. GCC can occur naturally as it has in the past with the previous ice ages. According to the California Air Resources Board (CARB, ARB), the climate change that is currently in effect differs from previous climate changes in both rate and magnitude (CARB 2004, *Technical Support document for Staff Proposal Regarding Reduction of Greenhouse Gas Emissions from Motor Vehicles*).

4.4.2.2 Greenhouse Gases

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic (human) activity. Without the natural greenhouse gas effect, the average temperature would be approximately 61° Fahrenheit (F) cooler than it is currently. The accumulation of these gases in the atmosphere is considered to be the cause for the observed increase in the Earth's temperature.

Although California's rate of growth of GHG emissions is slowing, the state is still a substantial contributor. In 2004, the state is estimated to have produced 492 million gross metric tons of carbon dioxide equivalent greenhouse gas emissions. For the purposes of this analysis, Project-related emissions of carbon dioxide, methane, and nitrous oxide were evaluated because these gases are the primary contributors to GCC from development projects. Emissions from Project facilities and stationary sources as well as emissions generated by Project-related vehicular traffic were included in the evaluation of potential GHG emissions impacts.

GHGs have varying global warming potential (GWP) values; GWP values represent the potential of a gas to trap heat in the atmosphere. Carbon dioxide is utilized as the reference gas for GWP, and thus has a GWP of 1. The atmospheric lifetime and GWP of GHGs that would be generated by the Project are summarized at Table 4.4-1.

Table 4.4-1
Global Warming Potentials and Atmospheric Lifetimes

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)	
		2nd Assessment Report	4th Assessment Report
Carbon Dioxide	50-200	1	1
Methane	12 ± 3	21	25
Nitrous Oxide	120	310	298
HFC-23	264	11,700	14,800
HFC-134a	14.6	1,300	1,430
HFC-152a	1.5	140	124
Sulfur Hexafluoride (SF6)	3,200	23,900	22,800

Source: *Polopolus Greenhouse Gas Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018.

The following discussions summarize and describe commonly occurring GHGs, their sources, and general characteristics.

Water Vapor

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. A climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. 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. For example, increased atmospheric water vapor translates to increased cloud cover and increased reflection of incoming solar radiation (thus diminishing potential radiant heating of the Earth's surface).

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. The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.

Carbon Dioxide

Carbon dioxide (CO_2) is an odorless and colorless GHG. Outdoor levels of carbon dioxide are not high enough to result in negative health effects. Carbon dioxide 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. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. Carbon dioxide is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks.

Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. 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 percent. Left unchecked, the concentration of carbon dioxide in the atmosphere is

projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources.

Methane

Methane (CH_4) is an extremely effective absorber of radiation, though its atmospheric concentration is less than carbon dioxide and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs. No health effects are known to occur from exposure to methane.

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 anthropogenic sources include fossil-fuel combustion and biomass burning.

Nitrous Oxide

Nitrous oxide (N_2O), also known as laughing gas, is a colorless GHG. Nitrous oxide 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 Olney's Lesions (brain damage).

Concentrations of nitrous oxide also began to rise 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 (i.e., in whipped cream bottles). It is also used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. Nitrous oxide can be transported into the stratosphere, be deposited on the Earth's surface, and be converted to other compounds by chemical reaction.

Chlorofluorocarbons

Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in methane 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 are no longer being used; therefore, it is not likely that health effects would be experienced. Nonetheless, in confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation.

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

Hydrofluorocarbons (HFCs) are synthetic, man-made chemicals that are used as a substitute for CFCs. Among the constituents classified as GHGs, they are one of three groups with the highest GWP. The HFCs with the greatest 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 health effects are known to result from exposure to HFCs, which are manmade for applications such as automobile air conditioners and refrigerants.

Perfluorocarbons

Perfluorocarbons (PFCs) have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above Earth's surface, are able to destroy the

compounds. 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 health effects are known to result from exposure to PFCs. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur Hexafluoride

Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (22,800). The U.S. 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.

4.4.2.3 Greenhouse Gases Emissions Inventories

Global

Worldwide anthropogenic 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). This GHG emission data for Annex I nations is available through 2011. Global GHG emissions are summarized at Table 4.4-2, and are representative of currently available inventory data.

United States

As identified in Table 4.4-2, the United States, as a single country, was the number two producer of GHG emissions in 2012. The primary GHG emitted by human activities in the United States was CO_2, representing approximately 80.9 percent of total GHG

emissions. Carbon dioxide from fossil fuel combustion is the largest source of GHG emissions in the United States.

Table 4.4-2
Global GHG Emissions by Major GHG Source Countries

Source Countries	GHG Emissions (Gg CO_2e)
China	10,975,500
United States	6,665,700
European Union (27-member countries)	4,544,224
Russian Federation	2,322,220
India	3,013,770
Japan	1,344,580
Total	**28,865,994**

Source: *Polopolus Greenhouse Gas Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018.

State of California

CARB compiles GHG inventories for the State of California. CARB GHG inventory data indicates that in 2014 (the most recent inventory of record) California GHG emissions totaled approximately 441.5 Million Metric Tons of Carbon Dioxide Equivalent (MMTCO2e) (17). "In 2010, California accounted for 6.8 percent of all emissions in the country [United States], and ranked second highest among the states with total emissions of 453 MMTCO2e, only behind Texas with 763 MMTCO2e. From a per capita standpoint, California has the 45th lowest emissions with 12.1 MMTCO2e/person in 2010."

4.4.2.4 Effects of Climate Change in California

Public Health

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35 percent under the lower warming range to 75 to 85 percent under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires,

which emit fine particulate matter that can travel long distances, depending on wind conditions. The Climate Scenarios Report indicates that large wildfires could become more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming range scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

Water Resources

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.

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 percent. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. How much snowpack could be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. It could also adversely affect winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there may be years with insufficient snow for skiing and snowboarding.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is 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

Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25 percent of the water supply they need. Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate O_3 pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits, and nuts.

In addition, continued GCC could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued GCC could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

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 percent, 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, terrain, and vegetation, future risks would likely not be uniform throughout the state. For example, wildfires in northern California could increase by up to 90 percent due to decreased precipitation.

Moreover, continued GCC has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80 percent by the end of the century as a result of increasing temperatures. The productivity of the state's forests has the potential to decrease as a result of GCC.

Rising Sea Levels

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. Increased sea level 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.

4.4.2.5 Health Effects of Greenhouse Gases

Water Vapor

There are no known direct health effects related to water vapor at this time. However, water vapor can be a transport mechanism for other pollutants to enter the human body.

Carbon Dioxide

According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of carbon dioxide can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of carbon dioxide in the earth's atmosphere are estimated to be approximately 370 ppm, while the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15-minute period (NIOSH 2005).

Methane

Methane is extremely reactive with oxidizers, halogens, and other halogen-containing compounds, may displace oxygen in an enclosed space and act as an asphyxiant.

Nitrous Oxide

Nitrous Oxide is often referred to as laughing gas; it is a colorless GHG. The health effects associated with exposure to elevated concentrations of nitrous oxide include dizziness, euphoria, slight hallucinations, and in extreme cases of elevated concentrations nitrous oxide can also cause brain damage.

Fluorinated Gases (HFCs, PFCs, SF_6)

High concentrations of fluorinated gases can also result in adverse health effects such as asphyxiation, dizziness, headache, cardiovascular disease, cardiac disorders, and in extreme cases, increased mortality.

Aerosols

Health effects of aerosols are similar to those of other fine particulate matter. More specifically, aerosols can cause elevated respiratory and cardiovascular diseases and increased mortality.

4.4.2.6 GCC Regulatory Setting

The current GHG regulatory setting is extensive and constantly evolving. The GHG regulatory setting is discussed in detail within the Project GHG Analysis (GHG Analysis Sections 2.7, 2.8, et al.). Current aspects of the GHG regulatory setting of relevance to the Project are summarized below.

STATE OF CALIFORNIA

The State of California legislature has enacted a series of bills and associated actions, described below, that collectively act to reduce GHG emissions. Certain state legislation such as Assembly Bill (AB 32) *California Global Warming Solutions Act of 2006*, was specifically enacted to address GHG emissions. Other state legislation, such as Title 24 and Title 20 energy standards, originally adopted for other purposes (energy and water conservation), also facilitate GHG emissions reductions.

AB 32. The California State Legislature enacted AB 32, which requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. GHGs, as defined under AB 32, include carbon dioxide, methane, N2O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs. The California Air Resources Board (CARB, ARB) is the state agency charged with monitoring and regulating sources of GHGs.

The ARB approved the 1990 GHG emissions level of 427 MMTCO2e on December 6, 2007 (ARB 2007). Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 MMTCO2e. Emissions in 2020 in a "business as usual" (BAU) scenario were estimated to be 596 MMTCO2e, which do not account for reductions from AB 32 regulations (ARB 2008). At that level, a 28.4 percent reduction was required to achieve the 427 million MTCO2e 1990 inventory. In October 2010, ARB prepared an updated 2020 forecast to account for the recession and slower forecasted growth. The forecasted inventory without the benefits of adopted regulation is now estimated at 545 million MTCO2e. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels (ARB 2010).

The State has made steady progress in implementing AB 32 and achieving targets included in Executive Order S-3-05. The progress is shown in updated emission inventories prepared by ARB for 2000 through 2012 (ARB 2014a). The State has achieved the Executive Order S-3-05 target for 2010 of reducing GHG emissions to 2000 levels. As shown below, the 2010 emission inventory achieved this target.

- 1990: 427 million MTCO2e (AB 32 2020 target)
- 2000: 463 million MTCO2e (an average 8 percent reduction needed to achieve 1990 base)
- 2010: 450 million MTCO2e (an average 5 percent reduction needed to achieve 1990 base)

ARB has also made substantial progress in achieving its goal of achieving 1990 emissions levels by 2020. As described earlier in this section, ARB revised the 2020 BAU inventory forecast to account for new lower growth projections, which resulted in a new lower reduction from BAU to achieve the 1990 base. The previous reduction from 2020 BAU needed to achieve 1990 levels was 28.4 percent and the latest reduction from 2020 BAU is 21.7 percent.

- 2020: 545 million MTCO2e BAU (an average 21.7 percent reduction from BAU needed to achieve 1990 base)

ARB Scoping Plan. The California Air Resources Board (ARB) Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 and thereby comply with AB 32 GHG emissions reductions targets. The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

The ARB approved the First Update to the Scoping Plan (Update) on May 22, 2014. The Update identifies progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and activities Climate for the next several years. The Update does not set new targets for the State, but rather describes a path that would achieve the state's 2050 goal to achieve GHG emissions levels that are 80 percent below 1990 baseline levels.

ARB Business as Usual (BAU) GHG Emissions Estimates. Forecasting the amount of emissions that would occur in 2020 if no actions are taken was necessary to assess the amount of reductions California must achieve to return to the 1990 emissions level by 2020 as required by AB 32. The no-action scenario is known as "business-as-usual" or BAU. The ARB originally defined the BAU scenario as emissions in the absence of any GHG emission reduction measures discussed in the Scoping Plan.

As part of CEQA compliance for the Scoping Plan, ARB prepared a Supplemental Functional Equivalent Document (FED) in 2011. The FED included an updated 2020 BAU emissions inventory projection based on current economic forecasts (i.e., as influenced by

the economic downturn) and emission reduction measures already in place, replacing its prior 2020 BAU emissions inventory. ARB staff derived the updated emissions estimates by projecting emissions growth, by sector, from the State's average emissions from 2006–2008. The new BAU estimate includes emission reductions for the million-solar-roofs program, the AB 1493 (Pavley I) motor vehicle GHG emission standards, and the Low Carbon Fuels Standard. In addition, ARB factored into the 2020 BAU inventory emissions reductions associated with 33 percent Renewable Energy Portfolio Standard (RPS) for electricity generation. The updated BAU estimate of 507 MMTCO2e by 2020 requires a reduction of 80 MMTCO2e, or a 16 percent reduction below the estimated BAU levels to return to 1990 levels (i.e., 427 MMTCO2e) by 2020.

To establish a BAU reduction scenario that is consistent with the original definition in the Scoping Plan and with threshold definitions used in thresholds adopted by lead agencies for CEQA purposes and many climate action plans, the updated inventory without regulations was also included in the Supplemental FED. The ARB 2020 BAU projection for GHG emissions in California was originally estimated to be 596 MMTCO2e. The updated ARB 2020 BAU projection in the Supplemental FED is 545 MMTCO2e. Considering the updated BAU estimate of 545 MMTCO2e by 2020, ARB estimates a 21.7 percent reduction below the estimated statewide BAU levels is necessary to return to 1990 emission levels (i.e., 427 MMTCO2e) by 2020, instead of the approximate 28.4 percent BAU reduction previously reported under the original Climate Change Scoping Plan (2008).

2017 Climate Change Scoping Plan Update. In November 2017, ARB released the final 2017 Scoping Plan Update, which identifies the State's post-2020 reduction strategy. The 2017 Scoping Plan Update reflects the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order B-30-15 and codified by Senate Bill 32 (SB 32). Key programs that the proposed Second Update builds upon include the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and much cleaner cars, trucks and freight movement, utilizing cleaner, renewable energy, and strategies to reduce methane emissions from agricultural and other wastes.

The 2017 Scoping Plan establishes a new emissions limit of 260 MMTCO2e for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030.

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

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

- 20 percent reduction in GHG emissions from refineries by 2030.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

In addition to the statewide strategies listed above, the 2017 Scoping Plan also identifies local governments as essential partners in achieving the State's long-term GHG reduction goals and identifies local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends that local governments achieve a community-wide goal to achieve emissions of no more than 6 MTCO2e or less per capita by 2030 and 2 MTCO2e or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidenced-based bright-line numeric thresholds—consistent with the Scoping Plan and the State's long-term GHG goals—and projects with emissions over that amount may be required to incorporate on-site design features and mitigation measures that avoid or minimize project emissions to the degree feasible; or, a performance-based metric using a climate action plan or other plan to reduce GHG emissions is appropriate.

According to research conducted by the Lawrence Berkeley National Laboratory and supported by ARB, California, under its existing and proposed GHG reduction policies, is on track to meet the 2020 reduction targets under AB 32 and could achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California LBNL GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that GHG emissions through 2020 could range from 317 to 415 MTCO2e per year, "indicating that existing state policies will likely allow California to meet its target [of 2020 levels under AB 32]." CALGAPS also showed that by 2030, emissions could range from 211 to 428 MTCO2e per year, indicating that "even if all modeled policies are not implemented, reductions could be sufficient to reduce emissions 40 percent below the 1990 level [of SB 32]." CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Though the research indicated that the emissions would not meet the State's 80 percent reduction goal by 2050, various combinations of policies could allow California's cumulative emissions to remain very low through 2050.

Senate Bill 32. On September 8, 2016, Governor Jerry Brown signed the Senate Bill (SB) 32 and its companion bill, Assembly Bill (AB) 197. SB 32 requires the State to reduce statewide greenhouse gas emissions to 40 percent below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15.

SB 375 - the Sustainable Communities and Climate Protection Act of 2008. Passing the Senate on August 30, 2008, Senate Bill (SB) 375 was signed by the Governor on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40 percent of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: it (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Concerning CEQA, SB 375, as codified in Public Resources Code Section 21159.28, states that CEQA findings for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts, or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network, if the project:

1. Is in an area with an approved sustainable community's strategy or an alternative planning strategy that the ARB accepts as achieving the GHG emission reduction targets.
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies).
3. Incorporates the mitigation measures required by an applicable prior environmental document.

Title 24 Energy Efficiency Standards and California Green Building Standards. California Code of Regulations Title 24 Part 6: *California's Energy Efficiency Standards for Residential and Nonresidential Buildings*, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. For nonresidential buildings, the 2016 Title 24 standards reduce energy consumption by 5 percent when compared to the 2013 Title 24 standards.

California Code of Regulations, Title 24, Part 11: California Green Building Standards Code (CALGreen). CALGreen is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2011. CALGreen is updated on a regular basis, with the most recent update consisting of the 2016 California Green Building Code Standards that became effective January 1, 2017. Under state law, local jurisdictions are permitted to adopt more stringent requirements. Specific CALGreen requirements include, but are not limited to, those listed below. CALGreen Section citations are presented parenthetically.

- Short-term bicycle parking. If a commercial project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack (5.106.4.1.1).

- Long-term bicycle parking. For new buildings with 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of tenant-occupied motorized vehicle parking capacity, with a minimum of one space (5.106.4.1.2).

- Designated parking. Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in [CALGreen] Table 5.106.5.2 (5.106.5.2).

- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling (5.410.1).

- Construction waste. A minimum 65 percent diversion of construction and demolition waste from landfills, increasing voluntarily to 80 percent for new homes and commercial projects (CALGreen Sections 5.408.1, A5.408.3.1 [nonresidential], A5.408.3.1 [residential]). All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled (5.408.3).

- Wastewater reduction. Each building shall reduce the generation of wastewater by one of the following methods:
  - The installation of water-conserving fixtures (5.303.3) or
  - Using nonpotable water systems (5.303.4).

- Water use savings. 20 percent mandatory reduction of indoor water use with voluntary goal standards for 30, 35 and 40 percent reductions (5.303.2, A5303.2.3 [nonresidential]).

- Water meters. Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day (5.303.1).

- Irrigation efficiency. Moisture-sensing irrigation systems for larger landscaped areas (5.304.3).

- Materials pollution control. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard (5.404).

- Building commissioning. Mandatory inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over

10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies (5.410.2).

Model Water Efficient Landscape Ordinance. The Model Water Efficient Landscape Ordinance (Model Ordinance) established under the Water Conservation Act, requires local agencies to adopt a local landscape ordinance at least as effective in conserving water as the Model Ordinance. New development projects that include landscape areas of 500 square feet or more are subject to the Model Ordinance.

Executive Order S-3-05. Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order B-30-15. On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The Order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050 and directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of CO2 equivalent (MMCO2e). The Order also requires the state's climate adaptation plan to be updated

every three years, and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this Order is not legally enforceable for local governments and the private sector. Legislation that would update AB 32 to make post 2020 targets and requirements a mandate is in process in the State Legislature.

CEQA Guidelines. *CEQA Guidelines* Section 15064.4 assists agencies in determining the significance of GHG emissions. Agencies are allowed discretion in determining if a quantitative or qualitative GHG analysis is warranted. Little guidance is offered in determining if a project's estimated GHG emissions would be significant or cumulatively considerable.

CEQA Guidelines Sections 15126.4 and 15130 address GHG mitigation measures and GHG emissions cumulative impacts, respectively. GHG mitigation measures are referenced in general terms, but no specific measures are championed. The revision to the cumulative impact discussion requirement (Section 15130) simply directs agencies to analyze GHG emissions in an EIR when a project's incremental contribution of emissions may be cumulatively considerable, however it does not answer the question of when emissions would be considered cumulatively considerable.

CEQA Guidelines Section 15183.5 permits programmatic GHG analysis and later project-specific tiering, as well as the preparation of Greenhouse Gas Reduction Plans. Compliance with such plans can support a determination that a project's cumulative effect is not cumulatively considerable, according to Section 15183.5(b).

Southern California Association of Governments (SCAG) 2016 – 2040 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). SCAG is the regional planning agency for Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties, and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. The Regional Transportation Plan (RTP) component of the RTP/SCS serves as a long-range transportation plan that is developed and updated by SCAG every four years. The

Sustainable Communities Strategy (SCS) component of the RTP/SCS expands upon transportation strategies in the RTP to analyze growth patterns and establish future land use strategies that aid the region in meeting its GHG reduction targets.

Western Regional Council of Governments Subregional Climate Action Plan (WRCOG Subregional CAP)

The WRCOG Subregional CAP establishes GHG emissions reduction targets, policies, and programs that are consistent with and support statewide GHG emissions reductions targets and strategies. The WRCOG Subregional CAP is not however a qualified plan that would allow for streamlining of GHG emissions impacts analyses.

The City of Eastvale is a participant party to the WRCOG Subregional CAP. Consistency of the Project with applicable WRCOG Subregional CAP policies and programs is presented subsequently in this analysis (please refer to Table 4.4-6).

CITY OF EASTVALE GENERAL PLAN

The City of Eastvale has not prepared or adopted a Climate Action Plan (CAP) or similar plans/programs for evaluation of project-level GHG emissions impacts. The City of Eastvale General Plan does however establish numerous Policies that would act to control and reduce project-level GHG emissions. Consistency of the Project with applicable City of Eastvale GHG General Plan emissions policies programs is presented subsequently in this analysis (please refer to Table 4.4-7).

4.4.3 GHG Significance Thresholds and Performance Standards

4.4.3.1 CEQA Guidelines

Pursuant to *CEQA Guidelines* Appendix G criteria, GHG emissions impacts would be potentially significant if the project under consideration would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

CEQA requires evaluation of project impacts in the context of existing conditions and against adopted "thresholds of significance." With regard to establishing a significance threshold, the Office of Planning and Research's amendments to the CEQA Guidelines Section 15064.7(c) state that "[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

CEQA Guidelines Section 15064.4(a) further states, . . . "[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 Guidelines Section 15064.4 provides that a lead agency may take into account the following three considerations in assessing the significance of impacts from greenhouse gas emissions:

- **Consideration #1**: The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- **Consideration #2**: Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- **Consideration #3**: The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

4.4.3.2 California Supreme Court Opinion: *Center for Biological Diversity v. California Department of Fish and Wildlife ("Newhall Ranch")*

On November 30, 2015, the California Supreme Court published its Opinion in *Center for Biological Diversity v. California Department of Fish and Wildlife* ("*Newhall Ranch*"), which invalidated the GHG analysis for a large master planned residential development in Los Angeles County consisting of over 20,000 residential dwelling units and other uses. The Court determined that the GHG significance finding was "not supported by a reasoned explanation based on substantial evidence." However, the Court upheld: (1) use of the statewide emissions reduction goal in AB 32 as a significance criterion (pp. 15-19), (2) use of the Scoping Plan's BAU model "as a comparative tool for evaluating efficiency and conservation efforts" of the Project (p. 18-19), and (3) a comparison of the project's expected emissions to a BAU model rather than a baseline of pre-project conditions (p. 15-19).

The Court invalidated the GHG analysis because the "administrative record discloses no substantial evidence that the Newhall Ranch's project-level reduction of 31 percent in comparison to [BAU] is consistent with achieving AB 32's statewide goal of a 29 percent reduction from [BAU]…." (p.19; see also p. 23 ("Nor is Justice Corrigan correct that our analysis 'assumes project-level reduction in greenhouse gas emissions must be greater than the reduction California is seeking to achieve statewide.' [internal citations omitted] . . . [W]e only hold that DFW erred in failing to substantiate its assumption that the Scoping Plan's statewide measure of emissions reduction can also serve as the criterion for an individual land use project.")

In so doing, the Court questioned whether "a greater degree of reduction may be needed" from new versus existing development to achieve the statewide goal set forth in AB 32 (p. 20). The Court also stated that the EIR failed to contain sufficient evidence to conclude that the "land use density" assumptions used in the EIR's GHG emissions model relate to the land use density assumptions used in the Scoping Plan's BAU model (p. 21-22). Because this information was not contained in the *Newhall Ranch* EIR, the Court determined that the record did not contain substantial evidence supporting the findings.

The Court outlined "potential pathways to compliance" that future EIRs could use to determine if GHG emissions from a given project are significant. Specifically, the Court advised that:

- **Substantiation of Project Reductions from BAU**. A lead agency may use a BAU comparison based on the Scoping Plan's methodology if it also substantiates the reduction a particular project must achieve to comply with statewide goals. The Court suggested a lead agency could examine the "data behind the Scoping Plan's business-as-usual model" to determine the necessary project-level reductions from new land use development at the proposed location (p. 25).

- **Compliance with Regulatory Programs or Performance Based Standards**. A lead agency "might assess consistency with AB 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities (see Final Statement of Reasons, supra, at p. 64 [greenhouse gas emissions 'may be best analyzed and mitigated at a programmatic level.'].) To the extent a project's design features comply with or exceed the regulations outlined in the Scoping Plan and adopted by the Air Resources Board or other state agencies, a lead agency could appropriately rely on their use as showing compliance with 'performance based standards' adopted to fulfill 'a statewide . . . plan for the reduction or mitigation of greenhouse gas emissions.' (CEQA Guidelines § 15064.4(a)(2), (b)(3); see also id., § 15064(h)(3) [determination that impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including 'plans or regulations for the reduction of greenhouse gas emissions']))" (p. 25).

- **Compliance with GHG Reduction Plans or Climate Action Plans (CAPs)**. A lead agency may utilize "geographically specific GHG emission reduction plans" such as climate action plans or greenhouse gas emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis (p. 26).

- **Compliance with Local Air District Thresholds**. A lead agency may rely on "existing numerical thresholds of significance for greenhouse gas emissions" adopted by, for example, local air districts (p. 27).

4.4.3.3 GHG Emissions Thresholds

The City of Eastvale has not adopted a numeric threshold of significance for determining impacts with respect to GHG emissions. As directed by the City, within this analysis, the SCAQMD screening-level threshold of 3,000 $MTCO_2E$/year is employed to determine if additional analysis of GHG emissions impacts and implementation of GHG emissions mitigation measures is warranted. The SCAQMD 3,000 $MTCO_2E$/year threshold is the most conservative metric available; is widely accepted as an appropriate project-level threshold; and is used by numerous lead agencies within the South Coast Air Basin. As noted by the SCAQMD:

> ". . . the . . . [3,000 $MTCO_2E$/year] screening-level for stationary sources is based on an emission capture rate of 90 percent for all new or modified project . . . the policy objective of [SCAQMD's] recommended interim GHG significance threshold proposal is to achieve an emission capture rate of 90 percent of all new or modified stationary source projects. A GHG significance threshold based on a 90 percent emission capture rate may be more appropriate to address the long-term adverse impacts associated with global climate change because most projects will be required to implement GHG reduction measures. Further, a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. This assertion is based on the fact that [SCAQMD] staff estimates that these GHG emissions would account for slightly less than one percent of future 2050 statewide GHG emissions target (85 [MMTCO2e/yr.]). In addition, these small projects may be subject to future

> applicable GHG control regulations that would further reduce their overall future contribution to the statewide GHG inventory. Finally, these small sources are already subject to [Best Available Control Technology] (BACT) for criteria pollutants and are more likely to be single-permit facilities, so they are more likely to have few opportunities readily available to reduce GHG emissions from other parts of their facility."

Based on the above guidance from the SCAQMD, if a non-industrial project would emit GHGs totaling less than 3,000 $MTCO_2E$/year, the project is not considered a substantial GHG emitter and the GHG impact is less-than-significant. SCAQMD guidance indicates no additional analysis is required and no mitigation need be imposed. On the other hand, if a non-industrial project would emit GHGs in excess of 3,000 $MTCO_2E$/year, then the project could be considered a potentially significant GHG emitter, requiring additional analysis and potential mitigation.

4.4.4 PROJECT GREENHOUSE GAS EMISSIONS

4.4.4.1 California Emissions Estimator Model™ Employed to Estimate GHG 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 October 14, 2016, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the California Emissions Estimator Model™ (CalEEMod™) v2016.3.2. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (NO_x, VOC, PM_{10}, $PM_{2.5}$, SO_x, and CO) and greenhouse gas (GHG) emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures. Accordingly, the latest version of CalEEMod™ has been used for this Project to determine construction and operational GHG emissions. The CalEEMod model includes GHG emissions from the following source categories: construction, area, energy, mobile, waste, water.

4.4.4.2 Construction and Operational Life-Cycle Analysis

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, infrastructure and on-going operations) depends on emission factors or econometric factors that are not well established for all processes. A full life-cycle analysis (LCA) for construction and operational activity is not included in this analysis due to the speculative nature of any such analysis and the lack of consensus guidance on LCA methodology.

4.4.4.3 Construction-Source GHG Emissions

Project construction activities would generate emissions of CO_2 and CH_4. Project construction-source emissions, GHGs are quantified and amortized over the life of the Project. To amortize the emissions over the life of the Project, the SCAQMD recommends calculating the total greenhouse gas emissions for the construction activities, dividing it by a 30-year project life. then adding that number to the annual operational phase GHG emissions. Accordingly, Project construction-source GHG emissions were amortized over a 30-year period and added to the annual operational-source GHG emissions.

4.4.4.4 Operational-Source GHG Emissions

Project operations would result in emissions of CO_2, CH_4, and N_2O from the following primary sources:

- Area Source Emissions from Project site landscaping maintenance activities;
- Energy Source Emissions from Project building heating/cooling;
- Mobile Source Emissions generated by Project traffic;
- Solid Waste management;
- Water Supply, Treatment and Distribution.

Area Source Emissions

Landscape and site 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.

Energy Source Emissions

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 CO2 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 to estimate energy source GHG emissions.

Mobile Source Emissions

GHG emissions will also result from mobile sources associated with the Project. These mobile source emissions will result from the typical daily operation of motor vehicles by vendors, visitors, employees, and customers. Project mobile source emissions are dependent on both overall daily vehicle trip generation. Trip characteristics available from the Project TIA (EIR Appendix B) were utilized in this analysis and are reflected in the CalEEMod parameters.

Solid Waste Management Emissions

The Project land uses will result in the generation and disposal of solid waste. A large percentage of solid waste generated by the Project would be diverted and recycled consistent with requirements of AB 39, yielding a minimum reduction of 50% in Project waste that would be transported to and disposed of at area landfills. The remainder of the waste not diverted will be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material. GHG emissions associated with the disposal of solid waste associated with the proposed Project were calculated by the CalEEMod model using default parameters.

Water Supply, Treatment and Distribution Emissions

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. Unless otherwise noted, CalEEMod default parameters were used.

4.4.5 Project GHG Emissions Impacts

The following discussions focus on areas where it has been determined that the Project may result in potentially significant GHG emissions impacts, pursuant to comments received through the NOP process, and based on the analysis presented within this Section and included within the EIR Initial Study. Under all GHG topical issues listed at *CEQA Guidelines* Appendix G, Project impacts were determined to be potentially significant warranting further analysis and are discussed below. Please also refer to Initial Study Checklist Item 7. *Greenhouse Gas Emissions.*

4.4.5.1 Impact Statements

Following is an analysis of potential GHG emissions impacts that are expected to result from the Project.

Potential Impact: *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.*

Impact Analysis: The City of Eastvale does not have an adopted quantified threshold of significance for GHG emissions. For CEQA purposes, the City has discretion to select an appropriate significance criterion, based on substantial evidence. As previously discussed, the AQMD's numerical threshold of 3,000 $MTCO_2E$/year has been employed within this analysis.

As indicated at Table 4.4-3, Project GHG emissions from construction, area, energy, waste, and water usage source would total approximately 2,852.7 MTCO2e per year. Additionally, the Project mobile source GHG emissions could potentially generate 12,304.77 MTCO2e per year. This assumes that all vehicle trips to and from the Project

are "new" trips attributable to development of the Project. Considering all GHG emissions sources, the Project has the potential to generate a total of approximately 15,157.47 MTCO2e per year. Project GHG emissions would therefore exceed the SCAQMD screening-level threshold of 3,000 $MTCO_2E$/year. Exceedance of this threshold indicates that the Project has the potential to result in a potentially significant and cumulatively considerable GHG emissions impact.

Table 4.4-3
Annual Project GHG Emissions

Emission Source	Emissions (metric tons per year)			
	CO_2	CH_4	N_2O	Total CO_2E
Annual construction-related emissions amortized over 30 years	27.86	0.01	0.00	28.01
Area Sources	0.01	0.00	0.00	0.01
Energy Consumption	2,471.85	0.08	0.03	2,482.79
Solid Waste Management	86.15	5.09	0.00	213.44
Water Usage	108.73	0.61	0.02	128.45
Subtotal	2,694.60	5.79	0.05	2,852.7
Mobile Sources	12,280.74	0.96	0.00	12,304.77
Total CO_2E (All Sources)	15,157.47			
SCAQMD Commercial Threshold	3,000			
Threshold Exceeded?	**YES**			

Source: *Polopolus Greenhouse Gas Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018.
Note: Totals obtained from CalEEMod and may not total 100% due to rounding.

Level of Significance: Potentially Significant.

Mitigation Measures: No feasible mitigation.

Level of Significance After Mitigation: ***Cumulatively Significant and Unavoidable.***

Conformance with Title 24 Energy Efficiency requirements, CalGreen mandates, and other energy efficiency measures implemented by the state, as well as conservation measures implemented through City Ordinances (e.g., City of Eastvale Water Conservation Ordinance) would act to generally reduce area-source and energy-source

GHG emissions, but would have no substantive effect on mobile-source GHG emissions, the primary contributor to the Project GHG emission impact.

Responsibility and authority for regulation of mobile-source emissions resides with the State of California (CARB, et al.). Neither the Applicant nor the Lead Agency can mandate substantive reductions in mobile-source GHG emissions, much less reductions that would achieve the applicable SCAQMD threshold of 3,000 $MTCO_2E$/year. Specifically, as shown at Table 4.4-3, the Project mobile-source GHG emissions alone total approximately 12,304.77 $MTCO_2E$/year, which would exceed the SCAQMD threshold employed in this analysis. On this basis, quantified net GHG emissions generated by the Project would be cumulatively considerable, and the Project net GHG emissions impact would be cumulatively significant and unavoidable.

Potential Impact: *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

Impact Analysis: With regard to the Project, applicable plans, policies and regulations adopted for the purpose of reducing the emissions of greenhouse gases include: AB 32, strategies of ARB's 2008 Scoping Plan and associated regulatory measures adopted to further AB 32's goals; goals established under the 2016 RTP/SCS; applicable provisions of the WRCOG Subregional Climate Action Plan (CAP); and GHG emissions Policies articulated in the City of Eastvale General Plan.

The analysis below qualitatively examines the measures contained in applicable plans and subsequent adopted regulations and how they relate to the Project to achieve the State's goals.

AB 32 Consistency

Determining Project consistency with GHG plans presents unique challenges because the impact is global and inherently cumulative in nature. A single nation, state, or project cannot solve the problem and there are no binding international agreements in place that will achieve the amount of reductions scientists estimate will be required to prevent

catastrophic climate change. California recognized this and decided to identify reduction targets for itself in AB 32 that would lead to California providing its fair share of reductions. This leadership by example is hoped to spur other governments to reduce their GHG impacts. Through AB 32, California set its fair share reduction at the amount required to reduce emissions to 1990 levels by 2020.

ARB's Scoping Plan identifies strategies to reduce California's GHG emissions in support of AB 32. 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 Project, such as energy efficiency. Finally, while some measures are not directly applicable, the Project would not conflict with their implementation. Reduction measures are grouped into 18 action categories, as follows:

1. California Cap-and-Trade Program Linked to Western Climate Initiative Partner Jurisdictions. Implement a broad-based California cap-and-trade program to provide a firm limit on emissions. Link the California cap–and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.
2. California Light-Duty Vehicle Greenhouse Gas Standards. Implement adopted Pavley standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.
3. Energy Efficiency. Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities).
4. Renewables Portfolio Standards. Achieve 33 percent renewable energy mix statewide.

5. Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard.
6. Regional Transportation-Related Greenhouse Gas Targets. Develop regional greenhouse gas emissions reduction targets for passenger vehicles.
7. Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.
8. Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.
9. Million Solar Roofs Program. Install 3,000 megawatts of solar-electric capacity under California's existing solar programs.
10. Medium- and Heavy-Duty Vehicles. Adopt medium- (MD) and heavy-duty (HD) vehicle efficiencies. Aerodynamic efficiency measures for HD trucks pulling trailers 53-feet or longer that include improvements in trailer aerodynamics and use of rolling resistance tires were adopted in 2008 and went into effect in 2010. Future, yet to be determined improvements, includes hybridization of MD and HD trucks.
11. Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.
12. High Speed Rail. Support implementation of a high speed rail system.
13. Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.
14. High Global Warming Potential Gases. Adopt measures to reduce high warming global potential gases.
15. Recycling and Waste. Reduce methane emissions at landfills. Increase waste diversion, composting and other beneficial uses of organic materials, and mandate commercial recycling. Move toward zero-waste.
16. Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation. The 2020 target for carbon sequestration is 5 million MTCO2E/YR.

17. Water. Continue efficiency programs and use cleaner energy sources to move and treat water.
18. Agriculture. In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.

Table 4.4-4 summarizes the Project's consistency with the State Scoping Plan. As summarized, the Project would not conflict with any of the provisions of the Scoping Plan and in fact supports the action categories: energy efficiency, water conservation, recycling, and landscaping.

Table 4.4-4
Scoping Plan Consistency Summary

Action	Supporting Measures[1]	Remarks
Cap-and-Trade Program	--	Not Applicable. These programs involve capping emissions from electricity generation, industrial facilities, and broad scoped fuels.
Light-Duty Vehicle Standards	T-1	Not Applicable. This is a statewide measure establishing vehicle emissions standards.
Energy Efficiency	E-1	Consistent. The Project will include a variety of building, water, and solid waste efficiencies consistent with 2016 CALGreen requirements.
	E-2	
	CR-1	
	CR-2	
Renewables Portfolio Standard	E-3	State action beyond the scope of the Project. Establishes the composition of statewide renewable energy resources.
Low Carbon Fuel Standard	T-2	State action beyond the scope of the Project. Establishes reduced carbon intensity standards for transportation fuels.
Regional Transportation-Related Greenhouse Gas Targets	T-3	State action beyond the scope of the Project. Establishes regional transportation GHG emissions targets.
Vehicle Efficiency Measures	T-4	State action beyond the scope of the Project. Identifies measures such as minimum tire-fuel efficiency, lower friction oil, and reduction in air conditioning use.

[1] Supporting measures can be found at the following link: http://www.arb.ca.gov/cc/scopingplan/2013_update/appendix_b.pdf

Table 4.4-4
Scoping Plan Consistency Summary

Action	Supporting Measures[1]	Remarks
Goods Movement	T-5	Identifies measures to improve goods movement efficiencies such as advanced combustion strategies, friction reduction, waste heat recovery, and electrification of accessories. These measures are yet to be implemented and would be voluntary. The Project would not impede or interfere with their implementation.
	T-6	
Million Solar Roofs (MSR) Program	E-4	The MSR program sets a goal for use of solar systems throughout the state as a whole. The Lead Agency will review the Project for potential inclusion of solar roofs. The Project would comply with applicable provisions of Title 24 Section 1110.20 Section 110.10 – *Mandatory Requirements for Solar Ready Buildings.*
Medium- & Heavy-Duty Vehicles	T-7	The Project would not generate substantive MD and HD truck traffic. No feature of the Project would interfere with or impede implementation of these programs.
	T-8	
Industrial Emissions	I-1	Not Applicable. These measures are applicable to large industrial facilities (> 500,000 MTCO2E/YR) and other intensive uses such as refineries. The Project is not an industrial use.
	I-2	
	I-3	
	I-4	
	I-5	
High Speed Rail	T-9	Not Applicable. Supports increased mobility choice via implementation of high speed rail. The Project does not propose implementation of rail facilities, and would not otherwise affect implementation of rail facilities.
Green Building Strategy	GB-1	Consistent. The Project would implement building, water, and solid waste efficiency measures consistent with 2016 CALGreen requirements.
High Global Warming Potential Gases	H-1	Not Applicable. As substantiated herein, the Project is not a substantial source of high GWP emissions.
	H-2	
	H-3	
	H-4	
	H-5	
	H-6	
	H-7	
Recycling and Waste	RW-1	Consistent. The Project would be required to divert/recycle a minimum of 50 percent of construction-source and operational-source waste.
	RW-2	
	RW-3	
Sustainable Forests	F-1	Consistent. Project landscaping would generally support increased carbon sequestration.
Water	W-1	

Table 4.4-4
Scoping Plan Consistency Summary

Action	Supporting Measures[1]	Remarks
	W-2	Consistent. The Project would include use of low-flow fixtures and efficient landscaping per State requirements.
	W-3	
	W-4	
	W-5	
	W-6	
Agriculture	A-1	Not Applicable. The Project is not an agricultural use.

SB 32 Consistency

SB 32 requires the State to reduce GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80% below 1990 levels by 2050.

According to research conducted by the Lawrence Berkeley National Laboratory and supported by the CARB, under its existing and proposed GHG reduction policies, is on track to meet the 2020 reduction targets under AB 32 and could achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California LBNL GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that GHG emissions through 2020 could range from 317 to 415 MTCO2e per year, "indicating that existing state policies will likely allow California to meet its target [of 2020 levels under AB 32]." CALGAPS also showed that by 2030, emissions could range from 211 to 428 MTCO2e per year, indicating that "even if all modeled policies are not implemented, reductions could be sufficient to reduce emissions 40 percent below the 1990 level [of SB 32]." CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Though the research indicated that the emissions would not meet the State's 80 percent reduction goal by 2050, various combinations of policies could allow California's cumulative emissions to remain very low through 2050.

Regional Transportation Plan and Sustainable Communities Strategy Consistency

The Southern California Association of Governments (SCAG) is the federally recognized Metropolitan Planning Organization (MPO) for this region, which encompasses over 38,000 square miles, and comprises representatives of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their potential impacts on regional planning programs. As Southern California's MPO, SCAG cooperates with the Southern California Air Quality Management District, the California Department of Transportation, and other agencies in preparing regional planning documents.

California's MPOs must prepare a "sustainable communities strategy" (SCS) as part of its regional transportation plan (RTP). The SCS integrates land use, housing, and transportation strategies that, if implemented, would achieve regional GHG emission reduction targets. As adopted by the MPO, the RTP/SCS guides regional transportation policies and investments. The ARB is required to review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional GHG targets.

In 2016, SCAG adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The RTP/SCS vision encompasses general principles and themes that collectively work to shape the Southern California region. The RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with Senate Bill 375, improve public health, and meet the National Ambient Air Quality Standards as set forth by the federal Clean Air Act. Regional development patterns and integrated transportation systems contemplated under the RTP/SCS would act to reduce per capita VMT and associated vehicular-source GHG emissions. The RTP/SCS does not require that local general plans, specific plans, or zoning be consistent with the RTP/SCS; rather, the RTP/SCS provides consistency incentives for governments and developers. As

demonstrated at Table 4.4-5, the Project is consistent with RTP/SCS Goals, and would thereby support the RTP/SCS intent to reduce regional GHG emissions.

Table 4.4-5
Consistency with SCAG RTP/SCS Goals

RTP/SCS Goals	Remarks
Goal 1: Align the plan investments and policies with improving regional economic development and competitiveness.	Consistent: The Project proposes contemporary retail/civic uses providing an opportunity for development investment on currently underutilized vacant land.
Goal 2: Maximize mobility and accessibility for all people and goods in the region.	Consistent: The transportation network in the Project area has been developed and maintained to meet local and regional transportation demands, and to ensure efficient mobility. Draft EIR Section 4.2, *Traffic and Circulation,* addresses local and regional transportation, traffic, and transit in more detail.
Goal 3: Ensure travel safety and reliability for all people and goods in the region.	**Consistent:** The Project TIA identifies improvements that would promote and facilitate the safe movement of people and goods. All transportation modes within the Project area would be required to comply with incumbent regulatory safety standards.
Goal 4: Preserve and ensure a sustainable regional transportation system.	**Consistent:** The Project TIA assesses all new and existing roadways and identifies required improvements to the existing transportation network. The Project would offset its incremental transportation system impacts through payment of requisite transportation/traffic impact fees acting to ensure sustainable local and regional transportation systems.
Goal 5: Maximize the productivity of our transportation system.	**Consistent:** Pursuant to adopted plans and programs, local and regional transportation systems would be improved and maintained to encourage their efficiency and productivity. The City oversees the improvement and maintenance of all aspects of the public right-of-way on an as-needed basis.
Goal 6: Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).	**Consistent:** The Project would accommodate and would not interfere with existing or planned bicycle facilities and improvements. The Project would provide a pedestrian access network that internally links all uses and connects to the existing off-site pedestrian network.
Goal 7: Actively encourage and create incentives for energy efficiency, where possible.	**Consistent:** EIR Section 3.4.11, *Energy Efficiency/Sustainability,* notes that the Project in

Table 4.4-5
Consistency with SCAG RTP/SCS Goals

RTP/SCS Goals	Remarks
	total would surpass incumbent performance standards established under the Building Energy Efficiency Standards contained in the California Code of Regulations (CCR), Title 24, Part 6 (Title 24, Title 24 Energy Efficiency Standards).
Goal 8: Encourage land use and growth patterns that facilitate transit and non-motorized transportation.	**Consistent:** The Project proposes retail/civic development with proximate access to local and regional transportation facilities. Intensified development of the Project site in combination with existing proximate urban development acts to focus transit ridership base, thereby supporting existing and future transit opportunities.
Goal 9: Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	**Consistent:** The City of Eastvale is responsible for monitoring of roadways and transit routes to determine the adequacy and safety of these systems. The City and other local and regional agencies and organizations (e.g., RTA, Caltrans, and SCAG) cooperatively manage these systems. Security situations involving roadways and evacuations would be addressed through City emergency response plans.

Sources: Goal Statements from: 2016–2040 RTP/SCS); Remarks by Applied Planning, Inc.

WRCOG Subregional CAP Consistency

Consistency with applicable provisions of the WRCOG Subregional CAP is presented at Table 4.4-6.

Table 4.4-6
WRCOG Subregional CAP Consistency

CAP Measure	Remarks
E-3. Plant 2,000 new shade trees by the year 2020	**Consistent.** The Project supports CAP Measure E-3 through site landscaping, including planting of new shade trees. Shade trees planted as part of the Project landscape concept would comprise a portion of the City's shade tree target established under Measure E-3.
T-1. Increase the amount of bike lanes miles in the city by 10 percent compared with existing conditions	**Consistent.** A Class II bikeway exists northerly of the Project site, between Schleisman Road and Limonite Avenue. The Project does not propose or require facilities or programs that would conflict with or obstruct implementation of Measure T-1.
T-2. Increase bicycle parking	**Consistent.** The Project would implement bicycle facilities

Table 4.4-6
WRCOG Subregional CAP Consistency

CAP Measure	Remarks
	and amenities mandated under CALGreen (Sections 5.106.4.1.1, 5.106.4.1.2) and as required by the City, increasing bicycle parking as provided for under Measure T-2.
T-4. Promote transportation demand management (TDM) strategies to existing businesses	**Consistent.** The Project tenants would independently evaluate participation in TDM programs offered by the Riverside Transportation Commission (RTC). RTC offers ride-matching for car pools and vanpools, incentives for employees who rideshare, and a guaranteed ride home program. The City of Eastvale as participant in the WRCOG Subregional CAP, promotes implementation of relevant TDM strategies as provided for under Measure T-4.
T-5. Increase fixed-route bus service miles by 10 percent compared with existing conditions	**Consistent.** The Project would establish destination uses acting to concentrate ridership base, supporting the increase in fixed-route bus service established under Measure T-5. The Applicant and City will coordinate Project final designs with RTA to evaluate propriety of Project transit access and amenities.
T-7. Synchronize traffic signals	**Consistent.** The Project would ensure that potentially affected traffic signals are synchronized consistent with City requirements.
T-8. Achieve a 5 percent increase in community-wide household and employment density over baseline conditions by 2020	**Consistent.** The Project would contribute to employment opportunities within the City, supporting the employment target established under Measure T-8.
T-9. Increase the jobs/housing ratio in the city by 25 percent	**Consistent.** The Project would contribute to employment opportunities within the City, supporting the jobs/housing ratio target established under Measure T-9.
T-13. Offer high frequency transit service within two corridors	**Consistent.** The Project would promote use of transit generally, as noted art Measure T-5. The Project does not propose or require facilities or programs that interfere with City plans to offer high-frequency transit as provided for under Measure T-13.
SW-2. Provide community outreach about benefits of food scrap and compostable paper collection with information about at-home composting corridors	**Consistent.** The Project would promote and implement waste reduction and recycling measures as required by the City. The Project does not propose or require facilities or programs that interfere with City plans to provide community outreach regarding recycling/composting as provided for under Measure SW-2.

Sources: CAP Measures from Western Regional Council of Governments Subregional Climate Action Plan Final Report, September 2014 (WRCOG) September 2014. Remarks by Applied Planning, Inc.

Table 4.4-7
General Plan GHG Emissions Policies Consistency

Policy Statements	Remarks
Policy AQ-18: Support local, regional, and statewide efforts to reduce emissions of greenhouse gases linked to climate change.	**Consistent.** The Project would comply with and would support all applicable plans, regulations, policies, and strategies addressing control and reduction of GHG emissions. Please refer to supporting discussions presented in this Section.
Policy AQ-19: Analyze and mitigate, to the extent feasible, potentially significant increases in greenhouse gas emissions during project review, pursuant to the California Environmental Quality Act.	**Consistent.** Project GHG emissions have been analyzed and mitigated pursuant to CEQA. Please refer to supporting discussions presented in this Section.
Policy AQ-20: Continue to support the planting and maintenance of trees in the community to increase carbon sequestration.	**Consistent.** The Project would implement landscaping consistent with City development standards, including but not limited to tree planting. Please refer to EIR Section 3.0, *Project Description*.
Policy AQ-21: The City encourages the installation of water-conserving systems such as dry wells and graywater systems, where feasible, especially in new developments. The installation of cisterns or infiltrators shall also be encouraged to capture rainwater from roofs for irrigation in the dry season and flood control during heavy storms.	**Consistent.** The Project would comply with CALGreen indoor water conservation standards and would surpass outdoor water conservation standards. Please refer to the discussions in this Section and water conservation requirements stipulated under Mitigation Measure 4.4.1.
Policy AQ-22: The City encourages the decrease of stormwater runoff by reducing pavement in development areas, and by design practices such as permeable parking bays and porous parking lots with bermed storage areas for rainwater detention.	**Consistent.** The Project would comply with City stormwater management and stormwater quality requirements and standards. Please refer to EIR Section 4.8, *Hydrology and Water Quality*.
Policy AQ-23: The City encourages native, drought- resistant landscape planting.	**Consistent.** The Project would comply with City landscaping standards. Please refer to EIR Section 3.0, *Project Description*.
Policy AQ-24: Support and engage in educational outreach programs with other agencies that promote water conservation and widespread use of water-saving technologies.	**Consistent.** The Project would implement applicable water conservation strategies. Please refer to the discussions presented in this Section. The Project does not propose or require facilities or programs that would conflict with or obstruct City efforts to support and engage in educational outreach programs with other agencies that promote water conservation and water-saving technologies.
Policy AQ-26: Permit and encourage the use of passive solar devices and other state-of-the-art energy conservation measures.	**Consistent.** The Project would comply with applicable provisions of Title 24 Section 1110.20 Section 110.10 – *Mandatory Requirements for Solar Ready*

Table 4.4-7
General Plan GHG Emissions Policies Consistency

Policy Statements	Remarks
	Buildings. Please refer to the discussions presented in this Section.
Policy AQ-27: Support and encourage voluntary efforts to provide active and passive solar access opportunities in new developments.	**Consistent.** Per the above remarks, the Project would comply with applicable solar ready provisions of Title 24. Please refer to the discussions presented in this Section. The Project does not propose facilities or programs that would conflict with or obstruct City efforts that support and encourage voluntary incorporation of active and passive solar access opportunities in new developments.
Policy AQ-29: Undertake proper maintenance of the City's physical facilities to ensure that optimum energy conservation is achieved.	**Consistent.** Improvements implemented by the Project would be designed and constructed to City standards, acting to ensure efficient use of energy and resources generally, while reducing maintenance requirements. Please refer to EIR Section 3.0, *Project Description*.
Policy AQ-30: Promote coordination of new public facilities with mass transit service and other alternative transportation services, including bicycles, and design structures to promote mass transit, bicycle, and pedestrian use.	**Consistent.** The Project would establish destination uses acting to concentrate ridership base, supporting the increase in fixed-route bus service established under Measure T-5. The Applicant and City will coordinate Project final designs with RTA to evaluate propriety of Project transit access and amenities. The Project would implement bicycle facilities and amenities mandated under CALGreen (Sections 5.106.4.1.1, 5.106.4.1.2) and as required by the City. Please refer to the discussions in this Section.
Policy AQ-31: The City encourages urban design measures that support alternatives to private automobile use.	**Consistent.** Please refer to Remarks at Policy AQ-30.
Policy AQ-32: Utilize source reduction, recycling, and other appropriate measures to reduce the amount of solid waste disposed of in landfills.	**Consistent.** The Project would comply with applicable source reduction and recycling policies and programs thereby reducing the amount of solid waste disposed of in landfills. Please refer to the discussions presented in this Section.

Sources: GHG Emissions Policies from *City of Eastvale General Plan* (City of Eastvale) June 13, 2012; Remarks by Applied Planning, Inc.

Summary

The Project reduces its GHG emissions to the maximum extent feasible. Additionally, the Project does not propose facilities or operations that would substantively interfere with or impede any future City-, County-, State-, or federally-mandated retrofit obligations enacted or promulgated to legally require development to assist in meeting State-adopted GHG emissions reduction targets, including those established under Executive Order S-3-05, Executive Order B-30-15, SB 32 and related regulatory actions. Nor would the Project interfere with implementation of GHG reduction plans described in the CARB's Updated Scoping Plan; measures identified by the California Building Commission mandating net zero energy homes in the building code after 2020; or existing building retrofits under AB 758. The Project is also consistent with and supports SCAG 2016 RTP/SCS Goals; applicable provisions of the WRCOG Subregional CAP; and City of Eastvale General Plan GHG emissions policies.

On this basis, the potential for the Project to conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG is considered less-than-significant.

Level of Significance: Less-Than-Significant.

4.5 NOISE

4.5 NOISE

Abstract

This Section assesses whether the Project would substantially increase ambient noise levels, or expose land uses to noise, groundborne noise, or groundborne vibration levels exceeding established standards. In this regard, potential impacts considered within this Section include:

- *Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.*

- *Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels.*

- *A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project; or*

- *A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project.*

Additionally, as substantiated in the Initial Study (EIR Appendix A), the Project's potential impacts under the following topics were previously determined to be less-than-significant and are not further discussed here:

- *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*

- *For a project within the vicinity of a private airstrip, expose people residing or working in the Project area to excessive noise levels.*

As substantiated in the following analyses, even with the application of mitigation measures, construction-source noise levels received at certain adjacent properties would exceed applicable noise standards. Additionally, even with the implementation of mitigation, operational-source noise generated by the proposed Site 2 carwash as received at certain adjacent properties would exceed applicable standards. These are considered significant and unavoidable impacts of the Project. All other noise-related impacts would be less-than-significant.

4.5.1 INTRODUCTION

This Section presents the noise setting, methodology, standards of significance, and potential noise impacts associated with the Project. Where impacts are determined to be potentially significant, mitigation measures are proposed to avoid or reduce the severity of impacts. The information presented herein has been summarized from the *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018 (Project Noise Study). The Project Noise Study in its entirety is presented at EIR Appendix E.

4.5.2 SETTING

The following are discussions of noise fundamentals applicable to the Project, together with assessments of existing ambient noise levels and noise sources in the Project vicinity.

4.5.2.1 Fundamentals of Noise

Noise levels are measured on a logarithmic scale in decibels which are then weighted and added over a 24-hour period to reflect not only the magnitude of the sound, but also its duration, frequency, and time of occurrence. In this manner, various acoustical scales and units of measurement have been developed, including: equivalent sound levels (Leq), day-night average sound levels (Ldn) and community noise equivalent levels (CNEL).

"A-weighted" decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against the very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. The decibel scale has a value of 0.0 dBA at the threshold of hearing and 140 dBA at the threshold of pain. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. A 1.0 decibel increase is barely audible, whereas a 10 decibel increase is perceived as being twice as loud as before. Representative decibel levels of various noise sources are presented at Figure 4.5-1.

Noise Rating Schemes

Equivalent sound levels are not measured directly but, rather, are calculated from sound pressure levels typically measured in dBA. The equivalent sound level (Leq) is the constant level that, over a given period, transmits the same amount of acoustic energy as the actual time-varying sound. Equivalent sound levels are the basis for both the Ldn and CNEL scales.

Day-night average sound levels (Ldn) are a measure of the cumulative noise exposure of the community. The Ldn value results from a summation of hourly Leq over a 24-hour period with an increased weighting factor applied to the night period between 10:00 p.m. and 7:00 a.m. This noise rating scheme accounts for subjectively more annoying noise events which occur during normal sleep hours.

Community noise equivalent levels (CNEL) also carry a weighting penalty for noise that occurs during the nighttime hours. In addition, CNEL levels include a penalty for noise events that occur during the evening hours between 10:00 p.m. and 7:00 a.m. Because of the weighting factors applied, CNEL values at a given location will always be larger than Ldn values, which in turn will exceed Leq values. However, CNEL values are typically within one decibel of the Ldn value.

TYPICAL NOISE LEVELS AND THEIR SUBJECTIVE LOUDNESS AND EFFECTS

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP DISTURBANCE
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

SOURCE: NOISE TECHNICAL SUPPLEMENT BY CALTRANS

Source: Urban Crossroads, Inc.

Sound Propagation

For a "line source" of noise such as a heavily traveled roadway, the noise level drops off by a nominal value of 3.0 decibels for each doubling of distance between the noise source and the noise receptor. The nominal value of 3.0 dBA with doubling applies to sound propagation from a line source: (1) over the top of a barrier greater than three meters in height; or (2) where there is a clear unobstructed view of the highway, the ground is hard, no intervening structures exist and the line-of-sight between the noise source and receptor averages more than three meters above the ground.

Notwithstanding, environmental factors such as wind conditions, temperature gradients, characteristics of the ground (hard or soft) and the air (relative humidity), and the presence of vegetation combine to typically increase the attenuation achieved outside laboratory conditions to approximately 4.5 decibels per doubling of distance. The increase in noise attenuation in exterior environments is particularly true: (1) for freeways with an elevated or depressed profile or exhibiting expanses of intervening buildings or topography; (2) where the view of a roadway is interrupted by isolated buildings, clumps of bushes, scattered trees; (3) when the intervening ground is soft or covered with vegetation; or (4) where the source or receptor is located more than three meters above the ground.

In an area which is relatively flat and free of barriers, the sound level resulting from a single "point source" of noise drops by six decibels for each doubling of distance or 20 decibels for each factor of ten in distance. This applies to fixed noise sources and mobile noise sources which are temporarily stationary, such as an idling truck or other heavy-duty equipment operating within a confined area (such as industrial processes or construction).

Noise Barrier Attenuation

Noise barriers along roadways can reduce noise effects of vehicular-source at adjacent land uses. 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 be effective, it must be high enough and long enough to block the view of the noise source.

Vibration

According to the Federal Transit Administration (FTA) Transit Noise Impact and Vibration Assessment, vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of groundborne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, groundborne vibrations may be described by amplitude and frequency. Vibration is often described in units of velocity (inches per second) and discussed in decibel (dB) units to compress the range of numbers required to describe vibration. The vibration velocity level is denoted as VdB in this document. Vibration impacts are generally associated with activities such as train operations, construction and heavy truck movements.

The background vibration-velocity level in residential areas is generally 50 VdB. Groundborne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

4.5.2.2 Factors Affecting Motor Vehicle Noise

According to the Highway Traffic Noise Analysis and Abatement Policy and Guidance, provided by the Federal Highway Administration (FHWA), 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 affect 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.

To account for the ground-effect attenuation (absorption), 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. A drop-off rate of 4.5 dBA per doubling of distance is typically observed over soft ground with landscaping, as compared with a 3.0 dBA drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. The Project Noise Study indicates that, generally, soft site conditions better reflect the predicted noise levels. In addition, Caltrans' research has shown that the use of soft site conditions is more appropriate for the application of the FHWA traffic noise prediction model used in this analysis.

4.5.2.3 Community Responses to Noise

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another 25 percent 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.[1]

Despite this variability in behavior on an individual level, populations in general can be expected to exhibit the following responses to changes in noise levels. An increase or decrease of 1.0 dBA cannot be perceived except in carefully controlled laboratory experiments. A 3.0 dBA increase may be perceptible outside of the laboratory. An

1 U.S. Environmental Protection Agency Office of Noise Abatement and Control. *Noise Effects Handbook-A Desk Reference to Health and Welfare Effects of Noise*. October 1979 (revised July 1981).

increase of 5.0 dBA is often necessary before any noticeable change in community response (i.e., complaints) would be expected.

Community responses to noise may range from registering a complaint by telephone or letter, to initiating court action. Several factors are related to the level of community annoyance including:

- Fear associated with noise-producing activities;
- Noise receptor's perception that they are being unfairly treated;
- Attitudes regarding the usefulness of the noise-producing activity;
- Receptor's belief that the noise source can be controlled.

Recent studies have shown that changes in long-term noise levels are noticeable and are responded to by people. For example, about ten percent of the people exposed to traffic noise of 60 Ldn will report being highly annoyed with the noise, and each increase of one Ldn is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 Ldn or aircraft noise exceeds 55 Ldn, people begin complaining. Group or legal actions to stop the noise should be expected to begin at traffic noise levels near 70 Ldn and aircraft noise levels near 65 Ldn.

4.5.2.4 Land Use Compatibility With Noise

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches and residences are more sensitive to noise intrusion than are commercial or industrial activities. As ambient noise levels affect the perceived amenity or liveability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process.

4.5.2.5 Sensitive Receptors

The City of Eastvale General Plan Noise Element, Policy N-3, considers the following uses to be sensitive to noise and vibration: schools, hospitals, rest homes, long-term care

centers, mental care facilities, residential uses, libraries, recreation areas, and places of worship. Moderately noise-sensitive land uses typically include: multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs.

Land uses which are considered relatively insensitive to noise include business, commercial, and professional/office developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals. Sensitive receptors in the Project area include existing residential uses, a fire station, a church, and a park.

4.5.2.6 Current Noise Exposure

To assess the existing noise level environment, nine 24-hour and four 1-hour noise level measurements were taken at sensitive receiver locations in the Project study area. Noise measurement locations are illustrated at Figure 4.5-2 and are representative of sites that may be affected by Project-generated noise. Descriptions of noise measurement locations and monitored noise levels are summarized at Tables 4.5-1 and 4.5-2.

Table 4.5-1
Ambient Noise Levels (24-Hour)

Location	Distance to Project Boundary	Description	Energy Average Hourly Noise Level (dBA Leq)		CNEL
			Daytime	Nighttime	
L1	210'	Located north of the Project site on the northeast corner of Hamner Avenue and Riverboat Drive adjacent to existing residential homes.	79.9	75.5	83.2
L2	0'	Located at the northwest Project site boundary adjacent to existing residential homes on College Park Drive.	74.8	71.6	79.0
L3	155'	Located south of Site 2 adjacent to an existing fire station on Hamner Avenue, near existing	61.3	58.6	65.9

Table 4.5-1
Ambient Noise Levels (24-Hour)

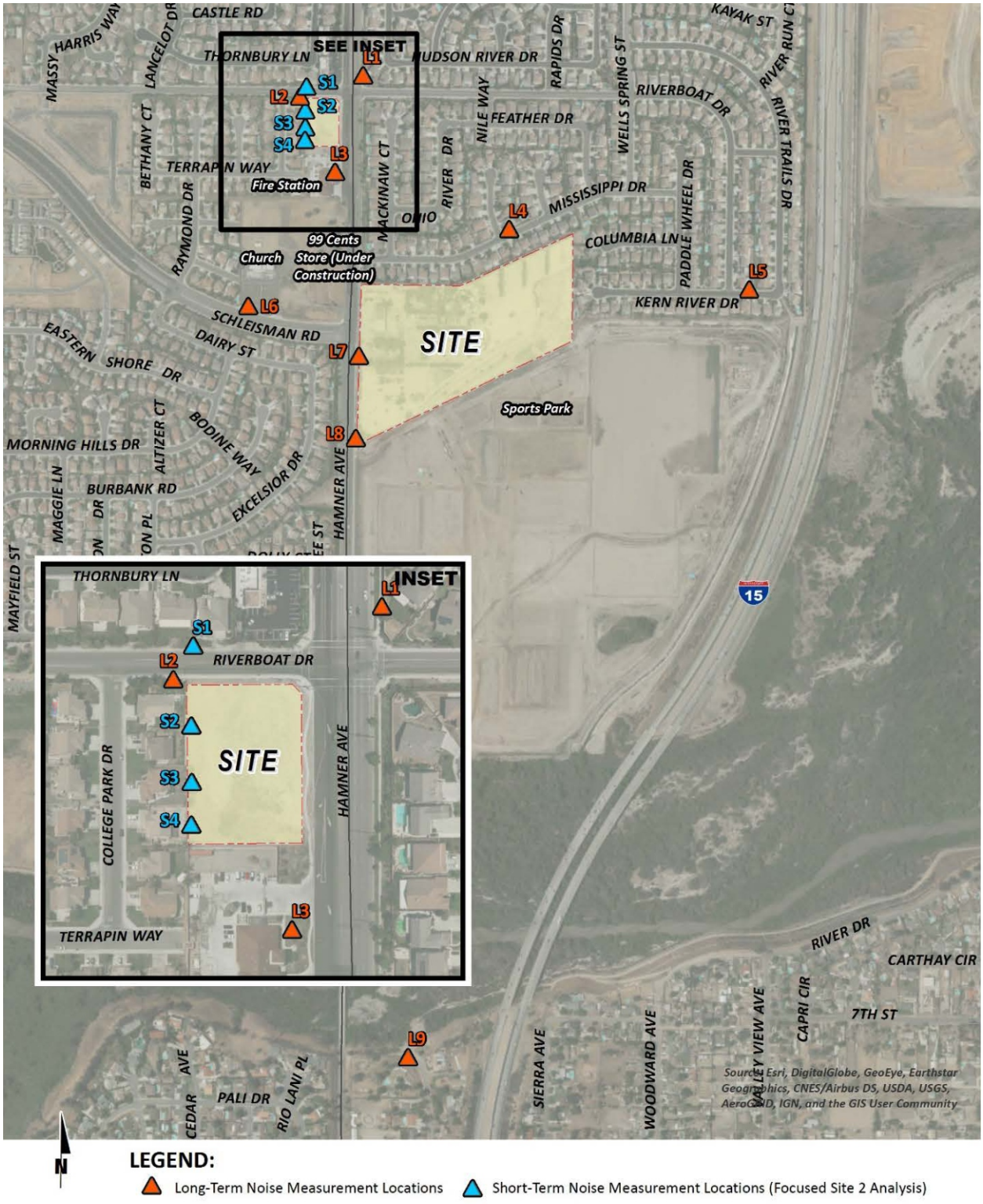
Location	Distance to Project Boundary	Description	Energy Average Hourly Noise Level (dBA Leq)		CNEL
			Daytime	Nighttime	
		residential homes.			
L4	180'	Located north of the Project site on Mississippi Drive in an existing residential community.	58.9	58.4	65.0
L5	1,060'	Located on Kern River Road east of the Project site within an existing residential community.	59.2	59.8	66.5
L6	670'	Located west of the Project site in an existing church parking lot near existing residential homes north of Schleisman Road.	60.5	56.6	64.0
L7	0'	Located on Hamner Avenue adjacent to the western Project site boundary near existing residential homes.	71.1	65.6	73.8
L8	0'	Located at the western Project site boundary on Hamner Avenue near existing residential homes.	71.8	68.2	75.7
L9	3,700'	Located south of the Project site on Old Hamner Avenue near existing residential homes.	55.7	59.1	65.4

Source: *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Table 4.5-2
Ambient Noise Levels (1-Hour)

Location	Floor (Height)	Represented Address	1-Hour Noise Levels (dBA Leq)
S1	1st (5 feet)	12653 & 12679 Thornbury Lane	58.9
	2nd (14 feet)		58.1 (estimated)
S2	1st (5 feet)	7012 & 7022 College Park Drive	57.1
	2nd (14 feet)		56.3 (estimated)
S3	1st (5 feet)	7032 College Park Drive	56.0
	2nd (14 feet)		55.2 (estimated)
S4	1st (5 feet)	7042 College Park Drive	55.2
	2nd (14 feet)		54.4 (estimated)

Source: *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018.



Source: Urban Crossroads, Inc.

Figure 4.5-2
Noise Measurement Locations

4.5.3 REGULATORY SETTING

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the City of Eastvale has established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic generally produces an average sound level that remains constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

4.5.3.1 State of California

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards and provides guidance for local land use compatibility. State law requires each county and city to adopt a General Plan that includes a Noise Element, prepared pursuant to the Governor's Office of Planning and Research Guidelines. The purpose of the Noise Element is to "limit the exposure of the community to excessive noise levels." In addition, the CEQA requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

California Building Code

State of California noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, and the California Building Code. These noise standards are applied to new construction in California to control interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are located near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans must demonstrate that the structure has been designed to limit interior noise in habitable

rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

4.5.3.2 City of Eastvale Noise Standards

The City of Eastvale has adopted a Noise Element of the General Plan to control and abate environmental noise, and to protect the citizens of City of Eastvale from excessive exposure to noise. The Noise Element specifies the maximum allowable exterior noise levels for new developments impacted by transportation and stationary noise sources. To protect the City of Eastvale residents from excessive noise, the Noise Element contains the following four goals:

N-1 Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors and noise-sensitive uses of Eastvale.

N-2 Locate noise-tolerant land uses within areas irrevocably committed to land uses that are noise-producing, such as transportation corridors.

N-3 Ensure that noise sensitive uses do not encroach into areas needed by noise generating uses.

N-4 Locate noise sources away from existing noise sensitive land uses unless appropriate noise control measures are provided.

Stationary-Source Noise Level Standards

The City of Eastvale General Plan Noise Element identifies exterior noise limits to control operational noise impacts associated with the development of the proposed Project. Table N-4 of the Noise Element provides the City's standards for maximum exterior non-transportation noise levels to which land designated for residential land uses may be exposed for any 30-minute period on any day. For the purposes of this analysis, the noise generated by the roof-top air conditioning units, drive-through speakerphones, parking lot vehicle movements, and gas station activities within Site 1, and car wash tunnel entrance activity, tunnel exit activity, and vacuum activities within Site 2 of the proposed Project will be evaluated based on the City's stationary source standards at the nearby residential land uses.

Table N-4 of the Noise Element requires an exterior noise level standard for the nearby noise-sensitive single-family residential land uses of 60 dBA Leq between the daytime hours of 7:00 a.m. and 10:00 p.m., and 50 dBA Leq between the nighttime hours of 10:00 p.m. to 7:00 a.m.

Vibration Level Standards

The City of Eastvale General Plan Noise Element, Policy N-3, identifies a vibration level standard for sensitive land uses of 0.0787 inches per second peak particle velocity (PPV). Therefore, for the purposes of this analysis, the vibration level shall not exceed 0.0787 in/sec PPV at the nearby sensitive receiver locations during Project construction activities capable of generating vibration levels.

Construction Noise Standards

The City of Eastvale has set restrictions to control noise impacts associated with the construction of the proposed Project. According to the City of Eastvale Municipal Code Section 8.52.020, construction activities are limited to the hours of 6:00 a.m. to 6:00 p.m. June through September, and 7:00 a.m. to 6:00 p.m. October through May. While the City establishes limits to the hours during which construction activity may take place, neither the City's General Plan or Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a substantial temporary or periodic noise increase.

To evaluate whether the Project will generate potentially significant temporary construction noise levels at off-site sensitive receiver locations, a construction-related noise level threshold (absolute) is adopted from the *Criteria for Recommended Standard: Occupational Noise Exposure* prepared by the National Institute for Occupational Safety and Health (NIOSH). A division of the U.S. Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The construction-related noise level threshold starts at 85 dBA for more than eight hours per day, and for every 3 dBA increase, the exposure time is cut in half. This results in noise level thresholds of 88 dBA for more than four hours per day, 92 dBA for

more than one hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. For the purposes of this analysis, the lowest, more conservative construction noise level threshold of 85 dBA Leq is used as an acceptable threshold for construction noise at the nearby sensitive receiver locations. Since this construction-related noise level threshold represents the energy average of the noise source over a given time period, they are expressed as Leq noise levels. Therefore, the noise level threshold of 85 dBA Leq over a period of eight hours or more is used to evaluate the potential Project-related construction noise level impacts at the nearby sensitive receiver locations.

The 85 dBA Leq threshold is also consistent with the FTA *Transit Noise and Vibration Impact Assessment* criteria for construction noise which identifies an hourly construction noise level threshold of 90 dBA Leq during daytime hours, and 80 dBA Leq during nighttime hours for construction for general assessment at noise-sensitive uses (e.g., residential, medical/hospital, school, etc.). Detailed assessment, according to the FTA, identifies an 8-hour dBA Leq noise level threshold specific to noise-sensitive uses of 80 dBA Leq. Therefore, this analysis relies on the NIOSH 85 dBA Leq threshold, consistent with FTA general and detailed assessment criteria for noise-sensitive uses and represents an appropriate threshold for construction noise analysis.

Additionally, construction-source noise is evaluated in the context of ambient conditions. The City has not adopted a standard in this regard. For the purposes of this analysis, and consistent with available Caltrans guidance, construction-source noise level increases of $\geq$ 12 dBA Leq relative to ambient or greater would be considered potentially significant.[2]

[2] *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects* (California Department of Transportation Division of Environmental Analysis), p. 6, et al.

4.5.4 STANDARDS OF SIGNIFICANCE

Based on the noise criteria presented above, and direction provided within the *CEQA Guidelines*, Project noise impacts would be considered potentially significant if the Project is determined to result in or cause the following conditions:

- Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

- A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project;

- A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project;

- Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels;

- 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

- For a project within the vicinity of a private airstrip, expose people residing or working in the Project area to excessive noise levels.

Noise impact significance criteria germane to the Project are summarized at Table 4.5-3.

Table 4.5-3
Summary of Significance Criteria

Analysis	Condition(s)	Significance Criteria	
		Daytime	Nighttime
Off-Site Traffic Noise	if ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase	
	if ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase	
	if ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL Project increase	
Operational Noise	Exterior Noise Level Standards	60 dBA L_{eq}	50 dBA L_{eq}
	if ambient is < 60 dBA L_{eq}	≥ 5 dBA L_{eq} Project increase	
	if ambient is 60 - 65 dBA L_{eq}	≥ 3 dBA L_{eq} Project increase	
	if ambient is > 65 dBA L_{eq}	≥ 1.5 dBA L_{eq} Project increase	
Construction Noise & Vibration	6:00 a.m. to 6:00 p.m. June through September, and 7:00 a.m. to 6:00 p.m. October through May		
	Noise Level Threshold	85 dBA L_{eq}	n/a
	Noise Level Increase	12 dBA L_{eq}	n/a
	Vibration Level Threshold	0.0787 PPV	n/a

Source: *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018.

4.5.5 POTENTIAL IMPACTS AND MITIGATION MEASURES

4.5.5.1 Introduction

The following discussions focus on areas where it has been determined that the Project may result in potentially significant noise/vibration impacts, based on the analysis presented within this Section and included within the EIR Initial Study (EIR Appendix A). Of the CEQA threshold considerations at Section 4.5.4, and as substantiated in the Initial Study, the Project's potential impacts under the following topics are determined to be less-than-significant, and are not further discussed in this Section:

- 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.

- For a project within the vicinity of a private airstrip, expose people residing or working in the Project area to excessive noise levels.

Please refer also to Appendix A, Initial Study and NOP Responses; Initial Study Checklist Item 12., *Noise*.

4.5.5.2 Impact Statements

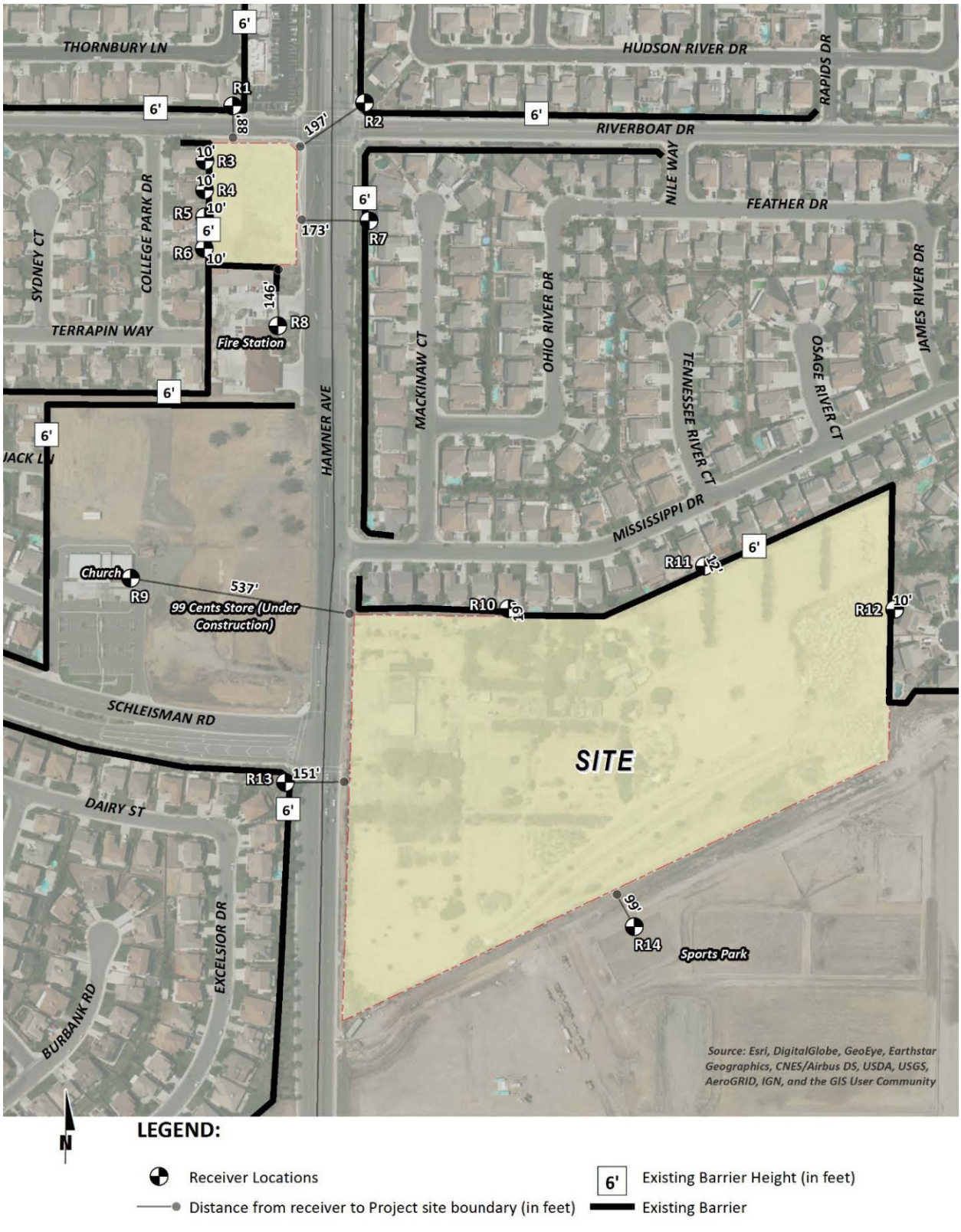
Following is an analysis of potential noise impacts that could occur because of the Project. Noise levels will change both on-site and off-site if the Project is approved and implemented. The discussion of potential noise/vibration impacts is organized under the following topical headings:

- Construction-Source Noise;
- Vehicular-Source Noise;
- Operational/Area-Source Noise; and
- Vibration.

For each topical discussion, potential impacts are evaluated under applicable criteria established above at Section 4.5.4, *Standards of Significance*. Please also refer to Noise Impact Analysis Section 6, for methodology utilized within the following discussions.

SENSITIVE RECEIVER LOCATIONS

To assess the potential for long-term operational noise and short-term construction noise and vibration impacts, 14 receiver locations were identified as representative locations for focused analysis. As shown at Figure 4.5-3, the closest sensitive receiver locations are represented by R3 and R7 to R9, at approximately 10 to 19 feet from the Project site boundaries. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this analysis would experience lower noise levels than those identified here due to the additional attenuation from distance and the shielding of intervening structures.



Source: Urban Crossroads, Inc.

Figure 4.5-3
Receiver Locations

CONSTRUCTION-SOURCE NOISE

Potential Impact: *Would Project construction activities and associated noise result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Impact Analysis: Construction noise represents a short-term impact on ambient noise levels. Noise generated by construction equipment, including trucks, power tools, concrete mixers, and portable generators can reach high levels. Project construction is expected to occur in the following stages:

- Demolition;
- Site Preparation;
- Grading;
- Building Construction;
- Paving; and
- Architectural Coating.

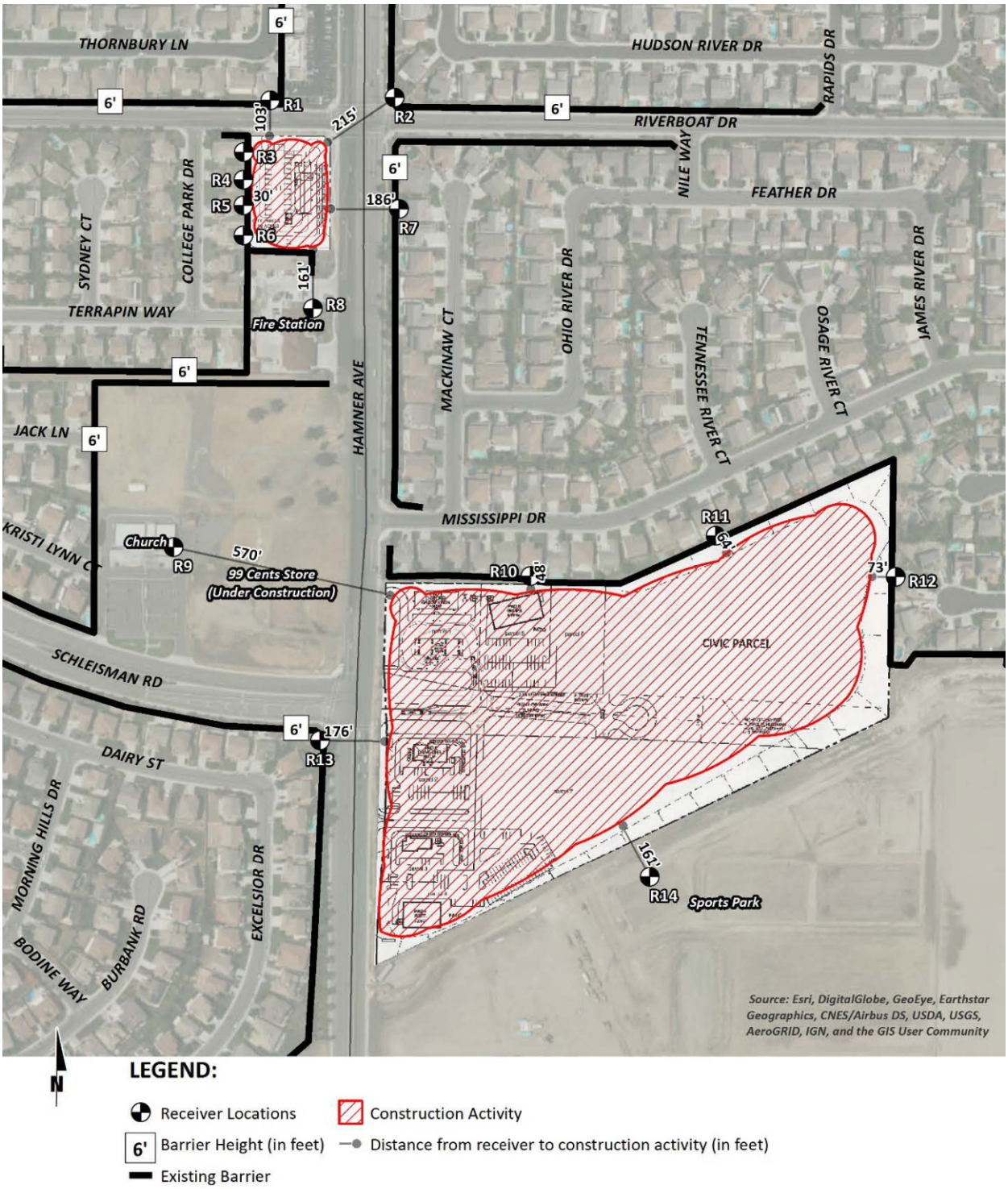
The construction noise analysis was prepared using reference noise level measurements to describe the typical construction activity noise levels for each stage of Project construction. Please refer to Noise Impact Analysis (EIR Appendix E) Table 10-1 for a complete listing of reference noise levels used within the analysis. The construction reference noise level measurements represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 62 dBA to in excess of 80 dBA when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 80 dBA measured at 50 feet from the noise source to the receiver would be reduced to 74 dBA at 100 feet from the source to the receiver and would be further reduced to 68 dBA at 200 feet from the source to the receiver.

Using the reference noise levels, Table 4.5-4 presents the highest noise levels at the sensitive receiver locations identified at Figure 4.5-4. Compliance with the applicable threshold is also presented.

Table 4.5-4
Construction Noise Level Compliance

Receiver Location	Unmitigated Construction Noise Levels (dBA Leq)		
	Highest Construction Noise Level	Threshold	Threshold Exceeded?
R1	68.4	85	No
R2	62.0	85	No
R3	79.1	85	No
R4	79.1	85	No
R5	79.1	85	No
R6	79.1	85	No
R7	63.3	85	No
R8	69.4	85	No
R9	58.4	85	No
R10	74.4	85	No
R11	71.9	85	No
R12	70.8	85	No
R13	63.1	85	No
R14	69.4	85	No

Source: *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018.



Source: Urban Crossroads, Inc.

Figure 4.5-4
Construction Activity Locations

As shown above, Project construction noise would not exceed applicable thresholds at any of the sensitive receiver locations.

To describe the temporary Project construction noise level contributions to the existing ambient noise environment, the Project construction noise levels presented above were combined with the existing ambient noise levels measurements at the off-site receiver locations. The difference between the combined Project-construction and ambient noise levels are used to describe the construction noise level contributions. Temporary noise level increases that would be experienced at sensitive receiver locations when Project construction-source noise is added to the ambient daytime conditions are presented at Table 4.5-5.

Table 4.5-5
Unmitigated Construction Noise Levels
Increase Relative to Ambient Conditions

Receiver Location	Highest Noise Level	Measurement Location	Ambient Noise Level	Combined Project and Ambient	Project Contribution	Threshold Exceeded?
R1	68.4	S1	58.9	68.8	9.9	No
R2	62.0	L1	79.9	80.0	0.1	No
R3	79.1	S2	57.1	79.1	22.0	Yes
R4	79.1	S2	57.1	79.1	22.0	Yes
R5	79.1	S3	56.0	79.1	23.1	Yes
R6	79.1	S4	55.2	79.1	23.9	Yes
R7	63.3	L3	61.3	65.4	4.1	No
R8	69.4	L3	61.3	70.0	8.7	No
R9	58.4	L6	60.5	62.6	2.1	No
R10	74.4	L4	58.9	74.5	15.6	Yes
R11	71.9	L4	58.9	72.1	13.2	Yes
R12	70.8	L5	59.2	71.1	11.9	No
R13	63.1	L7	71.1	71.7	0.6	No
R14	69.4	L8	71.8	73.8	2.0	No

Source: *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018.

As indicated in Table 4.5-5, the Project will contribute unmitigated, worst-case construction noise level increases between 0.1 to 23.9 dBA Leq at the adjacent sensitive receiver locations during the daytime hours. Project construction activities would exceed the 12 dBA Leq significance threshold at receiver locations R3 to R6, R10, and R11. At these locations, the received construction-source noise levels would therefore be potentially significant.

Level of Significance: Potentially Significant.

Mitigation Measures:

4.5.1 The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.

Level of Significance After Mitigation: Significant and Unavoidable. Mitigation Measure 4.5.1 would generally and qualitatively reduce Project construction-source noise impacts. The Project would also comply with all City of Eastvale Ordinance requirements that would generally act to reduce effects of construction-source noise. However, even with application of mitigation, and compliance with Ordinance requirements, Project construction-source noise received at proximate receptors would exceed 12 dBA Leq. Project construction-source noise impacts are therefore recognized as significant and unavoidable.

Potential Impact: *Would Project construction activities and associated noise result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?*

Impact Analysis: Project construction-source noise is temporary and transient, and would therefore not permanently alter ambient noise conditions.

Level of Significance: Less-Than-Significant.

Potential Impact: *Would Project construction activities and associated noise result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?*

Impact Analysis: Unmitigated Project construction-source noise levels in the context of ambient conditions are summarized at Table 4.5-5. As indicated, unmitigated Project construction-source noise would exceed the 12 dBA Leq significance threshold at nearby receiver locations. This is a potentially significant impact.

Level of Significance: Potentially Significant.

Mitigation Measures: Please refer to Mitigation Measure 4.5.1.

Level of Significance After Mitigation: Significant and Unavoidable. As previously stated, Mitigation Measure 4.5.1 would generally and qualitatively reduce Project construction-source noise impacts. However, even with application of mitigation, it is anticipated the Project construction-source noise received at proximate receptors would exceed 12 dBA Leq. As such, the potential for Project construction-source noise to result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project is therefore recognized as significant and unavoidable.

VEHICULAR-SOURCE NOISE

Potential Impact: *Would Project vehicular-source noise result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or other applicable standards of other agencies?*

Impact Analysis: To assess impacts resulting from Project vehicular-source noise, the Project Noise Study developed noise contours for Study Area roadway segments based on roadway average daily trip (ADT) estimates, Project trip generation, and trip

distribution as presented in *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.

The noise contours were used to assess the Project's incremental vehicular-source noise impacts at land uses adjacent to roadways conveying Project traffic. Based on the vehicular-source noise impact significance criteria presented at Section 4.5.4, a potentially significant off-site vehicular-source noise impact would occur when the noise levels at existing and future noise-sensitive land uses (e.g. residential, etc.):

- Are less than 60 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project-related noise level increase; or
- Range from 60 to 65 dBA CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater Project-related noise level increase; or
- Already exceed 65 dBA CNEL, and the Project creates a community noise level impact of greater than 1.5 dBA CNEL (FICON, 1992).

Potential vehicular-source noise impacts were evaluated under the following scenarios:

- Existing Conditions Without and With the Project; and
- Opening Year Conditions (2019) Without and With the Project.

Existing Conditions Without and With Project

As indicated at Table 4.5-6, under Existing Conditions Without and With the Project, vehicular-source noise impacts along all Study Area roadway segments would not exceed applicable thresholds and would be less-than-significant.

Table 4.5-6
Vehicular-Source Noise
Existing Conditions, Without/With Project

	Road	Segment	CNEL at 100 feet (dBA)			Potential Significant Impact
			Without Project	With Project	Project Addition	
1	Scholar Way	n/o Schleisman Rd.	65.5	65.6	0.1	No
2	Scholar Way	s/o Schleisman Rd.	65.3	65.5	0.2	No
3	Hamner Ave.	n/o Limonite Ave.	68.8	68.8	0.1	No
4	Hamner Ave.	s/o Limonite Ave.	68.3	68.7	0.4	No
5	Hamner Ave.	s/o 68th St.	67.3	67.9	0.6	No
6	Hamner Ave.	s/o Riverboat Dr.	68.9	69.4	0.5	No
7	Hamner Ave.	s/o Schleisman Rd.	68.2	68.8	0.5	No
8	Hamner Ave.	s/o Citrus St.	69.6	69.8	0.2	No
9	Limonite Ave.	w/o Hamner Ave.	69.3	69.4	0.1	No
10	Limonite Ave.	e/o Hamner Ave.	71.0	71.1	0.1	No
11	Limonite Ave.	e/o I-15 Fwy.	70.5	70.5	0.0	No
12	68th St.	w/o Hamner Ave.	65.5	65.7	0.2	No
13	68th St.	e/o Hamner Ave.	67.0	67.1	0.1	No
14	Riverboat Dr.	w/o Hamner Ave.	63.0	65.1	2.1	No
15	Schleisman Rd.	w/o Scholar Way	64.3	64.5	0.3	No
16	Schleisman Rd.	e/o Scholar Way	63.9	64.4	0.5	No
17	Citrus St.	w/o Hamner Ave.	69.2	69.4	0.1	No
18	Citrus St.	e/o Hamner Ave.	60.3	61.4	1.0	No

Source: *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018.

Opening Year Conditions (2019) Without and With the Project

As indicated at Table 4.5-7, under Opening Year Conditions Without and With the Project, vehicular-source noise impacts along all Study Area roadway segments would not exceed applicable thresholds and would be less-than-significant.

Table 4.5-7
Vehicular-Source Noise
Opening Year Conditions, Without/With Project

	Road	Segment	CNEL at 100 feet (dBA)			Potential Significant Impact
			Without Project	With Project	Project Addition	
1	Scholar Way	n/o Schleisman Rd.	65.9	66.0	0.1	No
2	Scholar Way	s/o Schleisman Rd.	65.9	66.0	0.1	No
3	Hamner Ave.	n/o Limonite Ave.	70.3	70.3	0.0	No
4	Hamner Ave.	s/o Limonite Ave.	69.5	69.8	0.3	No
5	Hamner Ave.	s/o 68th St.	68.8	69.3	0.5	No
6	Hamner Ave.	s/o Riverboat Dr.	70.0	70.4	0.4	No
7	Hamner Ave.	s/o Schleisman Rd.	69.4	69.8	0.4	No
8	Hamner Ave.	s/o Citrus St.	70.5	70.7	0.2	No
9	Limonite Ave.	w/o Hamner Ave.	70.4	70.5	0.1	No
10	Limonite Ave.	e/o Hamner Ave.	71.9	72.0	0.1	No
11	Limonite Ave.	e/o I-15 Fwy.	71.6	71.6	0.0	No
12	68th St.	w/o Hamner Ave.	65.8	66.0	0.2	No
13	68th St.	e/o Hamner Ave.	67.7	67.8	0.1	No
14	Riverboat Dr.	w/o Hamner Ave.	63.1	65.2	2.1	No
15	Schleisman Rd.	w/o Scholar Way	65.0	65.3	0.3	No
16	Schleisman Rd.	e/o Scholar Way	64.7	65.1	0.5	No
17	Citrus St.	w/o Hamner Ave.	69.7	69.8	0.1	No
18	Citrus St.	e/o Hamner Ave.	62.3	62.9	0.6	No

Source: *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018.

Summary

Project contributions to roadway noise levels would not result in noise levels exceeding City standards or that would significantly impact any existing or future sensitive noise receptors. On this basis, Project vehicular-source noise would not result in noise levels exceeding standards established in a general plan, noise ordinance, or other applicable standards of other agencies.

Level of Significance: Less-Than-Significant.

Potential Impact: *Would Project vehicular-source noise result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?*

Impact Analysis: Project vehicular-source noise would permanently, rather than temporarily, affect ambient noise conditions. Permanent alteration of ambient noise conditions resulting from Project vehicular-source noise is substantiated herein to be less-than-significant.

Level of Significance: Less-Than-Significant.

Potential Impact: *Would Project vehicular-source noise result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?*

Impact Analysis: At all roadway segments within the Study Area, Project-related mobile-source noise would not exceed the significance thresholds presented at Section 4.5.4. As such, Project vehicular-source noise would not result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.

Level of Significance: Less-Than-Significant.

OPERATIONAL/AREA-SOURCE NOISE

Potential Impact: *Would Project operational/area-source noise result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance?*

Reference Noise Levels

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of uses/activities to represent the noise levels that can be expected with the operation of the proposed Project. Project operational/area noise

sources, their durations, and reference noise levels employed in this analysis are summarized at Table 4.5-8.

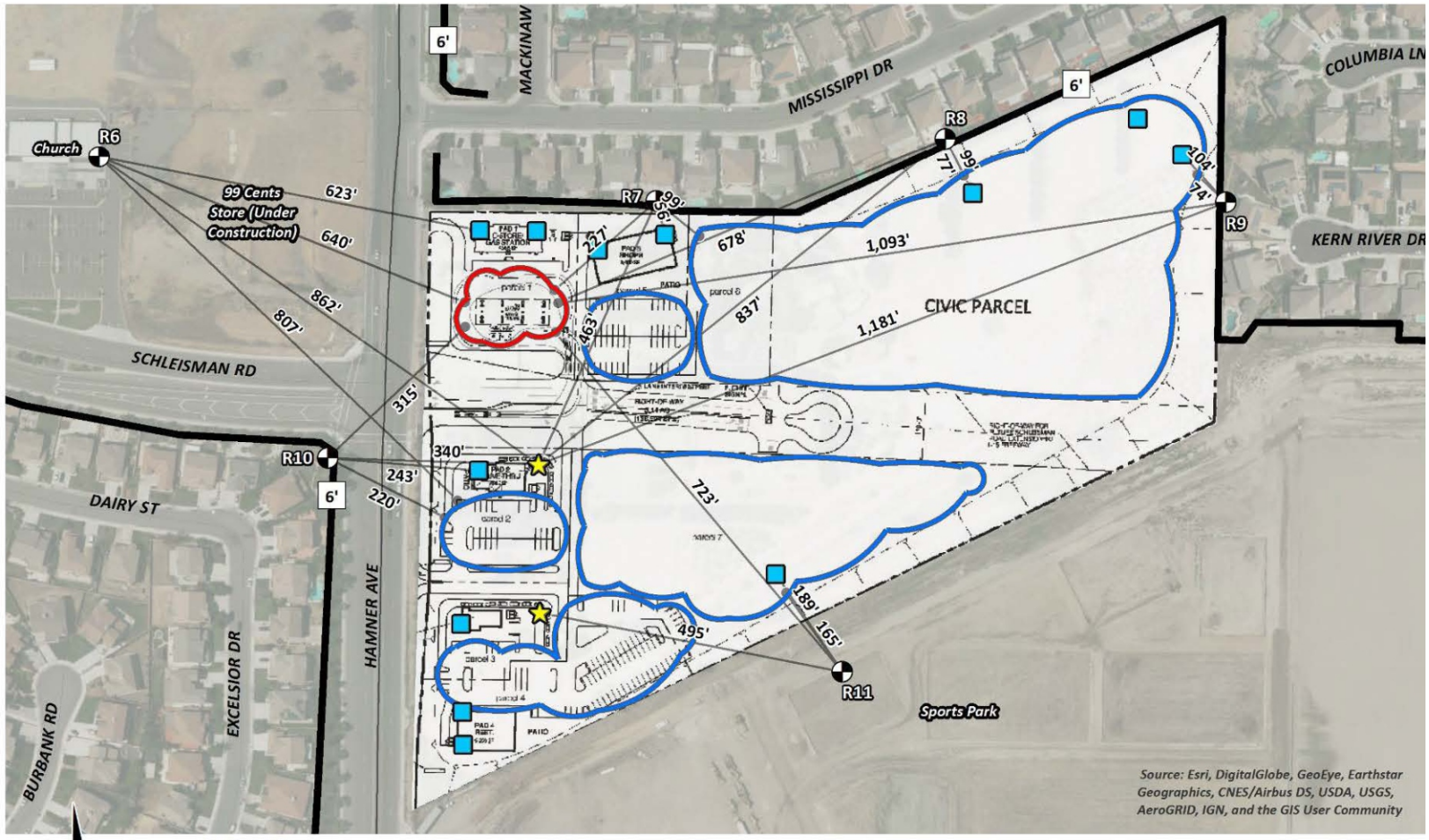
Table 4.5-8
Reference Noise Level Measurements

Noise Source	Duration	Distance	Height	Hourly Activity (mins)	Reference Noise Level (dBA Leq)	
					At Ref Distance	At 50 Feet
Site 1 Reference Noise Levels						
Roof-Top Air Conditioning Unit	96:00:00	5'	5'	39	77.2	57.2
Drive-Through Speakerphone	00:02:00	15'	3'	60	62.0	51.5
Parking Lot Vehicle Movements	00:15:00	5'	5'	60	60.1	45.1
Gas Station Activity	00:03:00	5'	5'	60	68.2	48.2
Site 2 Reference Noise Levels						
Car Wash Entrance Activity	01:00:00	20'	5'	60	71.7	63.7
Car Wash Tunnel Exit (Air Blowers/Dryer)	-	40'	10'	20	71.3	69.4
Car Wash Vacuum Activity	00:01:02	5'	5'	60	74.6	54.6

Source: *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018.

Site 1 Operations

Locations of the operational-source noise generators proposed within Site 1 are illustrated at Figure 4.5-5. Using the reference noise levels listed above at Table 4.5-8, operational noise levels at the identified receiver locations were estimated for Site 1.



Source: Urban Crossroads

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Figure 4.5-5
Operational Noise Source Locations (Site 1)

Table 4.5-9
Unmitigated Operational Noise Levels (Site 1)

Location	Site 1 Noise Sources				Combined Noise Level (dBA Leq)	Threshold Exceeded?	
	Rooftop A/C	Drive-Through Speakerphone	Parking Lot Movements	Gas Station Activity		Daytime	Nighttime
R9	33.4	26.8	27.0	26.1	35.5	No	No
R10	46.6	26.7	35.2	29.6	47.0	No	No
R11	43.9	21.6	36.7	20.1	44.7	No	No
R12	43.5	18.6	36.9	15.9	44.4	No	No
R13	36.7	29.3	29.9	26.7	38.4	No	No
R14	43.8	31.6	37.3	25.0	44.9	No	No

Source: *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018.

As shown above, operational noise levels associated with Site 1 will not exceed the City of Eastvale 60 dBA Leq daytime and 50 dBA Leq nighttime exterior noise level standards at any adjacent receiver locations (R9 to R14).

Site 2 Operations

Locations of the operational-source noise generators proposed within Site 2 are illustrated at Figure 4.5-6. Using the reference noise levels listed above at Table 4.5-8, operational noise levels at the identified receiver locations were estimated for Site 2.

Table 4.5-10
Unmitigated Operational Noise Levels (Site 2)

Location		Car Wash Noise Sources			Combined Noise Level (dBA Leq)	Standard (dBA Leq)		Threshold Exceeded?	
		Tunnel Entrance	Tunnel Exit	Vacuum		Daytime	Nighttime	Daytime	Nighttime
R1	Backyard	50.4	31.5	40.2	50.8	60	50	No	Yes
R2		47.0	29.5	31.0	47.2	60	50	No	No
R3		56.1	34.5	45.1	56.4	60	50	No	Yes
R4		56.6	36.1	46.3	57.0	60	50	No	Yes
R5		56.5	36.7	45.4	56.8	60	50	No	Yes
R6		56.3	54.2	41.9	58.5	60	50	No	Yes
R7		49.7	34.4	24.1	49.8	60	50	No	No

Table 4.5-10
Unmitigated Operational Noise Levels (Site 2)

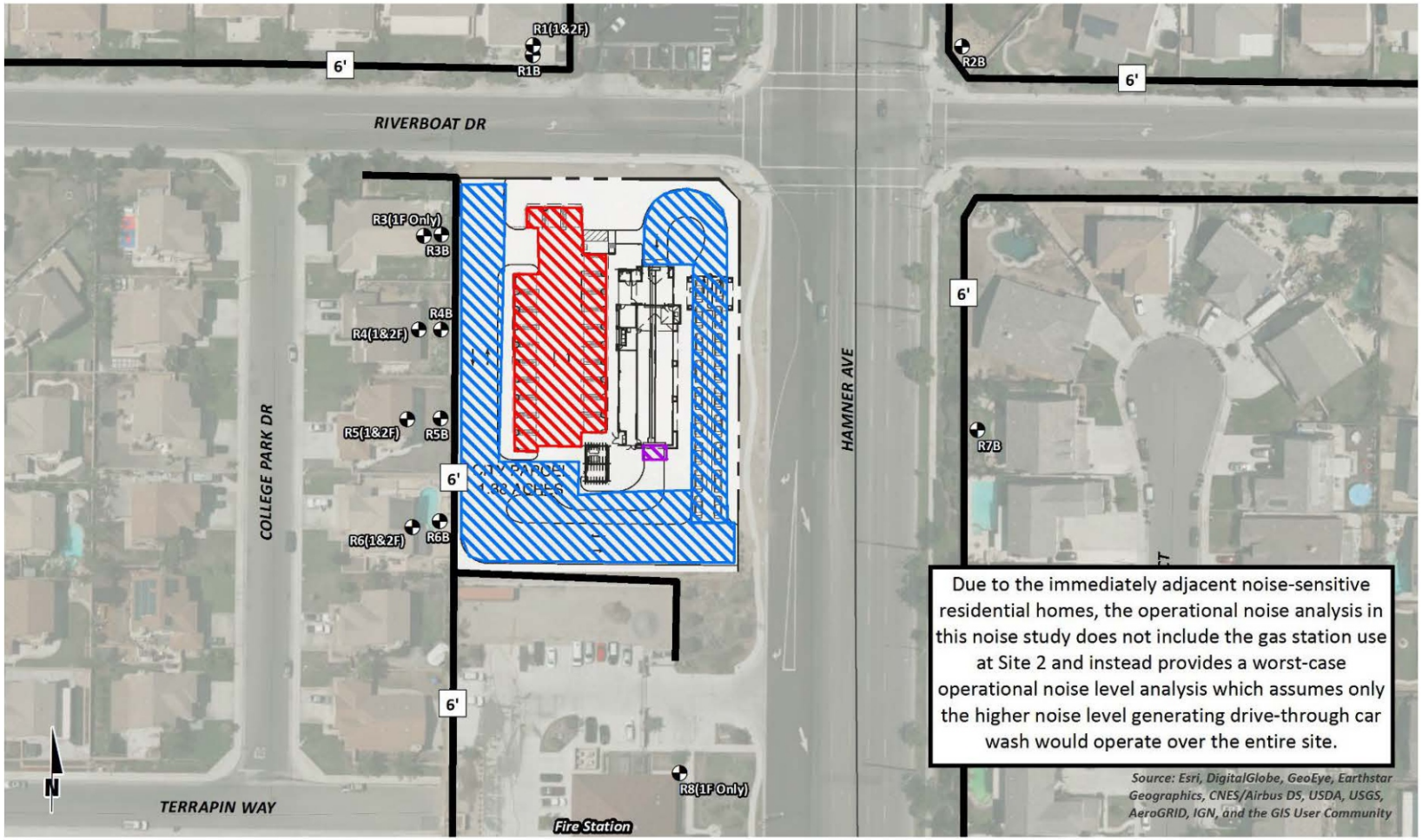
Location		Car Wash Noise Sources			Combined Noise Level (dBA Leq)	Standard (dBA Leq)		Threshold Exceeded?	
		Tunnel Entrance	Tunnel Exit	Vacuum		Daytime	Nighttime	Daytime	Nighttime
R8		50.7	50.9	33.7	53.9	60	50	No	Yes
R1	1st Floor Building Façade	48.1	29.0	37.9	48.6	60	50	No	No
R2	1st Floor Building Façade	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]
R3	1st Floor Building Façade	53.3	32.3	42.9	53.7	60	50	No	Yes
R4	1st Floor Building Façade	53.6	33.5	43.9	54.1	60	50	No	Yes
R5	1st Floor Building Façade	53.1	33.8	42.9	53.6	60	50	No	Yes
R6	1st Floor Building Façade	53.0	51.7	40.6	55.5	60	50	No	Yes
R7	1st Floor Building Façade	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]
R8	1st Floor Building Façade	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]
R1	2nd Floor Building Façade	53.1	33.5	42.9	53.5	60	50	No	Yes
R2	2nd Floor Building Façade	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]
R3	2nd Floor Building Façade	-[2]	-[2]	-[2]	-[2]	-[2]	-[2]	-[2]	-[2]
R4	2nd Floor Building Façade	57.7	43.3	48.8	58.3	60	50	No	Yes
R5	2nd Floor Building Façade	56.7	51.7	47.7	58.3	60	50	No	Yes
R6	2nd Floor Building Façade	57.1	54.9	45.4	59.4	60	50	No	Yes
R7	2nd Floor Building Façade	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]
R8	2nd Floor Building Façade	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]

Source: *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018.

[1] Receiver locations R2, R7, and R8 are located further from the Project site than those residential homes directly adjacent to the Project Site 2 car wash, and as such, are excluded from the extra building façade analysis for residential homes immediately adjacent to the Project.

[2] Single-story residential home (without a second-floor building façade for this analysis).

As shown above, the unmitigated operational noise levels associated with Site 2 would not exceed the City of Eastvale 60 dBA Leq daytime exterior noise level standards at any nearby sensitive receiver locations. However, the received car wash noise levels would exceed the 50 dBA Leq nighttime (10:00 p.m. to 7:00 a.m.) exterior noise level standard at locations nearest the Site 2 car wash (R1 and R3 to R6).



Source: Urban Crossroads

Figure 4.5-6
Operational Noise Source Locations (Site 2)

Summary

As discussed above, operational noise associated with Site 1 would not exceed City standards. However, noise levels associated with the car wash proposed on Site 2 would exceed the nighttime exterior noise standard. This is a potentially significant impact. It is also noted that other noise generated by car wash operations could be considered a localized community nuisance. While not exceeding an established CEQA significance threshold requiring mitigation, the City may consider imposition of Conditional Use Permit provisions that could act to reduce effects of nuisance noise.

Level of Significance: Potentially Significant.

Mitigation Measure:

4.5.2 No car wash activities shall be permitted between the hours of 10:00 p.m. and 7:00 a.m.

Level of Significance After Mitigation: Less-Than-Significant.

Project Operational Noise Contributions

To describe the Project operational noise level contributions, the Project operational noise levels were combined with the existing ambient noise levels measurements for the off-site receiver locations potentially impacted by Project operational noise sources. Project operational noise level contributions to the existing ambient noise environment are analyzed under the following scenarios:

Daytime

- Without and With Project Site 1 and 2 operational noise levels at outdoor living areas (backyards) and first-floor building façades;
- Without and With Project Site 2 (car wash) operational noise levels at first and second-floor building façades closest to the car wash use.

Nighttime

- Without and With Project Site 1 operational noise levels at outdoor living areas (backyards) and first-floor building façades (no Site 2 car wash activities shall be permitted to operate during nighttime hours consistent with Mitigation Measure 4.5.2, presented previously).

Daytime Operational Noise Level Increases (Sites 1 and 2)

Table 4.5-11 below, presents the daytime operational noise level increase that can be expected from the Project.

Table 4.5-11

Unmitigated Daytime Operational Noise Level Increases (Sites 1 and 2)

Receiver Location	Total Operational Noise Level	Measurement Location	Ambient	Combined Project and Ambient (dBA Leq)	Project Contribution	Threshold Exceeded?
R1	50.8	S1	58.9	59.5	0.6	No
R2	47.2	L1	79.9	79.9	0.0	No
R3	56.4	S2	57.1	59.8	2.7	No
R4	57.0	S2	57.1	60.1	3.0	No
R5	56.8	S3	56.0	59.5	3.5	No
R6	58.5	S4	55.2	60.1	4.9	No
R7	49.8	L3	61.3	61.6	0.3	No
R8	53.9	L3	61.3	62.0	0.7	No
R9	35.5	L6	60.5	60.5	0.0	No
R10	47.0	L4	58.9	59.2	0.3	No
R11	44.7	L4	58.9	59.1	0.2	No
R12	44.4	L5	59.2	59.3	0.1	No
R13	38.4	L7	71.1	71.1	0.0	No
R14	44.9	L8	71.8	71.8	0.0	No

Source: *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018.

As indicated at Table 4.5-11, the Project will contribute an operational noise level increase during the daytime hours ranging from 0.0 to 4.9 dBA Leq. The highest unmitigated Project-related operational noise level increases of 4.9 dBA Leq during the

daytime hours represents a less-than-significant noise level impact when the Without Project conditions are below 60 dBA Leq.

Nighttime Operational Noise Level Increases (Site 1)

Since Site 2 car wash uses will be prohibited (pursuant to Mitigation Measure 4.5.2) to operate during the noise-sensitive nighttime hours of 10:00 p.m. to 7:00 a.m., the nighttime Project-only operational noise level increases presented at Table 4.5-12 relate only to Site 1.

Table 4.5-12

Unmitigated Nighttime Operational Noise Level Increases (Site 1)

Receiver Location	Total Operational Noise Level	Measurement Location	Ambient	Combined Project and Ambient (dBA Leq)	Project Contribution	Threshold Exceeded?
R9	35.5	L6	56.6	56.6	0.0	No
R10	47.0	L4	58.4	58.7	0.3	No
R11	44.7	L4	58.4	58.6	0.2	No
R12	44.4	L5	59.8	59.9	0.1	No
R13	38.4	L7	65.6	65.6	0.0	No
R14	44.9	L8	68.2	68.2	0.0	No

Source: *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018.

As indicated at Table 4.5-12, Project-only operational noise level nighttime contributions are shown to range between 0.0 to 0.3 dBA Leq at receiver locations near Site 1. The highest unmitigated Project-related operational noise level increases of 0.3 dBA Leq during the nighttime hours represents a less-than-significant noise level impact.

Operational Noise Level Increases at First-Floor Building Façades (Site 2)

Table 4.5-13 identifies the Project-only operational noise level increases over existing ambient conditions at the first-floor building façades of receiver locations adjacent to Site 2.

Table 4.5-13
Operational Noise Level Increases (Site 2, First Floor)

Receiver Location	Total Operational Noise Level	Measurement Location	Ambient	Combined Project and Ambient (dBA Leq)	Project Contribution	Threshold Exceeded?
R1	48.6	S1	58.9	59.3	0.4	No
R3	53.7	S2	57.1	58.7	1.6	No
R4	54.1	S2	57.1	58.9	1.8	No
R5	53.6	S3	56.0	58.0	2.0	No
R6	55.5	S4	55.2	58.4	3.2	No

Source: *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018.

As indicated above, the Project will contribute an operational noise level increase during the daytime hours ranging from 0.4 to 3.2 dBA Leq. The highest unmitigated Project-related operational noise level increases of 3.2 dBA Leq during the daytime hours at the first-floor building façade represents a less-than-significant noise level impact when the Without Project conditions are below 60 dBA Leq.

Operational Noise Level Increases at Second-Floor Building Façades (Site 2)

Table 4.5-14 identifies the Project-only operational noise level increases over existing ambient conditions at the second-floor building façades of receiver locations adjacent to Site 2.

Table 4.5-14
Operational Noise Level Increases (Site 2, Second Floor)

Receiver Location	Total Operational Noise Level	Measurement Location	Ambient	Combined Project and Ambient (dBA Leq)	Project Contribution	Threshold Exceeded?
R1	53.5	S1	58.1	59.4	1.3	No
R3	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]
R4	58.3	S2	56.3	60.4	4.1	No
R5	58.3	S3	55.2	60.0	4.8	No
R6	59.4	S4	54.4	60.6	6.2	Yes

Source: *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018.

[1] Single-story residential home (without a second-floor building façade for this analysis).

As indicated above, the Project will contribute an operational noise level increase during the daytime hours ranging from 1.3 to 6.2 dBA Leq. The Project-source incremental contribution to the ambient noise condition at receiver location R6, second-floor building façade, would approximate to 6.2 dBA Leq. In the context of the ambient noise condition (54.4 dBA Leq), this is a potentially significant impact.

Operational Noise Level Increase Perception (Site 2)

The Project operational noise level increase of up to 6.2 dBA Leq represents a readily perceptible noise level increase that would be experienced at the second-floor building façade of an existing residential home represented by receiver location R6. This second-floor receiver location will have a direct line-of-sight to the car wash exit tunnel, and as a result, would experience the highest Project-related operational noise level contribution to the existing ambient noise environment. Typical residential building construction materials would reduce these exterior noise levels in interior spaces under "windows-closed" conditions. However, should windows be open during Project operation in any of the residential uses represented by receiver locations R1 and R3 to R6, these noise-sensitive receivers are likely to experience barely-to-readily perceptible noise level increases because of Project-only operational noise level contributions to the existing noise environment.

Summary

Based on the preceding discussions, the Project-only noise levels (daytime and nighttime) would be less-than-significant in the context of applicable thresholds. However, when added to ambient conditions, the daytime noise level associated with Site 2 operations would result in potentially significant noise levels under a "windows open" condition at nearby receiver locations.

Level of Significance: Potentially Significant.

Mitigation Measures: No feasible mitigation.

At the R6 second-floor receiver location, a physical noise barrier exceeding 14 feet would be required to ensure that the incremental noise increase would not exceed 5 dBA, and therefore remain less than significant. Construction of such a barrier would of itself result in land use and aesthetic incompatibilities; and is generally considered unreasonably cost-prohibitive.

It is therefore considered infeasible to fully mitigate operational-source noise impacts at the potentially affected R6 receiver location. The increase in ambient noise conditions at receiver R6 (second-floor façade) would exceed 5 dBA, and the incremental increase in the ambient noise condition would be significant and unavoidable. Notwithstanding, it is recommended the following noise-reducing design features be considered, and where feasible, incorporated in the final car wash building site plan designs:

- Maximize the distance between noise sources and off-site receptors;
- Incorporate parapet walls where appropriate; and
- Incorporate on-site noise barriers, landscaping, or similar physical features that would act to generally attenuate noise emanating from the car wash site.

Under all scenarios and at all other receiver locations, Project-source contributions to ambient noise conditions would be less-than-significant.

Level of Significance After Mitigation: ***Significant and Unavoidable.***

Potential Impact: *Would Project operational/area-source noise result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?*

Impact Analysis: Project operational/area-source noise would permanently, rather than temporarily, affect ambient noise conditions. Temporary or periodic alteration of ambient noise conditions resulting from Project operational/area-source noise is substantiated herein to be less-than-significant.

Level of Significance: Less-Than-Significant.

Potential Impact: *Would Project operational/area-source noise result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?*

Impact Analysis: As discussed previously, Project-only noise levels (daytime and nighttime) would be less-than-significant in the context of applicable thresholds. However, when added to ambient conditions, the daytime noise level associated with Site 2 operations would result in potentially significant noise levels under a "windows open" condition at nearby receiver locations.

Level of Significance: Potentially Significant.

Mitigation Measures: No feasible mitigation. Please refer to previous related discussions.

Level of Significance After Mitigation: ***Significant and Unavoidable.***

Potential Impact: *Would the Project result in exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise?*

Impact Analysis: The following discussions address the Project's potential to generate groundborne vibration, also referred to as groundborne noise, resulting from Project construction and operations. The Project does not propose or require facilities or operations that would be substantive sources of vibration. Project construction activities may however result in potentially adverse vibration levels received at nearby properties.

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that groundborne vibration from Project construction activities would cause

only intermittent, localized intrusion. Project construction activities most likely to cause vibration impacts are:

- Heavy Construction Equipment: Although all heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to a building, the vibration is usually short-term and is not of sufficient magnitude to cause building damage. It is not expected that heavy equipment such as large bulldozers would operate close enough to any residences to cause a vibration impact.

- Trucks: Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.

Groundborne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration (FTA). Construction activities that would have the potential to generate low levels of groundborne vibration within the Project site include grading. Using the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 4.5-15 presents the unmitigated Project construction-related vibration levels at each of the sensitive receiver locations.

Table 4.5-15
Unmitigated Construction Vibration Levels

Receiver Location	Distance to Construction Activity	Receiver PPV Levels (in/sec)					Threshold Exceeded?
		Small Bulldozer	Jack-Hammer	Loaded Trucks	Large Bulldozer	Highest Levels	
R1	103'	0.0004	0.0042	0.0091	0.0106	0.0106	No
R2	215'	0.0001	0.0014	0.0030	0.0035	0.0035	No
R3	30'	0.0023	0.0266	0.0578	0.0677	0.0677	No
R4	30'	0.0023	0.0266	0.0578	0.0677	0.0677	No
R5	30'	0.0023	0.0266	0.0578	0.0677	0.0677	No
R6	30'	0.0023	0.0266	0.0578	0.0677	0.0677	No
R7	186'	0.0001	0.0017	0.0037	0.0044	0.0044	No
R8	161'	0.0002	0.0021	0.0047	0.0054	0.0054	No
R9	570'	0.0000	0.0003	0.0007	0.0008	0.0008	No
R10	48'	0.0011	0.0132	0.0286	0.0335	0.0335	No
R11	64'	0.0007	0.0085	0.0186	0.0217	0.0217	No
R12	73'	0.0006	0.0070	0.0152	0.0178	0.0178	No
R13	176'	0.0002	0.0019	0.0041	0.0048	0.0048	No
R14	161'	0.0002	0.0021	0.0047	0.0054	0.0054	No

Source: *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018.

As shown above, at distances ranging from 30 to 570 feet from the Project construction activities, construction vibration velocity levels are expected to range from 0.001 to 0.068 in/sec PPV. Based on the City of Eastvale vibration standard of 0.0787 in/sec PPV, Project construction activities represent a less-than-significant impact.

Based on the preceding, the potential for the Project to result in exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise is less-than-significant.

Level of Significance: Less-Than-Significant.

4.6 GEOLOGY AND SOILS

4.6 GEOLOGY AND SOILS

Abstract

This Section addresses the potential for the Project to result in substantial geotechnical hazards or soils-related impacts. More specifically, this analysis presented here focuses on whether the Project would result in, or be subjected to any of the following:

- *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking;*

- *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction;*

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

Other potential CEQA geologic, seismic, and soils considerations at the subject site and/or affecting the Project are determined to be less-than-significant as discussed within the EIR Initial Study (EIR Appendix A, Checklist Item 6., Geology and Soils.)

As summarized below, the subject sites are suitable for development of the Project, provided that recommendations of the final Geotechnical Investigation(s) are implemented during Project design and construction. As supported by the analysis presented in this Section, potential geology and soils impacts of the Project are determined to be less-than-significant.

4.6.1 INTRODUCTION

This Section examines underlying soil conditions and geologic characteristics of the Project area, and evaluates potential related impacts affecting design, construction, and operation of the Project. The subsequent discussions provide an assessment of potential seismologic hazards, notably faults and primary and secondary earthquake hazards which may affect the proposal. Influences such as topography and soil types are also discussed as these factors substantively influence potential erosion and landslide hazard characteristics of the Project site(s).

4.6.2 SETTING

Following are discussions of the Project area's geologic setting, prevalent site soils, geotechnical considerations, and seismic design considerations.

Regional Geology

The Project area is located in the northwestern portion of the Peninsular Ranges Geomorphic Province of Southern California. The Peninsular Ranges province is characterized by northwest tending valleys and mountain ranges which have formed in response to regional tectonic forces along the boundary between the Pacific and North American tectonic plates. The geologic structure is dominated by northwest trending right-lateral faults, most notable, the San Andreas Fault, San Jacinto Fault, Elsinore Fault, Whittier Fault, and the Newport-Inglewood Fault. The province extends southward from the Transverse Ranges province at the north end of the Los Angeles Basin to the southern tip of the Baja California Peninsula.

Basement rocks in the region are predominantly granitic and metamorphic rocks associated with the Mesozoic-age Southern California Batholith. Erosional remnants of granitic rocks are exposed in isolated hilly outcrops within the northern portions of the Chino Basin. Cenozoic-age sedimentary rocks overly the basement rocks in many areas and are well exposed in the Santa Ana Mountains and the Chino Hills southwest and west of the site.

The Project area is located in the southeastern portion of the Chino Basin, a broad alluvial area that is drained by the Santa Ana River. The Santa Ana River, which flows near the site, originates in the San Bernardino Mountains, northeast of the sites, and flows southwesterly toward Santa Ana Canyon at the southwest margin of the Basin, and onward to the Pacific Ocean. The deepest portion of the Chino Basin lies to the northeast of the site where Pleistocene and recent alluvial deposits reach hundreds of feet thick.

Local Geology

The Project area is located in the historical floodplain of the Santa Ana River. The current river channel is located approximately 1,800 feet southeast of Site 1. The area is underlain by Pleistocene axial-channel deposits of the Santa Ana River. These deposits consist primarily of sand, but contain scattered gravel and pebble layers, and silt and clay. These alluvial deposits are typically moderately to well consolidated.

Subsurface Profile

The subsurface exploration conducted as part of the Geotechnical Investigation for Site 1 encountered undocumented fill and alluvial deposits, as discussed below.

Undocumented Fill

Based on the existence of utility lines including a network of irrigation pipelines, a layer of up to 24 inches of undocumented fill is anticipated throughout the site.

Deeper fill encountered consisted of primarily of silty and clayey sand, and in the southeast portion of the site contained plastic bags, wood, rebar and concrete fragments. An organic odor was noted within the fill soil.

Where encountered, the deeper fill ranged from approximately 9 to 14 feet in thickness. Based on the site topography and the elevation of the adjacent properties, we anticipate that the maximum fill thickness is less than 20 feet; however, deeper fills may be present locally.

Alluvium

The soil borings and test pits encountered alluvial deposits of sands, silts and clays. The alluvium extended to the maximum explored depth of 51.5 feet below ground surface (bgs).

Layers of gravel and cobbles were encountered within the shallow alluvium in some borings and test pits. Where encountered, the gravelly layer was up to approximately 10 feet in thickness and contained particles up to approximately 12 inches in maximum dimension. Although material larger than 12 inches in dimension was not encountered during our field exploration, it may be present within the sub-surface soils.

Caliche stringers were encountered within the clay layers. These clay layers were approximately 4 to 5 feet in thickness.

Soils within the vicinity of Site 2 have been identified as Hanford Series, which are gently to moderately sloping soils occurring on alluvial fans. The Hanford Series consist of well-drained soil, developed in alluvium and made up of granitic materials.

Groundwater

Historical groundwater levels were evaluated for wells within one mile of the Project area. Based on a review of the National Water Information System, the nearest well to the site(s) is USGS Well No. 335731117330601, which was located approximately 0.15 miles east of the Project area at an elevation of 601 feet above mean sea level (amsl). A review of records from 1962 through 1994, indicate a historical high groundwater level of 21.3 ft bgs, or approximately 580 feet amsl, measured in April 1969. This well site was abandoned in 1994.

Several other wells were located approximately 0.65 miles south of the Project area. These wells are not considered to be representative of onsite conditions because they are located on the bank of the active channel of the Santa Ana River, and are likely influenced by surface flow in the river.

Regional groundwater data was reviewed to evaluate the current groundwater levels within one mile of the Project area. The nearest well is State Well No. 02S/07W-36J, which is located on the northern edge of the Santa Ana River floodplain, approximately 0.5 miles southwest of Site 1, at an elevation of 590 feet amsl. Depth to groundwater within this well was measured at 11.9 feet bgs on April 10, 2013. Groundwater depths within this well have ranged between 9.0 and 12.2 feet bgs since April of 2012. This groundwater level corresponds to a high elevation of approximately 581 feet amsl.

Groundwater at Site 1 was not encountered within any of the borings or test pits to the maximum explored depth of 51.5 feet bgs. Depth to groundwater within monitoring wells in the vicinity of Site 2 ranges from 24 to 50 feet bgs.

Flooding

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map indicates that the majority of Site 1 is located outside of the identified flood hazard zone. However, a small portion of the southeast corner of the site is within the 100-year and 500-year flood zones, identified as Zones AE and X. A portion of the southern half of Site 1 is located within a Riverside County designated flood hazard zone. The FEMA Flood Insurance Rate Map indicates that Site 2 is not located within a flood hazard zone.

Faulting

The Project area is situated in a seismically active region. As is the case for most areas of Southern California, ground shaking resulting from earthquakes associated with nearby and more distant faults may occur at the site(s). During the life of the Project, seismic activity associated with active faults can be expected to generate moderate to strong ground shaking at the site.

The sites are not located within a currently designated State of California Earthquake Fault Zone and there are no known active faults projecting toward or extending across the Project sites.

Secondary Effects of Seismic Activity

In general, secondary effects of seismic activity include surface fault rupture, soil liquefaction, seismic settlement, lateral spreading, landslides, tsunamis, seiches, and earthquake-induced flooding. Site-specific potential for each of these seismic hazards is discussed in the following sections.

Surface Fault Rupture

There are no known faults located within the City of Eastvale. The sites are not located within a currently designated State of California Earthquake Fault Zone. Based on a review of regional geologic mapping, no known active surface fault zone crosses or projects toward the sites. The potential for surface rupture resulting from the movement of the nearby major faults is considered very low.

Dynamic Settlement (Liquefaction and Dry Seismic Settlement)

Liquefaction is defined as the phenomenon in which a soil mass within about the upper 50 feet of the ground surface suffers a substantial reduction in its shear strength, due to the development of excess pore pressures. During earthquakes, excess pore pressures in saturated soil deposits may develop as a result of induced cyclic shear stresses, resulting in liquefaction. Soil liquefaction occurs during or after strong ground shaking.

Although the Project area has been designated as having very high liquefaction potential, groundwater is currently deeper than 50 feet bgs. The historical high groundwater level at the site is estimated to be 15 feet bgs.

Dry seismic settlement occurs when relatively loose unsaturated sediments above the groundwater elevation may densify and settle when subjected to ground shaking during earthquakes. The site is underlain by loose to medium dense sediments, which may be susceptible to settlement during seismic shaking.

Liquefaction potential was analyzed based on soil data gathered for three 50-foot-deep borings. There is a potential for up to approximately 2 inches of liquefaction induced settlement at the site, however, much of the settlement potential is limited to the top 5 feet of the unsaturated zone.

Seismic induced settlement analyses were also performed; there is a potential for up to 2.35 inches of dry seismic settlement, with much of the settlement potential being limited to the top 5 feet.

Landslides

Seismically induced landslides and other slope failures are common occurrences during or soon after earthquakes. Slopes graded in accordance with the recommendations of the final Geotechnical Investigation(s) and current codes are anticipated to be stable.

Lateral Spreading

Seismically induced lateral spreading involves primarily lateral movement of earth materials due to ground shaking. It differs from slope failure in that complete ground failure involving large movement does not occur due to the relatively smaller gradient of the initial ground surface. Lateral spreading is demonstrated by near-vertical cracks with predominantly horizontal movement of the soil mass involved. The Project area is located in an area with a high susceptibility to liquefaction, however, based on the relatively fine-grained and dense nature of the site soils, as well as the low potential for liquefaction, the risk for lateral spreading is considered low.

Tsunamis

Tsunamis are large waves generated in open bodies of water by fault displacement or major ground movement. Based on the inland location of the sites, tsunamis do not pose a hazard to the Project area.

Seiches

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. Due to the elevation of both sites above the Santa Ana River, and the absence of other significant bodies of water near the sites, the potential for flooding due to seiches is considered low.

Earthquake-Induced Flooding

Dams or other water-retaining structures may fail as a result of large earthquakes. Several regional dams, including the Seven Oaks Dam, are located upstream of the Project area in the Santa Ana River watershed. Due to the elevation of the sites above the Santa Ana River, it is unlikely that the site would be impacted by flooding due to earthquake-induced failure of off-site facilities.

4.6.3 GEOLOGY/SOILS/SEISMIC POLICIES AND REGULATIONS

Following are summary descriptions of geology/soils/seismic regulations applicable to the Project. In many instances, compliance with existing regulations eliminates, or substantially reduces, environmental effects.

4.6.3.1 City of Eastvale Development Review Processes

The City of Eastvale, through its Planning and Public Works Departments, implements General Plan Goals and Policies addressing geology, soils, and seismic conditions through established development permit review processes. To these ends, City staff ensures that site and development-specific geotechnical investigations are completed where appropriate, and that requirements and recommendations of these investigations are incorporated in construction plans, are followed through during construction processes, and are functionally complete before buildings are occupied and/or infrastructure systems or other improvements are accepted. To the satisfaction of the City, recommendations and requirements of the final Geotechnical Investigation(s) will be incorporated in the final project design and construction. In all instances, the City ensures that, at a minimum, applicable provisions of the California Building Code are incorporated throughout development design and implementation.

4.6.4 STANDARDS OF SIGNIFICANCE

Appendix G of the *CEQA Guidelines* indicates a Project will have a potentially significant geology and soils impact if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving: rupture of a known earthquake fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction or landslides;

- Result in substantial soil erosion or the loss of topsoil;

- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;

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

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

4.6.5 POTENTIAL IMPACTS AND MITIGATION MEASURES

4.6.5.1 Introduction

As substantiated previously within this Section and supported by analysis in the Initial Study, the Project's potential to: expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving rupture of a known earthquake fault or landslides; result in substantial soil erosion or the loss of topsoil; location on a geologic unit or soil that is unstable; or have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where

sewers are not available, are determined to be less-than-significant. Please refer also to EIR Appendix A, Initial Study Checklist Item 6., *Geology and Soils*.

The following discussions focus on those areas where it has been determined that the Project may result in potentially significant impacts. Topical areas addressed include:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking;

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction;

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

4.6.5.2 Impact Statements

Potential Impact: *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking*.

Impact Analysis: As presented previously, the Project sites are not adversely affected by known earthquake faults or other seismic hazards. Further, appropriate measures which reduce the effects of seismic events and potentially adverse geology and soils conditions at the Project site are broadly identified in the California Building Code (CBC) as implemented by the City of Eastvale. Short of a catastrophic event, design of structures in accordance with the final Geotechnical Investigation(s), the CBC, and current seismic engineering practices is sufficient to reduce potential effects of ground shaking, including potential liquefaction hazards, at the Project site below the level of significance.

Through established Site Plan, Building Permit, and Certificate of Occupancy requirements, the City will verify that required design and construction measures are incorporated throughout Project development and are functionally implemented in the completed structures and facilities. Accordingly, it is anticipated that any site-specific geologic constraints which may be encountered during the course of Project implementation can be mitigated to a less-than-significant level within the context of the findings and recommendations of the final Geotechnical Investigation(s), and existing City/CBC seismic design regulations, standards, and policies.

The Geotechnical Investigation earthwork and design/construction recommendations address topics that include:

- General Considerations (Investigation, p. 16);
- Site Preparation (Investigation, p. 17);
- Remedial Earthwork (Investigation, p. 17);
- Compacted Fill Placement (Investigation, p. 18);
- Fill Slopes (Investigation, p. 19);
- Shrinkage and Subsidence (Investigation, p. 19);
- Shallow Foundation Design Parameters (Investigation, p. 21);
- Lateral Earth Pressures and Resistance to Lateral Loads (Investigation, p. 22);
- Slabs-On-Grade (Investigation, p. 23);
- Soil Expansion (Investigation, p. 24);
- Settlement (Investigation, p. 24);
- Soil Corrosivity (Investigation, p. 24);
- Asphalt Concrete Pavement (Investigation, p. 25);
- Concrete Flatwork (Investigation, p. 26);
- Temporary Sloped Excavations (Investigation, p. 26);
- Slope Protection and Maintenance (Investigation, p. 27);
- Site Drainage (Investigation, p. 28); and
- Infiltration Structure Design (Investigation, p. 28).

As supported by the preceding discussions, the potential for the Project to result in exposure of people or structures to potentially substantial adverse effects, including the risk of loss, injury or death involving strong seismic ground shaking is considered less-than-significant.

Level of Significance: Less-Than-Significant. Incorporation of recommendations of the final Geotechnical Investigation(s), and compliance with existing City/CBC seismic design regulations, standards, and policies reduces impacts to levels that are less-than-significant, and no additional mitigation is required.

Potential Impact: *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.*

Impact Analysis: Liquefaction and seismically induced settlement or ground failure are generally associated with strong seismic shaking in areas where ground water tables are at relatively shallow depths (within 50 feet of the ground surface) and/or when the area is underlain by loose, cohesionless deposits. During a strong groundshaking event, saturated, cohesionless soils may acquire a degree of mobility to the extent that the overlying ground surface distorts. In extreme cases, saturated soils become suspended in groundwater and become fluid-like. The entire City of Eastvale has been identified as having a moderate to high susceptibility to liquefaction.

As previously presented, groundwater was not encountered within 50 feet bgs during the Geotechnical Investigation. It is anticipated that any site-specific geologic constraints which may be encountered on either site during the course of Project implementation can be mitigated to a less-than-significant level within the context of the findings and recommendations of the final Geotechnical Investigation(s), and existing City/CBC seismic design regulations, standards, and policies.

As supported by the preceding discussions, the potential for the Project to result in exposure of people or structures to potentially substantial adverse effects, including the

risk of loss, injury or death involving seismic-related ground failure, including liquefaction is considered less-than-significant.

Level of Significance: Less-Than-Significant. Incorporation of recommendations of the final Geotechnical Investigation(s), and compliance with existing City/CBC seismic design regulations, standards, and policies reduces impacts to levels that are less-than-significant, and no additional mitigation is required.

Potential Impact: *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.*

Impact Analysis: The California Building Code establishes methodologies and guidelines for identification of expansive soils, and establishes responsive design standards which act to avoid potentially adverse effects of expansive soils on facilities. Section 1802.3 of the 2013 California Building Code directs expansive soil tendency be graded by its Expansion Index. A soil's Expansion Index is defined by its potential to swell when wet or saturated.

Unmitigated effects of expansive or otherwise unstable soils may adversely affect roadway subgrades, concrete slabs-on-grade, and building foundations. In the event of a severe earthquake in the vicinity, structural foundations and floors may be damaged if constructed in, or over, expansive or unstable soils.

As part of the Geotechnical Investigation, 13 representative samples were taken from the on-site soils to evaluate the expansion potential. The expansion potential of the tested samples was "very low" to "low." It is anticipated that any site-specific geologic constraints which may be encountered on either site during the course of Project implementation can be mitigated to a less-than-significant level within the context of the findings and recommendations of the final Geotechnical Investigation(s), and existing City/CBC seismic design regulations, standards, and policies. Additionally, the City of

Eastvale General Plan notes that, "[s]pecial engineering designs are used effectively to alleviate problems caused by expansive soils." (p. 12-6)

Level of Significance: Less-Than-Significant. Incorporation of recommendations of the final Geotechnical Investigation(s), and compliance with existing City/CBC seismic design regulations, standards, and policies reduces impacts to levels that are less-than-significant, and no additional mitigation is required.

4.7 HAZARDS/HAZARDOUS MATERIALS

4.7 HAZARDS/HAZARDOUS MATERIALS

Abstract

This Section identifies and addresses potential hazards and hazardous materials impacts that may result from the implementation and operation of the Project. More specifically, the hazards and hazardous materials analysis presented here examines whether the Project would:

- *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or*

- *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.*

As supported by the analysis presented in this Section, with the application of mitigation, and the Project's mandated compliance with existing statutes and regulations, potential hazards and hazardous materials impacts of the Project would be less-than-significant.

Other potential CEQA hazards and hazardous materials considerations at the subject sites and/or affecting the Project are determined to be less-than-significant as discussed within the EIR Initial Study (EIR Appendix A, Checklist Item 9., Hazards and Hazardous Materials.)

4.7.1 INTRODUCTION

The analysis presented in this Section addresses the potential impacts of hazards and/or hazardous materials associated with the construction and operation of the Project. The analysis considers potential hazards/hazardous conditions affecting the Project site; and

also considers potential hazards resulting from the Project, including potential effects at off-site land uses.

Information presented in this Section is summarized in part from the following:

- *Phase I Environmental Site Assessment Report, 7270 Hamner Avenue, Eastvale, California* (Converse Consultants) August 4, 2017;
- *Limited Phase II Environmental Site Assessment Report, Polopolus Eastvale, 7270 Hamner Avenue, Eastvale, California, APN 152-060-003* (Converse Consultants) May 5, 2017;
- *Phase I Environmental Site Assessment, Riverside County Department of Facilities Management, Proposed Fire Station – Al's Corner, 7010 Hamner Avenue, Corona, Riverside County, California 92880, APN 152-050-003* (EEI Geotechnical & Environmental Solutions) December 13, 2007.
- *Phase II Environmental Site Assessment Report, Potential County Fire Station Purchase (County #30-EO), Al's Corner Project Site, 7010 Hamner Road - APN 152-050-003, Corona, California* (EEI Geotechnical & Environmental Solutions) December 12, 2007.
- *Comprehensive Asbestos Containing Materials Survey and Limited Lead-Based Paint Investigation, Al's Corner Project, Located at 7010 Hamner Ave, Corona, California* (Altec Testing and Engineering, Inc.) December 3, 2007.

4.7.2 SETTING

The physical setting of the Project provided here serves as context for potential hazards affecting, or resulting from, the Project.

4.7.2.1 Project Site Land Use

Site 1

Site 1 was historically used for agricultural purposes from as early as 1938 until at least 1960. A wholesale nursery occupied the site from about 1967 until at least 2010. Remnant buildings associated with this former use currently exist on-site, such as a

single-family residence, commercial sales office, three garage buildings, a maintenance shop, multiple storage sheds, dilapidated greenhouses, an empty below-ground pool, and vacant plant and tree storage areas.

Site 2

Site 2 was first developed as early as 1962 with two unidentified structures and a dirt parking lot. During the 1970's, the site was developed with three buildings (identified in 2007 as Al's Corner [a restaurant/bar], a single-family residence, and a barn storage area). These uses have since been demolished, and Site 2 remains a vacant disturbed property populated with scattered non-native vegetation.

4.7.2.2 Vicinity Land Uses

Site 1

Properties abutting Site 1 to the north and east are developed with single-family residential uses. Site 1 is bounded by Hamner Avenue to the west. Westerly of Site 1, across Hamner Avenue and north of Schleisman Road, properties are vacant; south of Schleisman Road, properties are developed with single-family residential uses. Southerly of Site 1 is the Silverlakes Sports Complex.

Site 2

Properties abutting Site 2 to the west are developed with single-family residences. Southerly of Site 2 is Riverside County Fire Station No. 27. Northerly of Site 2, at the northwest corner of Riverboat Drive at Hamner Avenue, are commercial/retail uses. Westerly of these commercial/retail uses, properties are developed with single-family residences. Northeasterly of Site 2, across the intersection of Riverboat Drive at Hamner Avenue, and easterly of Site 2, across Hamner Avenue, properties are developed with single-family residences.

4.7.2.3 Sensitive Land Uses

Sensitive land uses are considered to include residential land uses, schools, hospitals, daycare centers, or any other land uses that provide long-term occupancy and/or accommodate vulnerable populations (e.g., children, the elderly, and the infirm).

Sensitive land uses are located throughout the City of Eastvale. The land uses specifically discussed herein are those nearest the Project site. These land uses represent locations with the maximum potential exposure to any Project-related hazards, and thus establish a likely maximum potential impact scenario with regard to hazards/hazardous materials. Nearby sensitive receptors include existing residential homes, a fire station, a church, and a park.

4.7.3 EXISTING HAZARDS/HAZARDOUS CONDITIONS

Information addressing and describing existing hazards/hazardous conditions affecting the Project site was obtained from a variety of sources including:

User Provided Information - This included title and judicial records for environmental liens or activity and use limitations, recorded environmental liens, actual or specialized knowledge or commonly known information regarding environmental conditions at the site, the relationship of the purchase price of the property to the fair market value, readily available maps, environmental reports, and other environmental documents pertaining to the site.

Records Review - This included review of: federal, state, and local regulatory agency databases and records for the site and vicinity properties; local regulatory agency files for the site and selected nearby properties of potential environmental concern; physical setting sources, including topographic maps, geologic maps, and geologic and hydrogeologic reference documents. Historic land use information was also reviewed including: historical aerial photographs, historical fire insurance rate maps, building department records, and city directories.

Site Reconnaissance - Site reconnaissance was conducted to observe the sites in context and under current conditions, and to obtain information indicating the likelihood of any recognized environmental conditions (RECs). Potential RECs include general site setting, site usage, use and storage of hazardous materials and petroleum products, disposal of waste products and materials, sources of polychlorinated biphenyls (PCBs),

and evidence of releases and possible risks of contamination from activities at adjacent properties.

Interviews - To the extent necessary and such persons were available, interviews were conducted with site representatives, property owners, occupants, and site managers, regarding the environmental condition of the site. Interviews with state and/or local government officials were also conducted as necessary.

4.7.3.1 Potential Project Site Hazards and Hazardous Conditions

Site 1

The Phase I ESA Report identified several Recognized Environmental Conditions (RECs) in connection with the site and recommended further assessment. To this end, a Phase II ESA was conducted with the following objectives:

- Further evaluate the hydrocarbon impacted soil and/or soil vapor in the vicinity of the previously-identified spilled drum and dilapidated pool areas;
- Evaluate the potential presence of organochlorine pesticides (OCPs) and arsenic in the surface and shallow subsurface soil associated with the on-site mixing and storing of pesticides;
- Evaluate former agricultural use areas for the potential presence of buried transite irrigation pipes;
- Evaluate potential areas of stained soil in the former location of smudge pot storage for impacts from total petroleum hydrocarbons (TPH); and
- Identify if potential target analytes are present at concentrations greater than threshold criteria.

To accomplish the above objectives, the following tasks were undertaken:

- Five (5) borings were collected in the vicinity of the dilapidated pool area to a maximum depth of 8 feet below ground surface (bgs) with soils samples collected at 2, 4, 6 and 8 feet bgs.

- Five (5) borings were completed in the vicinity of the of the spilled drum area to a depth of 16 feet bgs with soil samples collected from depths of 2, 4, 8, 12 and 16 feet bgs, and soil vapor samples collected at 5 and 15 feet bgs.
- Five (5) borings were completed in the vicinity of the pesticide mixing/storage areas to a depth of 8 feet bgs with soil samples collected at 2, 4, 6 and 8 feet bgs.
- One (1) boring was completed in the vicinity of observable stained oil areas with soil samples collected at 2, 4, 6 and 8 feet bgs.
- Six (6) borings were completed across the site to evaluate for potential impacts of 1,3-butadiene, with soil vapor samples collected at 5 or 12 feet bgs.
- Exploratory excavation in former agricultural use areas was conducted for the potential presence of buried transite irrigation pipes. A back hoe was used to excavate to a maximum of 5 feet bgs in various locations throughout the site, in areas of former agricultural use.
- Laboratory Analysis of Samples: Soil samples from 2, 4 and/or 8 and 16 feet bgs were analyzed for TPH and VOCs in the vicinity of the dilapidated pool and observable stained soil areas, the soil samples from 2, 4, and/or 8 feet bgs in the maintenance barn borings were analyzed for VOCs, and TPH, and the agricultural use soil samples were analyzed for OCPs and metals. Soil vapor samples collected were analyzed for VOCs, with some samples also being analyzed for oxygenates and total petroleum hydrocarbons in the gasoline range.

Results of the Phase II ESA are presented subsequently, within Section 4.7.6, *Potential Impacts and Mitigation Measures*.

Site 2

Regarding potential hazards associated with Site 2, the most recent site information available was reviewed. This information included a Phase I ESA, Phase II ESA, and an Asbestos-Containing Material (ACM) Survey and Lead-Based Paint (LBP) Investigation, as previously identified at Section 4.7.1. These studies were conducted in 2007, prior to the demolition of on-site structures. These studies included several recommendations regarding potential existing hazards, including contaminated soil remediation, removal of an underground storage tank (UST), removal of a septic tank, proper abandonment of

an on-site well, and removal of 55-gallon drums of gas and oil. Additionally, ACMs and LBP were identified within the structures located on-site at the time of survey.

Since the preparation of the 2007 studies, all on-site structures have been demolished. Based on City record-keeping, all recommendations of the 2007 studies have been completed and Site 2 is considered "clean." As such, existing hazards associated with Site 2 are not further discussed within this Section.

4.7.4 HAZARDS/HAZARDOUS MATERIALS POLICIES AND REGULATIONS

4.7.4.1 Overview

As summarized below, the City has developed and adopted General Plan Goals and Policies addressing hazards and hazardous materials. Applicable federal, state, and local regulations which act to reduce potential creation of, or exposure to, hazards and hazardous materials are also presented.

4.7.4.2 City of Eastvale General Plan Goals and Policies

The City of Eastvale General Plan Safety Element establishes Goals and Policies addressing community health and safety, including potential hazards and hazardous materials concerns. Goals and Policies implemented by the City through its General Plan support prevention and education measures acting to minimize the occurrence and effects of hazards, emergencies and disasters; and include measures to ensure the City is able to respond appropriately under hazardous, emergency, or disaster conditions.

4.7.4.3 Regulatory Context

In addition to the above-referenced General Plan Goals and Policies, a number of federal, state, and local laws have been enacted to regulate and manage hazardous materials. Implementation of these laws and the associated management of hazardous materials are regulated independently of the CEQA process, through programs administered by various agencies at the federal, state, and local levels. An overview of regulatory agencies and certain key hazardous materials laws and regulations applicable to the Project, and to which the Project must conform, is provided below.

Federal

Overview

Several federal agencies regulate hazardous materials. These include the U.S. EPA, the United States Occupational Safety and Health Administration (USOSHA), and the United States Department of Transportation (USDOT). Applicable Federal Regulations are contained primarily in Titles 10, 29, 40, and 49 of the Code of Federal Regulations (CFR). Some of the major federal laws and issue areas include the following statutes and implementing regulations:

- Resources Conservation and Recovery Act (RCRA) - hazardous waste management;
- Hazardous and Solid Waste Amendments Act (HSWA) - hazardous waste management;
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - cleanup of contamination;
- Superfund Amendments and Reauthorization Act (SARA) - cleanup of contamination; and
- Emergency Planning and Community Right-to-Know (SARA Title III) - business inventories and emergency response planning.

The U.S. EPA is the primary federal agency responsible for the implementation and enforcement of hazardous materials regulations. In most cases, enforcement of environmental laws and regulations established at the federal level is delegated to state and local environmental regulatory agencies.

In addition, with respect to emergency planning, the Federal Emergency Management Agency (FEMA) is responsible for ensuring the establishment and development of policies and programs for emergency management at the federal, state, and local levels. This includes the development of a national capability to mitigate against, prepare for, respond to, and recover from a full range of emergencies.

Hazardous Waste Handling

The U.S. EPA has authorized the California Department of Toxic Substance Control (DTSC) to enforce hazardous waste laws and regulations in California. Requirements place "cradle-to-grave" responsibility for hazardous waste disposal on the shoulders of hazardous waste generators. Waste generators must ensure that their wastes are disposed of properly, and legal requirements dictate the disposal requirements for many waste streams (e.g., a ban on the disposal of many types of hazardous wastes in landfills).

State

Overview

The primary state agencies with jurisdiction over hazardous chemical materials management are the DTSC and the State Water Quality Control Board (SWQCB). Other state agencies involved in hazardous materials management and oversight are the Department of Industrial Relations, California OSHA (Cal OSHA) implementation, Office of Emergency Services (OES - California Accidental Release Prevention Implementation), Air Resources Board (ARB), California Department of Transportation (Caltrans), State Office of Environmental Health Hazard Assessment (OEHHA - Proposition 65 implementation) and CalRecycle (formerly the California Integrated Waste Management Board, CIWMB). The enforcement agencies for hazardous materials transportation regulations are the California Highway Patrol (CHP) and Caltrans. Hazardous materials and waste transporters are responsible for complying with all applicable packaging, labeling, and shipping regulations.

Relevant hazardous materials management laws in California include, but are not limited to, the following statutes and implementation regulations:

- Hazardous Materials Management Act - business plan reporting;
- Hazardous Waste Control Act - hazardous waste management;
- Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) - release of and exposure to carcinogenic chemicals;

- Hazardous Substance Act - cleanup of contamination; and
- Hazardous Materials Storage and Emergency Response.

California Environmental Protection Agency

The California Environmental Protection Agency (CalEPA) has broad jurisdiction over hazardous materials management in the state. Within CalEPA, the DTSC has primary regulatory responsibility for hazardous waste management and cleanup. Enforcement of regulations has been delegated to local jurisdictions that enter into agreements with DTSC for the generation, transport, and disposal of hazardous materials under the authority of the Hazardous Waste Control Law.

Along with the DTSC, the SWQCB is responsible for implementing regulations pertaining to management of soil and groundwater investigation and cleanup. SWQCB regulations are contained in Title 27 of the California Code of Regulations (CCR). Additional state regulations applicable to hazardous materials are contained in Title 22 of the CCR. Title 26 of the CCR is a compilation of those sections or titles of the CCR that are applicable to hazardous materials.

Department of Toxic Substances Control

The Resource Conservation and Recovery Act (RCRA) of 1976 is the principal federal law that regulates the generation, management, and transportation of hazardous materials and other wastes. The DTSC regulates hazardous waste in California primarily under the authority of the federal RCRA, and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. In addition, DTSC reviews and monitors legislation to ensure that the position reflects the DTSC's goals. From these laws, DTSC's major program areas develop regulations and consistent program policies and procedures. The regulations spell out what those who handle hazardous waste must do to comply with the laws.

California law provides the general framework for regulation of hazardous wastes by the Hazardous Waste Control Law (HWCL) passed in 1972. DTSC is the State's lead agency in

implementing the HWCL. The HWCL provides for state regulation of existing hazardous waste facilities, which include "any structure, other appurtenances, and improvements on the land, used for treatment, transfer, storage, resource recovery, disposal, or recycling of hazardous wastes," and requires permits for, and inspections of, facilities involved in generation and/or treatment, storage and disposal of hazardous wastes.

The oversight of hazardous materials release sites often involves several different agencies that may have overlapping authority and jurisdiction. The DTSC and SWQCB are the two (2) primary state agencies responsible for issues pertaining to hazardous materials release sites. Air quality issues related to remediation and construction at contaminated sites are also subject to federal and state laws and regulations that are administered at the local level.

Investigation and remediation activities that would involve potential disturbance or release of hazardous materials must comply with applicable federal, state, and local hazardous materials laws and regulations. The DTSC has developed standards for the investigation of sites where hazardous materials contamination has been identified or could exist based on current or past uses. The standards identify approaches to determine if a release of hazardous wastes/substances exists at a site and delineate the general extent of contamination; estimate the potential threat to public health and/or the environment from the release and provide an indicator of relative risk; determine if an expedited response action is required to reduce an existing or potential threat; and complete preliminary project scoping activities to determine data gaps and identify possible remedial action strategies to form the basis for development of a site strategy.

California Accidental Release Prevention Program (CalARP)

The CalARP program (CCR Title 19, Division 2, Chapter 4.5) covers certain businesses that store or handle more than a certain volume of specific regulated substances at their facilities. The list of regulated substances is found in Article 8, Section 2770.5 of the CalARP program regulations. The businesses that use a regulated substance above the noted threshold quantity must implement an accidental release prevention program, and some may be required to complete a Risk Management Plan (RMP). An RMP is a

detailed engineering analysis of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential. The purpose of an RMP is to decrease the risk of an off-site release of a regulated substance that might harm the surrounding environment and community. An RMP includes the following components: safety information, hazard review, operating procedures, training, maintenance, compliance audits, and incident investigation. The RMP must consider the proximity to sensitive populations located in schools, residential areas, general acute care hospitals, long-term health care facilities, and child day-care facilities, and must also consider external events such as seismic activity.

Regional

South Coast Air Quality Management District (SCAQMD)

The SCAQMD establishes Rules that regulate or control various air pollutant emissions and emissions sources, including hazardous emissions sources, within the South Coast Air Basin (Basin). The SCAQMD coordinates its actions with local, state, and federal government agencies, the business community, and private citizens to achieve and maintain healthy air quality.

Local

Riverside County Department of Environmental Health

Under the California Unified Hazardous Waste and Hazardous Material Management Regulatory Program, (Chapter 6.11, Division 20, Section 25404 of the Health and Safety Code), hazards/hazardous materials management is addressed locally through the Certified Unified Program Agency (CUPA). The CUPA for Riverside County, including the City of Eastvale, is the Riverside County Department of Environmental Health, Hazardous Materials Branch (Branch).

The Branch is responsible for overseeing the six hazardous materials programs in the County. The Branch is responsible for inspecting facilities that handle hazardous materials, generate hazardous waste, treat hazardous waste, own/operate underground

storage tanks, own/operate aboveground petroleum storage tanks, or handle other materials subject to the California Accidental Release Program. In addition, the Branch maintains an emergency response team that responds to hazardous materials and other environmental health emergencies 24 hours a day, 7 days a week. The Branch also oversees the two Participating Agencies (Corona Fire and Riverside Fire) that implement hazardous materials programs within the County.

4.7.4.4 Waste Handling Procedures

As presented above, the identification, characterization, handling, transportation and disposal of wastes are primarily regulated under 40 CFR, part 261.24 (Federal) and Title 22 of the California Code of Regulations (State) and other applicable DOT, CA DTSC, and OSHA laws and regulations. The following discussions detail how these regulations are applied to the specific hazardous materials that may be encountered as part of demolition and site preparation phase of the Project (previously identified at Section 4.7.3.1).

Manifesting and Transportation

Waste must be hauled under proper shipping manifests as follows:

1) Non-hazardous: A uniform non-hazardous manifest;

2) Cal-haz/Non-RCRA (State system): A uniform hazardous manifest, identifying the waste as non-RCRA, using an appropriate EPA number;

3) RCRA-hazardous (Federal system): A uniform hazardous manifest, identifying the waste as RCRA, using an appropriate EPA number.

The transporter must have the required and appropriate hauling permits and licenses in order to be able to haul the waste.

Disposal

Landfills are classified based on the type of waste accepted; hazardous waste must be disposed of at a Class I landfill, "designated waste"[1] at a Class II, non-hazardous solid waste at a Class III, and inert waste is disposed of at an unclassified disposal site. All designated landfills must have the proper local, State and Federal operating permits. Waste, as classified, is disposed as follows:

1) Non-hazardous: At a non-hazardous Class III landfill or at a Treatment and Recycling facility.

2) Cal-haz/Non-RCRA: At a hazardous Class I landfill or at an out of State non-hazardous landfill.

3) RCRA-hazardous: At a hazardous Class I landfill.

While non-hazardous waste from the Project site could be transported to a number of Class III landfills, non-hazardous waste generated at the site and vicinity is currently disposed of at the El Sobrante Landfill, located in the City of Corona. All hazardous waste that may be encountered as part of site preparation activities would be disposed of at a Class I landfill. There are currently three (3) Class I landfills located in California. These sites are located in Imperial, Kings, and Kern Counties. The precise disposal location would be determined by the contractor in charge of demolition and site preparation.

Contaminated Soils

Fuel and Oil

Fuel and/or oil contaminated soils can be generated by activities such as fuel stations, storage facilities, spills, etc. The associated contamination is typically petroleum-based

[1] "Designated waste" is defined as hazardous waste that has been granted a variance from hazardous waste management requirements; or non-hazardous waste that could be released in concentrations exceeding applicable water quality objectives or that could reasonably be expected to affect beneficial uses of waters of the State.

and may include a range of hydrocarbon chains such as gasoline, diesel, oil, kerosene, etc. Petroleum contaminated soils are not typically considered as hazardous by the Federal or State policies but the waste is considered regulated requiring proper characterization, handling and disposal. As such, petroleum contaminated solid wastes are routinely disposed of at a non-hazardous Class III landfill. Alternatively, there are also various treatment and recycling facilities that accept contaminated soils and neutralize the contamination to a level that would be accepted at any landfill. The final determination of the precise disposal procedure would be determined by the contractor at the time the material is removed.

Pesticides

There are State and Federal thresholds dictating the characterization of pesticide contaminated soils. As a result, based on testing results, impacted soils may be characterized and disposed of as follows:

a. Non-hazardous: The soil must pass the State and Federal regulatory thresholds. In that case, the soil may be disposed of as non-hazardous at a Class III landfill or, as discussed above, a treatment or recycling facility.

b. Cal-haz/Non-RCRA: In this case, the soil fails the State regulatory thresholds but passes the Federal requirements. Therefore, the soil may be disposed of as non-RCRA at a Class I hazardous landfill or at an out of State non-hazardous landfill.

c. RCRA-hazardous: In this case, the soil fails both the State and Federal regulatory thresholds. Therefore, the soil will have to be disposed of as Federal, RCRA-hazardous at a Class I landfill.

Above-Ground Storage Tanks (AST)

Any remaining contents from an AST are pumped from the tank and disposed of based on the type of chemical being stored. Once empty, the AST will need to be triple-rinsed and properly cleaned after dismantling. All rinsing fluids are also disposed of based on

the chemical being stored. The AST structure may then be transported to a metal scrapping facility or landfill.

Asbestos-Containing Materials (ACM)

Prior to demolition of structures, testing for ACMs is performed by a licensed contractor and any ACMs are disposed of based on the testing results. In California, if asbestos is friable[2] and contains more than 1% asbestos, it is considered hazardous. ACMs are disposed of as follows:

1) Non-friable: This ACM waste may be disposed of at a Class III local landfill subject to their acceptance criteria.

2) Friable: This ACM waste may be disposed of at a Class I hazardous landfill or at an out-of-state landfill, depending on the level of contamination.

Depending on whether or not the ACMs are friable or non-friable, they will need to be handled, contained, and wrapped accordingly based on the applicable State regulations and the landfill requirements for transportation and disposal purposes.

Lead-Based Paint (LBP)

Prior to demolition, testing for LBP would be performed by a licensed contractor and any LBP is disposed of based on the testing results. LBP waste is disposed of as follows:

[2] A distinction is made between more and less dangerous ACMs. More dangerous, "friable" ACM can release asbestos fibers into the air where they can be inhaled and cause illness. Less dangerous, "non-friable" ACM generally coats or encapsulates the asbestos fibers with cement, plastics, or asphalt so that they are not easily released into the air. Friable ACMs are defined as those materials containing more than 1% asbestos which could be crumbled, pulverized or reduced to powder by hand pressure when dry, using methods specified in the National Emission Standards for Hazardous Air Pollutants rules. A non-friable ACM is a material containing more than 1% asbestos but not able to be crumbled, pulverized or reduced to powder by hand pressure when dry, using the same methods.

1) Non-hazardous: If the lead content is less than 50 ppm (presumes it passes the State STLC and the Federal TCLP levels of 5.0 mg/l), the waste can be disposed of at a Class III non-hazardous landfill.

2) Cal-haz/Non-RCRA: If the waste contains 1,000 ppm lead and it fails the State STLC of 5 mg/l, it is considered cal-hazardous and may disposed of at an out of State landfill as non-RCRA waste.

3) RCRA-hazardous: If the waste fails the Federal TCLP of 5 mg/l, it will then have to be disposed of at a hazardous Class I landfill.

4.7.5 STANDARDS OF SIGNIFICANCE

Pursuant to the *CEQA Guidelines* as adopted and implemented by the City of Eastvale, and for purposes of this EIR, implementation of the Project may result in or cause potentially significant hazards/hazardous materials impacts if it would:

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

- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment;

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

- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Section 65962.5 and, as a result, create a significant hazard to the public or the environment;

- Result in a safety hazard for people residing or working in the project area due to airport/airstrip operations;

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

- 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.

4.7.6 POTENTIAL IMPACTS AND MITIGATION MEASURES

4.7.6.1 Introduction

The following discussions focus on areas where it has been determined that the Project may result in potentially significant hazards and hazardous materials impacts, pursuant to comments received through the NOP process, and based on the analysis presented within this Section and included within the EIR Initial Study.

As discussed within the Initial Study (EIR Appendix A), the potential for the Project to result in any of the following conditions was determined to be potentially significant, and these potential impacts are discussed further within this Section.

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

- 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.

Other CEQA hazards/hazardous materials considerations were determined within the Initial Study to be less-than-significant. These considerations include:

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

- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5;

- Potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;

- Potential to result in a safety hazard for people residing or working in the project area due to airport/airstrip operations; or

- Potential to expose people or structures to a significant risk of loss, injury or death involving wildland fires.

These potential impacts are therefore not substantively discussed further within this Section. Please refer also to EIR Section 1.5, *Impacts Considered Previously but Not Found to Be Potentially Significant*, and Initial Study Checklist Item 9., *Hazards and Hazardous Materials*.

4.7.6.2 Impact Statements

Potential Impact: *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.*

Impact Analysis:

Existing Hazards

Based on the objectives and tasks presented previously at Section 4.7.3.1, the Phase II ESA prepared for Site 1 concluded the following:

- No concentrations of VOCs, OCPs or TPH in the gasoline range were reported in any of samples analyzed.
- Transite piping was not discovered during exploratory trenching activities.

- Arsenic was detected in all of the samples analyzed at concentrations greater than the RSL-r, but that are less than the DTSC screening level of 12 mg/kg considered to be representative of naturally occurring background concentrations.
- TPH in the diesel and/or heavy oil ranges was reported in soil samples in the vicinity of stained soil around the swimming pool and a 5-gallon bucket. The concentrations are less than the MSSLs which are protective of groundwater. However, some of the heavy oil range concentrations exceed the RSL-r screening level value.
- A total of 37 VOCs, as well as gasoline range TPH, were detected in the soil vapor samples analyzed. With the exception of 1,3-butadine, all reported compound concentrations in the soil vapor samples are less than their respective soil vapor screening levels for a residential land use scenario. The maximum concentration of 1,3-butadiene is less than the screening level for commercial land use.

It is noted that occurrence of 1,3-butadiene, which is commonly associated with the manufacturing of rubber and as a product of combustion, is not believed to be associated with historic on-site uses of the site. Based on discussions with knowledgeable laboratory and DSTC personnel who have experience with this compound, it is suspected that the likely source is the Nylaflow tubing used in the construction of the soil vapor probes. Therefore, the reported concentrations of this compound are considered to likely be anomalous artifacts of the sampling process, and not attributable to the subsurface conditions beneath the site. Further, the proposed redevelopment plan for the site will include significant grading and compaction of soils that would result in a reduction of the risk posed by this compound, if present.

Transport, Storage, and Use of Hazardous Materials

Project construction will require temporary and short-term transport, use, and storage of potentially hazardous materials (e.g., gasoline, paints, solvents, fertilizer, etc.). Additionally, Project operations and on-going maintenance activities would involve the transport, storage, and use of potentially hazardous materials. The Project would utilize USTs to store gas and diesel fuel on the Project site. The USTs would consist of double-

walled, fiberglass fuel storage tanks with leak detection sensors. All Project USTs would be installed, inspected, maintained, and monitored consistent with federal, State, and local regulatory requirements.

Additionally, gasoline fueling stations are required by the SCAQMD Rule 461, *Gasoline Storage and Dispensing*, to include an enhanced vapor recovery and diagnostic system. The purpose of this system is to collect and store gasoline vapors during both bulk deliveries and vehicle operations. Fuel dispensing systems are required to include dripless nozzles that seal to the vehicle during filling. A vacuum system forces the vapors created by the vehicle filling back to the underground storage tank (UST). The storage tank is vented by a mechanical filtration system that scrubs and neutralizes the vapors before their release.

Similarly, during bulk delivery operations, the delivery truck's filling tubes are sealed to the storage tank and all vapors are returned to the UST. This process stems the release of vapors. The vapors created by the filling operation are then subject to mechanical scrubbing and neutralization prior to release. The final component of the vapor recovery process is the diagnostic system. This electronic system provides 24-hour monitoring of the vapor recovery system, including collection of vapors during fueling operations and assurances that vapors in the UST are not leaking. The system identifies failures automatically, notifies the station operator, and reduces emissions by early detection and prompt repair.

The Project would be required to comply with the provisions established by Section 2540.7, *Gasoline Dispensing and Service Stations*, of the California Safety and Health (Cal/OSHA) Regulations; Chapter 38, *Liquefied Petroleum Gases*, of the California Fire Code; Resource Conservation and Recovery Act requirements; and the Riverside County Fire Department requirements. Collectively, the routine inspection of the gas station, the USTs, and all associated fuel delivery infrastructure, along with the continued mandated compliance with all federal, State, and local regulations, would ensure that the Project is operated in a non-hazardous manner. Therefore, long-term impacts associated with handling, storing, and dispensing of hazardous materials would be less-than-significant.

Summary
Based on the information summarized above, no significant operational impacts have been identified. However, the Phase II ESA for Site 1 recommends impacted soils be excavated and disposed off-site, and noted the potential existence of yet unknown USTs. These are potentially significant hazards.

Level of Significance: Potentially Significant.

Mitigation Measure:

4.7.1 Prior to issuance of a rough grading permit, all stained soils within Site 1 impacted with TPH shall be excavated and properly disposed of to an offsite facility. Any additional stained or odorous soil identified during site development activities shall also be appropriately removed and disposed of offsite.

Incorporation of Mitigation Measure 4.7.1 requires appropriate excavation, removal, and disposition of soils impacted by TPH. Additionally, mandated compliance with all federal, State, and local regulations ensures that subsequent development and operation of land uses within the Project site would not create, result in, or be exposed to potentially significant hazardous conditions. Based on the preceding, the potential for the Project to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment is considered less-than-significant as mitigated.

Level of Significance After Mitigation: Less-Than-Significant.

4.8 HYDROLOGY/WATER QUALITY

4.8 HYDROLOGY/WATER QUALITY

Abstract

This Section of the EIR addresses potential impacts of the Project related to hydrology and water quality. The analysis presented herein focuses on the potential for the Project to:

- *Violate any water quality standards or waste discharge requirements;*
- *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 that would result in substantial erosion or siltation on- or off-site;*
- *Create or contribute runoff water that would exceed the capacity of the existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;*
- *Otherwise substantially degrade water quality;*

As supported by the analysis presented in this Section, the above-noted potential hydrology/water quality impacts are determined to be less-than-significant.

4.8.1 INTRODUCTION

Information contained in this Section has been summarized or excerpted from: *Polopolus Commercial Project, TPM 37492 Preliminary Hydrology Report* (Albert A. Webb Associates) March 2018 (Project Hydrology Study); *2017-0043 Preliminary Water Quality Memorandum for the Polopolous Project Site* (Albert A. Webb Associates) March 7, 2018; and *2017-0043 Preliminary Hydrology & Water Quality Memorandum for APN 152-350-010/152-350-011* (Albert A. Webb Associates) March 20, 2018, which are provided at EIR Appendix H.

Additional source and background information was obtained from the City of Eastvale General Plan, the Santa Ana Regional Water Quality Control Board (SARWQCB), and the California State Water Resources Control Board (SWRCB).

4.8.2 EXISTING SITE DRAINAGE

4.8.2.1 Site 1

Under existing conditions, the westerly portion of the site drains via unimproved channels toward Hamner Avenue. The drainage is collected at three outlet points: two along the northwestern boundary, and one located at the southwestern corner. These flows then drain southerly to an existing catch basin inlet located near the southwestern corner of the site. The catch basin then conveys the runoff to an existing storm drain located in Hamner Avenue (Line H). From this point, the drainage is transmitted into Master Drainage Plan Line E-3 located at the intersection of Citrus Street and Hamner Avenue, located approximately one-quarter mile southerly of the site. The easterly portion of the site currently drains through unimproved swales from north to south, toward the southeastern corner of the site. Ultimately, on-site flows reach the Santa Ana River. Please refer also to Figure 4.8-1, *Existing Drainage Conditions – Site 1*.

4.8.2.2 Site 2

Runoff from Site 2 currently flows in a northwest to southeast direction to Hamner Avenue through an existing under-sidewalk drain. Flows travel south along the western side of Hamner Avenue before entering a catch basin inlet located at the intersection of Hamner Avenue and Schleisman Road. The catch basin conveys the flow to Line H, then to Line E-3, and ultimately to the Santa Ana River. Please refer also to Figure 4.8-2, *Existing Drainage Conditions – Site 2*.

Source: Albert A. Webb Associates

Figure 4.8-1
Existing Drainage Conditions - Site 1

Source: Albert A. Webb Associates

Figure 4.8-2
Existing Drainage Conditions - Site 2

4.8.3 PROPOSED SITE DRAINAGE

4.8.3.1 Site 1

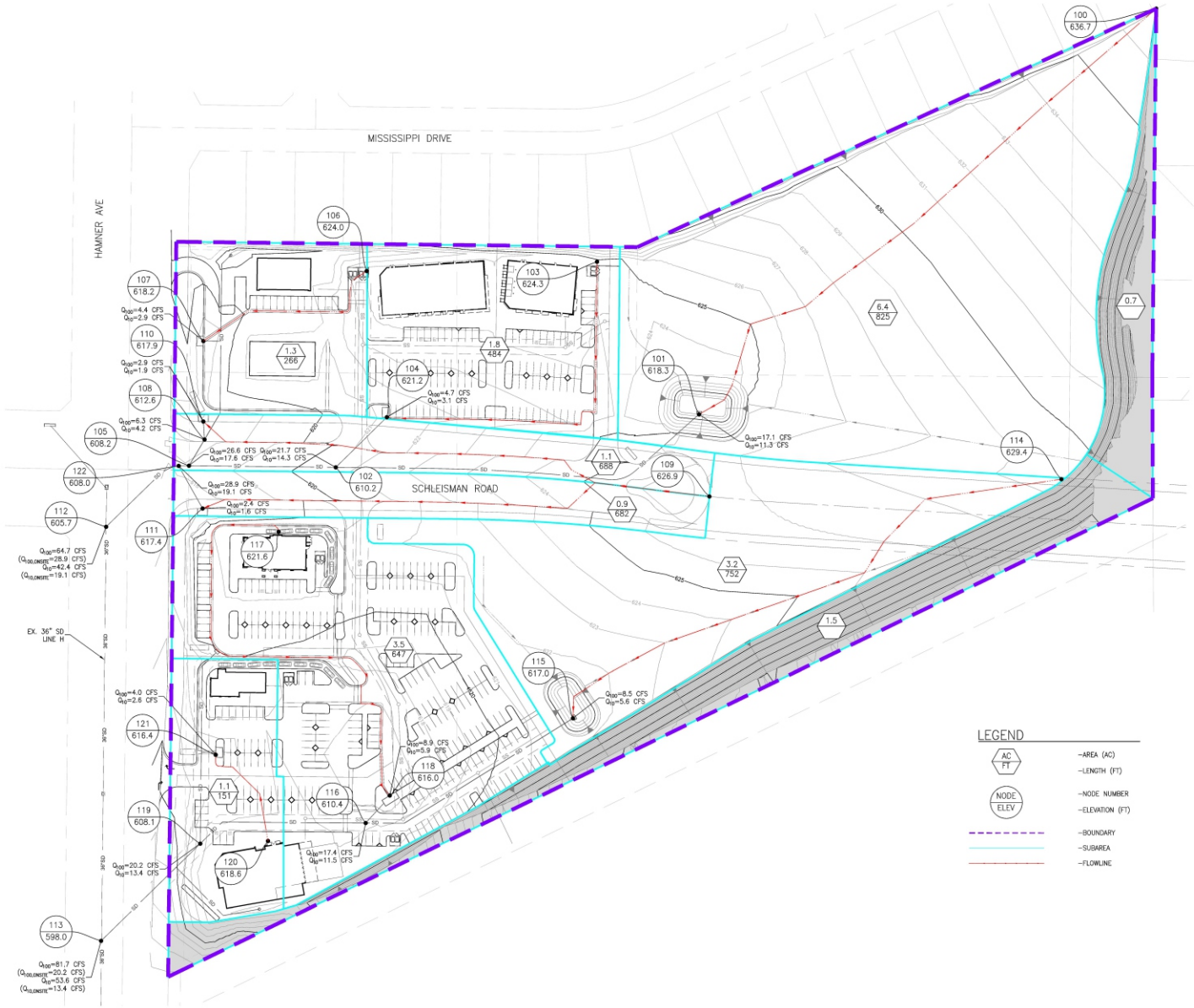
Under proposed conditions, Site 1 would generally drain in a southwesterly direction. All on-site flows would drain to one of two connections to the existing Line H storm drain, located within Hamner Avenue.

More specifically, flows within the northwestern and southwestern portions of the site would be collected via curb inlets located within proposed parking areas. Proposed on-site drainage facilities would convey these flows toward Hamner Avenue and into Line H. Similarly, Schleisman Road would drain from east to west, and be conveyed to Line H.

Pending its ultimate development, the eastern portion of Site 1 would be mass graded from northeast to southwest. Two sediment basins are proposed within this portion of the site to capture sediment runoff. Sediment basins are designed to capture eroded or disturbed soil that is washed off during rain storms; allow suspended solids to settle out prior to discharge; and protect nearby properties and/or resources. From the basins, the on-site storm drain system would connect directly to Line H.

The Project would utilize a biofiltration system for the removal of pollutants prior to discharge into the municipal storm drain system. More specifically, modular wetlands would be installed at all Project drainage inlets. Modular wetlands are an effective means of biofiltration consisting of three chambers. The pre-treatment chamber separates trash, sediment, and debris; the biofiltration chamber removes pollutants; and finally, the discharge chamber offers a controlled flow to the outlet pipe. More information regarding modular wetlands can be found in Appendix H.

Please refer also to Figure 4.8-3, *Proposed Drainage Conditions – Site 1*.



Source: Albert A. Webb Associates

Figure 4.8-3
Proposed Drainage Conditions - Site 1

4.8.3.2 Site 2

The post-development drainage pattern would be similar to existing conditions. The proposed storm water management system would convey on-site flows in a northwest to southeast direction towards Hamner Avenue. As part of the Project, Line H would be extended northerly in order to connect to the on-site drainage system. Additionally, a new catch basin inlet will be installed at the southeasterly corner of the southerly adjacent fire station property. A new lateral will connect this basin to the newly extended Line H.

As with Site 1, Site 2 would utilize a biofiltration system (modular wetlands) for the removal of pollutants prior to discharge into the municipal storm drain system.

Please refer also to Figure 4.8-4, *Proposed Drainage Conditions – Site 2*.

Source: Albert A. Webb Associates

Figure 4.8-4
Proposed Drainage Conditions - Site 2

4.8.4 REGULATORY SETTING

Applicable federal, state, and local policies and regulations which act to reduce potential hydrologic impacts and/or act to protect and preserve water quality are summarized below.

4.8.4.1 Federal Water Pollution Control Act, Federal Clean Water Act (CWA)

The principal law governing pollution of the nation's surface waters is the Federal Water Pollution Control Act, or Clean Water Act (CWA), which was substantially revised by amendments in 1972 that created the bulk of the current statutory scheme. The CWA requires states to adopt water quality standards. To achieve its objectives, the CWA is based on the concept that all discharges into the nation's waters are unlawful, unless specifically authorized by a permit. Moreover, the CWA states that discharge of pollutants into waters of the United States from any point source is unlawful unless the discharge complies with applicable provisions of the National Pollution Discharge Elimination System (NPDES) program.

The NPDES program is established under Section 402 of the CWA. The CWA provides the framework for regulating municipal and industrial (point sources) stormwater discharges under the NPDES program. In California, the NPDES program is administered through the nine Regional Water Quality Control Boards, including the SARWQCB. Locally, the SARWQCB is responsible for determining the City of Eastvale's compliance with the water quality requirements of the CWA.

Non-point pollution sources are also regulated by the SARWQCB through the General Construction Activity Storm Water NPDES permits, which are issued for stormwater discharges. Construction activities that are subject to this general permit include clearing, grading, and disturbances to the ground such as stockpiling or excavation that result in soil disturbances. Stormwater pollution prevention plans (SWPPPs) are required for the issuance of a construction NPDES permit and typically include both structural and non-structural Best Management Practices (BMPs) to reduce water quality impacts. The Project will implement and comply with applicable provisions of the Federal Water Pollution Control Act, and Federal Clean Water Act.

4.8.4.2 State of California and Riverside County

At the federal level, the CWA allows the Environmental Protection Agency (EPA) to delegate its NPDES system permitting authority to states with an approved regulatory program. The CWA authorizes discharge of pollutants into waters of the State by issuance of NPDES permits. Eastvale, Riverside County and 23 other cities and agencies obtained a joint NPDES permit from the SARWQCB. As a co-permittee, the City has the following obligations and responsibilities:

- Conduct storm drain system inspections;
- Conduct and coordinate with the County any surveys and characterizations needed to identify the pollutant sources and drainage areas;
- Implement management programs, monitoring programs and implementation plans;
- Enact legislation and ordinances as necessary to establish legal authority;
- Pursue enforcement actions as necessary to ensure compliance with the stormwater management programs and the implementation plans; and
- Respond to emergency situations (e.g., accidental spills, leaks, illegal discharges and illicit connections) to prevent or reduce the discharge of pollutants to storm drain systems and streams.

Regulated entities acting as co-permittees must obtain coverage under an NPDES stormwater permit and implement construction SWPPPs, and operational Water Quality Management Plans (WQMPs), both employing BMPs that effectively reduce or prevent the discharge of pollutants to receiving waters. The NPDES Permit (Permit) imposes various requirements of the discharger. In general, provided the discharger complies with such requirements, the discharger is deemed to be in compliance with the CWA and the Permit. Most of the requirements imposed by the Permit consist of BMPs, which are construction and operational discharge control practices and mechanisms acting to achieve compliance with the CWA requirements. Additional details regarding the SWPPP and WQMP required of the Project are provided below.

Storm Water Pollution Prevention Plan (SWPPP)

In December 1999, the State Water Resources Control Board (SWRCB) issued an NPDES General Permit for the discharge of stormwater associated with construction activities. Federal regulations promulgated by USEPA (40 CFR Parts, 9, 122, 123, and 124) expanded the NPDES stormwater program to include stormwater discharges from MS4s and construction sites that were smaller than those previously included in the program. Accordingly, SWRCB issued a NPDES General Permit for the discharge of stormwater associated with construction activities. This Permit addresses stormwater discharges associated with construction activities. The Permit is applicable to all of California, which is inclusive of the City of Eastvale and the Project area.

Requirements of this Permit include a mandate that all dischargers shall develop and implement an SWPPP in accordance with Section A of the NPDES General Permit. Pursuant to NPDES General Permit Section A, SWPPP requirements: all pollutant sources shall be identified; BMPs shall be implemented in order to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site during construction; and a maintenance schedule for BMPs installed during construction shall be implemented. BMPs shall be described for control of discharges from waste handling and disposal areas and methods of on-site storage and disposal of construction materials and construction waste.

An effective combination of erosion and sediment control on all disturbed areas during the rainy season must be implemented. The SWPPP shall include a description of the erosion control practices. The SWPPP shall include descriptions of the BMPs to reduce pollutants in stormwater discharges subsequent to Project construction. The beneficial uses of the receiving waters are protected through implementation of these BMPs.

BMP stormwater pollutant source controls are articulated in the NPDES Permit, and include such measures as first flush diversion, detention/retention basins, infiltration trenches/basins, porous pavement, oil/grease separators, grass swales, education programs, and maintenance practices. The NPDES permitting program also includes measures to reduce the release of pollutants such as sediment, construction materials, or accidental spillage of polluting materials during construction. Consistent with provisions

of the NPDES Permit, the City of Eastvale requires implementation of development-specific SWPPPs and incorporation of BMPs that reduce, to the extent practicable, stormwater and urban runoff pollutant discharges to the waters of Southern California.

Water Quality Management Plan (WQMP)

The Project is also required to develop and implement a WQMP addressing potential operational stormwater pollutant discharges over the life of the Project. As with the Project SWPPP, the Project's mandated WQMP will act to control potential discharge of pollutants, prevent sewage spills, and avoid discharge of sediments into streets, stormwater channels, or waterways.

Typical SWPPP and WQMP elements include:

- Introduction and Purpose;
- Compliance Requirements and Certifications;
- Facility Information/Pollution Prevention Team Members;
- Site Map;
- List of Significant Materials;
- Potential Stormwater Pollutants and Sources;
- Best Management Practices;
- Summary of Pollutants, Sources, and BMPs;
- Annual Comprehensive Site Evaluation;
- Definitions; and
- State Notice of Intent Form and Instructions.

4.8.4.3 Porter-Cologne Water Quality Act

Section 303 of the federal CWA and the State's Porter-Cologne Water Quality Act establish applicable water quality objectives for ground and surface waters in the State. In general, protection and maintenance of surface water quality is the combined responsibility of the applicable Regional Water Quality Control Board (RWQCB), water supply and wastewater management agencies, and City and County governments.

The RWQCB has purview over point and non-point sources of pollution. Point source water pollutants consist of controlled wastewater releases that are commonly generated by activities that use water to collect pollutants and transport them from the processing facility. When such wastewater discharges are proposed, the Applicant must obtain a set of Waste Discharge Requirements from the RWQCB which serve to control water pollution to a non-significant level from such point sources.

Non-point sources of water pollution consist of surface runoff from a site or area during or following a storm where the source of pollution cannot be traced to a specific location. Typical non-point water pollution sources consist of agricultural fields with sediment and fertilizers, construction sites with sediment and debris, and roads with oil, tire particles, and debris common to roads. The Project will implement and comply with applicable Porter-Cologne water quality protection policies and mandates.

4.8.4.4 Santa Ana Watershed Project Authority

The Santa Ana Watershed Project Authority (SAWPA) was formed to find a mutually beneficial way of protecting water quality in the Santa Ana Watershed. Orange County Water District, Inland Empire Utilities Agencies, San Bernardino Valley Municipal Water District, Western Municipal Water District, and Eastern Municipal Water District represent all the major areas of water use in the Santa Ana Watershed who formed and are all members of SAWPA.

4.8.4.5 City of Eastvale Municipal Code

All Project storm management systems and facilities would be designed, implemented, and maintained consistent with requirements as outlined in City of Eastvale Municipal Code Title 14, Water and Sewers, Chapter 14.12, Stormwater Drainage System Protection Regulations. Please refer also to the City of Eastvale Municipal Code available at: https://library.municode.com/ca/eastvale/codes/code_of_ordinances.

4.8.5 STANDARDS OF SIGNIFICANCE

Consistent with the standards of significance outlined in the *CEQA Guidelines*, hydrology/water quality impacts would be considered potentially significant if the Project would:

- Violate any water quality standards or waste discharge requirements;

- 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 the 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);

- Substantially alter the existing drainage pattern of the 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;

- Create or contribute runoff water which would exceed the capacity of the existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;

- Otherwise substantially degrade water quality;

- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;

- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;

- 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

- Cause or result in inundation by seiche, tsunami, or mudflow.

4.8.6 POTENTIAL IMPACTS AND MITIGATION MEASURES

4.8.6.1 Introduction

The following discussions focus on topical areas and issues where it has been determined pursuant to the Initial Study/NOP processes, that the Project may result in or cause potentially significant hydrology/water quality impacts. Of the CEQA threshold considerations identified above at Section 4.8.4, and as substantiated in the Initial Study (EIR Appendix A), the Project's potential impacts under the following topics are determined to be less-than-significant, and are not further substantively discussed here:

- 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 the 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);

- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;

- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;

- 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

- Cause or result in inundation by seiche, tsunami, or mudflow.

All other CEQA topics concerning the Project's potential impacts to hydrology/water quality are discussed below. Please also refer to Initial Study Checklist Item 9., *Hydrology and Water Quality*.

4.8.6.2 Impact Statements

Potential Impact: *Would the Project violate any water quality standards or waste discharge requirements?*

Impact Analysis: The Project is mandated to acquire all necessary permits, and comply with City of Eastvale and RWQCB requirements for the Santa Ana Region, acting to preclude, or substantively reduce the potential for the Project to violate any water quality standards or waste discharge requirements. Further, the Project would be required to develop and implement a City-approved Stormwater Pollution Prevention Plan (SWPPP), acting to preclude or minimize potential discharge of construction-source stormwater pollutants. Similarly, a City-approved Water Quality Management Plan (WQMP) would be required to be developed and implemented, acting to preclude or minimize potential operational-source stormwater pollutant discharges over the life of the Project.

All stormwater discharges shall comply with applicable provisions of the Riverside County Flood Control and Water Conservation District (RCFCWCD) NPDES permit. Consistent with SARWQCB, RCFCWCD and City requirements, waste materials will not be discharged to drainage areas, streambeds, or streams. Appropriate BMPs will be employed throughout construction processes, thereby controlling potential discharge of pollutants, preventing sewage spills, and avoiding discharge of sediments into streets, stormwater channels, or waterways. Selected BMPs will act to:

- Control and prevent potential contaminant spills;
- Prevent runoff from off-site areas from flow across the construction site(s);
- Slow runoff rates across the site;
- Provide soils stabilization; and

- Remove sediment from on-site runoff before it leaves the site.

All required drainage improvements would be designed and implemented to the satisfaction of the City, RCFCWCD, and SARWQCB.

The Project would connect to the existing sanitary sewer system serving the Project area and does not propose or require septic systems or other alternative treatment of wastewater. Further, the Project's plans for connection to existing sanitary sewer infrastructure facilities are subject to review and approval by the City and the Jurupa Community Services District (JCSD). The Project Applicant will also be required to apply for service and pay a mandated Connection Fee and ongoing Service Fees. Fees paid by the Project will be applied toward maintenance and expansion of City and JCSD conveyance and treatment facilities. Wastewater generated by the Project is typical of commercial generators and wastewater resulting from the Project uses will not require treatment beyond that provided by existing JCSD facilities.

Preliminary hydrology reports are provided at EIR Appendix H. Consistent with established City building code regulations, a final site-specific drainage studies reflecting precise pad locations, proposed drainage structures, detention/retention facilities, etc., would be required prior to the issuance of building permits.

Based on the preceding discussion, the potential for the Project to violate any water quality standards or waste discharge requirements is determined to be less-than-significant.

Level of Significance: Less-Than-Significant.

Potential Impact: *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 substantial erosion or siltation on- or off-site; or create or contribute runoff water which would exceed the capacity of the existing or*

planned storm water drainage systems or provide substantial additional sources of polluted runoff; or otherwise substantially degrade water quality.

Impact Analysis:

Project Stormwater Management System Addresses Potential Post-Development Hydrologic Impacts

As previously described at Section 4.8.3, the Project incorporates all necessary drainage and stormwater management systems, and would comply with all stormwater system design, construction, and operational requirements mandated under the City Municipal Code and within regulations established by other agencies, such as the SARWQCB and California Department of Water Resources.

The Preliminary Project Hydrology Report prepared for Site 1 concluded that the proposed stormwater drainage management system would adequately drain on-site facilities, and that existing municipal drainage facilities would "convey flows safely through the region in accordance with Riverside County requirements" (page 1-3). More specifically, hydrologic calculations computed in accordance with the *Riverside County Flood Control and Water Conservation District Hydrology Manual* indicate that Line H has receiving capabilities of 46.2 cfs (northern connection) and 24.0 cfs (southern connection). Post-development flow rates for Site 1 are calculated at 28.9 cfs (northern connection) and 20.2 cfs (southern connection), which are well within the existing capacity for Line H.[1]

The Hydrology Memorandum prepared for Site 2 indicates the runoff from the site during a 100-year storm event would generate approximately 6.1 cfs. On-site drainage improvements will be sized accordingly, and no downstream capacity issues were identified.

[1] It is noted that the Hydrology Study assumed full development of Site 1. Additionally, it was assumed that the full right-of-way width of Schleisman Road would drain to the two proposed inlets at the western end of Schleisman Road within the site boundary.

Final design, configuration, and locations of proposed drainage system improvements will be reviewed and approved by the City, RCFCWCD, and SARWQCB prior to, or concurrent with, application for grading permits.

In combination, the Project's stormwater management system components, and compliance with regulatory requirements act to preclude potentially adverse drainage and stormwater runoff impacts.

Project SWPPP and Compliance with Regulatory Requirements Address Construction-Source Water Quality Impacts

During site preparation activities prior to construction, any existing groundcover would be removed from the site, exposing the Project area to increased wind and water erosion potentials. Further, construction site runoff may carry increased loads of sediment, heavy metals and petroleum hydrocarbons (from machinery) which could degrade water quality. In accordance with NPDES requirements, the Project Applicant would be required to prepare a construction activities erosion control plan to alleviate potential sedimentation and stormwater discharge contamination impacts of the Project.

The Applicant would also be responsible for compliance with the General Construction NPDES permit from the SARWQCB by filing a Notice of Intent to Commence Construction Activities. Under the General Construction Permit, discharge of materials other than stormwater is prohibited. The General Construction Permit stipulates further that the Applicant shall prepare, retain at the construction site, and implement a SWPPP which identifies the sources of sediments and other pollutants that affect the quality of stormwater discharge, and implement practices to reduce sediment and other pollutants to stormwater discharge. SWPPP requirements include identification of construction and post-construction BMPs that would act to reduce sediments and other pollutants.

Implementation of the Project SWPPP and compliance with applicable NPDES and SARWQCB requirements would ensure that potential construction-source water quality impacts of the Project are reduced below the level of significance.

Project WQMP and Compliance with Regulatory Requirements Address Operational-Source Water Quality Impacts

Over the life of the Project, contaminants such as oil, fuel and grease that are spilled or left behind by vehicular traffic, collect and concentrate on paved surfaces. During storm events, these contaminants are washed into the storm drain system and may potentially degrade receiving water quality. Stormwater runoff from paved surfaces within the developed Project area could carry a variety of urban wastes, including greases and oils and small amounts of metals which are common by-products of vehicular travel. In addition, storm runoff will likely contain residual amounts of fertilizers and plant additives washed off from landscaped areas.

Recognizing the potential hazards of such urban runoff, the EPA has issued regulations which require municipalities to participate in the NPDES. As part of this program, the SARWQCB has issued an NPDES permit for urban runoff to the RCFCWCD, and the City of Eastvale has been established as a co-permittee. Compliance with the provisions specified in the NPDES permit ensures proper management and disposal of urban runoff from the Project.

As previously described at Section 4.8.3, the Project would utilize a biofiltration system for the removal of pollutants prior to discharge into the municipal storm drain system. More specifically, modular wetlands would be installed at all Project drainage inlets. Modular wetlands are an effective means of biofiltration consisting of three chambers. The pre-treatment chamber separates trash, sediment, and debris; the biofiltration chamber removes pollutants; and finally, the discharge chamber offers a controlled flow to the outlet pipe. More information regarding modular wetlands can be found in Appendix H.

The Project Applicant would also be responsible for obtaining a General Permit for stormwater discharge from the SARWQCB, in accordance with the Notice of Intent instructions. Under the General Permit, discharge of materials other than stormwater is prohibited. In support of the above requirements, the Project Applicant would be

required to develop and implement a Project-specific WQMP addressing all post-construction pollutant discharges.

Based on compliance with applicable NPDES requirements, and implementation of the Project WQMP to include any additional requirements stipulated by the City, RCFCWCD, and/or SARWQCB, the potential for the Project to result in a potential for discharge of stormwater pollutants from post-construction activities; otherwise result in any other potential impacts to stormwater runoff from post-construction activities; or otherwise substantially degrade water quality would be reduced below the level of significance.

Conclusion

Based on the site-specific hydrologic modeling presented at EIR Appendix H, the Project's proposed stormwater management system entails those improvements necessary to adequately collect all Project site stormwater runoff. Additionally, the stormwater management system has been designed to filter all stormwater runoff prior to discharge into the municipal storm drain system. Proposed facilities in combination with existing regulations ensure a less-than-significant potential for the Project to violate any water quality standards or waste discharge requirements; 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 substantial erosion or siltation on- or off-site; create or contribute runoff water which would exceed the capacity of the existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff; or otherwise substantially degrade water quality.

Level of Significance: Less-Than-Significant.

4.9 CULTURAL RESOURCES/ TRIBAL CULTURAL RESOURCES

4.9 CULTURAL RESOURCES/ TRIBAL CULTURAL RESOURCES

Abstract

This Section examines the potential for implementation of the Lewis Retail Project to impact cultural and/or tribal resources in the Project area. Of primary concern are the protection of currently unknown (buried or undiscovered) paleontological or tribal resources that may be present on Site 1.[1] Specifically, this analysis seeks to determine whether the Project would result in any of the following:

- *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.*

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

    - *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or*
    - *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in*

[1] The Initial Study determined that there are no known cultural resources associated with Site 2 (the site has been recently cleared), and no further analysis is necessary. However, Site 1 exhibits a high potential for containing significant paleontological resources. As such, the analysis presented within this Section pertains to Site 1.

subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Additionally, as substantiated in the Initial Study (EIR Appendix A), the Project's potential impacts under the following topic were previously determined to be less-than-significant and are not further discussed here:

- *Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5;*

- *Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5; or*

- *Disturb any human remains, including those interred outside of dedicated cemeteries.*

Information contained within this section is based upon Paleontological Resources Assessment Report, Polopolus-Eastvale Project, Assessor's Parcel Numbers 152-060-002 and -003, 7270 Hamner Ave, City of Eastvale, Riverside County, California (CRM TECH) June 19, 2017. *In order to protect the location of sensitive cultural resources that may be identified as part of the Assessment, a copy of the report has not been included in this EIR. Copies are available, upon request, at the City of Eastvale Planning Department. All references and sources to the information presented herein can be obtained through review of that report. As supported by the analysis presented in this Section, as mitigated, the Project's potential to impact cultural resources is determined to be less-than-significant.*

4.9.1 INTRODUCTION

Paleontological resources represent the remains of prehistoric life, exclusive of any human remains, and include the localities where fossils were collected as well as the sedimentary rock formations in which they were found. The defining character of fossils or fossil deposits is their geologic age, which is typically regarded as older than approximately 12,000 years, the generally accepted temporal boundary marking the end

of the last late Pleistocene (circa 2.6 million to 12,000 years B.P.) glaciation and the beginning of the current Holocene epoch (circa 12,000 years B.P. to the present).

Common fossil remains include marine shells; the bones and teeth of fish, amphibians, reptiles, and mammals; leaf assemblages; and petrified wood. Fossil traces, another type of paleontological resource, include internal and external molds (impressions) and casts created by these organisms. These items can serve as important guides to the age of the rocks and sediments in which they are contained, and may prove useful in determining the temporal relationships between rock deposits from one area and those from another as well as the timing of geologic events. They can also provide information regarding evolutionary relationships, development trends, and environmental conditions.

Fossil resources generally occur only in areas of sedimentary rock (e.g., sandstone, siltstone, mudstone, claystone, or shale). Because of the infrequency of fossil preservation, fossils, particularly vertebrate fossils, are considered nonrenewable paleontological resources. Occasionally fossils may be exposed at the surface through the process of natural erosion or because of human disturbances; however, they generally lay buried beneath the surficial soils. Thus, the absence of fossils on the surface does not preclude the possibility of their being present within subsurface deposits, while the presence of fossils at the surface is often a good indication that more remains may be found in the subsurface.

4.9.2 SETTING

The Project site is located in the northern portion of the Peninsular Ranges province, which is bounded on the north by the Transverse Ranges province, on the northeast by the Colorado Desert province, and on the west by the Pacific Ocean (Jenkins 1980:40-41; Harms 1996:150). More specifically, it lies within the Santa Ana River Valley portion of the Peninsular Ranges province, a structurally depressed trough filled with sediments of Miocene through Recent age (Clarke 1978-1979:15).

The Santa Ana River Valley is one of the many tectonically controlled valleys within the valley-and-ridge systems found in the Perris Block. Defined by English (1926) as a region between the San Jacinto and Elsinore-Chino fault zones, the Perris Block is bounded on the north by the Cucamonga (San Gabriel) Fault and on the south by a vaguely delineated boundary near the southern end of the Temecula Valley. This structural block is considered to have been active since Pliocene time (Woodford et al. 1971:3421). The Pliocene- and Pleistocene-age non-marine sedimentary rocks filling the valley areas have produced a few vertebrate fossils, as well as a few invertebrate fossil remains (Mann 1955:13).

The Project site consists of an irregularly shaped tract of land containing a former plant nursery and residential complex, approximately a half-mile north of the Santa Ana River. It is surrounded by recent suburban residential development on the north, east, and west, across Hamner Avenue, with the Silverlakes Sports Complex, now under construction, lying on the adjacent property to the south. The terrain of the site is generally level in the northern portion with a sharp decline in elevation toward the south and east near the southern boundary. Elevations on the property range approximately between 600 and 630 feet above mean sea level.

Several buildings associated with the nursery remain present on the property, such as a retail store facing Hamner Avenue, offices, and greenhouses, some of them in significant disrepair. A single-family residence stands behind the store building and near the center of the property, surrounded by associated garages, storage sheds, and a drained pool. The ground surface of the site has been greatly disturbed by past agricultural activities and is covered by gravel in areas used for vehicular access and parking. The surface soil in the vicinity is typically a greyish-brown, fine- to medium-grained silty sand with some rocks. Vegetation observed on the property includes tumbleweed, wild mustard, foxtail, sunflower, and other small grasses and shrubs. Introduced landscaping plants such as palm, olive, a variety of cacti, and various flowers and grasses are also found in abundance.

4.9.3 EXISTING POLICIES AND REGULATIONS

4.9.3.1 Federal

National Historic Preservation Act

The National Historic Preservation Act (NHPA) requires federal agencies to consider the effects of their undertakings on historic properties. Historic properties are cultural resources (e.g., archeological sites, historic built environment features, or Native American sites) that are listed, or determined to be eligible for listing, on the National Register of Historic Places. The implementing regulations of this mandate, found in the Code of Federal Regulations (36 CFR 800), outline an involved consultative process known as the Section 106 process. The Section 106 process requires a project lead federal agency to consult with the State Historic Preservation Officer.

American Indian Religious Freedom Act

The American Indian Religious Freedom Act, passed in 1978, serves to protect and preserve the traditional religious rights of American Indians, Eskimos, Aleuts, and Native Hawaiians. Before the Act was passed, certain federal laws interfered with the traditional religious practices of many American Indians.

Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act establishes a federal policy of respect for, and protection of, Native American religious practices. It also has provisions for allowing limited access to Native American religious sites. The Act provides for the repatriation of certain items from the federal government and certain museums to the native groups to which they once belonged. The Act defines "cultural items," "sacred objects," and "objects of cultural patrimony" and establishes a means for determining ownership of these items. However, the provisions for repatriation only apply to items found on federal lands.

Executive Order 13007 and Executive Order 13084

Executive Order 13007 requires federal agencies with land management responsibilities to allow access to and use of Indian sacred sites on public lands, and to avoid adversely affecting these sites. Executive Order 13084 reaffirms the government-to-government relationship between the federal government and recognized Indian tribes, and requires federal agencies to establish procedures for consultation with tribes. These executive orders only apply to projects that include federal undertakings.

4.9.3.2 State

CEQA and the California Register of Historical Resources

Historical resources are recognized as part of the environment under the California Environmental Quality Act (CEQA). The California Register of Historical Resources (California Register) is the authoritative guide for the State's historical resources, and properties included in the California Register are considered significant for the purposes of CEQA. The California Register includes resources listed, or formally determined eligible for listing, on the National Register of Historic Places, and some California State Landmarks and Points of Historical Interest. Properties of local significance designated under a local preservation ordinance (local landmarks or landmark districts), or that have been identified in a local historical resources inventory, may be eligible for listing in the California Register and are presumed to be significant resources for the purposes of CEQA unless a preponderance of evidence indicates otherwise (PRC § 5024.1, 14 CCR § 4850).

An archaeological site may be considered a historical resource if it is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California (PRC § 5020.1(j)), or if it meets the criteria for listing on the California Register (14 CCR § 4850).

The *CEQA Guidelines* direct lead agencies to evaluate an archaeological site to determine if it meets the criteria for listing in the California Register. If it does, potential adverse impacts must be considered. If an archaeological site is not a historical resource, but meets

the definition of a "unique archaeological resource" as defined in PRC §21583.2, then it should be treated in accordance with the provisions of that section.

Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired (PRC § 5020.1(q)). While demolition and destruction would constitute significant impacts, it is sometimes more difficult to assess when change, alteration, or relocation results in a substantial adverse change. The *CEQA Guidelines* provide that a project that alters those physical characteristics of a historical resources that convey its significance (i.e., its character-defining features), can be considered to materially impair the resource's significance.

California Native American Graves Protection and Repatriation Act (2001)

The California Health and Safety Code, Division 7, Part 2, Chapter 5 (Sections 8010-8030) contains broad provisions for the protection of Native American cultural resources. The California Native American Graves Protection and Repatriation Act establishes policy to ensure that California Native American human remains and cultural items are treated with respect and dignity. The Act also provides the mechanism for disclosure and return of these items held by publicly funded agencies and museums in California. Additionally, the Act outlines the mechanism by which California Native American tribes not recognized by the federal government may file claims for human remains and cultural items held in agencies or museums.

California Public Resources Code

The California Public Resources Code contains several sections applicable to the preservation of cultural resources and human remains. These sections detail procedures to be followed whenever Native American remains are found, and delineate the unauthorized disturbance or removal of archaeological, historical, paleontological resources, or human remains as an act punishable by law (Sections 5020, 5097.5, 5097.9-5097.996, 7050.5, 7051). As matter of law, the Project would comply with applicable provisions of the California Public Resources Code addressing preservation and protection of cultural resources and human remains.

California Code of Regulations

Under Title 14, Division 3, Section 4308, no person shall remove, injure, disfigure, deface, or destroy any object of archeological or historical interest or value.

Senate Bill 18 (SB 18, 2004)

SB 18 (2004) requires cities and counties to notify, and if requested to do so, consult with California Tribal Governments anytime a General Plan is proposed for adoption or amendment. Tribes, once notified of the proposed adoption of or amendment(s) to a general plan, have 90 days to request consultation.

Because the Project proposes to amend the City of Eastvale General Plan (Land Use) the City is required to consult with requesting California Native American tribes for the purpose of preserving or mitigating potential impacts to Cultural Places. The requirements of SB 18 are separate from the CEQA process.

Assembly Bill 52 (AB 52) Tribal Cultural Resources

Enacted as of July 1, 2015, AB 52 established a new category of resources under CEQA called "tribal cultural resources" that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigations. The Bill was built on the concept that California Native American tribes have the expertise "with regard to tribal history and practices" to identify significant cultural resources. To this end, AB 52 requires early consultation in the CEQA process to ensure that local and Tribal governments, public agencies, and project proponents have information available, early in the CEQA environmental review process, for the purpose of identifying and addressing potential adverse impacts to tribal cultural resources.

AB 52 requires that the lead agency contact (in writing) all culturally affiliated tribes that could be affected by a project, within 14 days of deeming a development application complete. The notice commences a 30-day period for the tribe to request consultation. Upon receipt of a request consultation, the lead agency has an additional 30 days to begin the consultation process. AB 52 states that the consultation concludes when either "1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect

exists, on a tribal resource, or 2) a party, acting on good faith and after a reasonable effort, concludes that mutual agreement cannot be reached." AB 52 notes that the consultation can be ongoing throughout the CEQA process.

4.9.4 STANDARDS OF SIGNIFICANCE

Consistent with the standards of significance outlined in the *CEQA Guidelines*, Project-related impacts to cultural/tribal resources would be considered potentially significant if they cause or result in any of the following:

- Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5;

- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5;

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;

- Disturb any human remains, including those interred outside of dedicated cemeteries; or

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

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

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

4.9.5 POTENTIAL IMPACTS AND MITIGATION MEASURES

4.9.5.1 Introduction

The following analysis is focused on areas where it has been determined that the Project may result in potentially significant impacts, based on the analysis included within the Initial Study. In this regard, as substantiated in the Initial Study, the Project's potential to cause a substantial adverse change in the significance of historic or archeological resources, or disturb any human remains was previously determined to be less-than-significant. Please refer to EIR Appendix A, Initial Study Checklist Item 5., *Cultural Resources* and Item 17., *Tribal Cultural Resources*. All other potential cultural/tribal resource impacts of the Project are discussed below.

4.9.5.2 Impact Statements

Potential Impact: *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.*

Impact Analysis:

As part of the Paleontological Assessment, paleontological record searches were conducted, as well as literature review, and a field survey. The findings of these tasks are summarized below.

Record Searches

The paleontological resources records searches (provided by the San Bernardino County Museum in Redlands and the Natural History Museum of Los Angeles County in Los Angeles) identified no known vertebrate paleontological localities within the Project site. However, fossils have been identified within two miles of the Project site and from the same or similar sediments as those known to be present within the Project site, including ground sloth (*Megalonyx* sp.), horse (*Equus* sp.), bison (*Bison* sp.), and whipsnake (*Masticophis*), in addition to gastropoda and mammalia microfossils. Based on these findings, the Paleontological Assessment concluded that the undisturbed sedimentary soils at the Project site exhibit a high potential for containing significant nonrenewable paleontological resources.

Literature Review

Rogers (1965) maps the surface geology at the Project site as mainly Qc (Pleistocene-age non-marine sedimentary rocks) with possibly a small amount of Qal (alluvium of recent age). Hill et al. (1991:Plate 1A) maps the geology in the area as mainly Qo (older alluvium of early Holocene age) with some Qya (younger alluvium of late Holocene age) in the southern portion. Morton et al. (2001) and Morton and Miller (2006) map the surface geology in the Project area as mainly Qyoaa with some Qywa along the southern edge (Figure 5). These sources define Qyoaa as early Pleistocene alluvium channel deposits of gravel, sand, and silt, reddish-brown in color, well indurated, well dissected on the surfaces. They define Qywa as Holocene to late Pleistocene wash deposits of sand, gravel, and boulders.

Knecht (1971:Map Sheet 23) maps the surface soil within the Project area as mainly ReC2 with some GyC2 in the western portion and some TeG in the southern portion. The ReC2 soils belong to the Ramona Series, specifically the Ramona very fine sandy loam, 0 to 8 percent slopes, eroded, which form on alluvial fans and terraces (ibid.:53-54). The GyC2 soils belong to the Greenfield Series, specifically the Greenfield sandy loam, 2 to 8 percent slopes, eroded, which also form on alluvial fans and terraces (ibid.). The TeG soils belong to the Temescal Series, specifically the Temescal Terrace escarpments (ibid.:60), which he describes as follows:

> Terrace escarpments consist of variable alluvium on terraces or barrancas. Slopes range from 30 to 75 percent. Small areas of recently deposited alluvium may be near the bottom of the escarpments. This land type may have exposed "rim pan," gravel, cobblestones, stones, or large boulders in variable quantities. Approximately one-fourth of the acreage is made up of eroded spots and active gullies that head toward the terrace tops.

Field Survey

The field survey yielded negative findings for potential paleontological resources, and no surficial indications of any fossil remains were observed within or adjacent to the Project site. The ground surface of the site has been heavily disturbed during past development on the property, including agricultural operations and construction activities. In addition to the construction of the buildings, structures, and access roads, the slopes along the southern edge of the Project site have evidently been reshaped in the past with heavy equipment.

Conclusion

In summary, the surface sediments in the Project site, generally the top two feet of soils, are highly disturbed and therefore represent a low potential for significant nonrenewable paleontological resources. Along the southern edge of the property, the subsurface sediments consist of late Pleistocene to Holocene wash deposits, which are generally low in paleontological sensitivity.

While no vertebrate fossil localities were previously found at the Project site, fossil remains have been recovered nearby from the alluvium and rock sequences that also occur subsurface in most of the site. These older alluvial sediments underlying the disturbed surface soils in most of the site appear to have a high potential for paleontological resources. As such, a paleontological resource impact mitigation program shall be developed and implemented to protect possible resources in this portion of the site, as required by the following mitigation.

Level of Significance: Potentially Significant.

Mitigation Measure:

4.9.1 A paleontological monitoring program shall be required during all earth-moving operations reaching beyond the depth of two feet in all but the southernmost portion of the Project site (and in that portion as well if paleontologically sensitive sediments are identified in the field). The monitoring program shall be developed in accordance with the provisions of CEQA as well as the proposed guidelines of the Society of Vertebrate Paleontology (2010), and shall include but not be limited to the following components:

- *Excavations in sediments identified as likely to contain fossil remains shall be monitored for potential paleontological resources. The monitor shall be prepared to quickly salvage fossils as they are unearthed to avoid construction delays, and shall collect samples of sediments that are likely to contain fossil remains of small vertebrates or in vertebrates. However, the monitor must have the power to temporarily halt or divert grading equipment to allow for the removal of abundant or large specimens.*
- *Collected samples of sediment shall be processed to recover small fossils, and all recovered specimens shall be identified and curated at a repository with permanent retrievable storage.*
- *A report of findings, including an itemized inventory of recovered specimens, shall be prepared upon completion of the procedures outlined above. The report shall include a discussion of the significance of the paleontological findings, if any. The report and the inventory, when submitted to the City of Eastvale, would signify completion of the program to mitigate potential impacts on paleontological resources.*

Level of Significance After Mitigation: Less-Than-Significant. With the incorporation of Mitigation Measure 4.9.1, the potential for the Project to directly or indirectly destroy a unique paleontological resource or site is considered less-than-significant.

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

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

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

Impact Analysis: Consistent with AB 52 requirements, the City of Eastvale has commenced consultation with the appropriate and potentially affected Tribal Historic Preservation Officers (THPOs). Pursuant to the consultation process, potentially affected TPHOs have indicated that Tribal Cultural Resources (TCRs) could be affected by the Project.

Level of Significance: Potentially Significant.

Mitigation Measures:

4.9.2 *Monitoring Agreement. Prior to the issuance of a grading permit, the Project Applicant (Applicant) shall contact each consulting Native American tribe that has requested monitoring through consultation with the City during the AB 52 process and shall develop and implement a Tribal Monitoring Agreement (Agreement) with requesting tribe(s). Consulting tribes include Soboba Band of Luiseño Indians and Gabrieleño Band of Mission Indians-KIZH Nation. A copy of the Agreement shall be provided to the City of Eastvale Planning Department prior to the issuance of a grading permit.*

4.9.3 Tribal Cultural Resources (TCR) Monitor and Monitoring Plan. At least 30 days prior to application for a grading permit and before any grading, excavation, and/or ground-disturbing activities, the Applicant shall retain a Secretary of Interior Standards-qualified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown Tribal Cultural Resources (TCRs). The Project archaeologist, in consultation with the interested tribes identified at Mitigation Measure 4.9.2, and the developer(s), shall implement a TCR Monitoring Plan (Monitoring Plan).

The Monitoring Plan shall include:

A. Project[2] grading and development scheduling.

B. Cultural sensitivity training for the construction staff to be held during required pre-grading/ground disturbance meeting(s).

C. The development of a rotating or simultaneous schedule in coordination with the Applicant and the Project archaeologist for designated Native American tribal monitors representing consulting tribes during grading, excavation, and ground-disturbing activities on the site.

D. The safety requirements, duties, scope of work, and Native American tribal monitors' authority to stop and redirect grading activities in coordination with all Project archaeologists.

E. The protocols and stipulations that the developer(s), tribes, and Project archaeologist will follow in the event of TCR discoveries.

4.9.4 Treatment and Disposition of Tribal Cultural Resources. If TCRs as defined at Public Resources Code section 21074, are encountered during Project ground-disturbing activities, the following TCR treatment and disposition procedures shall be implemented:

A. Temporary Curation and Storage. During construction, all encountered TCRs shall be temporarily curated in a secure location on-site or at the offices of the Project archaeologist. Any TCRs removed from the Project site shall be thoroughly inventoried with tribal monitor oversight of the process.

[2] Project and Project site include both Site 1 and Site 2 as described within this EIR.

B. Treatment and Final Disposition. The Applicant shall relinquish ownership of all TCRs, including sacred items, burial goods, and all archaeological artifacts and non-human remains. The Applicant shall relinquish the artifacts through reburial and/or curation as indicated below and shall provide the City Planning Department with documentation of same in a Final Report as specified below. If more than one tribe is involved with the Project and cannot come to a consensus as to the disposition of TCRs, TCRs in dispute shall be curated at the Western Science Center.

1. *Reburial on-site. If TCR reburial on-site is possible without adversely affecting the Project's design, in consultation with consulting tribe(s), accommodate the process for such on-site reburial. The process for reburial shall include measures and provisions to protect the reburial area from any future impacts. Reburial shall not occur until all cataloguing and basic recordation have been completed.*
2. *Permanent Curation. A curation agreement with a qualified repository (Repository) in Riverside County that meets federal standards based on 36 Code of Federal Regulations Part 79. Any curated TCRs and associated records shall be transferred, including title, to the Repository, to be accompanied by payment of the fees necessary for permanent curation.*
3. *Monitoring Report. Within 60 days of the completion of Project ground-disturbing activities, a Phase IV Monitoring Report (Report) shall be submitted to the City documenting monitoring activities conducted by the Project archaeologist and tribal monitors. The Report shall:*

   a. Document the impacts to TCRs;

   b. Describe how each TCR mitigation measure was fulfilled;

   c. Document the type of recovered TCRs and the disposition of such resources;

   d. Provide evidence of the required cultural sensitivity training for the construction staff held during the required pre-grading/ground disturbance meeting(s);

   e. In a confidential appendix, include the daily/weekly monitoring notes from the Project archaeologist.

   f. Be submitted to the City, Eastern Information Center, and consulting tribes.

4.9.5 Human Remains. Complementing mandated requirements of California Health and Safety Code Section 7050.5, and California Public Resources Code Section 5097.98(b), the

following measure shall be implemented if any human remains are encountered in the course of Project development:

- *Following discovery and during assessment of any encountered human remains, work shall be diverted at least 50 feet from the site of encountered remains. The location(s) of encountered human remains shall be kept confidential and shall be secured to prevent disturbance. If left overnight, remains shall be covered with a muslin cloth and steel plate over the excavation to protect the remains. If this method of protection is not feasible, a guard shall be posted.*

Level of Significance After Mitigation: Less-Than-Significant. Implementation of Mitigation Measures 4.9.2 through 4.9.5 ensure that impacts to encountered TCRs that are:

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

- Or are determined by the City of Eastvale, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1 to include consideration of the significance of the resource to a California Native American tribe,

would be mitigated to pursuant to agreement with affected consulting tribe(s). On this basis, the potential for the Project to cause a substantial adverse change in the significance of a tribal cultural resource, as defined at Public Resources Code Section 21074 would be less-than-significant as mitigated.

5.0 OTHER CEQA CONSIDERATIONS

5.0 OTHER CEQA CONSIDERATIONS

This Section of the EIR addresses other environmental considerations and topics mandated under the California Environmental Quality Act (CEQA). These topics include Cumulative Impacts, Alternatives to the Project, Growth Inducement, Significant Environmental Effects of the Project, Significant and Irreversible Environmental Changes, and Energy Conservation.

5.1 CUMULATIVE IMPACT ANALYSIS

The *CEQA Guidelines* require that an EIR identify any significant cumulative impacts associated with a project [*CEQA Guidelines*, Section 15130(a)]. When potential cumulative impacts are not deemed significant, the document should explain the basis for that conclusion. Cumulative impacts are "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." [*CEQA Guidelines*, Section 15355]. Thus, a legally adequate cumulative impact analysis is an analysis of a given project viewed over time and with other related past, present, and foreseeable probable future projects, whose impacts might compound or interrelate with those of the Project considered here.

CEQA notes that the discussion of cumulative impacts should be guided by standards of practicality and reasonableness [*CEQA Guidelines*, Section 15130(b)]. Only those projects whose impacts might compound or interrelate with those of the Project under consideration require evaluation. CEQA does not require as much detail in the analysis of cumulative environmental impacts as must be provided for the Project alone.

The *CEQA Guidelines* identify two basic methods for satisfying the cumulative impacts analysis requirement: the list-of-projects methodology, and the summary-of-projections methodology. Because each environmental resource is affected by its surroundings in

different manners, either of the two methodologies, or a combination of both, may be applied to the analysis of cumulative impacts to each resource. For example, because the approval process and construction phase of development typically takes at least one to two years, the list-of-projects method is likely to provide a more accurate projection of growth in the near term. This method may overstate potential cumulative impacts because the considered list-of-projects may include proposals that would never be developed. Similarly, because development proposals are rarely publicly known until within five years of the expected development, the summary-of-projections method provides a more accurate projection of growth over the long term. This method may not accurately predict growth in any given year but aggregates various growth trends over the long term.

For each topical discussion presented herein, the cumulative geographic context is identified which in turn relates to the amount and type of growth that is anticipated to occur within the geographic area under consideration. Where appropriate to the analysis in question, cumulative impacts are assessed with reference to a list of off-site "related projects," as described at *CEQA Guidelines* §15130(b). In this manner, the EIR appropriately characterizes and evaluates potential cumulative impacts.

Consistent with direction provided in the *CEQA Guidelines,* related projects considered in these cumulative analyses are "only those projects whose impacts might compound or interrelate with those of the Project under consideration require evaluation." In this regard, it is recognized that within the context of the cumulative impacts analysis, varied criteria are employed in determining the scope and type of "cumulative projects" considered. For example, the analysis of cumulative traffic impacts evaluates the Project's traffic impacts in the context of other known or probable "related" development proposals that would discernibly affect traffic conditions within the Traffic Impact Analysis Study Area. As another example, cumulative air quality impacts are considered in terms of the Project's contribution to other air emissions impacts affecting the encompassing Air Basin.

The manner in which each resource may be affected also dictates the geographic scope of the cumulative impacts analysis. For example, cumulative traffic impacts would typically be localized to the vicinity of a given project site because after a relatively short distance, traffic patterns tend to normalize; whereas cumulative air quality impacts are more appropriately analyzed with a Basin-wide approach because the Basin's meteorological and geographic conditions generally define the extent of cumulative air quality considerations. Similar considerations are discussed in evaluating potential cumulative impacts for each of the EIR's environmental topics (Land Use and Planning, Transportation/Traffic, Air Quality, Global Climate Change and Greenhouse Gas Emissions, Noise, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, and Cultural Resources/Tribal Cultural Resources.

Unless otherwise noted herein, the cumulative impact analysis ultimately evaluates effects of the Project within the context of anticipated buildout of the City as envisioned under the General Plan and related regional plans. Specific cumulative projects have also been identified where this information may be different, more detailed than that provided within the General Plan or applicable regional plans, or where such specific information otherwise benefits the cumulative impact analyses.

5.1.1 DISCUSSION OF CUMULATIVE IMPACTS

Section 15130(a) of the *CEQA Guidelines* notes that "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not 'cumulatively considerable,' a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable." Potential cumulative impacts for each of the EIR's environmental topics are presented below and include:

- Land Use and Planning;
- Transportation/Traffic;
- Air Quality;
- Global Climate Change and Greenhouse Gas Emissions;

- Noise;
- Geology and Soils;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality; and
- Cultural Resources/Tribal Cultural Resources.

For other topical areas of consideration, Project impacts have been previously determined to be less-than-significant. Further, under these topics, there are no known or anticipated projects or conditions whose impacts might compound or interrelate with those of the Project, and thereby result in potentially significant cumulative impacts. No further substantive analysis is provided under these topics. Please refer also to EIR Section 1.5, *Impacts Not Found to be Potentially Significant*.

5.1.1.1 Cumulative Impacts Related to Land Use and Planning

The cumulative impact area when considering potential cumulative land use and planning issues includes areas that are currently, or are anticipated to be, subject to provisions of the City General Plan, Zoning Ordinance, and/or Special Planning Documents (e.g., Specific Plans). The cumulative impact area includes incorporated areas of the City of Eastvale.

General Plan and Zoning Considerations

The Project incorporates the following proposed modifications to the City of Eastvale General Plan Land Use and Zoning designations:

- Approval of a General Plan Amendment (Land Use) - From Medium Density Residential to Commercial Retail on both Sites 1 and 2. Existing and proposed General Plan Land Use designations are presented at EIR Section 3.0, *Project Description*, Figure 3.6-1.

- Approval of a Zone Change - For Site 1 from Watercourse, Watershed and Conservation Area (W-1) and Rural Residential (R-R) to General Commercial (C-

1/C-P).[1] Existing and proposed Zoning designations are presented at EIR Section 3.0, *Project Description*, Figure 3.6-2.

As discussed at EIR Section 4.1, *Land Use and Planning*, the Project is consistent with, and appropriately responds, to applicable General Plan Goals and Policies for the proposed Commercial Retail Land Use designation; and standards and requirements of the proposed General Commercial Zoning designation.

The City comprehensively updates and amends General Plan and Zoning documents to reflect cumulative land use changes within the impact area. Regional agencies employ development-specific information and General Plan/Zoning information provided by the City in developing regional plans and growth projections. In combination, these actions ensure that potential cumulative effects of evolving land use plans are appropriately addressed at local and regional levels. The discussion at EIR Section 4.1, *Land Use and Planning*, substantiates Project consistency with applicable goals presented in the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS).

Based on the preceding discussions, the Project's contributions to potential cumulative land use and planning impacts is not considerable, and the cumulative effects of the Project are determined to be less-than-significant.

Summary

The Project land uses and operations would conform to all governing land use plans, regulations and development standards. Land use amendments proposed by the Project would be reflected in the City General Plan and Zoning documents and in responding regional plans. The Project's contributions to potential cumulative land use and planning impacts is therefore not considerable, and the cumulative effects of the Project are determined to be less-than-significant.

[1] Site 2 is currently zoned General Commercial (C-1/C-P). The proposed General Plan Amendment (Land Use) for Site 2 would establish General Plan-Zoning consistency for the Site.

5.1.1.2 Cumulative Impacts Related to Transportation/Traffic

The cumulative impact area for traffic impacts is defined by the Traffic Impact Study Area (Study Area), as described within *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018 (Project TIA, TIA).

The TIA Study Area (illustrated at EIR Section 4.2, *Transportation/Traffic*, Figure 4.2-1) includes potentially affected facilities under the jurisdiction of the City of Eastvale, City of Norco, and City of Jurupa Valley. All potentially affected Caltrans and Congestion Management Program facilities are also included within the Study Area.

Cumulative Traffic Growth

The Project TIA comprehensively reflects anticipated cumulative traffic increases affecting the Study Area and addresses related potential cumulative traffic impacts. In these regards, future year traffic forecasts reflect 2 years of background (ambient) growth at 1.6 percent per year, intended to approximate regional traffic growth.

The assumed 1.6 percent ambient traffic growth rate employed in the TIA is consistent with the projected ambient traffic growth for Riverside County in total and is line with City of Eastvale growth rates reflected in the Southern California Association of Governments (SCAG) *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS)* (SCAG) April 2016.

Ambient background traffic growth was then added to existing daily and peak hour traffic volumes on Study Area roadways in addition to traffic generated by the development of related projects that have been approved but not yet constructed, and/or for which development applications have been filed and are under consideration by governing agencies. Only certain of the identified cumulative projects have been approved by the applicable governing agency, and not all would be completed prior to the Project's anticipated opening in 2019. Nonetheless, the TIA conservatively assumes that all cumulative projects would be complete, fully occupied, and generating traffic by the Project Opening Year. Please refer to TIA Table 4-3 for a complete listing of all related development projects considered within the analysis.

Cumulative Impacts

Intersections

Existing Conditions (2017) Cumulative Intersection LOS Impacts

Under Existing Conditions, Project traffic would contribute to potentially significant cumulative LOS impacts at the Study Area Intersections listed at Table 5.1-1.

Table 5.1-1
Existing Conditions (2017)
Cumulative Intersection LOS Impacts

Intersection ID No.	Intersection Location
6	Hamner Ave. & Citrus Ave.
7	Hamner Ave. & Norco Dr./6th St.

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.

Opening Year Conditions (2019) Cumulative Intersection LOS Impacts

Under Opening Year Conditions, Project traffic would contribute to potentially significant cumulative LOS impacts at the Study Area Intersections listed at Table 5.1-2.

Table 5.1-2
Opening Year (2019)
Cumulative Intersection LOS Impacts

Intersection ID No.	Intersection Location
2	Hamner Ave. & Limonite Ave.
6	Hamner Ave. & Citrus Ave.
7	Hamner Ave. & Norco Dr./6th St.

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.

The Project Applicant would pay requisite fees toward the construction of necessary improvements, thereby fulfilling the Applicant's mitigation responsibilities for incremental contributions to cumulative traffic impacts affecting Study Area intersections.

Notwithstanding, payment of traffic impact fees does not ensure timely completion of those traffic improvements necessary to mitigate potentially significant cumulative traffic impacts affecting the Study Area. On this basis, pending completion of required improvements, the Project's contributions to Existing and Opening Year cumulative LOS impacts at intersections noted above are considered cumulatively significant and unavoidable.

Roadway Segments

Existing Conditions (2017) Cumulative Roadway Segment LOS Impacts

Under Existing Conditions, Project traffic would contribute to cumulatively significant LOS deficiencies at the Study Area roadway segment listed at Table 5.1-3.

Table 5.1-3
Existing Conditions (2017)
Cumulative Roadway Segment LOS Impacts

Segment ID No.	Roadway	Segment Limits
6	Hamner Ave.	Citrus St. to Norco Dr./6th St.

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.

Opening Year Conditions (2019) Cumulative Roadway Segment LOS Impacts

Under Opening Year Conditions, Project traffic would contribute to cumulatively significant LOS deficiencies at the Study Area roadway segments listed at Table 5.1-4.

Table 5.1-4
Opening Year Conditions (2019)
Cumulative Roadway Segment LOS Impacts

Segment ID No.	Roadway	Segment Limits
4	Hamner Ave.	Riverboat Drive to Schleisman Rd.
6	Hamner Ave.	Citrus St. to Norco Dr./6th St.

Source: *Polopolus Traffic Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) [Revised] March 23, 2018.

The Project Applicant would pay requisite fees toward the construction of necessary improvements, thereby fulfilling the Applicant's mitigation responsibilities for

incremental contributions to cumulative traffic impacts affecting Study Area roadway segments.

Notwithstanding, payment of traffic impact fees does not ensure timely completion of those traffic improvements necessary to mitigate potentially significant cumulative traffic impacts affecting the Study Area. On this basis, pending completion of required improvements, the Project's contributions to Existing and Opening Year cumulative LOS impacts at roadway segments noted above are considered cumulatively significant and unavoidable.

Freeway Ramp Queues

Existing Conditions (2017) Cumulative Freeway Ramp Queuing Impacts

Project contributions to freeway ramp queuing impacts under Existing Conditions would be less-than-significant. Cumulative impacts would similarly be less-than-significant.

Opening Year Conditions (2019) Cumulative Freeway Ramp Queuing Impacts

Project contributions to freeway ramp queuing impacts under Opening Year Conditions would be less-than-significant. Cumulative impacts would similarly be less-than-significant.

Congestion Management Program (CMP) Facilities

Existing Conditions (2017) Cumulative CMP Facilities Impacts

Project contributions to CMP facilities impacts under Existing Conditions would be less-than-significant. Cumulative impacts would similarly be less-than-significant.

Opening Year Conditions (2019) Cumulative CMP Facilities Impacts

Project contributions to CMP facilities impacts under Opening Year Conditions would be less-than-significant. Cumulative impacts would similarly be less-than-significant.

Public Transit, Bicycle, and Pedestrian Facilities Impacts

Existing Conditions (2017) Cumulative Public Transit, Bicycle, and Pedestrian Facilities Impacts

Project contributions to public transit, bicycle, and pedestrian facilities impacts under Existing Conditions would be less-than-significant. Cumulative impacts would similarly be less-than-significant.

Opening Year Conditions (2019) Cumulative CMP Facilities Impacts

Project contributions to public transit, bicycle, and pedestrian facilities impacts under Opening Year Conditions would be less-than-significant. Cumulative impacts would similarly be less-than-significant.

Summary

To mitigate incremental contributions to cumulative traffic impacts affecting Study Area intersections, the Project Applicant would pay requisite fees toward the construction of necessary improvements. Notwithstanding, payment of traffic impact fees does not ensure timely completion of those traffic improvements necessary to mitigate potentially significant cumulative traffic impacts affecting the Study Area. On this basis, pending completion of required improvements, the Project's contributions to cumulative traffic impacts at intersections and roadway segments identified within this Section are therefore considered cumulatively significant and unavoidable. All other Project transportation/traffic impacts would be individually and cumulatively less-than-significant.

5.1.1.3 Cumulative Impacts Related to Air Quality

The cumulative impact area for air quality considerations is generally defined by the encompassing Air Basin and boundaries of the jurisdictional air quality management agency. In this case, the South Coast Air Basin (Basin) and the South Coast Air Quality Management District (SCAQMD) respectively. Project emissions within the context of SCAQMD's regional emissions thresholds provide an indicator of potential cumulative impacts within the jurisdictional Basin. Due to the defining geographic and

meteorological characteristics of the Basin, criteria pollutant emissions that could cumulatively impact air quality would be, for practical purposes, restricted to the Basin. Accordingly, the geographic area encompassed by the Basin is the appropriate limit for this cumulative Air Quality analysis.

Construction-source Air Quality Impacts

Regional Impacts

Mitigated Project construction-source air quality emissions would not exceed applicable SCAQMD regional thresholds and would be less-than-significant. Pursuant to SCAQMD criteria, less-than-significant impacts at the Project level are not cumulatively considerable. The potential for Project construction-source emissions to result in or cause cumulatively significant regional air quality impacts is therefore considered less-than-significant.

Localized Impacts

Mitigated Project construction-source air quality emissions would not exceed applicable SCAQMD Localized Significance Thresholds (LSTs) and would be less-than-significant. Pursuant to SCAQMD criteria, less-than-significant impacts at the Project level are not cumulatively considerable. The potential for Project construction-source emissions to result in or cause cumulatively significant localized air quality impacts is therefore considered less-than-significant.

Operational-source Air Quality Impacts

Regional Impacts

The Project would implement development-specific air quality mitigation measures, acting to generally reduce the Project's operational-source air pollutant emissions. Additionally, incorporation of contemporary energy-efficient technologies and operational programs, and compliance with SCAQMD emissions reductions and control requirements act to reduce Project air pollutant emissions generally. However, even after the application of mitigation measures and implementation of Project design features and

operational programs, the Project would generate operational-source emissions of Oxides of Nitrogen (NO_X) that would exceed applicable SCAQMD regional thresholds. This is a significant individual and cumulative air quality impact.

Localized Impacts

Project operational-source air quality emissions would not exceed applicable SCAQMD Localized Significance Thresholds (LSTs) and would be less-than-significant. Pursuant to SCAQMD criteria, less-than-significant impacts at the Project level are not cumulatively considerable. The potential for Project operational-source emissions to result in or cause cumulatively significant localized air quality impacts is therefore considered less-than-significant.

Nonattainment Impacts

The Project is located within ozone and $PM_{10}/PM_{2.5}$ nonattainment areas (NO_x is a precursor to ozone and $PM_{10}/PM_{2.5}$). Over the life of the Project, operational-source NO_x emissions exceedances noted above would result in a cumulatively considerable net increase in criteria pollutants (ozone and $PM_{10}/PM_{2.5}$) for which the encompassing region is nonattainment. These are cumulatively significant and unavoidable air quality impacts.

Air Quality Management Plan (AQMP) Consistency Impacts

The Project would implement development-specific air quality mitigation measures, acting to generally reduce the Project's operational-source air pollutant emissions. Additionally, incorporation of contemporary energy-efficient technologies and operational programs, and compliance with SCAQMD emissions reductions and control requirements act to reduce Project air pollutant emissions generally. However, even after the application of mitigation measures and implementation of Project design features and operational programs, the Project would not conform to applicable AQMP consistency criteria. This is a significant individual and cumulative air quality impact.

CO Hotspot Impacts

The potential for the Project to cause or result in potential CO hotspot impacts would be less-than-significant. Pursuant to SCAQMD criteria, less-than-significant impacts at the

Project level are not cumulatively considerable. The potential for Project CO emissions to result in or cause cumulatively significant CO hotspot impacts is therefore considered less-than-significant.

5.1.1.4 Cumulative Impacts Related to GHG Emissions/Global Climate Change

CEQA emphasizes that the effects of greenhouse gas emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis. (*CEQA Guidelines* Section 15130(f)). In this regard, the Project Greenhouse Gas (GHG) Analysis (EIR Appendix D) is by nature a cumulative analysis. Consistent with *CEQA Guidelines* direction, the Project GHG Analysis and this EIR evaluates Project GHG emissions under the following topical headings:

- Potential for the Project to generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and
- Potential for the Project to conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The City has further determined that each of the above thresholds establish a separate and independent basis upon which to substantiate the significance of the Project's potential GHG emissions impact. Project impacts within the context of the above threshold considerations are evaluated in the following discussions.

Potential for the Project to generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

As discussed at EIR Section 4.4, *Global Climate Change and Greenhouse Gas Emissions*, the Project cannot feasibly achieve the SCAQMD screening level threshold of 3,000 MTCO2e. Conformance with Title 24 Energy Efficiency requirements, CalGreen mandates, and other energy efficiency measures implemented by the state, as well as conservation measures implemented through City Ordinances (e.g., City of Eastvale Water Conservation Ordinance) would act to generally reduce area-source and energy-source GHG emissions, but would have no substantive effect on mobile-source GHG emissions, the primary contributor to the Project GHG emission impact.

Responsibility and authority for regulation of mobile-source emissions resides with the State of California (CARB, et al.). Neither the Applicant nor the Lead Agency can mandate substantive reductions in mobile-source GHG emissions, much less reductions that would achieve the applicable SCAQMD threshold of 3,000 MTCO2e. On this basis, quantified net GHG emissions generated by the Project would be cumulatively considerable, and the Project net GHG emissions impact would be cumulatively significant and unavoidable.

Potential for the Project to conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

As also discussed at EIR Section 4.4, *Global Climate Change and Greenhouse Gas Emissions*, Project GHG emissions would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. That is, as substantiated at EIR Section 4.4, the Project is consistent with all applicable goals and policies. The Project promotes the goals of the Scoping Plan through implementation of design measures that reduce energy and water consumption and that would generally facilitate reductions in GHG emissions. In addition, the Project is required to comply with the regulations that have been adopted to implement the Scoping Plan and to achieve AB 32 year 2020 and SB 32 year 2030 GHG emissions reductions targets. The Project would also conform to measures that may be included in the 2017 Scoping Plan Update as these would be regulatory requirements (when adopted). In summary, the Project does not conflict with any plans to reduce GHG emissions and furthers the state's goals relative to this impact.

On this basis, the potential for the Project to conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases is therefore less-than-significant and not cumulatively considerable.

Summary

Project GHG emissions would exceed the SCAQMD 3,000 MTCO2e screening-level threshold. Quantified Project GHG emissions would be cumulatively significant. The Project would not conflict with an applicable plan, policy or regulation adopted for the

purpose of reducing the emissions of greenhouse gases is therefore less-than-significant and not cumulatively considerable.

5.1.1.5 Cumulative Impacts Related to Noise

Construction-Source Noise

As discussed at EIR Section 4.5, *Noise*, even after compliance with regulations and application of mitigation measures, Project construction-source noise levels received at nearby properties would represent a substantial temporary periodic increase in noise conditions compared to conditions without the Project. Construction-source noise impacts affecting these properties are recognized as significant.

Project construction-source noise in combination with ambient noise levels would also represent a substantial temporary increase in noise conditions compared to conditions without the Project and would be considered cumulatively significant and unavoidable for the duration of construction activities.

It is further recognized, however, that individual and cumulative construction-source noise impacts would be temporary, intermittent and of short duration, and would dissipate entirely at the conclusion of construction activities.

Operational Noise-Area Sources

Project-source incremental contribution to the ambient noise condition at a second-floor receiver location[2] proximate to the southwesterly boundary of Site 2 (location of a proposed car wash use) would approach 6.2 dBA Leq. In the context of the ambient noise condition (54.4 dBA Leq), this is a *potentially significant* impact.

At the affected second floor receiver location, a physical noise barrier exceeding 14 feet would be required to ensure that the increment of received noise would not exceed 5

[2] The Project Noise Impact Analysis specifically identifies the significant impact affecting the second-floor façade at receiver location "R6." Receiver location R6 represents the residential home located at 7042 College Park Drive, approximately 10 feet southwesterly of Site 2.

dBA, and therefore be less than significant. Construction of such a barrier would result in land use and aesthetic incompatibilities; and from a pragmatic perspective would be cost-prohibitive. The increase in ambient noise conditions at Receiver R6 (second floor façades) is conservatively assumed to exceed 5 dBA, and the incremental increase in the ambient noise condition would be *significant and unavoidable*. This noise level increase in combination with ambient noise levels would also represent a substantial permanent increase in noise conditions compared to conditions without the Project and would be considered cumulatively significant and unavoidable over the life of the Project.

All other received Project area-source operational noise levels would be less-than-significant as mitigated and would be cumulatively less-than-significant.

Operational Noise-Mobile Sources

Cumulative effects of vehicular (mobile-source) noise are demonstrated by comparing noise levels under Existing Conditions (2017) to noise levels with the Project under Opening Year Conditions (2019). Cumulative vehicular-source noise impacts are summarized at Table 5.1-5.

Table 5.1-5
Cumulative Vehicular-Source Noise Impacts

		2017 CNEL at Receptor (dBA)*			2019 CNEL at Receptor (dBA)*			Cumulative Increase 2017 w/o Project – 2019 w/Project (dBA CNEL)
Roadway	**Segment**	**No Project**	**With Project**	**Project Addition**	**No Project**	**With Project**	**Project Addition**	
Scholar Way	n/o Schleisman Rd.	65.5	65.6	0.1	65.9	66.0	0.1	0.5
Scholar Way	s/o Schleisman Rd.	65.3	65.5	0.2	65.9	66.0	0.1	0.7
Hamner Ave.	n/o Limonite Ave.	***68.8***	***68.8***	***0.1***	***70.3***	***70.3***	***0.0***	***1.5***
Hamner Ave.	s/o Limonite Ave.	***68.3***	***68.7***	***0.4***	***69.5***	***69.8***	***0.3***	***1.5***
Hamner Ave.	s/o 68th St.	***67.3***	***67.9***	***0.6***	***68.8***	***69.3***	***0.5***	***2.0***
Hamner Ave.	s/o Riverboat Dr.	***68.9***	***69.4***	***0.5***	***70.0***	***70.4***	***0.4***	***1.5***
Hamner Ave.	s/o Schleisman Rd.	***68.2***	***68.8***	***0.5***	***69.4***	***69.8***	***0.4***	***1.6***
Hamner Ave.	s/o Citrus St.	69.6	69.8	0.2	70.5	70.7	0.2	1.1
Limonite Ave.	w/o Hamner Ave.	69.3	69.4	0.1	70.4	70.5	0.1	1.2

Table 5.1-5
Cumulative Vehicular-Source Noise Impacts

		2017 CNEL at Receptor (dBA)*			2019 CNEL at Receptor (dBA)*			Cumulative Increase 2017 w/o Project – 2019 w/Project (dBA CNEL)
Roadway	Segment	No Project	With Project	Project Addition	No Project	With Project	Project Addition	
Limonite Ave.	e/o Hamner Ave.	71.0	71.1	0.1	71.9	72.0	0.1	1.0
Limonite Ave.	e/o I-15 Fwy.	70.5	70.5	0.0	71.6	71.6	0.0	1.1
68th St.	w/o Hamner Ave.	65.5	65.7	0.2	65.8	66.0	0.2	0.5
68th St.	e/o Hamner Ave.	67.0	67.1	0.1	67.7	67.8	0.1	0.8
Riverboat Dr.	w/o Hamner Ave.	63.0	65.1	2.1	63.1	65.2	2.1	2.2
Schleisman Rd.	w/o Scholar Way	64.3	64.5	0.3	65.0	65.3	0.3	1.0
Schleisman Rd.	e/o Scholar Way	63.9	64.4	0.5	64.7	65.1	0.5	1.2
Citrus St.	w/o Hamner Ave.	69.2	69.4	0.1	69.7	69.8	0.1	0.6
Citrus St.	e/o Hamner Ave.	60.3	61.4	1.0	62.3	62.9	0.6	2.6

Source: *Polopolus Noise Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 26, 2018.
Notes: *May not sum to total due to rounding.

When considering the cumulative effects of vehicular-source noise, the City General Plan 60 dBA CNEL residential "completely compatible" standard is defined as the maximum acceptable ambient condition.[3] Paralleling the Federal Interagency Committee on Noise (FICON) [4] guidance discussed at EIR Section 4.5, *Noise*, when ambient noise conditions are within acceptable parameters (less than 60 dBA CNEL) and cumulative effects of vehicular-source noise would be readily perceptible (≥ 5 dBA CNEL), cumulative vehicular-source noise impacts would be considered potentially significant. When ambient baseline conditions already exceed minimum acceptable standards (60 – 65 dBA CNEL) and subsequent increases in noise levels would be barely perceptible (≥ 3 dBA CNEL) cumulative vehicular-source noise impacts would be considered potentially significant. When ambient baseline conditions already exceed minimum acceptable standards (> 65 dBA CNEL) increases in noise levels of ≥ 1.5 dBA CNEL would be considered potentially significant.

[3] General Plan Table N-3: *Noise Compatibility by Land Use Designation*
[4] *Federal Agency Review of Selected Airport Noise Analysis* (Federal Interagency Committee on Noise) 1992.

As indicated in Table 5.1-5, the total cumulative noise increases along roadways within the Study Area over the considered 2-year cumulative time frame would range from 0.5 dBA CNEL to 2.6 dBA CNEL. Study Area roadway segments affected by cumulatively significant vehicular-source noise impacts are indicated by ***bold italicized text***. Along these roadway segments, cumulative noise levels would increase by at least 1.5 dBA CNEL, with the ambient 2017 noise levels already exceeding 65 dBA CNEL. Along these segments, vehicular-source noise increases from Existing Conditions to Opening Year Conditions would be potentially cumulatively significant.

In all instances, the Project's incremental contributions along the affected roadway segments would be less than 1.5 dBA and would therefore not be cumulatively considerable.

Summary

Even after compliance with regulations and application of mitigation measures, Project construction-source noise levels received at nearby properties would represent a substantial temporary increase in ambient noise conditions without the Project. Project construction-source noise impacts are recognized as individually and cumulatively significant. Potential construction-source noise impacts would dissipate entirely at the conclusion of construction activities.

The increase in ambient noise conditions at Receiver R6 (second floor façade located southwesterly of the Project's carwash) is conservatively assumed to exceed 5 dBA, and the incremental increase in the ambient noise condition would be *significant and unavoidable*. This noise level increase in combination with ambient noise levels would also represent a substantial permanent increase in noise conditions compared to conditions without the Project and would be considered cumulatively significant and unavoidable over the life of the Project.

Noise increases along certain roadway segments within the Study Area would be cumulatively significant over the time frame 2017 to 2019. However, in all instances, the

Project's incremental contributions along the affected roadway segments would be less than 1.5 dBA and would therefore not be cumulatively considerable.

5.1.1.6 Cumulative Impacts Related to Geology and Soils

The Project site and all of Southern California lie within a seismically active area, generally susceptible to earthquake hazards. In this sense, Southern California is considered the cumulative impact area for geology and soils considerations. As substantiated at EIR Section 4.6, the Project's potential geology and soils impacts are determined to be less-than-significant as mitigated. No unique geologic features are present within the Project site or vicinity.

The Project would result in the construction of new commercial, retail, service, and civic land uses and supporting facilities. Infrastructure improvements and utility extensions implemented by the Project would include transportation system improvements, water lines, sewer lines, gas lines, electricity lines, and storm water management systems. Consistent with market demands, telephone and cable television services would also be extended into the subject site.

Based on the creation and occupation of additional uses and implementation of supporting infrastructure described above, the Project would incrementally increase concentrations of persons, structures, and infrastructure systems on a previously undeveloped site within an earthquake-prone region. Potential impacts of increased exposure to seismic effects as a result of new development were considered and determined to be less-than-significant based on conformance to seismic design and engineering practices and requirements of the California Building Code (CBC), State Seismic Mapping Act, and City building standards. Similarly, potential impacts related to erosion, subsidence, shrinkage, expansion, and soil consolidation are mitigated to levels that would be less-than-significant through conformance with local, regional, state, and federal permitting and regulatory requirements.

Summary

Mandated compliance with seismic design and engineering standards, soil conservation and erosion protection reduces the Project's potential contribution to cumulative impacts in regard to geology and soils to levels that would be less-than-significant.

5.1.1.7 Cumulative Impacts Related to Hazards and Hazardous Materials

For the purposes of this analysis, the cumulative impact area when considering potential hazards and hazardous materials issues generally includes the area to be developed within the Project site, as well as off-site locations that might be affected by or contribute to hazards or hazardous conditions resulting from the Project and its operations. These areas generally include neighboring properties within the City of Eastvale. The cumulative hazards and hazardous materials impact analysis evaluates effects of the Project construction and operations and reflects long-term buildout conditions within the cumulative impact area.

The EIR incorporates mitigation measures requiring remediation of pre-existing potentially hazardous conditions within the Project site. These measures would reduce Project hazards/hazardous material impacts and Project contributions to cumulative hazards/hazardous material impacts to levels that would be less-than-significant.

The Project does not propose or require uses or operations that would result in potentially significant hazards or hazardous material impacts. That is, the Project does not propose uses or activities that would require substantive handling or use of hazardous materials, hazardous substances, or hazardous waste that could result in potential adverse effects. To the extent that such materials or substances may be present during Project construction or operations they would be transported, stored, used and disposed of consistent with the multiple and broad regulatory requirements, ensuring the Project would not result in potentially significant hazards/hazardous materials impacts.

Summary

Based on compliance with established policies and regulations, as well as Project-specific mitigation, the Project's potential contribution to cumulative impacts in regard to

hazards/hazardous materials is not considerable, and the cumulative effects of the Project are less-than-significant.

5.1.1.8 Cumulative Impacts Related to Hydrology and Water Quality

The cumulative impact area for hydrology/water quality impact considerations is defined as the area encompassed by the jurisdictional Regional Water Quality Control Board (RWQCB), in this case the Santa Ana Regional Water Quality Control Board (SARWQCB). Local oversight is also provided by the City of Eastvale and Riverside County. Development of the Project site would incrementally increase impervious surfaces within the cumulative impact area, with related potential increases in the rate and quantity of local stormwater discharges. In response, the Project incorporates stormwater management components that collectively act to ensure that post-development stormwater discharges are conveyed to available receiving systems and would not exceed those systems' capacities.

As substantiated at EIR Section 4.8, and within the Project Drainage Study and Preliminary Water Quality Management Plan (EIR Appendix H), stormwater discharges from the developed Project site would not exceed receiving systems capacities; and stormwater discharges would comply with City and SARWQCB water quality performance standards.

The Project stormwater management system would be developed and operated in compliance with City/SARWQCB regulations and water quality standards. The City of Eastvale is required to comply with the Municipal Separate Storm Sewer System (MS4) Permit issued by the SARWQCB. Design, configuration, and locations of proposed drainage system improvements would be reviewed and approved by the City/SARWQCB prior to, or concurrent with, application for grading permits.

Summary

The Project incorporates all necessary development-specific stormwater management systems and facilities. Additionally, to facilitate stormwater conveyance from the Project Area and surrounding properties, the Project would install a 36-inch storm drain line

within Hamner Avenue that would connect from the existing storm drain at the intersection of Hamner Avenue at Riverboat Drive to the intersection of Hamner Avenue at Schleisman Road.

The Project would comply with established stormwater management and stormwater treatment policies and regulations. As complemented by implementation of Project-specific stormwater management components, and improvements to the area-serving stormwater management system, Project's potential contribution to cumulative impacts in regard to hydrology/water quality is not considerable, and the cumulative effects of the Project are determined to be less-than-significant.

5.1.1.9 Cumulative Impacts Related to Cultural Resources/Tribal Cultural Resources

The cumulative impact area for prehistoric, archaeological, and historic resources generally includes the City of Eastvale and surrounding areas of Riverside County. Impacts to any cultural resources/tribal cultural resources within this area would be site-specific. Consistent with CEQA requirements, in the event that potentially significant cultural resources/tribal cultural resources are encountered within the cumulative impact area, mitigation measures would be applied to ensure the preservation and protection of potentially significant resources. (*CEQA Guidelines* §15064.5. et al.) As substantiated at EIR Section 4.9, the Project's potential impacts to cultural resources/tribal cultural resources are determined to be less-than-significant as mitigated and would not be cumulatively considerable. Mitigation proposed for the Project (i.e., monitoring of construction activities for potential discovery of cultural resources) is typical of, and consistent with, mitigation required within developing urban and suburban areas throughout the City of Eastvale and surrounding region.

With the application of proposed mitigation measures, the Project's potential contribution to cumulative impacts in regard to cultural resources/tribal cultural resources is not considerable, and the cumulative effects of the Project are determined to be less-than-significant.

Summary

With the application of proposed mitigation measures, the Project's contributions to potential cumulative cultural resources/tribal cultural resources impacts would be less-than-significant and the cumulative effects of the Project are determined to be less-than-significant.

5.2 ALTERNATIVES ANALYSIS

5.2.1 Alternatives Overview

Descriptions of, and the rationale underlying, the alternatives considered in this EIR are presented below. As provided for under CEQA, the ultimate rationale underlying the development and selection of alternatives to the Project is the reduction or avoidance of otherwise resulting significant environmental impacts while allowing for attainment of most of the basic Project Objectives.

Alternatives considered within this analysis include:

- No Project Alternative;
- No Build Alternative;
- Reduced Intensity Alternative;
- Alternative Sites;
- Avoidance Significant Traffic Impacts Alternative;
- Avoidance of Significant Air Quality Impacts Alternative;
- Avoidance of AQMP Inconsistency Impacts Alternative;
- Avoidance of Significant GHG Emissions Impacts Alternative;
- Avoidance of Significant Noise Impacts Alternative.

These Alternatives are described in greater detail in Section 5.2.2, *Description of Alternatives*. To provide context for the subsequent consideration of Alternatives, significant Project impacts are summarized below in Table 5.2-1, and Project Objectives are subsequently restated.

Table 5.2-1
Summary of Significant and Unavoidable Impacts

Environmental Topic	Comments
Transportation/ Traffic	**Intersection Level of Service (LOS) Impacts/Roadway Segment Impacts** The Project Applicant would construct improvements and would, where applicable, pay requisite fees to be directed toward completion of necessary off-site traffic intersection and roadway segment improvements within the Study Area. Payment of fees does not assure timely implementation of required improvements. In instances where payment of fees is identified as mitigation, pending completion of required improvements, the Project's contributions to Existing (2017) and Opening Year (2019) Intersection and Roadway Segment LOS impacts would be considered cumulatively significant and unavoidable. More specifically, absent recommended improvements, impacts would be cumulatively significant and unavoidable at the following Study Area facilities. **Intersections** **ID # — Location** 2 — Hamner Ave. & Limonite Ave. 6 — Hamner Ave. & Citrus Ave. 7 — Hamner Ave. & Norco Dr./6th St. **Roadway Segments** **ID # — Roadway — Segment Limits** 4 — Hamner Ave. — Riverboat Drive to Schleisman Rd. 6 — Hamner Ave. — Citrus St. to Norco Dr./6th St.
Air Quality	**NOx Regional Threshold Exceedance** Project operational-source emissions of nitrogen oxides (NO_x) would exceed applicable South Coast Air Quality Management District (SCAQMD) regional thresholds. This is a Project-level and cumulatively significant impact. **Contributions to Non-Attainment Conditions** The Project is located within ozone and PM_{10}/$PM_{2.5}$ non-attainment areas (NO_x is a precursor to ozone, PM_{10}, and $PM_{2.5}$). Project operational-source NO_x emissions exceedances would therefore result in a cumulatively considerable net increase in criteria pollutants (ozone, PM_{10}, and $PM_{2.5}$) for which the Project region is non-attainment. These are cumulatively significant air quality impacts. **AQMP Inconsistency** The Project land uses are not reflected in land use plans and regional development assumed in the South Coast Air Basin 2016 Air Quality Management Plan (AQMP). On this basis, the Project is conservatively assumed to generate operational-source emissions not reflected within the current AQMP regional emissions inventory for the Basin. The Project is

Table 5.2-1
Summary of Significant and Unavoidable Impacts

Environmental Topic	Comments
	therefore considered to be inconsistent with the 2016 AQMP. This is a Project-level and cumulatively significant impact.
GHG Emissions	Project GHG emissions would exceed the SCAQMD screening-level threshold of 3,000 MTCO2e. On this basis, quantified net GHG emissions generated by the Project would be cumulatively considerable, and the Project net GHG emissions impact would be cumulatively significant and unavoidable.
Noise	**Construction-Source Noise** Even after compliance with regulations and application of mitigation measures, Project construction-source noise levels received at nearby properties would represent a substantial temporary periodic increase in noise conditions compared to conditions without the Project. Construction-source noise impacts affecting these properties are recognized as significant. Project construction-source noise in combination with ambient noise levels would also represent a substantial temporary increase in noise conditions compared to conditions without the Project and would be considered cumulatively significant and unavoidable for the duration of construction activities. **Operational-Source Noise** Project-source incremental contribution to the ambient noise condition at a second-floor receiver location[5] proximate to the southwesterly boundary of Site 2 (location of a proposed car wash use) would be individually and cumulatively significant.

PROJECT OBJECTIVES

The primary goal of the Project is the development of the subject site(s) with a productive mix of commercial, retail, service, and civic uses. Complementary Project Objectives include the following:

- To provide commercial, retail, and service uses that serve the local market area and beyond; and that attract new customers and businesses into Eastvale;

[5] The Project Noise Impact Analysis specifically identifies the significant impact affecting the second-floor façade at receiver location "R6." Receiver location R6 represents the residential home located at 7042 College Park Drive, approximately 10 feet southwesterly of Site 2.

- Provide a new Civic Center accommodating Eastvale government offices and a County of Riverside public library;

- Improve and maximize economic viability of the currently vacant and underutilized Project site through the establishment of commercial, retail, service, and civic uses;

- Maximize and broaden the City's sales tax base by providing local and regional tax-generating uses and by increasing property tax revenues;

- Provide commercial, retail, service, and civic uses within contemporary energy efficient buildings, at a location that is readily accessible by patrons and employees;

- Create additional employment-generating opportunities for the citizens of Eastvale and surrounding communities.

Please refer also to Draft EIR Section 3.5, *Project Objectives*.

5.2.2 Description of Alternatives

Alternatives to the Project that are considered in this analysis are described below.

5.2.2.1 No Project Alternative

Overview

The *CEQA Guidelines* specifically require that the EIR include in its evaluation a No Project Alternative. The No Project Alternative should make a reasoned assessment as to future disposition of the subject site should the Project under consideration not be developed. In this latter regard, the *CEQA Guidelines* state in pertinent part:

> If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the "no project" alternative

> is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this "no project" consequence should be discussed. In certain instances, the no project alternative means "no build" wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment (*CEQA Guidelines*, Section 15126.6 (e)(3)(b)).

No Project/No Build Alternative

In the case considered here, the subject site is a vacant and available property absent any significant environmental or physical constraints. Further, the Project Area is fully served by proximate available utilities and supporting public services; and is provided appropriate access. Areas around the subject site are developed with or are being developed with urban uses. The Project Area is not substantively constrained by physical conditions or environmental considerations.

Given the availability of infrastructure/services, lack of environmental or physical constraints; and proximity of other urban development, it is considered unlikely that the subject site would remain vacant or in a "No Build" condition, and evaluation of a No Build condition would "analyze a set of artificial assumptions that would be required to preserve the existing physical environment." This is inconsistent with direction provided at *CEQA Guidelines*, Section 15126.6 (e)(3)(b), as presented above.

If, however, a hypothetical No Project/No Build scenario were maintained, its comparative environmental impacts would replicate the existing conditions discussions for each of the environmental topics evaluated in this EIR; and comparative impacts of

the Project would be as presented under each of the EIR environmental topics. In all instances, a No Build scenario would result in reduced environmental impacts when compared to the Project. A No Build condition would achieve none of the basic Project Objectives.

Evaluated No Project Alternative

In light of the preceding discussions, for the purposes of this Alternatives Analysis, and to provide for analysis differentiated from the Project, the No Project Alternative considered herein assumes development of Project Sites 1 and 2 as would be permitted under the Sites' respective existing Zoning designations (Site 1: Rural Residential [R-R] and Watercourse, Watershed, and Conservation Area [W-1]; Site 2: General Commercial [C-1/C-P]). While any number of development scenarios could be implemented under the No Project Alternative, it is assumed that the westerly portion of Site 1 designated as R-R (approximately 7.5 acres) would be developed pursuant to City Zoning Code R-R Zone standards. Assuming the maximum allowable residential density based on a minimum lot size of 21,780 square feet, this would yield approximately 15 single-family residential units. The remaining, easterly portion of Site 1 (approximately 15.5 acres) would remain in a substantively undeveloped condition pursuant to City Zoning Code W-1 Zone standards.

Site 2 is assumed to be developed with commercial uses pursuant to City Zoning Code C-1/C-P standards. For analysis purposes, development of Site 2 is assumed to conform to the Site 2 gas station/car wash development concept currently proposed by the Project.

5.2.2.2 Reduced Intensity Alternative

Overview

The Project would result in certain cumulatively significant traffic impacts (roadway segments and intersections), air quality impacts (operational-source regional NOx threshold exceedance, cumulative contributions to Basin non-attainment conditions, Air Quality Management Plan inconsistency); GHG emissions impacts (exceedance of SCAQMD screening-level threshold, 3,000 MTCO2e/year); construction-source noise

impacts and operational-source noise impacts. As summarized below, the Reduced Intensity Alternative considered in this EIR is directed at reduction of the Project's significant NOx emissions impacts and would coincidentally act to globally diminish the scope of Project impacts in general. However, there are no feasible means to completely avoid significant impacts otherwise occurring under the Project; or to reduce these impacts to levels that would be less-than-significant.

Evaluated Reduced Intensity Alternative

In the context of the significant Project impacts noted above, the Reduced Intensity Alternative considered herein focuses on potential alternatives to the Project that would reduce the Project's significant air quality impacts. More specifically, the Reduced Intensity Alternative considered herein reflects a development scenario that would diminish operational-source NOx emissions exceedances otherwise occurring under the Project. The Reduced Intensity Alternative would also address and reduce coincident traffic, GHG emissions, non-attainment pollutant contributions, and AQMP inconsistency issues otherwise resulting from the Project.

Of the total operational-source NOx emissions generated by the Project, more than 97 percent (by weight) are due to Project-related traffic. Project operational-source NOx emissions could therefore likely be reduced through a reduction in the Project scope that would also reduce Project traffic (expressed as Average Daily Trips [ADT]) and associated vehicular-source emissions.

While this could be achieved through a variety of potential scope reduction schemes, for the purposes of this Alternatives Analysis, for purposes of the EIR Alternatives Analysis, the Reduced Intensity Alternative reflects elimination of the Project proposed Fast-Food restaurant uses (with and without drive through), the two greatest individual Project trip generators. This provides a readily-envisioned Reduced Intensity Alternative that would act to incrementally reduce Project operational-source NOx emissions while maintaining the Project's retail focus. Under the Reduced Intensity Alternative, total Project trips (gross trip generation) would be reduced by approximately 4,600 ADT, or by approximately 29.5 percent. The Reduced Intensity Alternative would also act to

incrementally reduce the extent of significant traffic and GHG emissions impacts otherwise occurring under the Project; would reduce incremental contributions to Basin pollutant non-attainment conditions; would reduce the scope development considered inconsistent with the adopted AQMP; and may also reduce the duration of significant construction-source noise impacts otherwise occurring under the Project. These impacts, while diminished under the Reduced Intensity Alternative, would not be reduced to levels that would be less-than-significant, and would therefore be considered significant and unavoidable.

5.2.2.3 Alternatives Considered and Rejected

Alternative Sites Considered and Rejected

As stated in the *CEQA Guidelines* §15126.6 (f)(1)(2)(A), the "key question and first step in [the] analysis [of alternative locations] 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 be considered for inclusion in the EIR." *CEQA Guidelines* §15126.6 (f) (1) also provides that when considering the feasibility of potential alternative sites, the factors that may be taken into account include: "site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent). None of these factors establishes a fixed limit on the scope of reasonable alternatives."

As stated at *CEQA Guidelines* Section 15126.6 (f)(1)(2)(A), the "key question and first step in [the] analysis [of alternative locations] is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location." As discussed in the body of the Draft EIR and summarized previously in Table 5.2-1, the Project will result in the following significant impacts:

- Cumulatively significant traffic impacts;
- Operational-source NO_x emissions exceeding SCAQMD regional thresholds and related cumulative air quality impacts and nonattainment impacts;
- AQMP inconsistency impacts;
- Cumulatively significant GHG emissions impacts;
- Individually and cumulatively significant construction-source and operational-source noise impacts.

All other potential Project impacts are determined to be either less-than-significant, or less-than-significant after mitigation.

The Project considered herein is not subject to relocation to an alternative site. Notably, as summarized below, relocation of the Project would not substantively or materially reduce the Project's significant environmental impacts, the basis for the consideration of Alternative sites under CEQA.

Relocation to an Alternative Site is not likely to achieve any measurable reduction in the Project's traffic impacts. Specifically, implementation of traffic improvements, including intersection signalization and roadway segment widening as envisioned under the City General Plan Circulation Element, are on-going processes undertaken in conjunction with the development of vacant or underutilized properties throughout the City. As such, it is unlikely that a suitable Alternative Site could be identified that would distribute Project trips only to roadways that have already been improved to their ultimate General Plan configurations, thus completely avoiding the Project's cumulatively significant impacts at transportation facilities. Further, there are no feasible alternative sites under control or likely control of the Applicant that would allow for relocation of the Project and associated reassignment of traffic.

Relocation to an Alternative Site is not likely to achieve any measurable reduction in the Project's operational-source air quality impacts. Specifically, Project operational-source NOx emissions would exceed the applicable SCAQMD regional threshold. The Project operational-source NOx exceedance is a regional air quality impact. Relocation of the

Project anywhere within the South Coast Air Basin would not alter or diminish the significance of this impact.

The AQMP land use inconsistency resulting from the Project could not be feasibly avoided by relocation of the Project to an alternative site. That is, there are no alternative sites under control or likely control of the Applicant that would allow for relocation of the Project and that would preclude a changes or changes in land use designations.

GHG emissions impacts are by definition cumulative and global in their effects. Relocation of the Project would not alter or diminish the significance of its GHG emissions impacts.

Individually and cumulatively significant construction-source noise impacts are equipment- and equipment operations-based. Relocation of the Project would not alter or diminish noise levels generated by Project construction equipment. Conceivably, the Project could be relocated to a site removed from proximate sensitive receptors, thereby potentially avoiding significant construction-source noise impacts at residential uses otherwise resulting from the Project. However, there are no feasible alternative sites under control or likely control of the Applicant that would allow for relocation of the Project and associated potential avoidance of the Project's significant construction-source noise impacts.

Individually and cumulatively significant operational-source noise impacts resulting from the carwash at Site 2 would affect the second-story of a residential use located southwesterly of the Site. As noted previously in this Section, location of a carwash at Site 2 at its present location is an integral component of the Project and is not subject to substantive alteration.

Based on the preceding considerations, analysis of an Alternative Site was not further considered.

Avoidance of Significant Traffic Impacts Alternative Considered and Rejected

Specific improvements identified in the Project TIA (EIR Appendix B) and summarized at Draft EIR Section 4.2 would, to the extent feasible, provide a physical solution to identified potentially significant cumulative traffic impacts. Notwithstanding, timely implementation of improvements required as mitigation for potentially significant cumulative traffic impacts cannot be assured, and impacts are therefore considered cumulatively significant and unavoidable pending completion of the required improvements.

Any measurable additional traffic contributed to the facilities noted previously in this Section would result in cumulatively significant transportation/traffic impacts similar to those occurring under the Project, requiring some manner of currently infeasible mitigation. Any viable development of the subject site would generate trips likely affecting some or all of the facilities that would be affected by Project traffic.

Based on the preceding, there are no feasible means to or alternatives to avoid this impact or reduce the impacts noted above to levels that would be less-than-significant. However, these impacts would be diminished under the EIR Reduced Intensity Alternative.

Avoidance of Significant Air Quality Impacts Alternative Considered and Rejected

Operational-source NOx Threshold Exceedances

Of the total operational-source NOx emissions generated by the Project, approximately 97 percent (by weight) are due to Project-related traffic. Responsibility and authority for regulation of vehicular-source NOx emissions resides with the State of California (CARB, et al.). Neither the Applicant nor the Lead Agency can effect or mandate substantive reductions in vehicular-source NOx emissions, much less reductions that would achieve the SCAQMD regional threshold for NOX emissions. At a minimum, an approximate 70 percent reduction in Project ADT and correlating reduction in Project scope would be required to achieve the SCAQMD operational-source NOx regional emissions threshold. At such a reduction in scope, the Project Objectives would be substantively marginalized and/or not realized in any meaningful sense; and the Project would likely not be further

pursued by the Applicant. In terms of its practical application, such a reduction in scope would constitute a "no build" condition.

Based on the preceding, there are no feasible means to or alternatives to avoid this impact or reduce the impact to levels that would be less-than-significant. However, this impact would be diminished under the EIR Reduced Intensity Alternative.

Cumulative Contributions to Basin Pollutant Non-Attainment Conditions

The Project operational-source NOx emissions exceedances noted above would result in cumulatively considerable contributions to existing Basin pollutant non-attainment conditions. For the same reasons noted above, there are no feasible means to or alternatives to avoid this impact or reduce the impact to levels that would be less-than-significant. However, this impact would be diminished under the EIR Reduced Intensity Alternative.

Avoidance of AQMP Inconsistency Impacts Alternative Considered and Rejected

The Project incorporates the necessary City of Eastvale General Plan Land Use and Zoning amendments that would allow for implementation of the Project uses. Because the change in land use designation proposed by the Project allow for greater developments not reflected in the current AQMP, the Project is considered to be inconsistent with AQMP emissions assumptions and projected emissions inventory.

Avoidance of the Project proposed changes in land use designations in order to maintain AQMP consistency would effectively negate the Project in total. There are no alternative locations under control or likely control of the Applicant that would preclude any potential change in land use designations, thereby avoiding potential inconsistencies with the AQMP.

Based on the preceding, there are no feasible means to or alternatives to avoid this impact or reduce the impact to levels that would be less-than-significant. However, the effects of AQMP inconsistency in terms of the AQMP emissions assumptions and projected emissions inventory would be diminished under the EIR Reduced Intensity Alternative.

Avoidance of Significant GHG Emissions Impacts Alternative Considered and Rejected

The Project cannot feasibly achieve no net increase in GHG emissions, nor can the applicable SCAQMD screening-level threshold (3,000 MTCO2e/year) be achieved. In this regard, the majority (approximately 81.2 percent) of the Project GHG emissions would be generated by vehicular traffic from employees and patrons that would access the Project. Responsibility and authority for regulation of vehicular-source emissions resides with the State of California (CARB, et al.). Neither the Applicant nor the Lead Agency can effect or mandate substantive reductions in vehicular-source GHG emissions, much less reductions that would achieve no net increase condition or achieve the SCAQMD screening-level 3,000 MTCO2e/year threshold. In effect, all Project traffic would need to be eliminated or be "zero GHG emissions sources" in order to achieve the SCAQMD threshold. Clearly, there is no feasible means to or alternatives to eliminate all Project traffic, or to ensure that Project traffic would zero GHG emissions sources. In terms of its practical application, this would constitute a "no build" condition. Based on the preceding, there are no feasible means to or alternatives to avoid this impact or reduce the impact to levels that would be less-than-significant. However, this impact would be diminished under the EIR Reduced Intensity Alternative.

Avoidance of Significant Noise Impacts Alternative Considered and Rejected

Construction-Source Noise

Project construction-source noise impacts reflect maximum noise levels generated by operations of typical construction equipment. The types and quantities of equipment employed, and associated maximum noise levels generated, would not differ substantively under any reasonable development scenario for the subject site. As such, under any reasonable development scenario, construction-source noise impacts would remain significant.

Based on the preceding, there are no feasible means to or alternatives to avoid this impact or reduce the impact to levels that would be less-than-significant.

Operational-Source Noise

Operational-source noise generated by the carwash at Site 2 would result in a significant increase in ambient noise conditions that would affect a 2-story residential use located southwesterly of the carwash. To effectively attenuate received noise at the impacted residence, construction of a 14-foot high wall would be required. Construction of such a barrier would result in land use and aesthetic incompatibilities; and is generally considered cost-prohibitive. At this preliminary stage, the Project design concepts do not provide sufficient detail that would ensure that this impact could otherwise be reduced to levels that would be less-than-significant.

While elimination of the carwash at Site 2 could avoid this impact, the Applicant and Lead Agency consider the carwash at this location to be an integral and key Project component allowing for development of the Project in total, pursuant to the Project Development Agreement.

Based on the preceding, there are no feasible means to or alternatives to avoid this impact or reduce the impact to levels that would be less-than-significant.

5.2.3 Comparative Impacts of Alternatives

For each environmental topic addressed in the EIR, environmental impacts associated with each of the considered Alternatives are described relative to impacts of the Project. At the conclusion of these discussions, Table 5.2-6 summarizes and compares relative impacts of the considered Alternatives.

5.2.3.1 Comparative Land Use Impacts

In order to implement the Project, while precluding or reducing potential land use impacts, the following discretionary actions are necessary:

- CEQA Compliance/EIR Certification. The City must certify the EIR prior to, or concurrent with, any approval of the Project.

- Approval of a General Plan Amendment (Land Use) - From Medium Density Residential to Commercial Retail on both Sites 1 and 2.

- Approval of a Zone Change - For Site 1 from Watercourse, Watershed and Conservation Area (W-1) and Rural Residential (R-R) to General Commercial (C-1/C-P).[6]

- Approval of a Tentative Parcel Map (TPM) for Site 1.

- Major Development Plan Reviews for Site 2 and a portion of Site 1.

- Conditional Use Permits (CUPs) for the sale of alcohol for on-site and off-site consumption (at one or more restaurants on Site 1 and at the proposed gas station convenience store on Site 1) and for drive-through operations on Sites 1 and 2.

- Approval of a Development Agreement between the City and the Applicant. Final terms of the DA are currently under negotiation.

- Additionally, the Project would require a number of non-discretionary construction, grading, drainage and encroachment permits from the City to allow implementation of the Project facilities.

Approval of the requested discretionary actions, and Project compliance with associated requirements incorporated therein, would reduce potential land use impacts of the Project below levels of significance. No mitigation measures were found to be necessary as part of the EIR Project land use analysis.

No Project Alternative

The No Project Alternative reflects development of the Project (Sites 1 and 2) consistent with current land use designations, and would not require the General Plan Amendment,

[6] Site 2 is currently zoned General Commercial (C-1/C-P). The proposed General Plan Amendment (Land Use) for Site 2 would establish General Plan-Zoning consistency for the Site.

Zone Change, or Development Agreement otherwise required under the Project. When compared to the Project, the scope of discretionary actions and associated potential land use impacts under the No Project Alternative would be reduced. Under either the Project or the No Project Alternative, land use impacts would be less-than-significant.

Reduced Intensity Alternative

Implementation of the Reduced Intensity Alternative would reduce the scope of land uses otherwise proposed by the Project. Discretionary actions required under the Reduced Intensity Alternative and the Project would be the same. Under either the Project or the Reduced Intensity Alternative, land use impacts would be less-than-significant.

5.2.3.2 Comparative Transportation/Traffic Impacts

At buildout, implementation of the Project would generate approximately 15,614 (gross) weekday trips on the Study Area roadway system. Traffic improvements constructed by the Project would act to preclude on-site and site-adjacent traffic impacts. The Project's mitigation responsibilities for incremental contributions to cumulatively significant traffic impacts would be fulfilled by payment of requisite fees assigned to construction of necessary traffic/transportation system improvements. Project fee payments would not however ensure timely completion of required improvements. Therefore, even with implementation of mitigation, Project traffic would contribute to cumulatively significant and unavoidable traffic impacts affecting certain of the Study Area intersections.

The Project does not propose, nor would it result in, inherently hazardous traffic/circulation design features. The Project Site Plan Concept provides for adequate and safe access. Final Site Plan design, including site access, internal circulation, and parking are subject to review and approval by the City. Designed and constructed consistent with City requirements and standards, the potential for the Project to result in or cause adverse impacts related to hazardous features or improper access and internal circulation features is determined to be less-than-significant.

No Project Alternative

Comparative gross trip generation of the Project and the No Project Alternative is presented at Table 5.2-2.

Table 5.2-2
Estimated Trip Generation Comparison
No Project Alternative and Project

Land Use	ITE Land Use Codes	Daily Trip Generation Factor	Project Building Area/Units	Project* Daily Trip Generation	No Project Alternative Building Area/Units	No Project Alternative* Daily Trip Generation
Hotel	310	8.17/Room (RM)	130 RMs	1,062	---	--
Library	590	56.24/ Thousand Square Feet (TSF)	25.0 TSF	1,406	---	---
Medical Office	720	36.13/TSF	10.0 TSF	361	---	--
Government Office	**	30.00/TSF	40.0 TSF	1,200	---	---
Shopping Center	820	209.52/TSF	4.0 TSF	838	---	--
High-Turnover Restaurant	932	127.15/TSF	6.0 TSF	763	---	---
Fast-Food w/o Drive-Thru	933	716.00/TSF	4.0 TSF	2,864	---	--
Fast-Food w/ Drive-Thru	934	496.12/TSF	3.5 TSF	1,736	---	---
Coffee Shop w/ Drive-Thru	937	818.58/TSF	2.0 TSF	1,637	---	--
Gas Station w/ Market	945	162.78/Vehicle Fueling Point (VFP)	8 VFP	1,302	---	---
Gas Station w/ Market & Car Wash	946	152.84/VFP	16 VFP	2,445	16 VFP	2,445
Single-Family Detached Housing	210	9.52/ Dwelling Unit (DU)	---	---	15 DU	143
Total Daily Trip Generation	**--**	**--**	**---**	**15,614**	**---**	**2,588**

Notes:
* Assumes no internal trip capture or trip pass-by reduction.
** The ITE Trip Generation Manual has limited data for the Government Office Land Use. For the purposes of this analysis, the Government Office Land Use trip generation rate was obtained from *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (SANDAG) April 2002.

The 2,588 average daily trips (ADT) generated under the No Project Alternative would represent an approximate 83.4 percent reduction in the 15,614 ADT that would be generated by the Project. Resulting potential traffic impacts under the No Project Alternative would likely be comparably reduced. On this basis, the No Project Alternative would likely require less extensive traffic improvements; and proportional fee contribution responsibilities for these improvements would be reduced. It is assumed

that like the Project, development of the subject site under the No Project Alternative would incorporate those site adjacent and on-site circulation system improvements necessary to avoid or mitigate development-specific traffic impacts. As with the Project, potentially significant cumulative traffic impacts may affect certain Study Area facilities under the No Project Alternative. Pending physical construction of the necessary improvements, these impacts under the No Project Alternative would be considered cumulatively significant and unavoidable.

Reduced Intensity Alternative

Comparative gross average daily trip generation of the Project and the Reduced Intensity Alternative is presented at Table 5.2-3.

Table 5.2-3
Estimated Trip Generation Comparison
Reduced Intensity Alternative and Project

Land Use	ITE Land Use Codes	Daily Trip Generation Factor	Project Building Area/Units	Project* Daily Trip Generation	Reduced Intensity Alternative Building Area/Units	Reduced Intensity Alternative Daily Trip Generation*
Hotel	310	8.17/Room (RM)	130 RMs	1,062	130 RMs	1,062
Library	590	56.24/ Thousand Square Feet (TSF)	25.0 TSF	1,406	25.0 TSF	1,406
Medical Office	720	36.13/TSF	10.0 TSF	361	10.0 TSF	361
Government Office	**	30.00/TSF	40.0 TSF	1,200	40.0 TSF	1,200
Shopping Center	820	209.52/TSF	4.0 TSF	838	4.0 TSF	838
High-Turnover Restaurant	932	127.15/TSF	6.0 TSF	763	6.0 TSF	763
Fast-Food w/o Drive-Thru	933	716.00/TSF	4.0 TSF	2,864	---	0
Fast-Food w/ Drive-Thru	934	496.12/TSF	3.5 TSF	1,736	---	0
Coffee Shop w/ Drive-Thru	937	818.58/TSF	2.0 TSF	1,637	2.0 TSF	1,637
Gas Station w/ Market	945	162.78/Vehicle Fueling Point (VFP)	8 VFP	1,302	8 VFP	1,302
Gas Station w/ Market & Car Wash	946	152.84/VFP	16 VFP	2,445	16 VFP	2,445
Total Daily Trip Generation	**--**	**--**	**---**	**15,614**	**---**	**11,014**

Notes:
* Assumes no internal trip capture or trip pass-by reduction.
** The ITE Trip Generation Manual has limited data for the Government Office Land Use. For the purposes of this analysis, the Government Office Land Use trip generation rate was obtained from *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (SANDAG) April 2002.

When compared to the Project trip generation (15,614 ADT), the Reduced Intensity Alternative trip generation (11,014 ADT) would represent approximate 29.5 percent reduction in traffic generation. On this basis, the Reduced Intensity Alternative would likely require less extensive traffic improvements; and proportional fee contribution responsibilities for these improvements would be reduced. It is assumed that like the Project, development of the subject site under the Reduced Intensity Alternative would incorporate those site adjacent and on-site circulation system improvements necessary to avoid or mitigate development-specific traffic impacts. As with the Project, potentially significant cumulative traffic impacts may affect certain Study Area facilities under the Reduced Intensity Alternative. Pending physical construction of the necessary improvements, these impacts under the Reduced Intensity Alternative would be considered cumulatively significant and unavoidable.

5.2.3.3 Comparative Air Quality Impacts

Project construction and operations would generate additional air pollutant emissions. Construction-source air pollutant emissions have been determined to be less-than-significant as mitigated under the Project development scenario. However, the Project's operational emissions would exceed SCAQMD regional threshold for NO_x. This is an individually and cumulatively significant and unavoidable air quality impact. Additionally, the Project lies within a region classified as nonattainment for ozone and $PM_{10}/PM_{2.5}$. NO_x is an ozone and $PM_{10}/PM_{2.5}$ precursor. Project NO_x exceedances within the encompassing ozone and $PM_{10}/PM_{2.5}$ nonattainment areas would therefore be considered a cumulatively significant impact to regional nonattainment conditions.

Because the Project land uses would allow for greater development intensities than is reflected in the current (2016) Air Quality Management Plan (AQMP), with resultant increased air pollutant emissions not reflected in the AQMP emissions inventory, the Project would be inconsistent with the AQMP.

No Project Alternative

Under the No Project Alternative, maximum air pollutant emissions from site preparation and grading would be the same as for the Project. That is, the same types and

amount of equipment would be employed, and the maximum daily area of disturbance would be the same under all development scenarios.

The reduction in overall scope of development and more notably, the reduction in vehicular trips under the No Project Alternative would also reduce operational-source air pollutant emissions. For purposes of comparison, the resulting decrease in operational-source emissions is estimated to be roughly proportional to the reduction in trip generation (approximately 83.4 percent) indicated above. Table 5.2-4 provides a comparison of operational-source air pollutant emissions under the Project and No Project Alternative.

Table 5.2-4
Project and No Project Alternative
Operational-Source Emissions Comparison
(With Mitigation-Pounds per Day, Maximum Summer/Winter Emissions)

Emissions Sources	Pollutants					
	VOC	**NOx**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
Project						
Area Sources (Landscape and Building Maintenance, Consumer Products)	6.41	2.40E-04	0.026	0.00	0.90E-04	0.90E-04
Building Energy Consumption	0.49	4.45	3.74	0.027	0.338	0.338
Mobile Sources	30.72	192.73	243.92	0.837	51.92	14.48
Maximum Daily Emissions	**37.62**	**197.18**	**247.69**	**0.864**	**52.26**	**14.82**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	No	**YES**	No	No	No	No
No Project Alternative						
Area Sources (Landscape and Building Maintenance, Consumer Products)	1.06	---	---	--	---	---
Building Energy Consumption	0.08	0.74	0.62	0.004	0.06	0.06
Mobile Sources	5.1	31.99	40.49	0.140	8.62	2.40
Maximum Daily Emissions	**6.24**	**32.73**	**41.11**	**0.144**	**8.68**	**2.46**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Sources: Project operational-source emissions estimates from: *Polopolus Air Quality Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018. No Project Alternative operational-source emissions estimates–Applied Planning, Inc.
Notes: Modeling results may not total 100% due to rounding. Scientific notation (e-4) expresses exponential quantities; e.g. 2.00e-4 = 2.00 $x10^{-4}$ = 2.00 x 0.0001 = 0.0002. --- Negligible

As indicated in Table 5.2-4, the reduced development scope and primarily, the reduced trip generation under the No Project Alternative, would translate to aggregate reductions in all operational-source air pollutant emissions otherwise occurring under the Project. NO_x emissions thresholds exceedances otherwise occurring under the Project would be avoided under the No Project Alternative.

Because the No Project Alternative land uses would conform to development reflected in the current (2016) Air Quality Management Plan (AQMP), the No Project Alternative would be considered consistent with the AQMP.

Reduced Intensity Alternative

Under the Reduced Intensity Alternative, the overall scope of development would be reduced through the elimination of the Project's fast food uses. The duration of construction activities could therefore be reduced when compared to the Project. As with the Project, mitigated construction-related emissions would not exceed SCAQMD emissions thresholds.

When compared to the Project, operational-source emissions resulting from the Reduced Intensity Alternative would be diminished as indicated at Table 5.2-5. For purposes of comparison, the resulting decrease in operational-source emissions is estimated to be roughly proportional to the reduction in trip generation (approximately 29.5 percent).

Table 5.2-5
Project and Reduced Intensity Alternative
Operational-Source Emissions Comparison
(With Mitigation-Pounds per Day, Maximum Summer/Winter Emissions)

Emissions Sources	Pollutants					
	VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Project						
Area Sources (Landscape and Building Maintenance, Consumer Products)	6.41	2.40E-04	0.026	0.00	0.90E-04	0.90E-04
Building Energy Consumption	0.49	4.45	3.74	0.027	0.338	0.338
Mobile Sources	30.72	192.73	243.92	0.837	51.92	14.48
Maximum Daily Emissions	**37.62**	**197.18**	**247.69**	**0.864**	**52.26**	**14.82**

Table 5.2-5
Project and Reduced Intensity Alternative
Operational-Source Emissions Comparison
(With Mitigation-Pounds per Day, Maximum Summer/Winter Emissions)

Emissions Sources	Pollutants					
	VOC	**NOx**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	No	**YES**	No	No	No	No
Reduced Intensity Alternative						
Area Sources (Landscape and Building Maintenance, Consumer Products)	4.52	---	---	--	---	---
Building Energy Consumption	0.35	3.14	2.64	0.019	0.238	0.238
Mobile Sources	21.66	135.87	171.96	0.59	36.60	10.21
Maximum Daily Emissions	**26.53**	**139.01**	**174.62**	**0.61**	**36.84**	**10.45**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	No	**YES**	No	No	No	No

Sources: Project operational-source emissions estimates from: *Polopolus Air Quality Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018. Reduced Intensity Alternative operational-source emissions estimates–Applied Planning, Inc.
Notes: Modeling results may not total 100% due to rounding. Scientific notation (e-4) expresses exponential quantities; e.g. 2.00e-4 = 2.00 $x10^{-4}$ = 2.00 x 0.0001 = 0.0002. --- Negligible

As indicated at Table 5.2-5, when compared to the Project, operational emissions would be incrementally reduced for all criteria pollutants under the Reduced Intensity Alternative. Notwithstanding, as with the Project, operational-source NO_x emissions under the Reduced Intensity Alternative would continue to exceed applicable SCAQMD regional thresholds and would be considered individually and cumulatively significant and unavoidable. Additionally, as with the Project, the Reduced Intensity Alternative's NO_x regional threshold exceedances within the encompassing ozone and PM_{10}/$PM_{2.5}$ nonattainment areas would be considered cumulatively significant and unavoidable contributions to nonattainment conditions.

Because the Reduced Intensity Alternative land uses would allow for greater development intensities than is reflected in the current (2016) Air Quality Management Plan (AQMP), with resultant increased air pollutant emissions not reflected in the AQMP emissions inventory, the Reduced Intensity Alternative would be inconsistent with the AQMP.

5.2.3.4 Comparative Greenhouse Gas/Global Climate Change Impacts

As demonstrated in the Project Greenhouse Gas Analysis and discussed at EIR Section 4.4, *Global Climate Change and Greenhouse Gas Emissions*, Project emissions would exceed the SCAQMD screening-level threshold of 3,000 $MTCO_2E$/year. Exceedance of this threshold indicates that the Project would result in a potentially significant and cumulatively considerable GHG emissions impact. Project GHG emissions cannot be feasibly reduced below the SCAQMD screening-level threshold (3,000 $MTCO_2E$/year) employed in this analysis.

As also discussed at EIR Section 4.4, *Global Climate Change and Greenhouse Gas Emissions*, Project GHG emissions would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

No Project Alternative

The reduction in development scope, reduced trip generation, and associated reduction in vehicular-source emissions under the No Project Alternative would result in diminished GHG emissions when compared to the Project. The predominance (approximately 81.2 percent) of Project-source GHG emissions would be generated by mobile sources (Project traffic). Project mobile sources would generate an estimated 12,304.77 $MTCO_2E$/year. The estimated 83.4 percent reduction in ADT under the No Project Alternative would result in an estimated correlating 83.4 percent reduction in mobile-source GHG emissions when compared to the Project. On this basis, mobile-source GHG emissions under the No Project Alternative would total an estimated 2,042.59 $MTCO_2E$/year and would not exceed the SCAQMD screening-level threshold of 3,000 $MTCO_2E$/year and would therefore not result in a potentially significant and cumulatively considerable GHG emissions impact.

As with the Project, it is assumed that the No Project Alternative would comply with applicable plans and policies addressing GHG emissions, and on this basis, the No Project Alternative would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Reduced Intensity Alternative

The reduction in development scope, reduced trip generation, and associated reduction in vehicular-source emissions under the Reduced Intensity Alternative would result in diminished GHG emissions when compared to the Project. Project mobile sources would generate an estimated 12,304.77 $MTCO_2E$/year. The estimated 29.5 percent reduction in ADT under the Reduced Intensity Alternative would result in an estimated correlating 29.5 percent reduction in mobile-source GHG emissions when compared to the Project. On this basis, mobile-source GHG emissions under the Reduced Intensity Alternative would total an estimated 8,674.86 $MTCO_2E$/year and would exceed SCAQMD screening-level threshold of 3,000 $MTCO_2E$/year. Exceedance of this thresholds indicates that the Reduced Intensity Alternative, like the Project, would result in a potentially significant and cumulatively considerable GHG emissions impact. As with the Project, the Reduced Intensity Alternative could not feasibly achieve the SCAQMD screening-level threshold of 3,000 $MTCO_2E$/year and quantified GHG emissions generated by the Reduced Intensity Alternative would be considered significant and cumulatively considerable.

As with the Project, it is assumed that the Reduced Intensity Alternative would comply with applicable plans and policies addressing GHG emissions, and on this basis, the Reduced Intensity Alternative would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

5.2.3.5 Comparative Noise Impacts

Development of the subject site as proposed under the Project would result in increased noise levels, including temporary construction-source noise, as well as long-term operational-source noise. More specifically, even with the application of mitigation measures, construction-source noise levels received at certain adjacent properties are expected to exceed applicable noise standards. Additionally, operational-source noise generated by a Site 2 carwash as received at certain adjacent properties would exceed applicable standards. These are considered significant and unavoidable impacts of the Project. All other noise-related impacts would be less-than-significant.

No Project Alternative

Construction of the No Project Alternative would likely generate peak daily noise levels comparable to the Project. That is, under either scenario, comparable construction equipment would be employed in a similar manner, generating similar maximum noise levels, with resulting exceedance of applicable noise standards at proximate sensitive receptors. As with the Project, even with application of mitigation, this impact would be significant and unavoidable.

The No Project Alternative assumes development of a Site 2 carwash use comparable to that proposed by the Project. As would occur under the Project, the Site 2 carwash use implemented under the No Project Alternative would produce received noise levels that would exceed applicable standards. As with the Project, this impact would be significant and unavoidable.

The approximately 83.4 percent reduction in vehicle trips (ADT) under the No Project Alternative would reduce vehicular (mobile-source) noise levels along area roadways. A discernible change in roadway noise levels (3 dB or more) would typically occur when roadway traffic volumes are doubled (or halved). As such, the No Project Alternative may perceptibly reduce vehicular-source noise levels when compared to vehicular-source noise levels resulting from the Project. Under the Project or the No Project Alternative, vehicular-source noise impacts would be less-than-significant.

Reduced Intensity Alternative

Under the Reduced Intensity Alternative, site preparation and grading noise could be reduced in duration based on the overall reduction in development scope. However, the types of equipment employed and its operation would likely be similar to associated with construction of the Project. Accordingly, maximum construction-source noise levels received at off-site locations would be comparable to those resulting from construction of the Project. Construction-source noise impacts would be significant and unavoidable under the Project and would also likely be significant and unavoidable under the Reduced Intensity Alternative.

The Reduced Intensity Alternative assumes development of a Site 2 carwash use comparable to that proposed by the Project. As would occur under the Project, the Site 2 carwash use implemented under the Reduced Intensity Alternative would produce received noise levels that would exceed applicable standards. As with the Project, this impact would be significant and unavoidable.

The approximately 29.5 percent reduction in vehicle trips under the Reduced Intensity Alternative may potentially reduce vehicular (mobile-source) noise levels along area roadways. However, any such reduction would likely be indiscernible. As noted previously, a discernible change in roadway noise levels (3 dB or more) would typically occur when roadway traffic volumes are doubled (or halved). Under the Project or the reduced Intensity Alternative, vehicular-source noise impacts would be less-than-significant.

5.2.3.6 Comparative Geology and Soils Impacts

As concluded in the Project Geotechnical Investigation (Geotechnical Investigation), the subject site can be developed as proposed under the Project, contingent on adherence to the recommendations and requirements of the Geotechnical Investigation and incorporation of applicable city and California Building Code (CBC) design/construction requirements. Based on mandated compliance with seismic design and building code requirements, potential geology/soils impacts affecting the Project are determined to be less-than-significant.

No Project Alternative

Under the No Project Alternative, as with the Project, compliance with requirements and recommendations identified in the geotechnical investigation, and incorporation of applicable City and CBC design/construction requirements would act to reduce potential geology/soils impacts to levels that are less-than-significant. Because the scope of development under the No Project Alternative would be diminished, the overall exposure of facilities and persons would be reduced. Potential geology/soils impacts of the No Project Alternative would otherwise be similar to those of the Project.

Reduced Intensity Alternative

Under the Reduced Intensity Alternative, as with the Project, compliance with requirements and recommendations identified in the geotechnical investigation, and incorporation of applicable City and CBC design/construction requirements would act to reduce potential geology/soils impacts to levels that are less-than-significant. Because the scope of development under the Reduced Intensity Alternative would be diminished, the overall exposure of facilities and persons would be reduced. Potential geology/soils impacts of the Reduced Intensity Alternative would otherwise be similar to those of the Project.

5.2.3.7 Comparative Hazards and Hazardous Materials Impacts

The EIR incorporates mitigation measures requiring remediation of pre-existing potentially hazardous conditions within the Project site. Mitigated hazards/hazardous materials impacts occurring under the Project would be less-than-significant.

No Project Alternative

As with the Project, existing hazards/hazardous conditions affecting the Project site would be required to be properly remediated over the course of development activities. The extent of required remediation would be reduced based on the reduced scope of development under the No Project Alternative. As with the Project, mitigated hazards/hazardous materials impacts under the No Project Alternative would be less-than-significant.

Reduced Intensity Alternative

As with the Project, existing hazards/hazardous conditions affecting the Project site would be required to be properly remediated over the course of development activities. The extent of required remediation would be reduced based on the reduced scope of development under the Reduced Intensity Alternative. As with the Project, mitigated hazards/hazardous materials impacts under the Reduced Intensity Alternative would be less-than-significant.

5.2.3.8 Comparative Hydrology/Water Quality Impacts

As discussed at EIR Section 4.8, the Project would be developed and operated in a manner that ensures post-development stormwater discharges do not exceed predevelopment conditions. The Project would implement stormwater management systems that would capture, retain and infiltrate all developed stormwater runoff, acting to effectively reduce site runoff when compared to existing conditions. Further, the Project would implement a construction Storm Water Pollution Prevention Plan (SWPPP) and operational Water Quality Management Plan (WQMP) ensuring that stormwater discharges for the Project site do not adversely affect water quality. On this basis, the Project's impacts to hydrology and water quality are considered less-than-significant.

No Project Alternative

When compared to the Project, the area subject to development with impervious surfaces under the No Project Alternative would be reduced. It is anticipated that the No Project Alternative may therefore result in reduced rates and quantities of post-development stormwater runoff when compared to the Project. As with the Project, the No Project Alternative would comply with mandated SWPPP and WQMP requirements, thereby reducing potential water quality impacts to levels that are less-than-significant. On this basis, the less-than-significant hydrology/water quality impacts occurring under the Project would be further reduced under the No Project Alternative.

Reduced Intensity Alternative

Comparable development intensities under the Reduced Intensity Alternative would likely result in the creation of impervious areas similar to the Project, with similar stormwater runoff characteristics and stormwater management requirements. The Reduced Intensity Alternative would also comply with mandated SWPPP and WQMP requirements, thereby reducing potential water quality impacts to levels that are less-than-significant. Already less-than-significant hydrology impacts occurring under the Project would likely be diminished under the Reduced Intensity Alternative.

5.2.3.9 Comparative Cultural Resources/Tribal Cultural Resource Impacts

There are no known historic, archaeological, paleontological, or tribal cultural resources within the Project site. Tribal consultation is in process pursuant to *AB 52, Gatto. Native Americans: California Environmental Quality Act*. Mitigation is incorporated that reduces potential impacts to cultural resources/tribal cultural resources to levels that would be less-than-significant.

No Project Alternative

Under the No Project Alternative, the maximum area disturbed would be reduced when compared to the Project. On this basis, it is likely that potential impacts to cultural resources would be similar to those of the Project, albeit at a somewhat reduced scale. As with the Project, potential impacts to cultural resources/tribal cultural resources would be less-than-significant as mitigated under the No Project Alternative.

Reduced Intensity Alternative

Maximum site disturbance and potential impacts to cultural resources would be equal to those of the Project. As with the Project, potential impacts to cultural resources/tribal cultural resources would be less-than-significant as mitigated under the Reduced Intensity Project Alternative.

5.2.4 Comparative Attainment of Project Objectives

Comparative Attainment of Project Objectives is summarized for each of the Alternatives considered here. For ease of reference, the Project Objectives are restated below.

5.2.4.1 Project Objectives

The primary goal of the Project is the development of the subject site(s) with a productive mix of commercial, retail, service, and civic uses. Complementary Project Objectives include the following:

- To provide commercial, retail, and service uses that serve the local market area and beyond; and that attract new customers and businesses into Eastvale;

- Provide a new Civic Center accommodating Eastvale government offices and a County of Riverside public library;

- Improve and maximize economic viability of the currently vacant and underutilized Project site through the establishment of commercial, retail, service, and civic uses;

- Maximize and broaden the City's sales tax base by providing local and regional tax-generating uses and by increasing property tax revenues;

- Provide commercial, retail, service, and civic uses within contemporary energy efficient buildings, at a location that is readily accessible by patrons and employees;

- Create additional employment-generating opportunities for the citizens of Eastvale and surrounding communities.

No Project Alternative

Based on the diminished scope of development and limited range of uses that would be implemented under the No Project Alternative, the Project Objectives would likely not be realized, or would be substantively circumscribed.

Reduced Intensity Alternative

Development of the site under the Reduced Intensity Alternative would eliminate the fast-food uses proposed by the Project. This would reduce the scope and variety of uses otherwise resulting from the Project and would generally diminish attainment of Project Objectives addressing the creation of a range of new commercial uses; transition of vacant properties to productive use; increased employment opportunities, and increased tax base.

5.2.5 Comparison of Alternatives

The *CEQA Guidelines* require that the environmentally superior alternative (other than the No Project Alternative) be identified among the Project and other Alternatives

considered in an EIR. Table 5.2-6 provides a summary, by topic, of the preceding alternatives analysis, indicating whether impacts may be reduced (or increased) when compared to the Project. Potential reductions in impacts (whether these impacts are significant or otherwise) are identified with **bold** text.

Table 5.2-6
Summary of Potential Impacts, Alternatives Compared to Project, By Topic

EIR Topic	No Project Alternative	Reduced Intensity Alternative
Land Use and Planning: Project impacts would be less-than-significant.	**Impacts would be diminished and would be less-than-significant.**	Impacts would be similar to those of the Project and would be less-than-significant.
Transportation/Traffic: Project-related transportation/traffic impacts would be significant at the Study Area facilities listed at Table 5.2-1.	**Trip generation would be reduced by an estimated 83.4 percent under the No Project Alternative. Related, under the No Project Alternative, the scope of off-site Study Area circulation system improvements would likely be reduced. The diminished scope of development would also reduce traffic impact fee responsibilities. Significant impacts otherwise occurring under the Project may be avoided.**	**Trip generation would be incrementally reduced by an estimated 29.5 percent under the Reduced Intensity Alternative. Related, under the Reduced Intensity Alternative, the scope of off-site Study Area circulation system improvements may be reduced, as would traffic impact fee responsibilities. Significant impacts otherwise occurring under the Project would likely persist.**
Air Quality: Operational-source exceedances of SCAQMD regional thresholds for NO_x would be significant. NO_x exceedances would also be cumulatively considerable within the encompassing ozone and $PM_{10}/PM_{2.5}$ nonattainment areas. The Project land uses are not reflected in the current AQMP.	**Operational-source emissions would be reduced in aggregate by an estimated 83.4 percent (by weight) under the No Project Alternative. NO_x threshold exceedances otherwise occurring under the Project would be avoided. AQMP inconsistency associated with the Project would be avoided.**	**Operational-source emissions would be reduced in aggregate by an estimated 29.4 percent (by weight). NO_x threshold exceedances occurring under the Project would persist, though the extent of these exceedances would be diminished. The scope of AQMP inconsistency associated with the Project would be diminished but not avoided.**
Greenhouse Gas Emissions (GHG)/Global Climate Change (GCC): - Quantified GHG/GCC impacts of the Project would exceed the SCAQMD 3,0000 $MTCO_2E$/year screening-level threshold and would be significant and unavoidable. -The No Project Alternative would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	**Trip generation would be incrementally reduced by an estimated 83.4 percent under the No Project Alternative. Related, under the No Project Alternative, vehicular-source GHG emissions would be reduced. GHG emissions would not exceed applicable thresholds and would be considered less-than-significant. The No Project Alternative would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.**	**Trip generation would be incrementally reduced by an estimated 29.5 percent under the Reduced Intensity Alternative. Related, under the Reduced Intensity Alternative, vehicular-source GHG emissions would be reduced. GHG emissions would however exceed applicable thresholds and would be considered cumulatively significant. The Reduced Intensity Alternative would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.**
Noise: -Project construction-source noise would be significant and unavoidable. -Area operational-source noise impacts would be significant and unavoidable at receptors proximate to a Site 2 carwash. -Vehicular-source noise impacts would be less-than-significant.	-Construction-source noise impacts would be similar to those of the Project and would be significant and unavoidable. -Area operational-source noise impacts would be similar to those of the Project and would be significant and unavoidable. **-Vehicular-source noise would likely be perceptibly diminished, further reducing already less-than-significant impacts.**	-Construction-source noise impacts would be similar to those of the Project and would be significant and unavoidable. -Area operational-source noise impacts would be similar to those of the Project and would be significant and unavoidable. -Vehicular-source noise impacts would be similar to those of the Project and less-than-significant.
Geology and Soils: Project geology and soils impacts would be less-than-significant.	Because the scope of development under the No Project Alternative would be diminished, the overall exposure of facilities and persons would be reduced. Potential geology/soils impacts of the No Project Alternative would otherwise be similar to those of the Project and would be less-than-significant.	Because the scope of development under the Reduced Intensity Alternative would be diminished, the overall exposure of facilities and persons would be reduced. Potential geology/soils impacts of the Reduced Intensity Alternative would otherwise be similar to those of the Project and would be less-than-significant.

Table 5.2-6
Summary of Potential Impacts, Alternatives Compared to Project, By Topic

EIR Topic	No Project Alternative	Reduced Intensity Alternative
Hazards/Hazardous Materials: Potentially hazardous conditions affecting the Project site would be mitigated to levels that would be less-than-significant.	The extent of required remediation would be reduced based on the reduced scope of development under the No Project Alternative. Hazards/hazardous materials impacts would otherwise be similar to those of the Project and would be less-than-significant as mitigated.	The extent of required remediation would be reduced based on the reduced scope of development under the Reduced Intensity Project Alternative. Hazards/hazardous materials impacts would otherwise be similar to those of the Project and would be less-than-significant as mitigated.
Hydrology/Water Quality: Stormwater management systems would be implemented to control and treat stormwater runoff, ensuring that storm drain systems and water quality are not adversely affected. Potential impacts are less-than-significant.	Impacts would be similar to those of the Project and would be less-than-significant.	Impacts would be similar to those of the Project and would be less-than-significant.
Cultural Resources: Project cultural resources/tribal cultural resources impacts would be less-than-significant as mitigated.	Impacts would be similar to those of the Project and would be less-than-significant as mitigated.	Impacts would be similar to those of the Project and would be less-than-significant as mitigated.
Relative Attainment of Project Objectives:	Based on the diminished scope of development and limited range of uses that would be implemented under the No Project Alternative, the Project Objectives would likely not be realized, or would be substantively circumscribed.	Development of the site under the Reduced Intensity Alternative would eliminate the fast-food uses proposed by the Project. This would reduce the scope and variety of uses otherwise resulting from the Project and would generally diminish attainment Project Objectives addressing creation of a range of new commercial uses; transition of vacant properties to productive use; increased employment opportunities, and increased tax base.

5.2.6 Environmentally Superior Alternative

As indicated at Table 5.2-6, with exclusion of the No Project Alternative as provided of under CEQA[7], the Reduced Intensity Alternative would likely result in a general reduction in other environmental effects when compared to the Project. For the purposes of CEQA, the Reduced Intensity Alternative is identified as the "environmentally superior alternative."

Significant Impacts Diminished but Not Eliminated or Avoided

Notwithstanding the general reduction in environmental impacts under the Reduced Intensity Alternative, significant and unavoidable traffic impacts, construction-source noise impacts, operational-source noise impacts, operational-source air quality impacts, GHG emissions impacts, and AQMP inconsistency impacts and otherwise occurring under the Project would persist.

Summary and Conclusions

The Reduced Intensity Alternative would reduce but would not avoid significant environmental impacts under the topics of Traffic, Air Quality, GHG Emissions, and Noise otherwise occurring under the Project. Under the Reduced Intensity Alternative, attainment of Project Objectives addressing the creation of a range of new commercial uses; transition of vacant properties to productive use; increased employment opportunities, and increased tax base would be generally diminished.

5.3 GROWTH-INDUCING IMPACTS OF THE PROPOSED ACTION

5.3.1 Overview

The California Environmental Quality Act requires a discussion of the ways in which a project could be growth-inducing. (Public Resources Code, §21100, subd. (b)(5); *CEQA Guidelines*, § 15126, subd. (d), 15126.2, subd (d.).) 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.

[7] If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (*CEQA Guidelines* Section 15126.6 (e)(2)).

Under CEQA, growth inducement is not considered necessarily detrimental, beneficial, or of significance to the environment. New employees from commercial or industrial development and new population from residential development 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 by reducing or removing barriers to growth, or by creating a condition that attracts additional population or new economic activity. However, a project's potential to induce growth does not automatically result in growth. Growth can only happen through capital investment in new economic opportunities by the private or public sectors. Development pressures are a result of localized economic investments. These pressures help to structure the local politics of growth and the local jurisdiction's posture on growth management and land use policy. The land use policies of local municipalities and counties regulate growth at the local level.

Impacts related to growth inducement would also be realized if a project provides infrastructure or service capacity which accommodates 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.

5.3.2 Direct Growth-Inducing Effects

The Project does not propose creation of housing or a change in land use that would result in additional residential development and population growth beyond that anticipated under the City General Plan. The Project would, however, create additional employment opportunities, also a potential direct growth-inducing effect. The extent to which new jobs opportunities are filled by the existing resident population tends to reduce any growth-inducing effect of a project.

The Project would result in the creation of new commercial/retail uses and associated employment opportunities. It is anticipated that the retail, commercial, service and civic sector jobs created by the Project would be filled predominantly by local residents and would not induce substantial growth or result in permanent relocation of populations requiring the construction of new housing.

Based on the preceding discussion, the Project would not directly result in unanticipated significant population growth or other direct growth-inducing effects.

5.3.3 Indirect Growth-Inducing Effects

Investment in the Project would have local and regional economic impacts which may result in indirect growth-inducing effects. The Project's potential economic benefits could indirectly result in employment growth in the region. This growth, in combination with other anticipated employment growth in the region, could indirectly result in population growth and an increased demand for housing. Such growth has a variety of potential effects on the physical environment, including but not limited to, effects on air quality, ambient noise levels, traffic impacts, and water quality.

Development of the Project as envisioned would entail upgrades to infrastructure in the immediate Project vicinity, including abutting roadways. Infrastructure improvements necessitated by the implementation of the Project could serve to facilitate and encourage development of nearby properties. The characteristics and intensities of development that could occur on properties near the Project site are governed by governing General Plan documents. Development of these properties within the context of approved General Plan(s) should not result in unforeseen or unmitigable impacts.

5.4 SIGNIFICANT ENVIRONMENTAL EFFECTS

An EIR must identify any significant environmental effects that would result from the Project. (Public Resources Code, §21100, subd. (b)(2)(B).) Significant environmental impacts of the Project are summarized below.

Table 5.4-1
Summary of Significant and Unavoidable Impacts

Environmental Topic	Comments
Transportation/ Traffic	**Intersection Level of Service (LOS) Impacts/Roadway Segment Impacts** The Project Applicant would construct improvements and would, where applicable, pay requisite fees to be directed toward completion of necessary off-site traffic intersection and roadway segment improvements within the Study Area. Payment of fees does not assure timely implementation of required improvements. In instances where payment of fees is identified as mitigation, pending completion of required improvements, the Project's contributions to Existing (2017) and Opening Year (2019) Intersection and Roadway Segment LOS impacts would be considered cumulatively significant and unavoidable. More specifically, absent recommended improvements, impacts would be cumulatively significant and unavoidable at the following Study Area facilities. **Intersections** **ID # — Location** 2 — Hamner Ave. & Limonite Ave. 6 — Hamner Ave. & Citrus Ave. 7 — Hamner Ave. & Norco Dr./6th St. **Roadway Segments** **ID # — Roadway — Segment Limits** 4 — Hamner Ave. — Riverboat Drive to Schleisman Rd. 6 — Hamner Ave. — Citrus St. to Norco Dr./6th St.
Air Quality	**NOx Regional Threshold Exceedance** Project operational-source emissions of nitrogen oxides (NO_x) would exceed applicable South Coast Air Quality Management District (SCAQMD) regional thresholds. This is a Project-level and cumulatively significant impact. **Contributions to Non-Attainment Conditions** The Project is located within ozone and PM_{10}/$PM_{2.5}$ non-attainment areas (NO_x is a precursor to ozone, PM_{10}, and $PM_{2.5}$). Project operational-source NO_x emissions exceedances would therefore result in a cumulatively considerable net increase in criteria pollutants (ozone, PM_{10}, and $PM_{2.5}$) for which the Project region is non-attainment. These are cumulatively significant air quality impacts. **AQMP Inconsistency** The Project land uses are not reflected in land use plans and regional development assumed in the South Coast Air Basin 2016 Air Quality Management Plan (AQMP). On this basis, the Project is conservatively assumed to generate operational-source emissions not reflected within the current AQMP regional emissions inventory for the Basin. The Project is therefore

Table 5.4-1
Summary of Significant and Unavoidable Impacts

Environmental Topic	Comments
	considered to be inconsistent with the 2016 AQMP. This is a Project-level and cumulatively significant impact.
GHG Emissions	Project GHG emissions would exceed the SCAQMD screening-level threshold of 3,000 MTCO2e. On this basis, quantified net GHG emissions generated by the Project would be cumulatively considerable, and the Project net GHG emissions impact would be cumulatively significant and unavoidable.
Noise	**Construction-Source Noise** Even after compliance with regulations and application of mitigation measures, Project construction-source noise levels received at nearby properties would represent a substantial temporary periodic increase in noise conditions compared to conditions without the Project. Construction-source noise impacts affecting these properties are recognized as significant. Project construction-source noise in combination with ambient noise levels would also represent a substantial temporary increase in noise conditions compared to conditions without the Project and would be considered cumulatively significant and unavoidable for the duration of construction activities. **Operational-Source Noise** Project-source incremental contribution to the ambient noise condition at a second-floor receiver location[8] proximate to the southwesterly boundary of Site 2 (location of a proposed car wash use) would be individually and cumulatively significant.

5.5 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA Guidelines sections 15126 (c), 15126.2 (c) & 15127 require that for certain types or categories of projects, an EIR must address significant irreversible environmental changes that would occur should the project be implemented. As presented at *CEQA Guidelines* section 15127, the topic of Significant Irreversible Environmental Changes need be addressed in EIRs prepared in connection with any of the following activities:

(a) The adoption, amendment, or enactment of a plan, policy, or ordinance of a public agency;

[8] The Project Noise Impact Analysis specifically identifies the significant impact affecting the second-floor façade at receiver location "R6." Receiver location R6 represents the residential home located at 7042 College Park Drive, approximately 10 feet southwesterly of Site 2.

(b) The adoption by a local agency formation commission of a resolution making determinations; or

(c) A project which will be subject to the requirements for preparing of an environmental impact statement pursuant to the requirements of the National Environmental Policy Act of 1969, 42 U.S.C. Section 43214347.

The Project qualifies under *CEQA Guidelines s*ection 15127 (a) because a General Plan Amendment and Zone Change are required to implement the Project. Accordingly, this EIR addresses potential significant irreversible environmental changes involved in the proposed action should it be implemented [*CEQA Guidelines*, §§ 15126(e) and 15127]. An impact would fall into this category if:

- A project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of a project would generally commit future generations to similar uses;
- A project involves uses in which irreversible damage could result from any potential environmental incidents associated with the project; or
- The proposed consumption of resources is not justified (e.g., the project results in wasteful use of energy).

Regarding the above, a given development proposal may result in significant irreversible effects should key resources be degraded or destroyed such that there would be little possibility of restoring them. No such degradation or destruction of resources is anticipated because of the Project. While the Project would represent a permanent commitment of the currently vacant site to new retail, commercial, service and civic uses, no important natural resources would be lost because of Project implementation. Various natural resources, in the form of construction materials and energy resources, would be used in the construction of the Project, but their use is not expected to result in shortfalls in the availability of these resources.

Construction of the Project would commit the subject site (Sites 1 and 2 collectively) to the proposed retail, commercial, service, and civic uses for the foreseeable future, and thereby limit the range of other future uses of the properties. Similarly, any development of the site (irrespective of the Project) would limit the range of other future uses of this land. Given the current undeveloped nature of the site, the limited amount of unencumbered vacant property in the City, and the urbanization of surrounding properties, transition of the subject site to a developed state such as would occur under the Project is considered consistent with the highest and best uses of the site. The Project site does not contain any significant natural features which should be preserved for public recreation or open space purposes; nor does the site contain any known features of significant cultural or historical value. Mitigation is proposed for any cultural/tribal cultural resources which may be encountered during Project development activities.

5.6 ENERGY CONSERVATION

5.6.1 Overview

Consistent with *CEQA Guidelines* Appendix F, this Section of the EIR addresses the potential for the Project to result in the inefficient, wasteful, or unnecessary consumption of energy. For new development such as that proposed by the Project, compliance with California Title 24 energy efficiency requirements is considered demonstrable evidence of efficient use of energy.

As discussed below, the Project would provide for, and promote, energy efficiencies consistent with applicable state or federal standards and regulations, and in so doing would meet or exceed all Title 24 standards. Moreover, energy consumed by the Project would be comparable to, or less than, energy consumed by other development proposals of similar scale and intensity. On this basis, the Project would not result in the inefficient, wasteful or unnecessary consumption of energy, and potential Project impacts in these regards are less-than-significant. Further, the Project would not cause or result in the need for additional energy producing facilities or energy delivery systems. The Project, therefore, would not create or result in a potentially significant impact on energy resources.

5.6.2 Background and Introduction

In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted AB 1575, which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs; license thermal power plants of 50 megawatts or larger; develop energy technologies and renewable energy resources; plan for and direct responses to energy emergencies; and, perhaps most importantly, to promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards.

Germane to the Project and this EIR, AB 1575 also amended Public Resources Code Section 21100(b)(3) to require EIRs to consider the potential for wasteful, inefficient, and/or unnecessary consumption of energy caused by or resulting from a project. Appendix F to the *CEQA Guidelines* assists EIR preparers in this regard. More specifically, Appendix F is an advisory document establishing parameters and context for determining whether a project would result in the inefficient, wasteful, and unnecessary consumption of energy.

5.6.3 Existing Conditions

5.6.3.1 Overview

A summary of, and context for, energy consumption and energy demands within the State is presented in *U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts* excerpted below:

- Excluding federal offshore areas, California ranked third in the nation in crude oil production in 2015, despite an overall decline in production rates since the mid-1980s.

- California also ranked third in the nation in refining capacity as of January 2016, with a combined capacity of almost 2 million barrels per calendar day from its 18 operable refineries.

- In 2014, California's per capita energy consumption ranked 49th in the nation; the state's low use of energy was due in part to its mild climate and its energy efficiency programs.

- In 2015, California ranked fourth in the nation in conventional hydroelectric generation, second in net electricity generation from other renewable energy resources, and first as a producer of electricity from geothermal energy.

- In 2015, California ranked 15th in net electricity generation from nuclear power after one of its two nuclear plants was taken out of service in January 2012; as of June 2013, operations permanently ceased at that plant, the San Onofre Nuclear Generating Station.[9]

As indicated above, California is one of the nation's leading energy-producing states, and California per capita energy use is among the nation's most efficient.

5.6.3.2 Electricity and Natural Gas Resources

Electricity

Electricity would be provided to the Project by Southern California Edison (SCE). SCE provides electric power to an estimated 15 million persons in 15 counties and in 180 incorporated cities, within a service area encompassing approximately 50,000 square miles.[10] SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers.

California's electricity industry is an organization of traditional utilities, private generating companies, and state agencies, each with a variety of roles and responsibilities

[9] U.S. Energy Information Administration. "California State Profile and Energy Estimates. California Energy Consumption by End-Use Sector." *U.S. Energy Information Administration.* Web. 07 March 2018.
[10] Southern California Edison. "About Us. Who We Are." *Southern California Edison*. Web. 07 March 2018.

to ensure that electrical power is provided to consumers. The California Independent Service Operator ("ISO") is a nonprofit public benefit corporation and is the impartial operator of the State's wholesale power grid and is charged with maintaining grid reliability, and to direct uninterrupted electrical energy supplies to California residential and commercial users. While utilities [such as SCE] still own transmission assets, the ISO routes electrical power along these assets, maximizing the use of the transmission system and its power generation resources. The ISO matches buyers and sellers of electricity to ensure that sufficient power is available to meet demand. To these ends, every five minutes the ISO forecasts electrical demands, accounts for operating reserves, and assigns the lowest cost power plant unit to meet demands while ensuring adequate system transmission capacities and capabilities.[11]

Part of the ISO's charge is to plan and coordinate grid enhancements to ensure that electrical power is provided to California consumers. To this end, transmission owners (investor-owned utilities such as SCE) file annual transmission expansion/modification plans to accommodate the State's growing electrical needs. The ISO reviews and either approves or denies the proposed additions. In addition, and perhaps most importantly, the ISO works with other areas in the western United States electrical grid to ensure that adequate power supplies are available to the State. In this manner, continuing reliable and affordable electrical power is assured to existing and new consumers throughout the State.

Natural Gas

Natural gas would be provided to the Project by The Gas Company (Southern California Gas, SoCalGas). The following summary of natural gas resources and service providers, delivery systems, and associated regulation is excerpted from information provided by the California Public Utilities Commission (PUC).

> The California Public Utilities Commission (PUC) regulates natural gas utility service for approximately 10.8 million customers that receive natural

[11] California ISO. "Understanding the ISO." *California ISO - Our Business*. California ISO, n.d. Web. 07 March 2018.

gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller natural gas utilities. The CPUC also regulates independent storage operators Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.

The vast majority of California's natural gas customers are residential and small commercial customers, referred to as "core" customers, who accounted for approximately 32% of the natural gas delivered by California utilities in 2012. Large consumers, like electric generators and industrial customers, referred to as "noncore" customers, accounted for approximately 68% of the natural gas delivered by California utilities in 2012.

Most of the natural gas used in California comes from out-of-state natural gas basins. In 2012, California customers received 35% of their natural gas supply from basins located in the Southwest, 16% from Canada, 40% from the Rocky Mountains, and 9% from basins located within California. California gas utilities may soon also begin receiving biogas into their pipeline systems.

Most of the natural gas transported via the interstate pipelines, as well as some of the California-produced natural gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipeline systems (commonly referred to as California's "backbone" natural gas pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered into the local transmission and distribution pipeline systems, or to natural gas storage fields. Some large noncore customers take natural gas directly off the high-pressure backbone pipeline systems, while core customers and other noncore customers take natural gas off the utilities' distribution pipeline systems. The PUC has regulatory jurisdiction over 150,000 miles of utility-owned natural gas pipelines, which transported 82%

of the total amount of natural gas delivered to California's gas consumers in 2012.

SDG&E and Southwest Gas' southern division are wholesale customers of SoCalGas, and currently receive all of their natural gas from the SoCalGas system (Southwest Gas also provides natural gas distribution service in the Lake Tahoe area). Some other municipal wholesale customers are the cities of Palo Alto, Long Beach, and Vernon, which are not regulated by the CPUC.

California's regulated utilities do not own any natural gas production facilities. All of the natural gas sold by these utilities must be purchased from suppliers and/or marketers. The price of natural gas sold by suppliers and marketers was deregulated by the FERC in the mid-1980's and is determined by "market forces." However, the PUC decides whether California's utilities have taken reasonable steps in order to minimize the cost of natural gas purchased on behalf of their core customers.[12]

As indicated in the preceding discussions, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available via existing delivery systems, thereby increasing the availability and reliability of resources in total. The PUC oversees utility purchases and transmission of natural gas to ensure reliable and affordable natural gas deliveries to existing and new consumers throughout the state.

5.6.3.3 Transportation Energy Resources

The Project would generate additional vehicle trips with resulting consumption of energy resources, predominantly gasoline. Gasoline (and other vehicle fuels) are commercially-

[12] California Public Utilities Commission. "Natural Gas and California." *Natural Gas and California*. CPUC, 2017. Web. 07 March 2018.

provided commodities and would be available to the Project patrons and employees via commercial outlets.

More than 22.2 billion gallons of gasoline equivalent (GGE) were consumed in California in 2014. Gasoline and diesel are the primary fuels used in the transportation sector, including 14.7 billion gallons of finished gasoline and 3.8 billion gallons of diesel in 2014. Generally, gasoline is used primarily to fuel personal automobiles, diesel is the primary fuel for goods movement and long-distance transit, and natural gas is the primary fuel for short-distance urban mass transit.[13]

Policies, rules, and regulations at the federal and state levels have been enacted to improve vehicle fuel efficiency; promote the development and use of alternative fuels; reduce transportation-source air pollutants and GHG emissions; and reduce vehicle miles traveled (VMT). Market forces and technological advances have made use of alternative energy resources or alternative transportation modes increasingly feasible.

Largely as a result of and in response to these multiple factors, gasoline consumption within the state has declined in recent years, while availability of other alternative fuels/energy sources has increased. In total, the quantity, availability, and reliability of transportation energy resources have increased in recent years, and this trend may continue and accelerate. Increasingly available and diversified transportation energy resources act to promote continuing reliable and affordable means to support vehicular transportation within the state.

5.6.4 Regulatory Setting

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. On the state level, the PUC and the CEC are two agencies with authority over

[13] *Transportation Energy Demand Forecast 2016-2026* (CEC) February 2016, p. 4.

different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below. Project consistency with applicable federal and state regulations is also presented in *italicized* text.

5.6.4.1 Federal Energy Policy and Conservation Act

The Federal Energy Policy and Conservation Act of 1975 (Act) intends that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the U.S. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the United States Department of Transportation, is responsible for establishing additional vehicle standards and for revising existing standards. *Vehicles accessing the Project site are subject to the Federal Energy Policy and Conservation Act (Act). The Project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of the Act.*

5.6.4.2 Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions. *Access to the Project site is provided primarily by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects realized pursuant to the ISTEA.*

5.6.4.3 The Transportation Equity Act for the 21st Century (TEA-21)

The Transportation Equity Act for the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for

highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety. *The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access; takes advantage of existing infrastructure systems; and as approved by the Lead Agency, would introduce compatible development at the subject site. In this manner, the Project supports the strong planning processes emphasized under TEA-21. The Project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of TEA-21.*

5.6.4.4 State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access. *The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access; takes advantage of existing infrastructure systems; and as approved by the Lead Agency, would introduce compatible commercial/retail development at the subject site. The Project therefore supports urban design and planning processes identified in the State of California Energy Plan, is consistent with, and would not otherwise interfere with, nor obstruct implementation of the State of California Energy Plan.*

5.6.4.5 California Code Title 24, Part 6, Energy Efficiency Standards

California Code Title 24, Part 6 (also referred to as the California Energy Code), was promulgated by the CEC in 1978 in response to a legislative mandate to create uniform

building codes to reduce California's energy consumption. To these ends, the California Energy Code provides energy efficiency standards for residential and nonresidential buildings. According to the CEC, the Energy Commission's energy efficiency standards have saved Californians more than $74 billion in reduced electricity bills since 1977.[14]

California energy efficiency standards are updated on an approximately three-year cycle. CEC 2016 building energy efficiency standards went in to effect January 1, 2017. The Project would comply with energy efficiency standards in effect at the time of building permit application(s).

The 2016 Energy Efficiency Standards in their entirety can be reviewed at: http://www.energy.ca.gov/title24/. Energy Efficiency Standards can be obtained at the California Energy Commission, 1516 Ninth Street, MS-37, Sacramento, CA 95814-5512. *The Project would be designed, constructed and operated to meet or exceed incumbent Title 24 Energy Efficiency Standards. On this basis, the Project is determined to be consistent with, and would not interfere with, nor otherwise obstruct implementation of Title 24 Energy Efficiency Standards.*

5.6.5 Project Energy Demands and Energy Efficiency/Conservation Measures

Estimated energy demands of Project construction and Project operations are summarized in the following discussions. Project design features and operational programs, as well as regulations that promote energy conservation end energy conservation are also identified. The Project in total would be required to comply with incumbent performance standards established under the Building Energy Efficiency Standards contained in the California Code of Regulations (CCR), Title 24, Part 6 (Title 24, Energy Efficiency Standards). Also, developers and owners/tenants have vested financial incentives to avoid imprudent energy consumption practices. In this regard, there is growing recognition among developers and owners/tenants that efficient and sustainable construction and operational practices yield both environmental and economic benefits. On this basis, and as further supported by the following discussions,

[14] CEC. "California's Energy Efficiency Standards Have Saved Billions." *California's Energy Efficiency Standards Have Saved Billions*. CEC, n.d. Web. August 2017.

the Project would not result in or cause wasteful, inefficient, and unnecessary consumption of energy.

5.6.5.1 Construction Energy Demands and Energy Efficiency/Conservation Measures

Construction Energy Demands

Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction. Project construction activity timeline estimates, construction equipment schedules, equipment power ratings, load factors, and associated fuel consumption estimates are presented in Table 5.6-1. Eight-hour daily use of all equipment is assumed. The aggregate fuel consumption rate for all construction equipment is estimated at 18.5 hp-hr-gal., obtained from CARB 2013 Emissions Factors Tables, and fuel consumption rate factors cited at Table D24 of the Moyer guidelines.[15] For the purposes of this analysis, it is assumed that all construction equipment would be diesel-powered. Diesel fuel would be supplied by existing commercial fuel providers serving the City and region.

Table 5.6-1
Construction-Source Fuel Consumption Estimates

Activity/ Duration	Equipment	HP Rating	Quantity	Use Hours/Day	Load Factor	HP-hrs./day	Total HP-hrs.	Total Fuel Consumption (gal. diesel fuel)
Demolition (20 Days)	Concrete/Ind. Saws	81	1	8	0.73	473.04	9,460.80	511.40
	Excavators	158	3	8	0.38	1,440.96	28,819.20	1,557.79
	Rubber Tired Dozers	247	2	8	0.40	1,580.80	31,616.00	1708.97
Site Preparation (10 days)	Crawler Tractors	212	4	8	0.43	2,917.12	2,9171.20	157.68
	Rubber Tired Dozers	247	3	8	0.40	2,371.2	23,712.00	1,281.73
Grading (20 days)	Excavators	158	1	8	0.38	480.32	9,606.40	519.26
	Graders	187	1	8	0.41	613.36	12,267.20	663.09
	Rubber Tired Dozers	247	1	8	0.40	790.4	15,808.00	854.49

[15] *Methods to Find the Cost-Effectiveness of Funding Air Quality Projects for Evaluating Motor Vehicle Registration Fee Projects and Congestion Mitigation and Air Quality Improvement (CMAQ) Projects, Emission Factor Tables* (California Air Resources Board) May 2013; Table D24 Moyers Guidelines Fuel Consumption Rate Factors All Engines < 750 hp = 18.5 hp-hr-gal.

Table 5.6-1
Construction-Source Fuel Consumption Estimates

Activity/ Duration	Equipment	HP Rating	Quantity	Use Hours/Day	Load Factor	HP-hrs./day	Total HP-hrs.	Total Fuel Consumption (gal. diesel fuel)
	Crawler Tractors	212	3	8	0.43	2,187.84	43,756.80	2,365.23
Building Construction (230 days)	Crawler Tractors	212	3	8	0.43	2,187.84	503,203.20	27,200.17
	Cranes	231	1	8	0.29	535.92	123,261.60	6,662.79
	Forklifts	89	3	8	0.20	427.2	98,256.00	5,311.14
	Generator Sets	84	1	8	0.74	497.28	114,374.40	6,182.40
	Welders	46	1	8	0.45	165.6	36,018.00	1,946.92
Paving (20 days)	Pavers	130	2	8	0.42	873.6	17,472.00	944.43
	Paving Equipment	132	2	8	0.36	760.32	15,206.40	821.97
	Rollers	80	2	8	0.38	486.4	9,728.00	525.84
Architectural Coating (20 days)	Air Compressors	78	1	8	0.48	299.52	5,990.40	323.81
TOTAL CONSTRUCTION FUEL DEMAND (gallons diesel fuel)								***59,539.11***

Notes: Construction equipment schedules, power ratings, load factors populated from CalEEMod data presented in *Polopolus Air Quality Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018.

As presented at Table 5.6-1, Project on-site construction activities would consume an estimated 59,539.11 gallons of diesel fuel. Project construction would represent a "single-event" diesel fuel/gasoline demand and would not require ongoing or permanent commitment of fuel resources for this purpose.

Construction Energy Efficiency/Conservation Measures

Equipment used for Project construction would conform to CARB regulations and California emissions standards, and would demonstrate related fuel efficiencies. There are no unusual Project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the Project would therefore not result in inefficient, wasteful, or unnecessary consumption of fuel.

Additionally, certain incidental construction-source energy efficiencies would likely accrue through implementation of California regulations. More specifically, California Code of Regulations Title 13, Motor Vehicles, section 2449(d)(3) *Idling*, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

Where feasible, indirect construction energy efficiencies and energy conservation would be achieved through the use of recycled/recyclable materials and related procedures, and energy efficiencies realized from bulk purchase, transport and use of construction materials. Use of recycled and recyclable materials and use of materials in bulk also reduces energy demands associated with preparation and transport of construction materials as transport and disposal of construction waste and solid waste in general, with corollary reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations.

Construction Waste Management Plan

Consistent with Section 5.408, *Construction Waste Reduction, Disposal, and Recycling* of the California Green Building Standards Code (CALGreen Code), as adopted by the City of Eastvale, the Project would recycle or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition waste. A Project Construction Waste Management Plan would also be prepared consistent with Section 5.408.1.1 of the CALGreen Code.

Summary

Construction equipment used by the Project would result in single event consumption of approximately 59,539.11 gallons of diesel fuel. Diesel fuel would be supplied by City and regional commercial vendors. Construction equipment use of fuel would not be atypical for the type of construction proposed, and Project construction equipment would conform to CARB emissions standards, acting to promote equipment fuel efficiencies. CCR Title 13, Title 13, Motor Vehicles, section 2449(d)(3) *Idling*, limits idling times of

construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints. Where feasible, indirect construction energy efficiencies and energy conservation would be achieved through the use of recycled/recyclable materials and related procedures, and energy efficiencies realized from bulk purchase, transport and use of construction materials. As supported by the preceding discussions, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

5.6.5.2 Operational Energy Demands and Energy Efficiency/Conservation Measures

Energy consumption in support of or related to Project operations would include transportation energy demands (energy consumed by employee and patron vehicles accessing the Project site) and facilities energy demands (energy consumed by building operations and site maintenance activities).

Transportation Energy Demands

Energy that would be consumed by Project-generated traffic is a function of total vehicle miles traveled (VMT) and estimated vehicle fuel economies of vehicles accessing the Project site. With respect to estimated VMT, Project traffic would result in approximately 22,138,616 annual VMT along area roadways. Regarding vehicle fuel economies, the predominance of vehicles accessing the Project site would be light trucks, automobiles, and SUVs; collectively, light duty vehicles (LDVs). As presented in *Annual Energy Outlook 2015, with projections to 2040* (U.S. Energy Information Administration, USEIA) April 2015, average fuel economies of LDVs in aggregate are projected to improve from approximately 21.9 mpg in 2013, to approximately 37.0 mpg in 2040. Fuel demands of private vehicles would be met through commercial fuel providers. Reflecting, respectively, the lowest and highest estimated fuel economies for LDVs presented in *Annual Energy Outlook 2015* for the period of record (2013 through 2040), Table 5.6-2 provides an estimated range of annual fuel consumption resulting from Project-generated traffic.

Table 5.6-2
Project Traffic-Fuel Consumption Estimates

Annual Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
22,138,616	21.9	1,010,896
22,138,616	37.0	598,341

Notes: 1. VMT estimates from: *Polopolus Greenhouse Gas Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018. Appendix 3.1: CalEEMod Emissions Model Outputs (Operations) p. 9.
2. MPG estimates from: *Annual Energy Outlook 2015, with projections to 2040* (U.S. Energy Information Administration, USEIA) April 2015, p 10.

Facilities Energy Demands

Project building operations and Project site maintenance activities would result in the consumption of natural gas and electricity. Natural gas would be supplied to the Project by The Gas Company; electricity would be supplied to the Project by SCE. Annual natural gas and electricity demands of the Project are summarized at Table 5.6-3.

Table 5.6-3
Project Annual Operational Energy Demand Summary

Natural Gas Demand	**kBTU/year**
Convenience Mkt. w/Gas Pumps	7,521.8
Fast Food Restaurant w/o Drive Through	1,093,760.0
Fast Food Restaurant w/Drive Through	1,503,920.0
Government Office Bldg.	138,800.0
High-Turnover Sit-Down Restaurant	1,640,640.0
Hotel	11,327,500.0
Library	812,250
Medical Office Bldg.	34,700
Shopping Center	8,880
Total Natural Gas Demand	**16,567,971.8 kBTU/year**
Electricity Demand	**kWh/year**
Convenience Mkt. w/Gas Pumps	42,793
Fast Food Restaurant w/o Drive Through	189,920
Fast Food Restaurant w/Drive Through	261,140
Government Office Bldg.	380,800
High-Turnover Sit-Down Restaurant	284,880
Hotel	3,424,110
Library	253,750

Table 5.6-3
Project Annual Operational Energy Demand Summary

Medical Office Bldg.	95,200
Shopping Center	50,520
Total Electricity Demand	**4,983,113 kWh/year**

Source: *Polopolus Greenhouse Gas Impact Analysis, City of Eastvale* (Urban Crossroads, Inc.) March 27, 2018. Appendix 3.1: CalEEMod Emissions Model Outputs (Operations) pp. 13, 15.

Operational Energy Efficiency/Conservation Measures

The Project would meet standards established under the California Code Title 24, Part 6 (the California Energy Code) and California Green Building Standards Code (CALGreen; CCR, Title 24, Part 11) as implemented by the City of Eastvale.

Enhanced Vehicle Fuel Efficiencies

Estimated annual fuel consumption estimates presented previously at Table 5.6-3 represent likely potential maximums that would occur under Project Opening Year (2019) Conditions. Under future conditions, average fuel economies of vehicles accessing the Project site can be expected to improve as older, less fuel-efficient vehicles are removed from circulation. Average fuel economies of vehicles accessing the Project site can also be expected to improve over time in response to fuel economy and emissions standards imposed on newer vehicles entering the transportation system.

Project Design and Access

The Project proposes commercial, retail, service, and civic uses within an urban context, proximate to, and readily accessible from regional and local roadways. In these regards, the Project's urbanized setting promotes local patronage of the proposed commercial, retail, service, and civic uses; and availability of regional and local roadways acts to facilitate access to the Project generally.

Alternative Transportation

Pedestrian Access/Bicycle Access

The Project area is predominantly developed and includes sidewalk facilities for pedestrians. The Project would accommodate and would not interfere with existing or

planned bicycle facilities, bicycle routes, bicycle paths or other bicycle amenities. To the satisfaction of the City, final Project designs would incorporate pedestrian sidewalks that internally link all uses. Pedestrian/bicycle improvements would be provided pursuant to CalGreen standards, or more stringent requirements as may be specified by the City. The Project pedestrian/bicycle improvements would encourage people to walk and bicycle rather than drive.

Transit

Bus service available to the Study Area is illustrated at Figure 4.2-2. The Study Area is currently served generally by the Riverside Transit Authority (RTA) RTA Routes 3 and 29. RTA Route 3 runs along portions of Hamner Ave., Limonite Ave., Pats Ranch Road, 68th St., Scholar Way, and Citrus St. RTA Route 29 runs along portions of Limonite Ave., Hamner Ave., 68th St., and Pats Ranch Road.

RTA regularly reviews ridership demands and travel patterns to assure convenient and efficient bus transportation within its Service Area. Current (2018) RTA bus routes and schedules are available at: http://www.riversidetransit.com/index.php/riding-the-bus/maps-schedules.

As part of the City's standard development review process, the need for and propriety of transit-related facilities including, but not limited to, bus shelters and bicycle parking would be coordinated between the City and the Project Applicant, with input from RTA.

Landscaping

Landscaping throughout the Project site would be provided consistent with City of Eastvale requirements and recognizing competing demands for available water resources. Drought-tolerant plants would be used, where appropriate, reducing water consumption and power demand related to water delivery/irrigation systems. The Project would connect to the recycled water distribution system when available to the Project site, further reducing potable water demands of the Project. Reduced water consumption provides corollary energy conservation benefits by reducing related

water/wastewater conveyance and treatment demands, and associated energy consumption.

Solid Waste Diversion/Recycling

The Project would comply with State of California, County of Riverside, and City of Eastvale requirements acting to reduce the amount of solid waste transported to, and disposed at area landfills, with corollary reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations.

Summary

Transportation Energy Demands

Vehicular trips and related VMT generated by the Project would result in an estimated 1,010,896 – 598,341 gallons of gasoline consumption per year. Fuel would be provided by current and future commercial vendors. Trip generation and VMT generated by the Project are consistent with other uses of similar scale and configuration. Therefore, the Project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips and VMT, nor associated excess and wasteful vehicle energy consumption.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, bio fuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT.

The Project would also implement sidewalks, pedestrian paths, and bicycle amenities thereby encouraging pedestrian and bicycle access. The Project would not interfere or conflict with existing or proposed pedestrian or bicycle facilities.

As part of the City's standard development review process, the need for and propriety of transit-related facilities, including but not limited to, bus shelters and bicycle parking, would be coordinated between the City and the Project Applicant, with input from RTA.

Facilities Energy Demands

Project facility operational energy demands are estimated at 16,567,971.8 kBTU/year natural gas and 4,983,113 kWh/year electricity. Natural gas would be supplied to the Project by The Gas Company; electricity would be supplied by SCE. The Project proposes conventional development types, reflecting contemporary energy efficient/energy conserving designs and operational programs. Uses proposed by the Project are not inherently energy intensive, and the Project energy demands in total would be comparable to, or less than, other similar projects of like scale and configuration.

The Project would comply with incumbent Title 24 energy efficiency requirements. Project energy demands are further reduced through compliance with CalGreen standards and requirements, and City Ordinance requirements (e.g., the City Water Conservation Ordinance).

Based on the preceding, Project facilities energy demands and energy consumption would not be inefficient, wasteful, or otherwise unnecessary.

5.6.6 Conclusion

As supported by the preceding analyses, Project construction and operations would not result in the inefficient, wasteful or unnecessary consumption of energy, and potential Project impacts in these regards are less-than-significant. Further, energy demands of the Project can be accommodated within the context of available resources and energy delivery systems. The Project would therefore not cause or result in the need for additional energy producing or energy transmission facilities and would not create or result in a potentially significant impact affecting energy resources or energy delivery systems.

6.0 ACRONYMS AND ABBREVIATIONS

6.0 ACRONYMS AND ABBREVIATIONS

ACOE	U.S. Army Corps of Engineers
ADA	Americans with Disabilities Act
ADT	average daily trip
af	acre-feet
amsl	above mean sea level
APN	Assessor's Parcel Number
APS	Alternative Planning Strategy
APZ	Accident Potential Zone
AQMP	Air Quality Management Plan
BAAQMD	Bay Area Air Quality Management District
BACM	best available control measures
BAU	business as usual
bgs	below ground surface
BMP	Best Management Practice
BSG	below site grade
CAA	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	California Green Building Standards Code
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAT	Climate Action Team
CBC	California Building Code

CBSC	California Building Standards Commission
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQ	Council on Environmental Quality
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CF_4	Tetrafluoromethane
C_2F_6	Hexafluoroethane
CFC	Chlorofluorocarbon
cfs	cubic feet per second
CH_4	Methane
C_2H_6	Ethane
CIP	Capital Improvement Plan
CMP	Congestion Management Plan
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon monoxide
CO_2	Carbon dioxide
COA	Conditions of Approval
CPUC	California Public Utilities Commission
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DEIR	Draft Environmental Impact Report
DIF	Development Impact Fees
DPM	Diesel Particulate Matter
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act
EMS	Energy Management System

EMWD	Eastern Municipal Water District
EPA	Environmental Protection Agency
EPS	emission performance standard
ESA	Endangered Species Act
EPA	Environmental Protection Agency
ESRI	Environmental Systems Research Institute
FAA	Federal Aviation Administration
FAR	Floor-to-Area Ratio
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FRP	Fiber Reinforced Plastic
FTA	Federal Transit Administration
GCC	Global Climate Change
GFA	gross floor area
Gg	Gigagram
GHG	Greenhouse Gas
GWP	Global Warming Potential
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HET	High Efficiency Toilet
HFC	Hydrofluorocarbon
HI	Hazard Index
H_2O	Water
HOV	high-occupancy vehicle
HRA	Health Risk Assessment
HVAC	Heating, Ventilation, & Air Conditioning
ICSC	International Council of Shopping Centers
ICU	Intersection Capacity Utilization
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
ISTEA	Intermodal Surface Transportation Efficiency Act
ITE	Institute of Transportation Engineers

JCSD	Jurupa Community Services District
lbs/day	pounds per day
Ldn	day/night average sound level
LEA	Local Enforcement Agency
LED	light-emitting diodes
Leq	equivalent sound level
LEED	Leadership in Energy and Environmental Design
LOS	Level of Service
LST	Localized Significance Threshold
MBTA	Migratory Bird Treaty Act
MEIR	Maximally Exposed Individual Receptor
MEISC	Maximally Exposed Individual School Child
MEIW	Maximally Exposed Individual Worker
mgd	million gallons per day
$MMTCO_2e$	Million Metric Ton of Carbon Dioxide Equivalent
MOE	measures of effectiveness
MPO	Metropolitan Planning Organization
MSHCP	Multiple Species Habitat Conservation Plan
msl	mean sea level
MUTCD	Manual of Uniform Traffic Control Devices
$\mu g/m^3$	micrograms per cubic meter
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NIOSH	National Institute for Occupational Health and Safety
N_2O	Nitrous Oxide
NOP	Notice of Preparation
NO_x	Oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRP	Non-Reinforced Thermoplastic Panel

O_3	Ozone
OEHHA	California Office of Environmental Health Hazard Assessment
OHWM	Ordinary High Water Mark
OPR	State of California Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PAHs	Polycyclic Aromatic Hydrocarbons
Pb	Lead
PCE	passenger car equivalency
PFC	Perfluorocarbon
$PM_{2.5}$	Particulate Matter Less Than 2.5 Microns in Diameter
PM_{10}	Particulate Matter Less Than 10 Microns in Diameter
ppb	parts per billion
ppm	parts per million
ppt	parts per trillion
PVC	Polyvinyl Chloride
RCA	Regional Conservation Authority
RCFCWCD	Riverside County Flood Control and Water Conservation District
RCNM	Roadway Construction Noise Model
RCTC	Riverside County Transportation Commission
RECs	Recognized Environmental Conditions
REL	Reference Exposure Level
RMP	Risk Management Plan
ROG	Reactive Organic Gases
RTA	Retail Trade Area
RTP	Regional Transportation Plan
R/W	Right of Way
RWQCB	Regional Water Quality Control Board
SARWQCB	Santa Ana Regional Water Quality Control Board
SAWPA	Santa Ana Watershed Project Authority
SBOE	State Board of Equalization
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
SIP	State Implementation Plan
SKR HCP	Stephens' Kangaroo Rat Habitat Conservation Plan
SO_x	Oxides of sulfur
SRRE	Source Reduction and Recycling Element
SSC	Species of Special Concern
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
TEA-21	Transportation Equity Act for the 21st Century
TIA	Traffic Impact Analysis
TRU	Transport Refrigeration Units
TUMF	Transportation Uniform Mitigation Fee
UBC	Uniform Building Code
ULI	Urban Land Institute
URF	Unit Risk Factor
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UWMP	Urban Water Management Plan
VBMP	Design Capture Volume
VFP	Vehicle fueling position
V/C	Volume to Capacity
VdB	vibration decibel
VMT	vehicle miles traveled
VOC	Volatile Organic Compound
WCI	Western Regional Climate Action Initiative
WDR	Water Discharge Requirement
WQMP	Water Quality Management Plan
WRCOG	Western Riverside Council of Governments

7.0 REFERENCES

7.0 REFERENCES

PERSONS AND ORGANIZATIONS CONSULTED

City of Eastvale
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DOCUMENTS CONSULTED

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