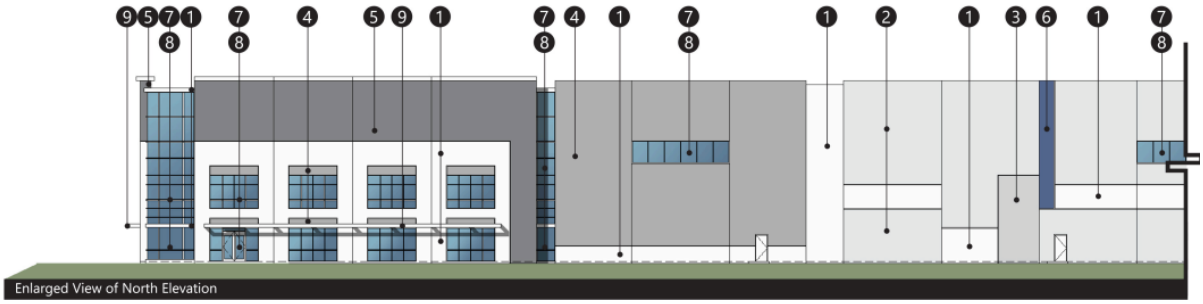

Homestead Industrial Project

Draft Environmental Impact Report
State Clearinghouse No. 2019090335

prepared by

City of Eastvale
Planning Department
12363 Limonite Avenue, Suite 910
Eastvale, California 91752
Contact: Gina Gibson-Williams, Community Development Director

prepared with the assistance of

Rincon Consultants, Inc.
901 9th Street, Suite 109
Redlands, California 92374

January 2020

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Executive Summary

This document is an Environmental Impact Report (EIR) analyzing the potential environmental effects of the proposed Homestead Industrial Project (proposed project). This section summarizes the characteristics of the proposed project, the environmental impacts and mitigation measures associated with the proposed project, and alternatives to the proposed project.

Project Synopsis

Project Applicant

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Raymond A. Polverini
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Newport Beach, California 92660

Lead Agency Contact Person

Gina Gibson-Williams, Community Development Director
City of Eastvale
12363 Limonite Avenue, Suite 910
Eastvale, California 91752

Project Description

This EIR has been prepared to examine the potential environmental effects of the Homestead Industrial Project. The following is a summary of the full project description, which can be found in Section 2, *Project Description*.

The approximately 56-acre project site is located west of the current westerly terminus of Limonite Avenue on the west side of Archibald Avenue. Limonite Avenue terminates at the site's eastern boundary. Archibald Avenue also abuts the site on the site's eastern edge. It encompasses the following Assessor's Parcel Numbers: 144-010-015, 144-010-018, 144-010-020, 144-010-023, 144-010-032.

The project site has a General Plan land use designation of Light Industrial (I-1) (Eastvale 2012). The site is zoned as Heavy Agricultural (A-2) as defined by the City's Zoning Ordinance (Eastvale 2013).

The site is relatively undeveloped and currently operates as a dairy farm, Dyt Dairy, and has three residences along the Archibald Avenue frontage.

Project Characteristics

The proposed project would consist of the development of six industrial use buildings totaling up to 1,080,060 square feet on the site of an existing dairy. The existing structures would be demolished to accommodate the new development, including the extension of Limonite Avenue through the project site.

The buildings would range in size from 37,125 square feet to 507,631 square feet. Each building would feature office space, dock doors, and be located on individual parcels. Most of the dock doors would be dock-height to accommodate trailer loading/unloading. Each building would also feature an at-grade door for vehicle access. The buildings would be from 30 feet to 40 feet in height.

Specific tenants are unknown, however, uses would be consistent with the Industrial Park (I-P) zone.

Architecture and Treatments

Project buildings would generally be composed of a series of concrete tilt up panels, with integrated horizontal and vertical elements, and windows with mullions. Metal canopies would be strategically placed along some windows for architectural affect. Building materials would be coated in shades of white, gray, blue and other similar colors. Windows would be non-reflective, tempered glass.

Landscaping

The landscape plan plant palette will feature drought-tolerant plants in compliance with Eastvale Municipal Code Section 120.05.040 (EMC 120.050.040). Landscaping throughout the project site would consist of low water use trees, shrubs and ground cover. The landscape plans include nine types of trees, seven types of shrubs and six varieties of ground cover. Large trees would align the project site perimeter as well as align Limonite Avenue and Archibald Avenue. A variety of trees, shrubs, and groundcover would be planted outside each of the buildings, along crosswalks and adjacent to other paving.

Road Improvements and Site Access

The project would include the extension of Limonite Avenue within the project limits, and also include improvements to the Archibald Avenue frontage, and the Archibald Avenue/Limonite Avenue intersection.

Limonite Avenue

Limonite Avenue currently terminates at Archibald Avenue at the project's eastern boundary. However, the City has been planning the westward extension of Limonite Avenue to complete this east-west corridor through the City as envisioned in the City's General Plan Circulation Element. The project would include the development of Limonite Avenue within the project limits. The City plans to construct Limonite Avenue westward from the western project boundary across Cucamonga Creek Channel.

Limonite Avenue would be developed with a right-of-way of approximately 60 feet with a 16-foot northerly and 20-foot southerly landscape/trail easement to meet the classification of a modified Urban Arterial and feature four travel lanes with a raised center median, with easements for the landscaped parkway and multi-use trails. Other features still to be determined include the number and placement of driveways, turning lanes/intersection types, acceleration/deceleration lanes, bike lanes and trails.

Archibald Avenue

Archibald Avenue would be widened along the project frontage to 152 feet to meet the classification of an Urban Arterial.

Limonite Avenue and Archibald Avenue Intersection

Archibald Avenue would be widened to 165 feet at the intersection with Limonite Avenue and conform with County of Riverside Standard No. 91. Traffic signal improvements would also be constructed. The widening of Archibald Avenue would require the relocation of Southern California Edison (SCE) transmission poles and overhead lines (SCE and telecommunication) along Archibald Avenue.

Site Access

Access to the project site would be provided via driveways on Archibald Avenue and Limonite Avenue. The specific number of driveways and configuration for access is subject to change during final design and in conjunction with the City.

Parking

The proposed project would provide 794 parking stalls, apportioned to each building and parcel. The 794 spaces are composed of a combination of standard, accessible, and accessible van spaces. Additionally, Buildings 5 and 6 would have 90 trailer stalls. In addition, infrastructure would be installed to facilitate tenant-installed electric vehicle (EV) charging.

Utilities

On-site utilities would be constructed underground to the extent suitable. The proposed project is within the Jurupa Community Services District (JCSD) service area. JCSD provides potable and reclaimed water and wastewater collection for the site. Water and wastewater collection infrastructure are located within the Archibald Avenue right-of-way.

A 36-inch high-pressure natural gas transmission line owned and operated by Southern California Gas company (SCG) lies underground, east-west through the project site. The gas line will be protected in place during construction and operation of the project in accordance with requirements of SCG.

SCE transmission lines and four transmission poles, along with co-located facilities (e.g., AT&T transmission lines) would be relocated aboveground to accommodate the widening of Archibald Avenue along its western frontage, while SCE distribution facilities would be relocated underground within Limonite Avenue and Archibald Avenue rights-of-way. Similarly, AT&T distribution lines would be located underground along the Limonite Avenue and Archibald Avenue rights-of-way.

Construction and Grading

Construction of the proposed project would begin in early 2021, take approximately 11 months, and be completed by early 2022. Construction would consist of grading, building construction, architectural coating, and paving. Grading would require a maximum of 94,000 cubic yards (cy) cut, and approximately 61,000 cy of fill. Grading will be balanced on-site to the extent feasible and any excess material would be provided to a site requiring clean fill or taken to a permitted landfill that will accept it.

Construction activity would comply with the City's Municipal Code Section 8.52.020 (Noise Regulation) and would not operate outside the hours of 6:00 am to 6:00 pm June through September, and 7:00 am to 6:00 pm October through May.

Project Design Features

The following are project design features incorporated into the proposed project that would reduce project impacts or otherwise provide environmental benefits:

- Windows will be anti-reflective to minimize glare and bird strikes.
- Buildings will be designed and constructed to be solar ready, to facilitate easy installation of solar power generation in the future.
- Parking spaces will be dedicated for electric vehicle charging and include the installation of infrastructure for future charging facilities.
- Trees will be located within the project site, and light poles limited to conform to Airport Land Use Compatibility Plan (ALUCP) requirements for compatibility with Zone C.

Project Objectives

Project objectives include the following:

1. Provide light industrial uses that serve the local market area and beyond; and that attract new customers and businesses to Eastvale.
2. Improve and maximize economic viability of the site through the establishment of light industrial uses.
3. Maximize and broaden the City's sales tax base by providing local and regional tax -generating uses and by increasing property tax revenues.
4. Create additional employment-generating opportunities for the residents of Eastvale and surrounding communities.
5. Contribute to the development of the City's General Plan circulation system through the development of a new segment of Limonite Avenue, and reconstruction of the Limonite Avenue and Archibald Avenue intersection to its ultimate configuration.

Areas of Known Controversy

The EIR scoping process did not identify any areas of known controversy for the proposed project. Responses to the Notice of Preparation of a Draft EIR and input received at the EIR scoping meeting held by the City are summarized in Section 1.0, *Introduction*.

Issues to be Resolved

No issues to be resolved have been identified.

Scope and Content of the EIR

The following issues were found to include potentially significant impacts and have been studied in detail in the EIR:

- Aesthetics, Light and Glare
- Air Quality
- Biological Resources
- Energy
- Greenhouse Gas
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities and Service Systems

Issues not studied in detail are evaluated in Section 5.0, *Effects Found Not to be Significant*, and summarized in Table 1-2, in Section 1.0, *Introduction*. As indicated therein, there is no substantial evidence that significant impacts would occur to the following issue areas: agricultural and forestry, cultural resources, geology and soils, mineral resources, population/housing, recreation, and wildfire.

Summary of Impacts and Mitigation Measures

Table ES-1 summarizes the environmental impacts of the proposed project, proposed mitigation measures, and residual impacts (the impact after application of mitigation, if required). Impacts are categorized as follows:

- **Significant and Unavoidable.** An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per §15093 of the CEQA Guidelines.
- **Less than Significant with Mitigation Incorporated.** An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings under §15091 of the CEQA Guidelines.
- **Less than Significant.** An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
- **No Impact:** The proposed project would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts

Impact	Mitigation Measure (s)	Residual Impact
Aesthetics, Light and Glare		
The proposed project would not substantially degrade the public view of Chino Hills and the San Gabriel Mountains.	None required.	Less than significant.
The proposed project would not substantially damage scenic resources within the viewshed of a designated or eligible state scenic highway as defined Caltrans and the California Scenic Highway Program.	None required.	No impact.
The proposed project would alter the existing character of the site from one of a dairy farm to large buildings for industrial uses. However, the project would conform to the city's vision as defined by the General Plan and policies designed to enhance the visual quality of new development. Therefore, the project would not substantially degrade the existing visual character of the site or surrounding area.	None required.	Less than significant.
The proposed project would introduce new sources of light and glare to the project site typical of an industrial warehouse uses. However, adherence to state and local standards and regulations regarding interior and exterior lighting, site design, and construction permitting would reduce impacts to a less than significant level.	None required.	Less than significant.
Agriculture and Forestry		
The proposed project would convert Farmland of Local Importance, and zoned for agricultural use However, this use is consistent with the General Plan, and envisioned long-term use of the property.	None required.	Less than significant.
Air Quality		
The project would not generate growth which would exceed the AQMP forecasts. However, the project would generate NO_x emissions that exceed thresholds which could result in an increase in air quality violations and conflict with the AQMP. There is no feasible mitigation to reduce mobile NO_x emissions.	**AQ-1 Truck Idling Signage. The** truck access gates and loading docks within the truck court on the project site shall be posted with signs which include the following: ▪ Truck drivers shall turn off engines when not in use; ▪ Diesel delivery trucks servicing the project shall not idle for more than five (5) minutes; and ▪ Telephone numbers of the building facilities manager and the California Air Resources Board to report violations. **AQ-2 Energy Efficient Trucks.** The project applicant/owner shall encourage the trucks visiting the facility to incorporate energy efficiency improvements by providing information about the Carl Moyer Program, including the benefits of truck modernization, retrofits, and/or aerodynamic kits	Significant and unavoidable.

Impact	Mitigation Measure (s)	Residual Impact
	and low rolling resistance tires, towards reduced fuel consumption. **AQ-3 Electric Vehicle Charging and Carpool Parking.** The project shall be designed to incorporate electric vehicle charging stations in parking areas and provide spaces designated for low-emission, fuel efficient, or carpool/vanpool vehicles, consistent with applicable CalGreen requirements. **AQ-4 Electric Interior Vehicles**. All buildings shall be designed to provide infrastructure to support use of electric-powered forklifts and/or other interior vehicles.	
The project would not exceed SCAQMD thresholds for criteria pollutants during construction. During operation, the project would exceed SCAQMD thresholds for NO_x from mobile sources.	Mitigation Measures AQ-1 through AQ-4.	Significant and unavoidable.
The project would not exceed LST for construction and operation established to address exposure of individuals to criteria pollutants and the project- related traffic would not result in the creation of CO hotspots.	None required.	Less than significant.
The project would release toxic air contaminants during construction and operation. However, emissions would not exceed established thresholds or expose nearby receptors to significant health risks.	None required.	Less than significant.
The proposed project does not contain land uses that are associated with odor complaints.	None required.	Less than significant.
Biological Resources		
Implementation of the project could result in direct or indirect impacts to Burrowing Owl and nesting birds and raptors through removal of ground cover and habitat, and from construction during the breeding season.	**BIO-1A Burrowing Owl Preconstruction Survey. Pre**-construction presence/absence surveys for burrowing owl shall be conducted in the survey area where suitable habitat is present prior to ground disturbance in new areas, throughout the construction phase of the project. Pre-construction surveys shall be conducted by a qualified biologist no more than 30 days prior to grading or other significant site disturbance. Surveys shall include the development footprint and consider up to a 500-foot buffer of adjacent areas to the extent feasible (e.g. a visual survey of adjacent areas will suffice for off-site areas not accessible). The surveys shall be conducted in accordance with the most recent California Department of Fish and Wildlife and California Burrowing Owl Consortium guidelines. A burrow shall be considered occupied when there is confirmed use by burrowing owl based on observations made by a qualified biologist. If owls are not found to be occupying habitat in the survey area during the pre-construction survey, the proposed disturbance	Less than significant with mitigation incorporated.

Impact	Mitigation Measure (s)	Residual Impact
	activities may proceed. Take of active nests shall be avoided. **BIO-1B Burrowing Owl Avoidance Measures.** If owls are discovered on and/or within 500 feet of the proposed project site, avoidance measures shall be developed in compliance with the Multiple Species Habitat Conservation Plan and in coordination with the California Department of Fish and Wildlife and/or Western Riverside County Regional Conservation Authority. Such measures will include but not be limited to the following: ▪ Burrowing owls shall not be disturbed on-site and/or within a 500-foot buffer between February 1 and August 31 to avoid impacting nesting. ▪ Prior to any ground disturbance, all limits of project construction shall be delineated and marked to be clearly visible to personnel on foot and in heavy equipment. All construction-related activities shall occur inside the limits of construction and designated staging areas. Construction staging and equipment storage shall be situated outside of any occupied burrowing owl burrow locations. All construction-related movement shall be restricted to the limits of construction and staging areas. ▪ Avoidance measures shall include passive relocation by a qualified biologist to remove the owls between September 1 and January 31, which is outside of the typical nesting season. **BIO-2 Nesting Bird Avoidance.** Prior to issuance of grading permits, the following measures shall be implemented: ▪ To avoid disturbance of nesting and special-status bird species protected by the Migratory Bird Treated Act and California Fish and Game Commission, activities related to the project, including but not limited to, vegetation removal, ground disturbance, and construction and demolition shall occur outside of the bird breeding season (February 1 through August 31). If construction must begin during the breeding season, then a pre-construction nesting bird survey shall be conducted no more than 30 days prior to initiation of construction activities. The nesting bird pre-construction survey shall be conducted on foot inside the project site disturbance areas. If an active avian nest is discovered during the pre-construction clearance survey, construction activities shall stay outside of a 300-foot buffer around the active nest. For listed and raptor species, this buffer shall be expanded to 500 feet. ▪ Inaccessible areas (e.g., private lands) shall be	

Impact	Mitigation Measure (s)	Residual Impact
	surveyed from afar using binoculars to the extent practical. The survey shall be conducted by a qualified biologist familiar with the identification of avian species known to occur in western Riverside County. If nests are found, an appropriate avoidance buffer shall be determined by a qualified biologist and demarcated by a qualified biologist with bright orange construction fencing, flagging, construction lathe, or other means to mark the boundary. Effective buffer distances are highly variable and based on specific project stage, bird species, stage of nesting cycle, work type, and the tolerance of a particular bird pair. The buffer may be up to 500 feet in diameter, depending on the species of nesting bird found and the biologist's observations. ▪ If nesting birds are located adjacent to the project site with the potential to be affected by construction activity noise above 60 dBA Leq (see Section 4.10, Noise, for definitions and discussion of noise levels), a temporary noise barrier shall be erected consisting of large panels designed specifically to be deployed on construction sites for reducing noise levels at sensitive receptors. If 60 dBA Leq is exceeded, an acoustician would require the construction contractor to make operational and barrier changes to reduce noise levels to 60 dBA during the breeding season (February 1 through August 31). Noise monitoring shall occur during operational changes and installation of barriers to ensure their effectiveness. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No parking, storage of materials, or construction activities shall occur within this buffer until the avian biologist has confirmed that breeding/nesting is completed, and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist, if it is determined such encroachment will not adversely impact the nesting birds.	
Construction of the project would not impact any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS.	None required.	No impact.
No proposed or existing MSHCP core areas, linkages, or habitat blocks are on or near the project site.	None required.	No impact.

Impact	Mitigation Measure (s)	Residual Impact
No proposed or existing MSHCP core areas, linkages, or habitat blocks are on or near the project site. Impacts would be less than significant. There would be no impacts related to local policies and ordinances protecting biological resources.	BIO-1A and BIO-1B	
Cultural Resources		
There are no significant cultural resources associated with the project site, and there is a low likelihood for the site to support either archaeological sites or human remains. Therefore, the project has the potential to adversely impact cultural resources, if unknow resources are present on the project site.	**CUL-1 Unanticipated Discovery of Cultural Resources**. If cultural resources are encountered during ground-disturbing activities, work in the immediate area shall be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology (National Park Service 1983) shall be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for California Register of Historic Resources eligibility. If the discovery proves to be significant under the California Environmental Quality Act and cannot be avoided by the project, additional work such as data recovery excavation and Native American consultation and archaeological monitoring may be warranted to mitigate any significant impacts to cultural resources. **CUL-2 Unanticipated Discovery of Human Remains**. If human remains are found, existing regulations outlined in the State of California Health and Safety Code Section 7050.5 state that 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. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric or Native American in origin, the Coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of being granted access and provide recommendations as to the treatment of the remains to the landowner.	Less than significant with mitigation incorporated.
Energy		
The project would consume electricity, natural gas, and fuel during construction and operation. However, the project would not place significant additional demand on SCE or SoCalGas and would comply with applicable conservation standards. Neither project construction nor operation would result in wasteful, inefficient, or unnecessary consumption of energy.	None required.	Less than significant.

Impact	Mitigation Measure (s)	Residual Impact
The project would not conflict with or obstruct state regulations or the Eastvale General Plan.	None required.	No impact.
Geology and Soils		
The project site is not within a fault zone, subject to steep slopes, liquefaction or expansive soils and would not feature septic tanks. Potential impacts to erosion are addressed via compliance with applicable regulations.	None required.	Less than significant.
There are no known fossil localities in the project vicinity. However, the project has the potential to adversely impact paleontological resources, if unknown resources are present on the project site.	**PALEO-1 Unanticipated Discovery of Fossils.** Excavations exceeding five feet in depth shall be monitored to identify any fossil remains. If fossil remains are discovered, the contractor shall cease ground disturbing activities within 50 feet of the find until it can be assessed by the qualified paleontologist. If the find is determined to be not significant by the paleontologist, excavation activities can continue. If the find is determined to be significant or potentially significant by the qualified paleontologist, the ground disturbing activities within 50 feet of the find shall continue to cease until the sampling and data recovery of resource is completed. After recovering the resource, the paleontologist shall follow the Society of Vertebrate Paleontology standard guidelines for analyzing the fossil specimens, store the specimens at a museum depository that is capable to provide access for future research, prepare a final report documenting the find(s), and submit the document to the City of Eastvale and any other requesting party.	Less than significant with mitigation incorporated.
Greenhouse Gas Emissions		
The proposed project would generate GHG emissions that exceed the established GHG industrial threshold even with the implementation of mitigation measures because there are no feasible measures to control mobile emissions.	No feasible mitigation.	Significant and unavoidable.
The project would be consistent with the goals and GHG reduction measures of the SCAG's 2040 RTP/SCS and WRCOG's CAP, as well as with applicable measures in the 2008 and 2017 Scoping Plan. However, the project would exceed established thresholds to meet GHG reduction targets and policies.	AQ-1 through AQ-4.	Significant and unavoidable.

Impact	Mitigation Measure (s)	Residual Impact
Hazards and Hazardous Materials		
Given the opportunity for contaminated soils to occur on the project site, project construction would potentially 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 likely release of hazardous materials into the environment.	**HAZ-1** Prior to the issuance of a building permit, the Applicant shall remove dieldrin containing soil and conduct post removal testing consistent with the recommendation in the Phase II Environmental Site Assessment (October 2019) prepared by Stantec for the project site. The soil removal and post-removal testing results shall be documented in a report and provided to the city for confirmation that the residual pesticide levels remain below screening levels. The Applicant shall take additional remediation actions If recommended based on the post-removal results to the satisfaction of the City. **HAZ-2** Prior to issuance of a demolition permit, the Applicant shall provide evidence that the single-family residence at 6207 Archibald Avenue has been evaluated for asbestos containing materials (ACM) by a certified asbestos consultant. If ACM are found to be present in building materials to be removed, demolished and disposed, the Applicant shall submit a plan signed by a certified asbestos consultant for the removal of the identified ACM in accordance with all applicable laws and regulations, including but not necessarily limited to: California Code of Regulations, Title 8; Business and Professions Code; Division 3; California Health and Safety Code 25915-25919.7.	Less than significant with mitigation incorporated.
The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	None required.	No impact.
The project would not 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.	None required.	Less than significant.
The project would not result in a safety hazard or excessive noise for people residing or working in the project area due to airport/airstrip operations.	None required.	Less than significant.
The project would not interfere with vehicular circulation routes or the ability of emergency response services. Therefore, it would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	None required.	Less than significant.
The project is not located in a very high fire hazard zone and would not expose people or structures to a significant risk of loss, injury or death involving wildland fires.	None required.	Less than significant.

Impact	Mitigation Measure (s)	Residual Impact
Hydrology and Water Quality		
Construction and operation of the project could increase erosion and stormwater runoff due to site disturbance and increased impervious surface area. Compliance with applicable regulations and policies, including preparation of a SWPPP during construction and on-site capture and treatment of stormwater runoff through biofiltration systems and detention basins during operation, would reduce water quality impacts.	None required.	Less than significant.
The proposed project would not involve on-site groundwater extraction or and would be served by JCSD's existing and planned supplies, reducing potential impacts to groundwater levels. Impervious surface cover would increase on the project site under the proposed project, reducing the potential for recharge of the underlying aquifer. However, on-site runoff would continue to discharge to Cucamonga Creek and, ultimately, unlined reaches of Mill Creek, Chino Creek, and the Santa Ana River, where additional potential for infiltration and recharge exists.	None required.	Less than significant.
Under the proposed project, on-site stormwater runoff would be captured and treated via stormwater drainage system consisting of catchment basins, biofiltration systems, and detention basins designed to accommodate the 85th percentile, 24-hour storm event. The proposed project would not result in substantial off-site hydromodification impacts and would not alter the course of a river or stream.	None required.	Less than significant.
The project site is not located in a flood, seiche, or tsunami zone. Therefore, the project would not impede or redirect flood flows or risk release of pollutants due to project inundation by flood, seiche, or tsunami.	None required.	No impact.
The proposed project would implement water quality best management practices (BMPs) in accordance with applicable local and regional requirements, reducing potential downstream water quality impacts. As such, the proposed project would not conflict with or obstruct implementation of the Water Quality Control Plan for the Santa Ana Region. The project site overlies an adjudicated groundwater basin and would not conflict with or obstruct implementation of a sustainable groundwater management.	None required.	Less than significant.

Impact	Mitigation Measure (s)	Residual Impact
Land Use and Planning		
The project would not divide an existing community.	None required.	Less than significant.
The project would be consistent with the land use designation and related requirements and inconsistent with the existing zone. A zone change is proposed to conform the zoning with the land use designation and proposed use. Upon approval of the project, the proposed development would comply with land use and zoning regulations.	None required.	Less than significant.
Mineral Resources		
The project site is not mapped or associated with the historic use as a mineral resource.	None required.	No impact.
Noise		
Construction of the project would temporarily increase noise levels, including ambient noise, but noise levels would not exceed standards established by NIOSH and Caltrans. Project operation would generate noise from on-site activities and increased traffic and increase ambient noise, but increases would not exceed standards established by the cities of Eastvale and Ontario and by FICON.	None required.	Less than significant.
Project construction would generate ground-borne vibration on and adjacent to the site. However, vibration impacts at nearby sensitive receptors would be less than the thresholds established by Eastvale and the FTA.	None required.	Less than significant.
The project is located within the Chino Airport Influence Area. The project would be located in the 55 dBA zone for the airport, below the 65 dBA CALGreen Code threshold for exterior noise. Therefore, the project would not expose people working in the project area to excessive noise.	None required.	Less than significant.
Population and Housing		
The project would not directly generate population or housing, or significant increase employment beyond expected projections.	None required.	Less than significant.
The project would not displace substantial people or housing, or require construction of replacement housing.	None required.	Less than significant.

Impact	Mitigation Measure (s)	Residual Impact
Public Services		
The proposed project would not result in substantial physical impacts associated with the provision or need of new or physically altered facilities, the construction of which would 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.	None required.	Less than significant.
Recreation		
The project does not include recreational facilities and would not increase the demand on recreation facilities.	None required.	Less than significant.
Transportation and Traffic		
Under Existing Plus Project Conditions, the proposed project impacts to intersection operation, roadway segments and freeway facilities would be less than significant.	None required.	Less than significant.
Under Opening Year 2021 Conditions, project impacts to the Archibald Avenue and Limonite Avenue intersection would be significant in the PM peak hour. Project impacts to roadway segments and freeway facilities would be less than significant.	**T-2** The Applicant shall construct the following improvements prior to operation: Archibald Avenue and Limonite Avenue intersection (No.12). Add a second southbound left-turn lane.	Less than significant with mitigation incorporated.
Under Interim Year 2023 Conditions, project impacts to two study intersections would be significant in the AM and PM peak hours. Project impacts to roadway segments and freeway facilities would be less than significant	**T-3** The Applicant shall construct the following improvements prior to the opening of the Limonite Avenue bridge, which is located west of the Project site: Hellman Avenue and Kimball Avenue (No. 1). Add a second northbound left turn lane. Archibald Avenue and Limonite Avenue intersection (No. 12). Add a second southbound left turn lane.	Less than significant with mitigation incorporated.
Under Horizon Year 2040 Conditions, project impacts to study intersections and roadway segments would be significant and unavoidable, and project impacts to roadway freeway facilities would be less than significant.	**T-4 Contribute Funding for Transportation Program and Fair-Share Improvements** - The project Applicant shall participate in the funding of off-site improvements through the payment of City of Eastvale Development Impact Fees (if the improvements are included in the Development Impact Fees program), Western Riverside Council of Governments Transportation Uniform Mitigation Fee, Mira Loma Road and Bridge Benefit District Program, or on a fair share basis for those improvements that are not included in a pre-existing fee program. These fees shall be collected by the City of Eastvale, with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases.	Significant and unavoidable.

Impact	Mitigation Measure (s)	Residual Impact
The project would not conflict with a program, plan, ordinance, or policy addressing transit, bicycle, or pedestrian facilities.	None required.	Less than significant.
The project would not substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment); nor would it result in inadequate emergency access.	None required.	Less than significant.
Tribal Cultural Resources		
An initial investigation did not identify any potential likelihood for the site to support either archaeological sites or human remains. However, construction of the project would involve ground-disturbing activities such as grading and surface excavation, with the potential to unearth or adversely impact previously unidentified tribal cultural resources.	**TCR-1A Tribal Monitoring.** Prior to the issuance of a grading permit, the Project Applicant shall contact the consulting tribe(s) with notification of the proposed grading and shall make a good-faith effort, as determined by the City's Development Director, to enter into a Tribal Cultural Resources Treatment and Monitoring Agreement that determines its tribal cultural resources may be present on the site. The agreement shall include, but not be limited to, outlining provisions and requirements for addressing the handling of tribal cultural resources; Project grading and development scheduling; terms of compensation for the Tribal monitors; treatment and final disposition of any tribal cultural resources, including but not limited to sacred sites, burial goods and human remains, discovered on the site; and establishing on-site monitoring provisions and/or requirements for professional Tribal monitors during all ground-disturbing activities. The terms of the agreement shall not conflict with any of these mitigation measures. A copy of the agreement shall be provided to the City of Eastvale Planning Department prior to the issuance of a grading permit. **TCR-1B Tribal Cultural Resources – Archaeological Monitoring.** At least 30 days prior to application for a grading permit and before any grading, excavation and/or ground disturbing activities on the site take place, the Project Applicant shall retain a Secretary of Interior Standards-qualified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources. Ground-disturbing activities may include, but are not limited to, pavement removal, pot-holing or auguring, grubbing, weed abatement, boring, grading, excavation, drilling, and trenching. The on-site monitoring would end when the project site grading and excavation activities are completed, or when the monitor has indicated that the site has a low potential for archeological resources. The Project Archaeologist, in consultation with interested Tribes identified in	Less than significant with mitigation incorporated .

Impact	Mitigation Measure (s)	Residual Impact
	Mitigation Measure TCR-1A, and the Project Applicant, shall develop an Archaeological Monitoring Plan to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the Project site. Details in the Plan shall include: 1. Project grading and development scheduling. 2. The development of a rotating or simultaneous schedule in coordination with the Project Applicant and the Project Archeologist for designated Native American Tribal Monitors from the consulting Tribes during grading, excavation and ground-disturbing activities on the site. 3. 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. 4. The protocols and stipulations that the Project Applicant, Tribes and Project Archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation. **TCR-1C. Treatment and Disposition of Tribal Cultural Resources.** If tribal cultural resources are inadvertently discovered during ground-disturbing actives for this project. The following procedures will be carried out for treatment and disposition of the discoveries: 1. Temporary Curation and Storage. During the course of construction, all discovered resources shall be temporarily curated in a secure location on-site or at the offices of the Project Archaeologist. The removal of any artifacts from the project site will need to be thoroughly inventoried by the Project Archeologist with tribal monitor oversite of the process. 2. Treatment and Final Disposition. The Project Applicant shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts and non-human remains as part of the required mitigation for impacts to cultural resources. The Project Applicant shall relinquish the artifacts through one or more of the following methods and provide the City of Eastvale Planning Department with documentation of same: a. Reburial on-site. Accommodate the process for on-site reburial of the discovered items with the consulting Tribes. This shall include measures and provisions to protect the future reburial area from any future impacts. Reburial shall not occur until all	

Impact	Mitigation Measure (s)	Residual Impact
	cataloguing and basic recordation have been completed. b. Curation. A curation agreement with an appropriate qualified repository within Riverside County that meets federal standards pursuant to 36 CFR Part 79, and therefore, would be professionally curated and made available to other archaeologists or researchers for further study. The collections and associated records shall be transferred, including title, to an appropriate curation facility within Riverside County, to be accompanied by payment of the fees necessary for permanent curation. c. Disposition Dispute. If more than one Tribe is involved with the Project and cannot come to a consensus as to the disposition of cultural materials, they shall be curated at the Western Science Center. d. Final Report. At the completion of grading, excavation and ground-disturbing activities on the site, a Phase IV Monitoring Report shall be submitted to the City documenting monitoring activities conducted by the Project Archaeologist and Tribal Monitors within 60 days of completion of grading. This report shall: i. Document the impacts to the known resources on the property; ii. Describe how each mitigation measure was fulfilled; iii. Document the type of cultural resources recovered and the disposition of such resources; iv. Provide evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting; v. In a confidential appendix, include the daily/weekly monitoring notes from the archaeologist. vi. All reports produced will be submitted to the City, Eastern Information Center and consulting tribes.	
Utilities		
The project would involve the relocation of electrical and telecommunications facilities and construction of new or expanded water, wastewater treatment, and stormwater drainage facilities on the project site. However, such relocation and construction would not cause significant environmental effects.	None required.	Less than significant.

Impact	Mitigation Measure (s)	Residual Impact
The project would demand approximately 225 AFY of water, which would represent less than 7 percent of JCSD's projected excess water supply for all normal, single-dry, and multiple-dry year scenarios through 2040. Based on JCSD's water supply and demand projections, projected water supplies are sufficient to meet the anticipated water demand of the project and reasonably foreseeable future development during normal, dry, and multiple dry years	None required.	Less than significant.
Project-generated wastewater would be treated at the Western Riverside County Regional Wastewater Authority (WRCRWA) plant. The plant would have adequate capacity to serve the project's projected wastewater generation in addition to its existing wastewater treatment commitments.	None required.	Less than significant.
The project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, including the El Sobrante Landfill. The project would not impair the attainment of solid waste reduction goals and would comply with federal, state, and local statutes and regulations related to solid waste.	None required.	Less than significant.
Wildfire		
The project site is not located in or near a state responsibility area or lands classified as very high fire hazard severity zone. The project would not substantially impair an adopted emergency response plan or emergency evacuation plan and would not impair abilities of emergency response services, including response to wildfire.	None required.	Less than significant.

Alternatives

Section 15126.6(a) of the California Environmental Quality Act (CEQA) Guidelines requires that an environmental impact report (EIR) describe a range of reasonable alternatives to the project, or a range of reasonable alternatives to the location of the project, that could feasibly attain the project's basic objectives. An EIR does not need to consider every conceivable alternative, but it does have to consider a range of potentially feasible alternatives that will facilitate informed decision making and public participation.

The EIR evaluates two alternatives to the proposed project. Based on the analysis herein, Alternative 2 was determined to be the environmentally superior alternative.

- **Alternative 1: No Project/No Build Alternative.** This alternative assumes that the proposed project would not be developed, and the project site would continue to operate as a dairy farm. The three existing residences along Archibald Avenue would remain. The new industrial buildings would not be developed. In addition, Limonite Avenue would not be extended

westward through the project site. The No Project Alternative would not fulfill any project objectives because the existing dairy farm would not provide light industrial uses, increase property tax revenues, or generate employment opportunities. In addition, the No Project Alternative would not contribute to the development of the City's General Plan circulation system and the westward extension of Limonite Avenue. Alternative 1 would avoid significant impacts associated with proposed project: air quality (NO_x emissions), GHG emissions, and traffic impacts. However, Alternative 1 would result in increased impacts to air quality (odors), hydrology, land use and planning, water quality, and hazardous materials compared to the proposed project.

- **Alternative 2: Reduced Intensity Industrial Alternative.** Alternative 2 would replace the existing dairy farm and three residences with a light industrial business park, at a lower square-footage and intensity of development. Alternative 2 would involve an approximate 30 percent reduction in square-footage compared to the proposed project for a total of 756,000 square feet. Alternative 2 would also include similar road improvements to the proposed project, including the development of Limonite Avenue westward within the project limits, and thereby facilitate the westward extension of Limonite Avenue. Alternative 2 would meet all the project objectives to some degree but would meet objectives one through four related to the provision of light industrial uses, tax generation, and employment, to a lesser extent than the proposed project.

  Alternative 2 would reduce the significant impacts associated with proposed project traffic: air quality (NO_x emissions) and traffic impacts, would reduce significant GHG impacts to less than significant levels. The reduced building footprint would also reduce construction-related impacts, energy use and the rate and volume of stormwater discharge. Alternative 2 is considered the environmentally superior alternative because it would generally reduce the impacts associated with the proposed project, and not result in any increase in impacts in other areas.

1 Introduction

This Environmental Impact Report (EIR) has been prepared for a proposed industrial center located adjacent to Archibald Avenue and at the terminus of Limonite Avenue in the City of Eastvale, California. The proposed industrial project (hereafter referred to as the proposed project or project) would be constructed on a site currently occupied by a dairy farm. The project would involve demolition of the existing buildings, grading for site preparation, and development of seven industrial use buildings totaling up to 1,080,060 square feet (sf), along with associated improvements (e.g., driveways, parking, detention facilities, etc.). The seven buildings would range in size from 37,040 sf to 507,317 sf. The project would also include the extension of Limonite Avenue westward through the project site. The proposed project is described in detail in Section 2.0, *Project Description*.

This section discusses (1) the project and EIR background; (2) the legal basis for preparing an EIR; (3) the scope and content of the EIR; (4) topics found not to be significant; (5) the lead, responsible, and trustee agencies; and (6) the environmental review process required under the California Environmental Quality Act (CEQA).

1.1 Purpose and Legal Authority

The proposed project requires the discretionary approval of the City of Eastvale (City); therefore, the project is subject to the environmental review requirements of CEQA. In accordance with Section 15121(a) of the *CEQA Guidelines* (California Code of Regulations, Title 14), the purpose of this EIR is to serve as an informational document that:

> "...will inform public agency decisionmakers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project."

This EIR has been prepared as a project EIR pursuant to Section 15161 of the *CEQA Guidelines*. A project EIR is appropriate for a specific development project. As stated in the *CEQA Guidelines*:

> "This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation."

This EIR will serve as an informational document for the public and City of Eastvale decision makers. The process will include public hearings before the City Council to consider certification of a Final EIR and approval of the proposed project.

1.2 Environmental Impact Report Background

The City distributed a Notice of Preparation (NOP) of a Draft EIR for a 30-day agency and public review period starting on September 16, 2019 and ending on October 16, 2019. In addition, the City held a Public Scoping Meeting on October 1, 2019. The meeting, held from 6:00 PM to 7:30 PM, was aimed at providing information about the proposed project to members of public agencies,

interested stakeholders, and residents/community members. The meeting was held at Eastvale City Hall at 12363 Limonite Avenue, Suite 910, and had two attendees.

The City received comment letters from five agencies in response to the NOP during the public review period. The NOP and the NOP comments received are provided in Appendix 1. Table 1-1 summarizes the environmental comments and where the issues raised are addressed in the EIR.

Table 1-1 NOP Comments and EIR Response

Commenter	Comment/Request	Where Addressed in the EIR
Agency Comments		
City of Chino (CHINO)	Offers to collaborate and review infrastructure-related improvements and the project traffic study.	The proposed improvements are described in Section 2.0, *Project Description*. A project-specific Traffic Impact Analysis was prepared for the project; see Appendix 4.11. See Section 4.11, *Transportation and Traffic*, regarding an evaluation of potential traffic impacts from the project.
Native American Heritage Commission (NAHC)	Recommends consultation with applicable California Native American Tribes. Provides information and recommendations regarding Assembly Bill 52 (AB 52), Senate Bill 18 (SB 18) and preparation of cultural resource assessments.	A Cultural Resources Assessment was prepared for the project; see Appendix 5.2. Section 5.2, *Cultural Resources*, describes the impacts and mitigation measures for cultural resources associated with implementation of the project. The City has consulted with applicable Tribes in accordance with AB 52. See Section 4.12, *Tribal Cultural Resources*, for discussion.
City of Ontario (ONTARIO)	Provides recommendation regarding traffic study guidance (follow SBCTA and CMP guidance), include cumulative projects in the City, calculate fair-share mitigation, and evaluate mitigation feasibility.	A project-specific Traffic Impact Analysis was prepared for the project; see Appendix 4.11. See Section 4.11, *Transportation and Traffic*, regarding an evaluation of potential traffic impacts from the project.
Riverside County Airport Land Use Commission (ALUC)	Indicates the project is in Compatibility Zone C of the Chino Airport Influence Area. Requests the project be submitted for ALUC review.	See Section 4.6, *Hazards and Hazardous Materials*, and Section 4.8, *Land Use and Planning* for a discussion of the ALUC review process and the project's compatibility for Zone C.
Riverside Transit Agency	Recommends ADA compliant, connected sidewalk on Archibald Avenue	The project would include an ADA compliant, connected sidewalk on Archibald Avenue as requested by Riverside Transit Agency.
South Coast Air Quality Management District (SCAQMD)	Recommends use of CEQA Air Quality Handbook for guidance in preparing air quality analysis and use CalEEMod for analysis. Recommends a health risk assessment. Suggests using trip generation rates for high cube warehouse, or another rate if supported by substantial evidence. Provides guidance regarding mitigation measures. Provides information regarding project alternatives, permits and rules, and data sources.	A project-specific Air Quality Analysis was prepared for the project, including a Health Risk Assessment; see Appendix 4.2. Section 4.2, *Air Quality*, describes impacts and mitigation measures associated with these issues from the project.

1.3 Scope and Content

The following issues were found to include potentially significant impacts and have been studied in the EIR:

- Aesthetics, Light and Glare
- Air Quality
- Biological Resources
- Energy
- Greenhouse Gas
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities and Service Systems

In preparing the EIR, use was made of pertinent City policies and guidelines, certified EIRs and adopted CEQA documents, project-specific technical reports, and other background documents. A full reference list is contained in Section 8.0, *References*.

The alternatives section of the EIR (Section 7.0) was prepared in accordance with Section 15126.6 of the *CEQA Guidelines* and focuses on alternatives that are capable of eliminating or reducing significant adverse effects associated with the project while feasibly attaining most of the basic project objectives. In addition, the alternatives section identifies the "environmentally superior" alternative among the alternatives assessed. The alternatives evaluated include the CEQA-required "No Project" alternative and three alternative development scenarios for the project area.

The level of detail contained throughout this EIR is consistent with the requirements of CEQA and applicable court decisions. Section 15151 of the *CEQA Guidelines* provides the standard of adequacy on which this document is based. The *Guidelines* state:

> *"*An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good faith effort at full disclosure."

1.4 Issues Not Studied in Detail in the EIR

Issues not studied in detail are evaluated in Section 5.0, *Effects Found Not to be Significant*. The findings of this evaluation are provided in Table 1-2. Based on the analysis herein, there is no substantial evidence that significant impacts would occur in any of these issues.

Table 1-2 Issues Not Studied in Detail

Issue Area	Initial Study Findings
Agriculture and Forestry	The project would convert agricultural uses to an industrial park consistent with the General Plan Land Use Designation. The City has been changing zoning to align with the General Plan in conjunction with consideration of new projects. Recent development in the City has reflected economic and land use changes, centered on the conversion of agricultural operations to industrial, commercial, or residential uses. Impacts would be less than significant.
Cultural Resources	The project would demolish on-site structures including a historic-era residence associated with a former orchard on the site. The residence was determined not to meet criteria for the State Register, and thus not to be a significant historic resource under CEQA. No other cultural resources are associated with the project site and impacts would be less than significant. Nonetheless, Mitigation Measures CUL-1 and CUL-2 are recommended to address the inadvertent discovery of any cultural resources during construction. Impacts would be less than significant without mitigation.
Geology and Soils	The project site is not associated with an earthquake fault, potential for liquefaction, landslide, or expansive soils. The site is susceptible to strong ground shaking and would conform to California Building Code (CBC) requirements, including engineering standards appropriate for seismic ground shaking hazards. The potential for soil erosion will be addressed through a Storm Water Pollution Prevention Plan implementation during construction, and site stabilization thereafter. The project site and vicinity are not associated with any vertebrate fossil localities and impacts would be less than significant. Nonetheless Mitigation Measure PALEO-1 is recommended to address the inadvertent discovery of any fossils during construction. Impacts would be less than significant without mitigation.
Mineral Resources	The project site is not associated with a significant mineral deposit or zone. No impacts would occur.
Population and Housing	The project does not include any housing that would directly induce growth. Temporary construction and long-term operational employment would be addressed through the existing labor force. Therefore, the project would not directly induce growth in the region. People associated with the three on-site residences would relocate and not necessitate a need for replacement housing. Impacts would be than significant.
Recreation	The project does not involve recreation facilities, and as new employees are expected to come from the existing area workforce, the project would not increase the demand on recreation facilities. Impacts would be less than significant.
Wildfire	The project site is not located in or near a state responsibility area or lands classified as very high fire hazard severity zone. Impacts would be less than significant.

1.5 Lead, Responsible, and Trustee Agencies

The *CEQA Guidelines* define lead, responsible and trustee agencies. The City is the lead agency for the project because it holds principal responsibility for approving the project.

A responsible agency refers to a public agency other than the lead agency that has discretionary approval over the project. Responsible agencies include the Santa Ana Regional Water Quality Control Board, which regulates water quality in the region, the South Coast Air Quality Management District (SCAQMD), which regulates air quality in the region, and the Western Riverside County Regional Conservation Authority, which administers the Western Riverside County Multiple Species Habitat Conservation Plan. The EIR will also be submitted to these agencies for review and comment.

A trustee agency refers to a state agency having jurisdiction by law over natural resources affected by a project. There are no trustee agencies for the proposed project.

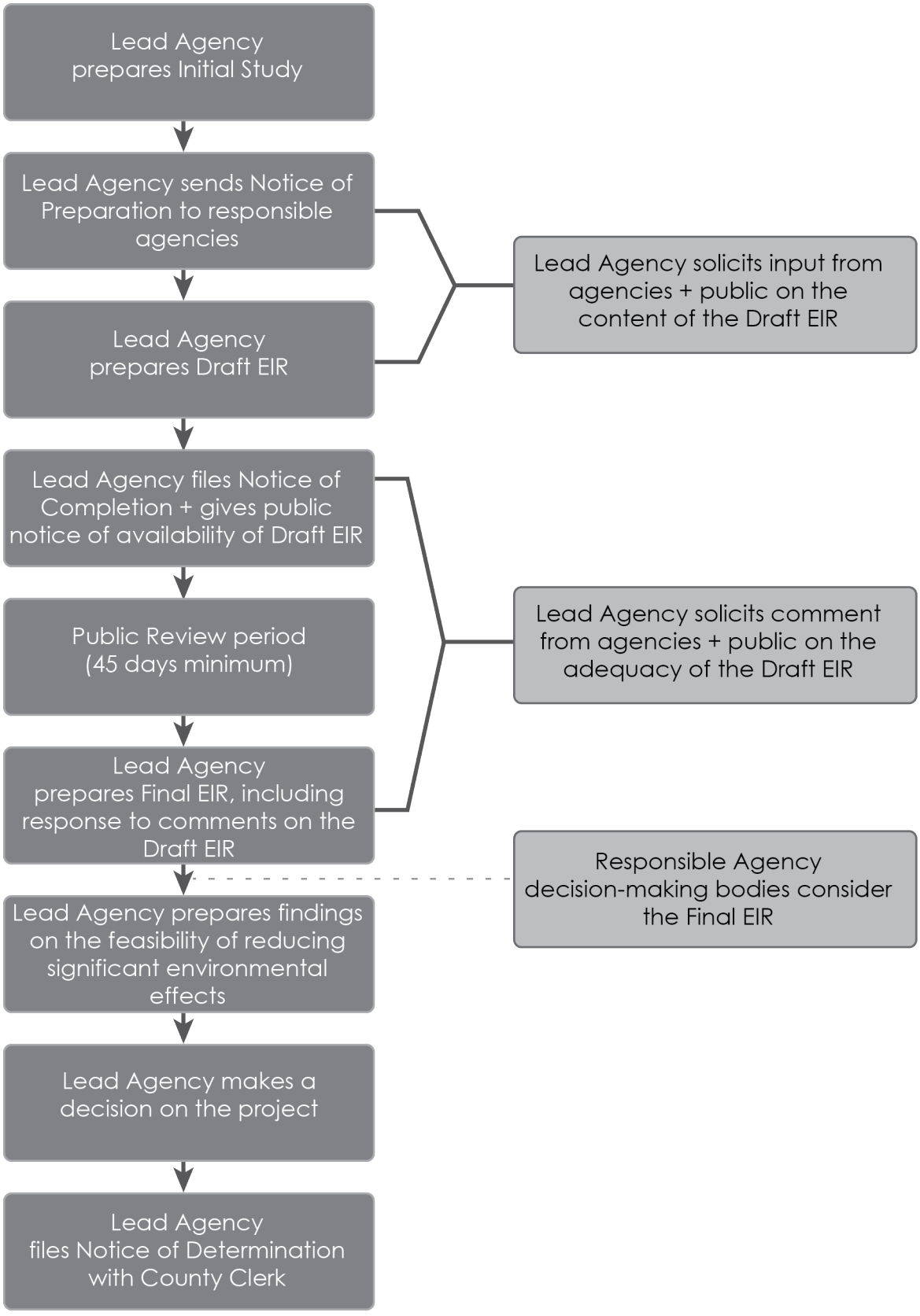
1.6 Environmental Review Process

The environmental impact review process, as required under CEQA, is summarized below and illustrated in Figure 1-1. The steps are presented in sequential order.

1. **NOP and Initial Study**. After deciding that an EIR is required, the lead agency (City of Eastvale) must file a NOP soliciting input on the EIR scope to the State Clearinghouse, other concerned agencies, and parties previously requesting notice in writing (*CEQA Guidelines* Section 15082; Public Resources Code Section 21092.2). The NOP must be posted in the County Clerk's office for 30 days. The NOP may, but is not required to, be accompanied by an Initial Study that identifies the issue areas for which the project could create significant environmental impacts. An Initial Study was not prepared for the proposed project; however, all issues are addressed in either Section 4.0 or 5.0 of this EIR.
2. **Draft EIR Prepared.** The Draft EIR must contain: (a) table of contents or index; (b) summary; (c) project description; (d) environmental setting; (e) discussion of significant impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts); (f) a discussion of alternatives; (g) mitigation measures; and (h) a discussion of irreversible changes (*CEQA Guidelines* Section 15120-15132).
3. **Notice of Completion (NOC).** The lead agency must file a NOC with the State Clearinghouse when it completes a Draft EIR and prepare a Public Notice of Availability of a Draft EIR. The lead agency must place the NOC in the County Clerk's office for 30 days (Public Resources Code Section 21092) and send a copy of the NOC to anyone requesting it (*CEQA Guidelines* Section 15087[a]). Additionally, public notice of Draft EIR availability must be given through at least one of the following procedures: (a) publication in a newspaper of general circulation; (b) posting on and off the project site; and (c) direct mailing to owners and occupants of contiguous properties. The lead agency must solicit input from other agencies and the public, and respond in writing to all comments received (Public Resources Code Sections 21104 and 21253). When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days unless the State Clearinghouse approves a shorter period (Public Resources Code Section 21091).

4. **Final EIR.** A Final EIR must include: (a) the Draft EIR; (b) copies of comments received during public review; (c) list of persons and entities commenting; and (d) responses to comments (*CEQA Guidelines* Section 15132).
5. **Certification of Final EIR.** Prior to making a approving a project, the lead agency must certify that: (a) the Final EIR has been completed in compliance with CEQA; (b) the Final EIR was presented to the decision-making body of the lead agency and the decision making body reviewed and considered the information in the Final EIR prior to approving a project; and (c) the Final EIR reflects the lead agency's independent judgement and analysis (*CEQA Guidelines* Section 15090).
6. **Lead Agency Project Decision.** The lead agency may: (a) disapprove the project because of its significant environmental effects; (b) require changes to the project to reduce or avoid significant environmental effects; or (c) approve the project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted (*CEQA Guidelines* Sections 15042 and 15043).
7. **Findings/Statement of Overriding Considerations**. For each significant impact of the project identified in the EIR, the lead agency must find, based on substantial evidence, that either: (a) the project has been changed to avoid or substantially reduce the magnitude of the impact; (b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or (c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible (*CEQA Guidelines* Section 15091). If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision (*CEQA Guidelines* Section 15093).
8. **Mitigation Monitoring Reporting Program.** When the lead agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects (*CEQA Guidelines* Section 15091).
9. **Notice of Determination (NOD).** The lead agency must file an NOD after deciding to approve a project for which an EIR is prepared (*CEQA Guidelines* Section 15094). A local agency must file the NOD with the County Clerk within five working days after approval of the project. The NOD must be posted for 30 days and sent to anyone previously requesting notice about the project. Posting of the NOD starts a 30-day statute of limitations on CEQA legal challenges (Public Resources Code Section 21167[c]).

Figure 1-1 Environmental Review Process



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2 Project Description

This section describes the proposed project, including the project applicant, the project site and surrounding land uses, major project characteristics, project objectives, and discretionary actions needed for approval.

2.1 Project Applicant

The Homestead LLC
Grant Ross
Orbis Real Estate Partners
280 Newport Center Drive, Suite 280
Newport Beach, California 92660

2.2 Lead Agency Contact Person

Gina Gibson-Williams
Community Development Director
City of Eastvale
12363 Limonite Avenue, Suite 910
Eastvale, California 91752

2.3 Project Location

The approximately 56-acre project site is located west of the current westerly terminus of Limonite Avenue on the west side of Archibald Avenue. Limonite Avenue terminates at the site's eastern boundary. Archibald Avenue also abuts the site on the site's eastern edge. It encompasses the following Assessor's Parcel Numbers:

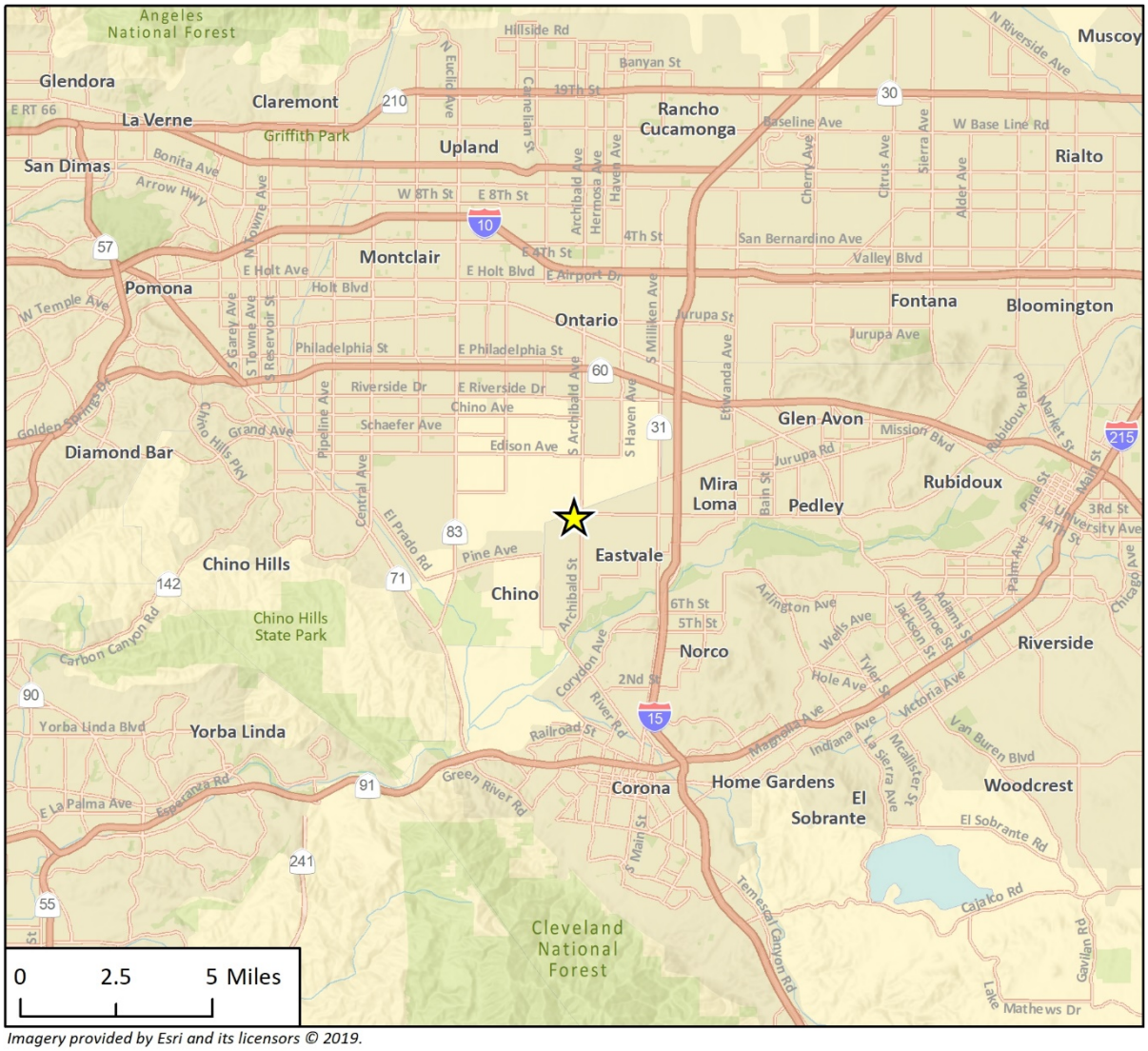
144-010-015, 144-010-018, 144-010-020, 144-010-023, 144-010-032

Figure 2-1 shows the regional location of the project site and Figure 2-2 shows the location of the site in its context.

2.4 Existing Site Characteristics

The existing uses of the project site and vicinity are described below, along with the applicable land use designation and zoning. Representative photos of the project site and surroundings are also provided.

Figure 2-1 Regional Location

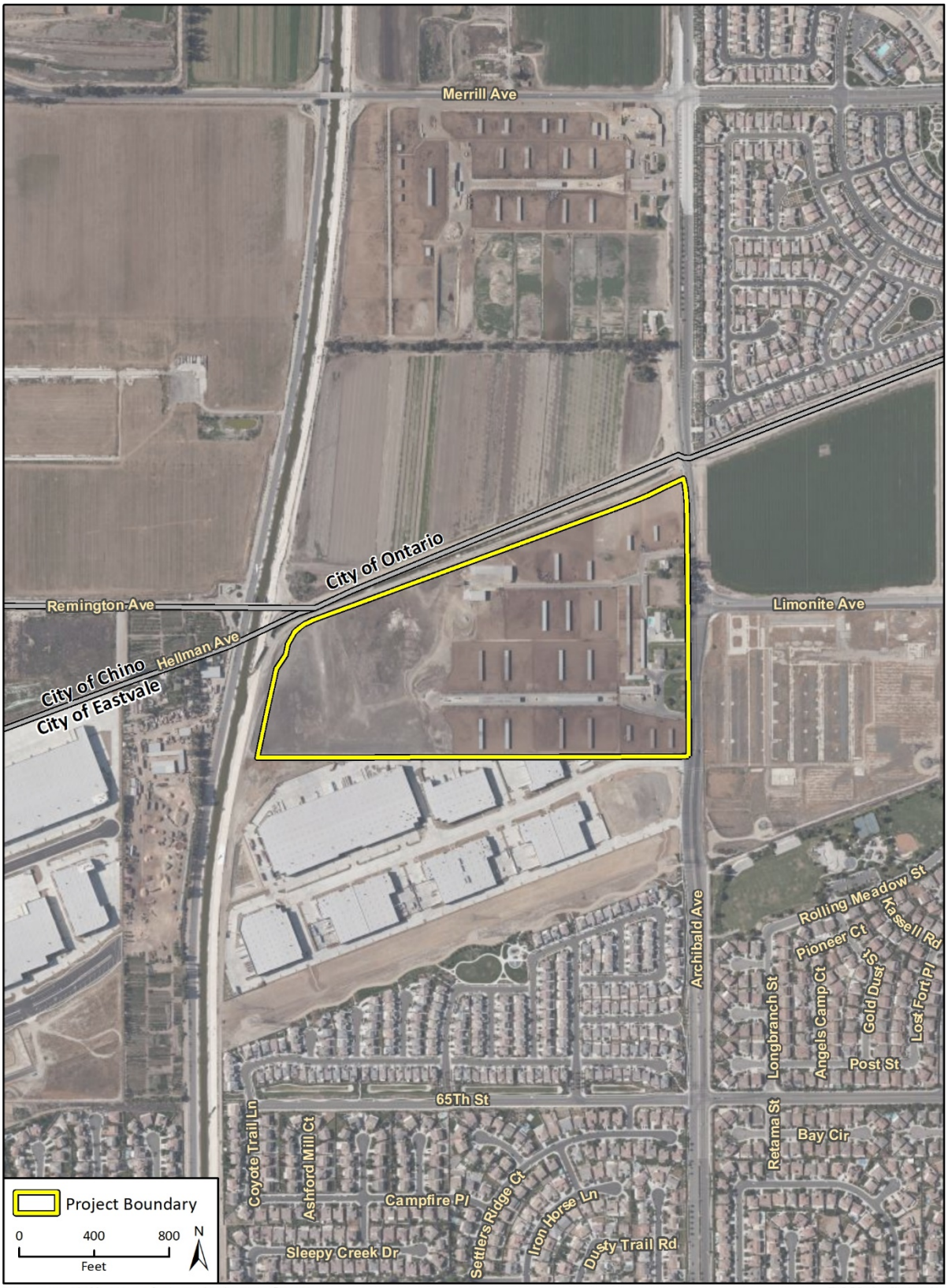


Imagery provided by Esri and its licensors © 2019.

Project Location

N

Figure 2-2 Project Site Location



Imagery provided by Microsoft Bing and its licensors © 2019.

Fig 2-2 Project Site Location

2.4.1 Project Site Background

The project site has been in agricultural use since at least 1938 when an orchard, house and related buildings were established. By the 1970s, the orchard buildings were demolished, and a modern dairy and related structures were developed.

The property remains in operation as a dairy with most of the site dedicated to this use. The dairy features shade awnings, barns, milk barn and pen, feed lots/pasture, drainage ponds, access roads and aisles. The easternmost property adjacent to Archibald Avenue features three single-family homes with associated driveways, lawns/landscaping and yards.

See Figure 2-3 for photographs of the project site.

2.4.2 Current Land Use Designation and Zoning

The project site has a General Plan land use designation of Light Industrial (I-1) (Eastvale 2012). The site is zoned as Heavy Agricultural (A-2) as defined by the City's Zoning Ordinance (Eastvale 2013). As described above, the site is relatively undeveloped and currently operates as a dairy farm, Dyt Dairy. Uses permitted in the A-2 Heavy Agricultural Zone include animal keeping, commercial fertilizer operations, crop production, dairy farm, temporary and permanent farm stand, grazing, kennel, agricultural workers housing, second unit and single-family dwelling, home occupations and mobile home. Other agricultural uses may be established upon approval of a conditional use permit. The proposed project would require a zone change from Heavy Agriculture (A-2) to Industrial Park (I-P) to comply with the City of Eastvale Zoning Ordinance and conform to the General Plan land use designation.

2.4.3 Surrounding Land Uses

The project site is bordered by varying land uses on all sides. The northern edge of the project site abuts the border of San Bernardino County and Ontario. Chino is adjacent to the project site to the northwest. Agriculture uses are located northwest and directly north of the project site, along with construction of new industrial uses. Northeast of the project site is primarily single-family residential use. East of the project site two developments are planned: north of Limonite Avenue, The Merge—a commercial/retail and industrial center—is under development; and south of Limonite Avenue is the location for the future Eastvale Crossings commercial/retail center. Uses west of the project site include Cucamonga Creek channel adjacent to the site, industrial, and a nursery located to the southwest. Beyond the project site's immediate surroundings, uses consist predominantly of residential and agriculture, with additional industrial use north within San Bernardino County.

Table 2-1 details the land use pattern and land use regulatory designations for the project site and surrounding areas.

Figure 2-3 Photographs of the Project Site

A. View south from within site

B. View north from within site

C. View northwest from within site

D. View northwest from within site

E. View west from within site

F. View west within the site

G. View south within the site

H. View of site from Archibald Avenue

I. View southwest of historic age residence from Archibald Avenue

J. View northeast from Archibald Avenue

K. View of Archibald Avenue north

L. View of Archibald Avenue south

Table 2-1 Existing Use, Land Use Designation and Zoning

Location	Existing Use	Designated Land Use	Zoning
Project	Agriculture (dairy)	Light Industrial	Heavy Agricultural (A-2)
North[1]	Agriculture, industrial (under construction)	Industrial	Specific Plan (S-P)
West	Industrial, drainage (Cucamonga Creek)	Light Industrial	Specific Plan (S-P), Industrial Park (I-P)
South	Industrial, agriculture	Light Industrial	Industrial Park (I-P)
East	Commercial, industrial	Commercial Retail, Light Industrial	General Commercial (C-1/C-P), Industrial Park (I-P)

[1]Land use north of the project site is under City of Ontario jurisdiction; land use and zoning designations follow Ontario's Land Use Map (Ontario 2019) and City Zoning Map (Ontario 2019).

2.5 Project Characteristics

The proposed project would involve of the development of six industrial use buildings totaling up to 1,080,060 square feet on the site of an existing dairy. The existing structures would be demolished to accommodate the new development, including the extension of Limonite Avenue through the project site. Project plans are provided in Appendix 2, and key exhibits are provided at the end of this section (site plan, elevation, etc.).

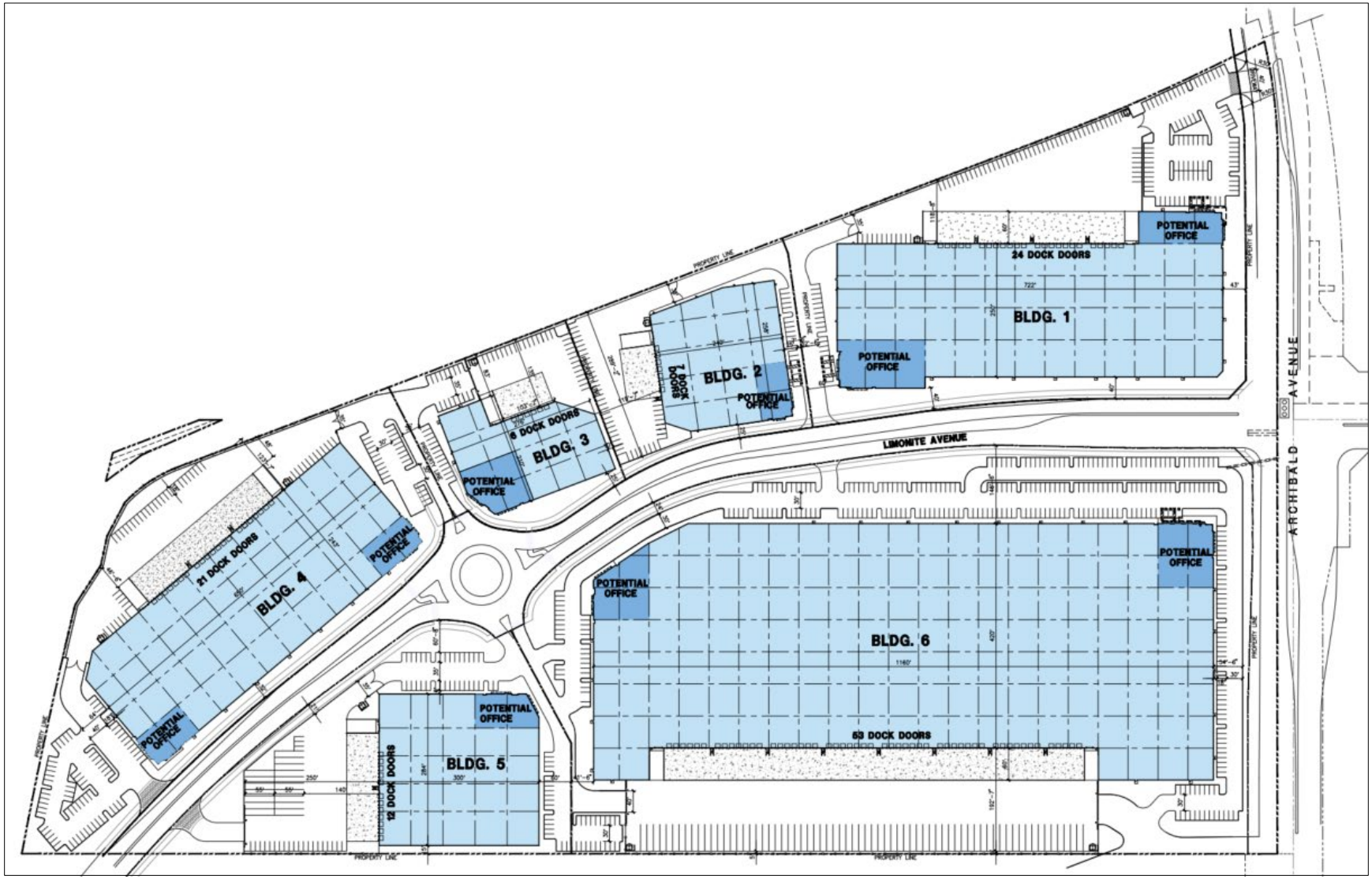
The buildings would range in size from 48,125 square feet to 507,317 square feet. Each building would feature office space, dock doors, and be located on individual parcels. Most of the dock doors would be dock-height to accommodate trailer loading/unloading. Each building would also feature an at-grade door for vehicle access. The buildings would be from 30 feet to 40 feet in height. Table 2-2 provides the square-footage and number of dock doors for each building and Figure 2-4, shows the distribution of the buildings and other features on the project site. Buildings 1, 2, 3 and 4 would be located north of Limonite Avenue and Buildings 5 and 6 would be located south of Limonite Avenue.

Table 2-2 Building Summary

Building	Area (square feet)	Number of Dock Doors
Building 1	187,018	24
Building 2	64,067	7
Building 3	48,125	6
Building 4	155,867	21
Building 5	86,679	12
Building 6	507,631	53
Total	**1,049,387**	**123**
Total for Evaluation Purposes[1]	**1,080,060**	

[1]The relative square-footage of each building is subject to change over the course of the planning process, however, the total square-footage would not exceed the 1,080,060 square feet used for evaluation purposes.

Figure 2-4 Conceptual Site Plan



Source: HPA Architecture 2019b

2.5.1 Potential Uses

Specific tenants are unknown, however, uses would be consistent with the Industrial Park (I-P) zone (Eastvale 2013). Table 2-3 summarizes the potential permitted and conditional uses allowed.

Table 2-3 Permitted and Conditional Uses – Industrial Park Zone

Permitted Uses	Conditional Uses
▪ Warehousing and distribution ▪ Industrial and manufacturing uses ▪ Limited manufacturing ▪ Banks and financial institutions ▪ Day care centers ▪ Religious institutions ▪ Laboratory, film, dental, medical, research, or testing ▪ Animal hospitals/training ▪ Blueprint, duplicating, printing or publishing ▪ Automobile parts, supply, service and repair ▪ Boat and marine sales and rental, services ▪ Sale, rental, repair or demonstration of motorcycles ▪ Equipment sales and storage ▪ Parcel delivery services ▪ Tire sales and services ▪ Indoor fitness and sports facilities	▪ Minor manufacturing ▪ Drive-in or drive-through operations ▪ Retail sales and services ▪ Mini storage

Notes: The list of permitted and conditional uses is not exhaustive. See the Eastvale Zoning Ordinance for the complete list and additional information.

Source: Eastvale 2013

2.5.2 Architecture and Treatments

Project buildings would generally be composed of a series of concrete tilt up panels, with integrated horizontal and vertical elements, and windows with mullions. Metal canopies would be strategically placed along some windows for architectural affect. Building materials would be coated in shades of white, gray, blue and other similar colors. Windows would be non-reflective, tempered glass. All buildings would have similar treatments. Figure 2-5 and Figure 2-6 illustrate the building elevation and detail for Building 6—the largest of the buildings proposed—and is representative of the treatments that would be applied to all buildings.

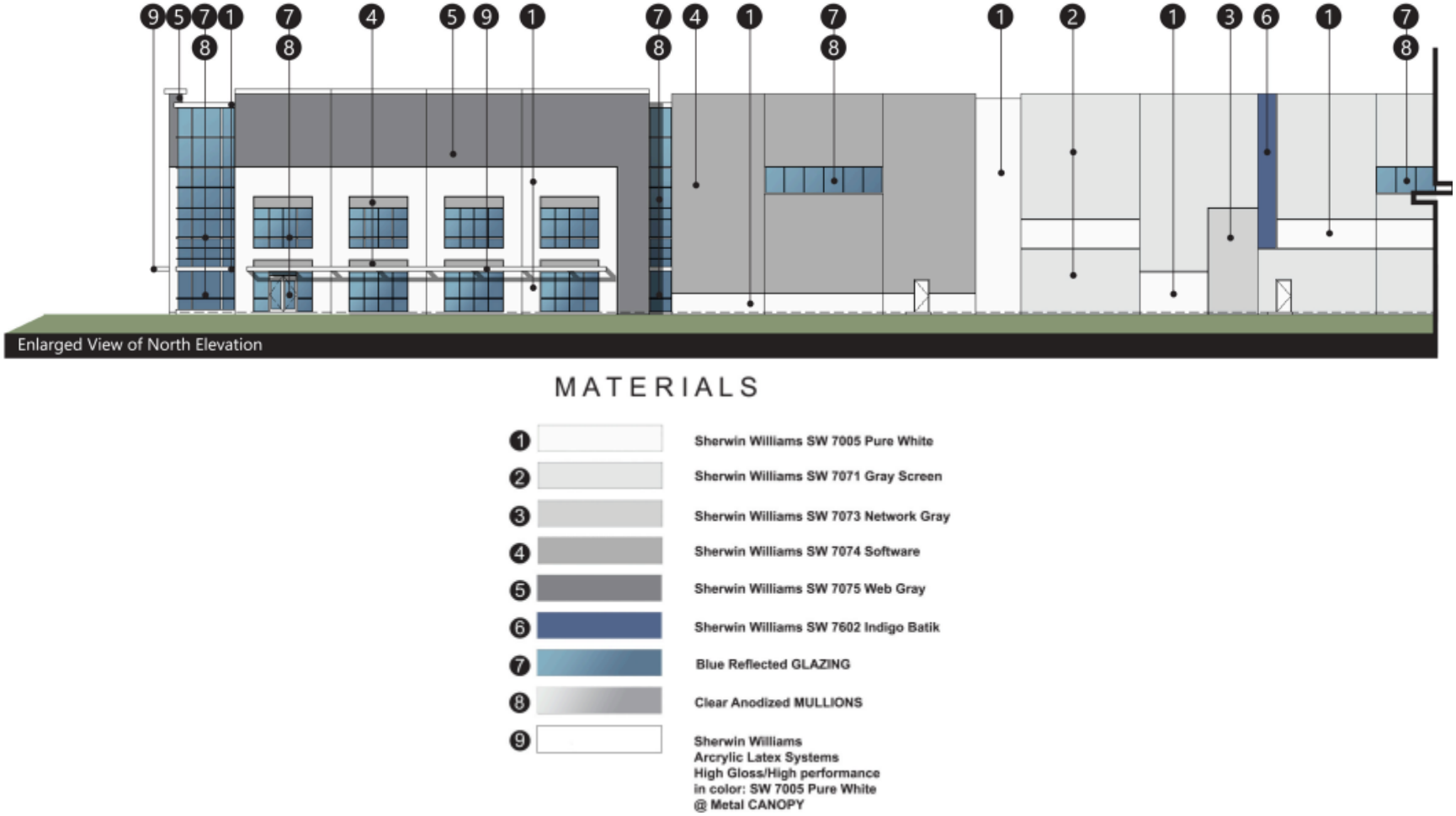
2.5.3 Landscaping

The landscape plan plant palette will feature drought-tolerant plants in compliance with Eastvale Municipal Code Section 120.05.040 (EMC 120.050.040). Landscaping throughout the project site would consist of low water use trees, shrubs and ground cover (see Figure 2-7). The landscape plans include nine types of trees, seven types of shrubs and six varieties of ground cover. Large trees would align the project site perimeter as well as align Limonite Avenue and Archibald Avenue. Common trees in the landscape plan consist of blue palo verde, fruitless olive, Mondell pine, Chinese elm, fern pine, Brisbane box and Australian willow. A variety of trees, shrubs, and

Figure 2-5 Representative Building Elevation – Building 6

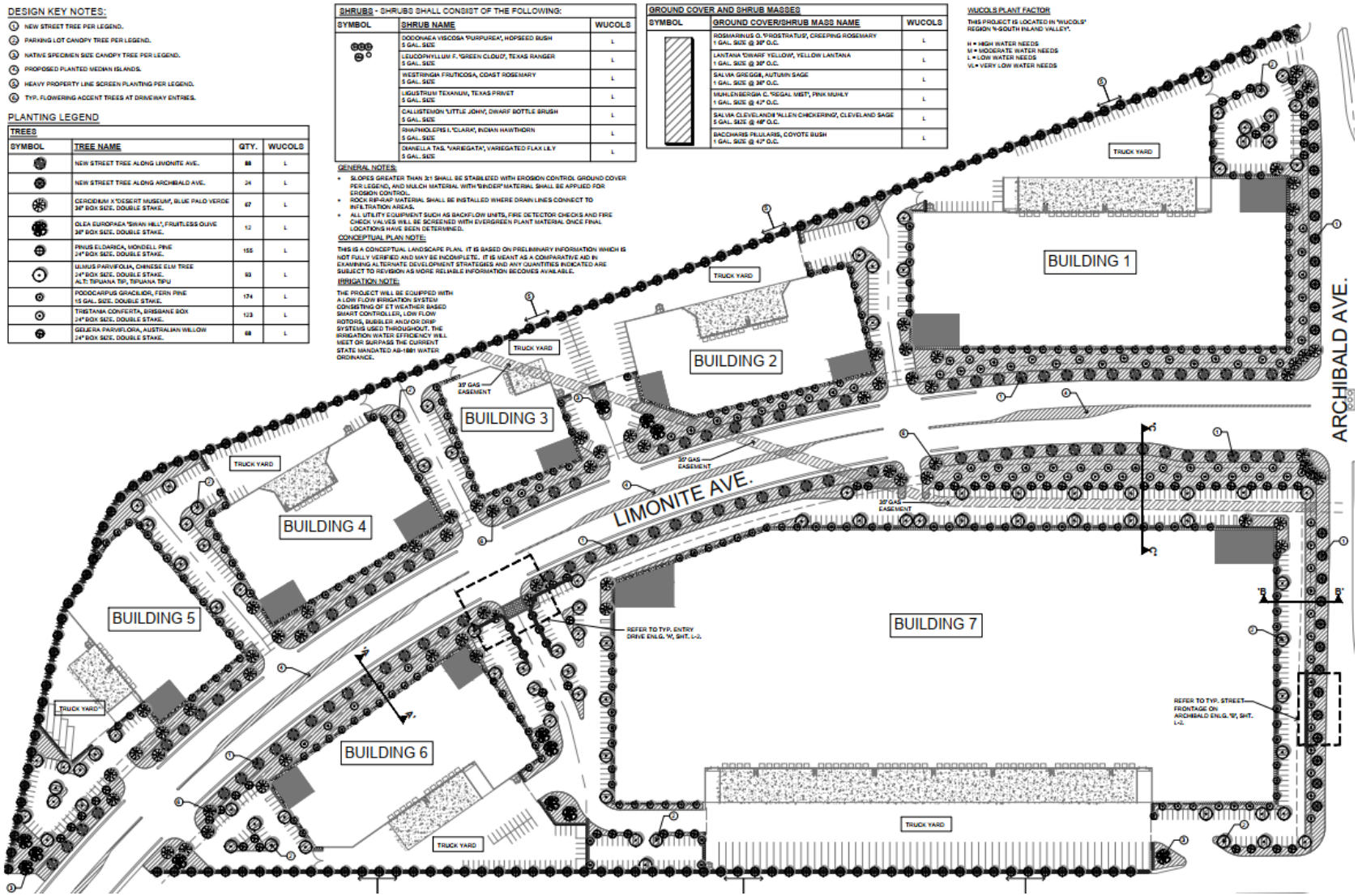
Source: HPA Architecture 2019a

Figure 2-6 Building Elevation Detail – Building 6



Source: HPA Architecture 2019a

Figure 2-7 Landscape Plan



Source: Scott Peterson Landscape Architect, Inc. 2019

groundcover would be planted outside each of the buildings, along crosswalks and adjacent to other paving. The project would be equipped with a low flow irrigation system to meet state mandated AB 1881 water ordinance requirements.

The proposed project is located within the Chino Airport influence area and subject to the requirements of the Chino Airport Land Use Compatibility Plan (ALUCP). These requirements limit vegetation density and height. For instance, in restricted areas[1] plant material can be no higher than four feet. Therefore, trees would only be placed within non-restricted planting areas. As a result, the project would meet the City's site coverage requirements for landscaping.

2.5.4 Road Improvements and Site Access

The project would include the extension of Limonite Avenue within the project limits, and also include improvements to the Archibald Avenue frontage, and the Archibald Avenue/Limonite Avenue intersection.

Limonite Avenue

Limonite Avenue currently terminates at Archibald Avenue at the project's eastern boundary; see Figure 2-2. However, the City has been planning the westward extension of Limonite Avenue to complete this east-west corridor through the City as envisioned in the City's General Plan Circulation Element. The project would include the development of Limonite Avenue within the project limits. The City plans to construct Limonite Avenue westward from the western project boundary across Cucamonga Creek Channel.

Limonite Avenue would be developed with a right-of-way of approximately 60 feet with a 16-foot northerly and 20-foot southerly landscape/trail easement to meet the classification of a modified Urban Arterial and feature four travel lanes with a raised center median, with easements for the landscaped parkway and multi-use trails. Other features still to be determined include the number and placement of driveways, turning lanes/intersection types, acceleration/deceleration lanes, bike lanes and trails.

Archibald Avenue

Archibald Avenue would be widened along the project frontage to 152 feet to meet the classification of an Urban Arterial.

Limonite Avenue and Archibald Avenue Intersection

Archibald Avenue would be widened to 165 feet at the intersection with Limonite Avenue and conform with County of Riverside Standard No. 91. Traffic signal improvements would also be constructed. The widening of Archibald Avenue would require the relocation of Southern California Edison (SCE) transmission poles and overhead lines (SCE and telecommunication) along Archibald Avenue.

[1] The ALUCP requires the incorporation of restricted areas with a minimum size of 75 feet by 300 feet to serve as emergency landing areas.

Site Access

Access to the project site would be provided via driveways on Archibald Avenue and Limonite Avenue. The specific number of driveways and configuration for access is subject to change during final design and in conjunction with the City. The project conceptual site plan (see Figure 2-4) illustrates the most current configuration.

2.5.5 Parking

The proposed project would provide 794 parking stalls, apportioned to each building and parcel. The 794 spaces are composed of a combination of standard, accessible, and accessible van spaces[2]. Additionally, Buildings 5 and 6 would have 90 trailer stalls. A total of 771 parking spaces is required to meet the City Parking Ordinance EMC 120.05.060 (Eastvale 2019). In addition, infrastructure would be installed to facilitate tenant-installed electric vehicle (EV) charging.[3] See Table 2-4 for a breakdown of parking spaces for each parcel.

Table 2-4 Parking Summary

Building Number	Parking Spaces
Building 1	147
Building 2	73
Building 3	55
Building 4	121
Building 5	72
Building 6	326
Total	**794**

2.5.6 Utilities

On-site utilities would be constructed underground to the extent suitable. The proposed project is within the Jurupa Community Services District (JCSD) service area. JCSD provides potable and reclaimed water and wastewater collection for the site. Water and wastewater collection infrastructure are located within the Archibald Avenue right-of-way.

A 36-inch high-pressure natural gas transmission line owned and operated by Southern California Gas company (SCG) lies underground, east-west through the project site. The gas line will be protected in place during construction and operation of the project in accordance with requirements of SCG.

SCE transmission lines and four transmission poles, along with co-located facilities (e.g., AT&T transmission lines) would be relocated aboveground to accommodate the widening of Archibald Avenue along its western frontage, while SCE distribution facilities would be relocated underground within Limonite Avenue and Archibald Avenue rights-of-way. Similarly, AT&T distribution lines would be located underground along the Limonite Avenue and Archibald Avenue rights-of-way.

[2] Cal Green requires ten percent of parking spaces provided to be designated for low-emission, fuel efficient, or carpool/vanpool vehicles. In this case, 75 spaces would be required for this purpose.
[3] Cal Green requires EV charging infrastructure be installed in an amount at least eight percent of the total spaces provided. Thus, infrastructure for at least 64 EV charging stations would be required.

2.5.7 Construction and Grading

Construction of the proposed project would begin in early 2021, take approximately 11 months, and be completed by early 2022. Construction would consist of grading, building construction, architectural coating, and paving. Grading would require a maximum of 94,000 cubic yards (cy) cut, and approximately 61,000 cy of fill. Grading will be balanced on-site to the extent feasible and any excess material would be provided to a site requiring clean fill or taken to a permitted landfill that will accept it.

Construction activity would comply with the City's Municipal Code Section 8.52.020 (Noise Regulation) and would not operate outside the hours of 6:00 am to 6:00 pm June through September, and 7:00 am to 6:00 pm October through May.

2.5.8 Project Design Features

The following are project design features incorporated into the proposed project and would reduce project impacts or otherwise provide environmental benefits:

- Windows will be anti-reflective to minimize glare and bird strikes.
- Buildings will be designed and constructed to be solar ready, to facilitate easy installation of solar power generation in the future.
- Parking spaces will be dedicated for electric vehicle charging and include the installation of infrastructure for future charging facilities.
- Trees will be located within the project site, and light poles limited to conform to ALUCP requirements for compatibility with Zone C; see Section 4.6, Hazards and Hazardous Materials, for additional discussion.

2.6 Project Objectives

Project objectives include the following:

- Provide light industrial uses that serve the local market area and beyond; and that attract new customers and businesses to Eastvale.
- Improve and maximize economic viability of the site through the establishment of light industrial uses.
- Maximize and broaden the City's sales tax base by providing local and regional tax-generating uses and by increasing property tax revenues.
- Create additional employment-generating opportunities for the residents of Eastvale and surrounding communities.
- Contribute to the development of the City's General Plan circulation system through the development of a new segment of Limonite Avenue, and reconstruction of the Limonite Avenue and Archibald Avenue intersection to its ultimate configuration.

2.7 Required Approvals

2.7.1 City of Eastvale

The project would require the following entitlements or approvals from the City of Eastvale:

- Certification of the Environmental Impact Report
- Rezoning from Heavy Agricultural (A-2) to Industrial Park (I-P)
- Major Development Plan Reviews
- Tentative Parcel Map for the subdivision of the site
- Lot line adjustment to subdivide a parcel
- Variance from City landscape shade and lighting requirements
- Demolition, grading and building permits

2.7.2 Other Agency Approvals

- **State Water Resources Control Board**: request for stormwater permit coverage during construction under the *Construction General Permit* (Order 2009-0009-DWQ).
- **Western Riverside County Regional Conservation Authority:** the project is subject to Western Riverside County Multiple Species Habitat Conservation Plan requirements administered by this agency.

3 Environmental Setting

This section provides a general overview of the environmental setting for the proposed project. More detailed descriptions of the environmental setting for each environmental issue area can be found in Section 4.0, *Environmental Impact Analysis*.

3.1 Regional Setting

The project site is located in the City of Eastvale, immediately south of Eastvale's northern border with Ontario, and approximately 0.60 mile east of Eastvale's western border with Chino. It is located on the southwest corner of the intersection of Archibald Avenue and Remington Avenue, east of the terminus of Limonite Avenue. The approximately 56-acre site is currently occupied by a dairy farm and three residences along the Archibald Avenue frontage. Figure 2 in Section 2.0, *Project Description*, shows the location of the project site in the region and Figure 3 shows the project location in relation to the surrounding community.

A grid system of east-west and north-south roadways, including arterials, collectors, and local streets, provide vehicular access throughout the City. The major roadways include Archibald Avenue, Limonite Avenue, Schleisman Road, Harrison Avenue, Scholar Way, and Milliken Drive. The closest freeways are Interstate 15 (I-15) approximately 2.5 miles east, and State Route 60 (SR-60) four miles north, of the project site.

Eastvale is located in northwestern Riverside County, within the Inland Valley region of southern California surrounded by the Santa Ana Mountains to the west and Central Transverse Ranges to the north and east. The climate is typical of Riverside County and surrounding cities: hot, dry summers and mild, relatively wet winters with rainfall concentrated in the winter months. The Riverside region remains a nonattainment area for ozone (urban smog) and particle pollution (dust, dirt, and soot). Eastvale is approximately 30 miles inland from the Pacific coastline.

3.2 Project Site Setting

As shown in Figure 2 in Section 2.0, *Project Description,* the project site is bordered by varying land uses on all sides. The northern edge of the project site abuts the border of San Bernardino County and Ontario. Chino is adjacent to the project site to the northwest. Agriculture uses are located northwest of the project site. Immediately north of the project site, new industrial is under construction. Northeast of the project site is primarily single-family residential use. East of the project site two developments are planned: north of Limonite Avenue, The Merge—a commercial/retail and industrial center—is under development; and south of Limonite Avenue is the location for the future Eastvale Crossings commercial/retail center. Directly south of the project site is recently constructed industrial use. Uses west of the project site include Cucamonga Creek channel adjacent to the site, industrial, and a nursery located to the southwest. Beyond the project site's immediate surroundings, uses consist predominantly of residential and agriculture, with additional industrial development to the north within San Bernardino County.

The project site is currently occupied by a dairy farm and three residences and has a General Plan land use designation of Light Industrial (L-1). The site is zoned Heavy Agricultural (A-2), as defined by the City's Zoning Ordinance. The proposed project would require a zone change from Heavy Agriculture (A-2) to Industrial Park (I-P) to comply with the Zoning Ordinance and conform to the General Plan land use designation. Uses permitted in the I-P designation include a wide range of low- to high-intensity uses, such as warehousing, distribution, manufacturing, automobile or boat sales and services, equipment sales and storage, as well as religious institutions, financial institutions, sports facilities, and day care centers.

3.3 Cumulative Development

In addition to the specific impacts of individual projects, CEQA requires EIRs to consider potential cumulative impacts of the proposed project. CEQA defines "cumulative impacts" as two or more individual impacts that, when considered together, are substantial or will compound other environmental impacts. Cumulative impacts are the combined changes in the environment that result from the incremental impact of development of the proposed project and other nearby projects. For example, traffic impacts of two nearby projects may be less than significant when analyzed separately, but could have a significant impact when analyzed together. Cumulative impact analysis allows the EIR to provide a reasonable forecast of future environmental conditions and can more accurately gauge the effects of a series of projects.

CEQA requires cumulative impact analysis in EIRs to consider either a list of planned and pending projects that may contribute to cumulative effects or a forecast of future development potential. Currently planned and pending projects in the project vicinity are listed in Table 3-1. The first column of this table provides the location number for each project and corresponds to the cumulative project map on Figure 3-1. These projects are considered in the cumulative analyses in Section 4.0, *Environmental Impact Analysis*.

Table 3-1 Cumulative Projects List

No.	Project Name	Land Use	DU	TSF	Other Units
	City of Eastvale				
E1	The Merge	Warehousing		336.501	
		Shopping Center		4.750	
		Supermarket		30.000	
		Gas Station with Convenience Store			16 VFP
		Pharmacy/Drugstore with Drive-Thru		14.600	
		Fast-Food with Drive-Thru		6.000	
		Automated Car Wash		4.000	
		Fast-Food Without Drive-Thru		7.750	
		Coffee/Donut Shop with Drive-Thru		2.500	
E2	TR29997	SFDR	122		
E3	13-0632 - Sumner Residential (Stratham Homes)	SFDR	129		

No.	Project Name	Land Use	DU	TSF	Other Units
E4	TR35751	Condo/Townhouse	243		
E5	PP23219 (PM35865) (50 percent complete)	General Light Industrial		738.430	
E6	Eastvale Shopping Center	Free-Standing Discount Superstore		192.000	
		Specialty Retail		9.200	
		Fast-Food Without Drive-Thru		7.200	
		Coffee/Donut Shop with Drive Thru		2.000	
		Fast-Food with Drive-Thru		3.500	
		Gas Station with Convenience Store and Car Wash			16 VFP
E7	Van Leeuwen	SFDR	126		
E8	SP00358 - The Ranch at Eastvale	Shopping Center		267.200	
		General Light Industrial		801.500	
		Business Park		1,121.100	
E9	SC Limonite, LLC	SFDR	323		
E10	Leal Master Plan	Lifestyle Center (Commercial)		1,300.000	
		General Commercial		225.000	
		Office		920.000	
		Hotel			450 rooms
		High Density Residential	660		
E11	Eastvale Commerce Center	Shopping Center		650.000	
E12	S. Milliken Warehouse	High-Cube Warehouse		277.638	
E13	15-1508 - Industrial Warehouse	Warehousing		156.478	
E15	Hamner Place	Gas Station			8 VFP
		Fast Food Restaurant with Drive-Thru		3.5000	
		Coffee Shop with Drive-Thru		2.0000	
		Restaurant		6.0000	
		Restaurant with Drive-Thru		4.0000	
		Office/Medical Building		10.0000	
		Hotel			130 rooms
		City Hall		40.0000	
		Public Library		25.0000	

No.	Project Name	Land Use	DU	TSF	Other Units
E16	The Marketplace at the Enclave (14-2974)	Child Day Care Facility		9,131	
E17	Copper Sky Residential by DR Horton (13-0395)	SFDR	224		
E18	Sunshine Growers Nursery (18-20040)	Greenhouse and Nursery		20	
E19	The Campus (12-0750)	Industrial, Office/Medical		738,970	
E20	LBA Realty Industrial Building (14-1077)	Warehouse		446.173	
E21	Restaurant with Pickup Window (Pizza Hut) (18-20037)	Fast Food Restaurant without Drive-Thru		6.380	
E22	Vantage Point Church (15-1174)	Church		119.222	
	City of Ontario				
O1	Parkside	SFDR	437		-
		Multi-Family Attached (Apartments)	1,510		-
		Shopping Center		115.000	-
O2	Subarea 29 & Amendment (40% complete)	SFDR	2,149		-
		Shopping Center		87.000	
O3	Colony Commerce West	High-Cube Warehouse		2213.360	
		Manufacturing		737.786	
O4	West Ontario Commerce Center SP	High-Cube Warehouse		1976.535	
		Manufacturing		658.845	
		Business Park		548.856	
O5	Colony Commerce East	High-Cube Warehouse		998.680	
		Manufacturing		233.129	
		Warehousing		699.387	
O6	Ontario Ranch Commerce Center	High-Cube Cold Storage Warehouse		1159.200	
		Warehousing		337.600	
		Business Park		290.200	

No.	Project Name	Land Use	DU	TSF	Other Units
O7	Parente Home Ranch SP	SFDR	270		
		Condo/Townhouse	1,872		
		General Office		462.281	
		Shopping Center		194.278	
O8	Countryside	SFDR	819		
O8	Armstrong Ranch	SFDR	994		
O9	The Avenue	SFDR	2,020		
		Multi-Family Attached (Apartments)	586		
		Shopping Center		250.000	
O10	Grand Park	SFDR	484		
		Multi-Family Attached (Apartments)	843		
O11	West Haven	SFDR	753		
		Shopping Center		87.000	
O12	Haven Gateway	General Light Industrial		42.160	
		High-Cube Warehouse		168.640	
O13	Rich Haven	SFDR	2,732		
		Multi-Family Attached (Condo)	1,524		
		Shopping Center		317.400	
O14	Esperanza	SFDR	914		
		Multi-Family Attached (Apartments)	496		
O15	Edenglen	SFDR	310		
		Multi-Family Attached (Condo)	274		
		Shopping Center		217.520	
		Business Park		550.000	
O16	PDEV10-008 - Dry Food Storage	Mini-Warehouse		17.000	
O17	Tuscana Village	SFDR	176		
		Shopping Center		26.000	
O18	Merrill Commerce Center	High-Cube Fulfillment Warehouse		7,014.000	
		Business Park		1,441.000	
	City of Chino				
C1	Bickmore Street Residential (TM 18858) (30 percent complete)	SFDR	185		

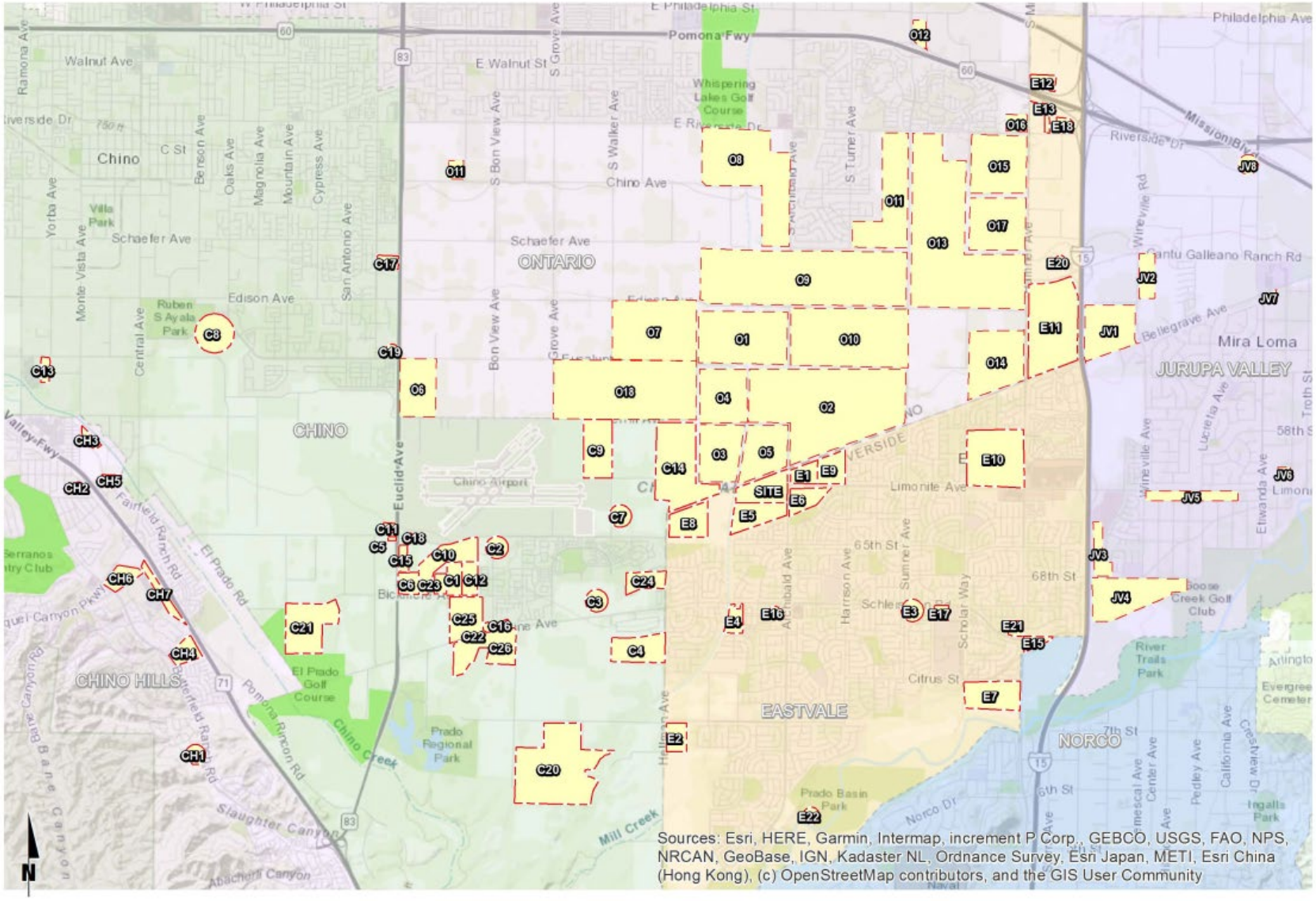
No.	Project Name	Land Use	DU	TSF	Other Units
C2	TM17574 (80 percent complete)	Condo/Townhouse	108		
C3	Falloncrest at the Preserve	SFDR	210		
		Condo/Townhouse	786		
		Apartments	412		
		Shopping Center		77.597	
		General Office		77.597	
C4	Tract 19980 (Homecoming Phase 4)	Apartments	454		
	TTM No. 20166 & 20167	SFDR	148		
	Brio & TTM No. 21065 & 20168 (Orchards)	SFDR	239		
C5	Farmer Boys	Fast-food with Drive-Thru		3.218	
		Shopping Center		2.300	
C6	Euclid & Bickmore Warehouse	Warehousing		205.820	
		General Light Industrial		51.030	
		Business Park		110.620	
C7	Kimball Business Park	Business Park		146.550	
C8	Chaffey College Expansion	Junior/Community College			93.50 AC
	College Park Commercial	Shopping Center			7.50 AC
C9	Chino Parcel Delivery	Parcel Delivery Facility		765.274	
C10	Altitude Business Centre	Warehousing		715.000	
		Light Industrial		255.000	
		Business Park		233.000	
		Self-Storage		110.000	
C11	Majestic Gateway	Specialty Retail		25.000	
		Pharmacy/Drugstore with Drive-Thru		13.000	
		Fast-Food with Drive-Thru		8.600	
C12	Bouma Residential	SFDR	106		
		Condo/Townhouse	94		
C13	Fairfield Inn & Suites (PL 17-0060 & PL 17-0061)	Hotel			111 RM
C14	Watson Industrial Park (40 percent complete)	High-Cube Warehouse		3,889.900	

No.	Project Name	Land Use	DU	TSF	Other Units
C15	Chino Business Park	General Light Industrial		165.500	
		Business Park		21.500	
C16	Flores Site	Shopping Center		4.000	
		Gas Station with Convenience Store			16 VFP
		Express Car Wash		5.000	
C17	Brewart Residential (Stonebrook - TM 18923)	SFDR	127		
C18	Archibald's (PL 17-0037)	Fast-Food with Drive-Thru		3.147	
C19	TM 18972 (80 percent complete)	SFDR	147		
C20	Rancho Miramonte	SFDR	691		
		Condo/Townhouse	132		
		Neighborhood Retail		21.780	
		Church			400 seats
C21	Majestic Chino Heritage	High-Cube Fulfillment Warehouse		1982.700	
		High-Cube Cold Storage Warehouse		100.000	
C22	Church	Church		47.979	
		Daycare			190 students
C23		SFDR	60		
		Condo/Townhouse	160		
C24		SFDR	151		
		Condo/Townhouse	150		
C25	Ag. Buffer, Bungalow, Lic. Product, Liberty Deluxe, Lyon 2 & 3	SFDR	474		
C26	Pine Community	SFDR	552		
		Public Park			3.0 acres
		Self Storage & RV Storage		120.000	
		Sports Park			41.8 acres
	Chino Hills				
CH1	Vila Borba Specific Plan (TR 16414)	SFDR	172		
CH2	Country Club Villas	Condo/Townhouse	46		
CH3	Crossings at Chino Hills	Apartments	346		
CH4	The Goddard School	Daycare		10.587	

No.	Project Name	Land Use	DU	TSF	Other Units
CH5	Indus Light Industrial	General Light Industrial		100.330	
CH6	The Santa Barbara	Condo/Townhouse – Low Rise	138		
		Condo/Townhouse – Mid Rise	186		
		Shopping Center		15.700	
CH7	Heritage Professional Center	Hospital		55.000	
		Medical Office Building		86.952	
		Hotel			120 rooms
		Shopping Center		38.848	
		Restaurant		7.200	
	Jurupa Valley				
JV1	Thoroughbred Farms	General Light Industrial			42.6 acres
		Business Park			35.5 acres
		Commercial			19.1 acres
JV2	Harmony Trails	SFDR	176		
JV3	Vernola Marketplace Apartments	Apartments	397		
JV4	Riverbend (70 percent complete)	Residential	466		
JV5	Wineville Marketplace	Commercial		37.657	
JV6	Express Car Wash	Car Wash		4.702	
JV7	Shops @ Bellegrave	Commercial		10.000	
JV8	Flying J Travel Center	Diesel Pumps			12 VFP
		Passenger Car Pumps			8 VFP

SFDR = Single Family Detached Residential, TSF = Thousand Square Feet, DU = Dwelling Unit, VFP = Vehicle Fueling Position AC = Acres

Figure 3-1 Cumulative Projects



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4 Environmental Impact Analysis

This section discusses the possible environmental effects of the Homestead Industrial Project for the specific issue areas that were identified through the scoping process as having the potential to experience significant effects. "Significant effect" is defined by the *CEQA Guidelines* §15382 as:

> "…a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant."

The assessment of each issue area begins with a discussion of the environmental setting related to the issue, which is followed by the impact analysis. In the impact analysis, the first subsection identifies the methodologies used and the "significance thresholds," which are those criteria adopted by the City and other agencies, universally recognized, or developed specifically for this analysis to determine whether potential effects are significant. The next subsection describes each impact of the proposed project, mitigation measures for significant impacts, and the level of significance after mitigation. Each effect under consideration for an issue area is separately listed in bold text with the discussion of the effect and its significance. Each bolded impact statement also contains a statement of the significance determination for the environmental impact as follows:

> **Significant and Unavoidable**. An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per §15093 of the CEQA Guidelines.
>
> **Less than Significant with Mitigation Incorporated**. An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings under §15091 of the CEQA Guidelines.
>
> **Less than Significant**. An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
>
> **No Impact.** The proposed project would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

Following each environmental impact discussion is a list of mitigation measures (if required) and the residual effects or level of significance remaining after implementation of the measure(s). The impact analysis concludes with a discussion of cumulative effects, which evaluates the impacts associated with the proposed project in conjunction with other planned and pending developments in the area listed in Section 3.0, *Environmental Setting*.

The Executive Summary of this EIR summarizes all impacts and mitigation measures that apply to the proposed project.

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4.1 Aesthetics, Light, and Glare

This section evaluates the project's potential impacts to scenic vistas, scenic resources, visual character or quality, and light or glare. The analysis consists of a description of the visual setting for the project and the surrounding area, and a discussion of potential impacts the project would have and any mitigation measures required to reduce impacts.

4.1.1 Setting

a. Existing Visual Setting

Visual quality is defined as the overall visual impression or attractiveness of an area based on the scenic resources, both natural and built. The attributes of visual quality include variety, vividness, coherence, uniqueness, harmony, and pattern. Viewshed is a term used to describe a range of resources and their context that relate to what people can see in the immediate environment in terms of foreground, middle ground, and background distances. Viewsheds refer to the visual qualities of a geographical area defined by the horizon, topography, and other natural features that give an area its visual boundary and context. Viewsheds are defined further by development that forms a prominent visual component of the area. Public views are those available from publicly accessible vantage points, such as streets, freeways, parks, and vista points. These views are available to a greater number of persons than private views, which are those available from vantage points on private property.

Visual Character of the Surrounding Area

The visual character of Eastvale is a mix of residential, commercial, and industrial development with some agricultural lands and natural features, mainly near the city boundaries. Sensitive viewer groups include people who reside in the area, permanently or temporarily, and those who pass through or otherwise appear in the area (e.g., commuters), who have the potential to be affected by the area's scenic features and visual quality, and by the character of scenic vistas and viewsheds. The Santa Ana River corridor in southern Eastvale is a scenic area identified in the Eastvale General Plan.

The project site is in the northwestern part of Eastvale, located between Cucamonga Creek Channel to the west and Archibald Avenue to the east. The project site is in an area characterized by a mix of medium-density residential, commercial, industrial, and agricultural uses on gently-sloped land. Recent development surrounding the project site includes commercial, industrial, and residential projects. Implementation of the Eastvale General Plan will eventually result in the conversion of remaining agricultural land in the City to nonagricultural uses (Eastvale 2012). Incremental changes to the visual character of Eastvale and surrounding jurisdictions have already occurred consistent with General Plan objectives.

The project site is currently the location of Dyt Dairy, one of Riverside County's remaining dairy farms. North of the project site in Ontario an industrial site is under development. Directly east of the project site is Archibald Avenue, a north-south arterial with a two-lane road north of Limonite Avenue and three to four lane road south of Limonite Avenue. The intersection at Archibald Avenue

and Limonite Avenue contains stoplights, pedestrian crosswalks, and bulbouts[1], although only the western side of Archibald Avenue south of Limonite Avenue has a sidewalk.

Electrical transmission towers line both sides of Archibald Avenue. To the east of Archibald Avenue, both north and south of Limonite Avenue are sites that are currently being developed, or are approved for development, but not yet under construction. The site north of Limonite Avenue is being developed for light industrial and commercial/retail use, known as The Merge project, which will include a mix of light industrial buildings as well as commercial/retail spaces including a gas station, drug store and other amenities. South of Limonite Avenue is the site of the approved Eastvale Crossings project, which will include a large retail center and smaller restaurant and retail space. This site is currently comprised of remnants of concrete foundation with scattered grasses, currently bounded by a small chain-link fence.

Immediately south of the project site are large, grey-toned industrial warehouses with associated landscaping, paved roads, and parking lots. South of the industrial warehouses is an alignment of SCE electrical transmission towers, and a master-planned residential community with single-family homes and a small park. The concrete-lined Cucamonga Creek Channel runs north-south immediately west of the project site. Properties across Cucamonga Creek Channel include industrial and agriculture sites to the west and northwest.

Visual Character of the Project Site

The proposed project site can be characterized by facilities typically associated with southern California dairy farms. The site is dominated by a mix of permeable and impermeable surfaces, with barren, muddy, or grassy landscapes interspersed with feed lots, manure piles, and a series of drainage and wastewater ponds. Associated structures on the project site include milking facilities, shade areas, and pens. Figure 4.1-1a through Figure 4.1-1c shows views of the project site; also see Figure 2-3 in Section 2.0, *Project Description* for additional views of the project site.

There are currently three single-family residences on the project site along the Archibald Avenue frontage; see Figure 4.1-1b, Photograph 8. The residences range from approximately 2,200 square feet to 6,000 square feet each and are set back from individual entrances on Archibald Avenue. Two of the residences have modern ranch-style design, and one residence appears considerably older. The architecture of the residence suggests early 20th century construction, however, severe alterations have made the architectural style unrecognizable. The residence is not eligible for the California Register of Historical Resources, as discussed in Section 5.2, *Cultural Resources*. Each property contains large yards landscaped with grass and ornamental plants. As shown in Figure 4.1-1a through Figure 4.1-1c, there are several large, mature eucalyptus trees on the eastern edge of the project site across from the terminus of Limonite Avenue.

[1] Bulbouts, also referred to as neckdowns, are raised curb extensions that narrow the travel lane at intersections or midblock locations. These features increase pedestrian comfort and safety by shortening the crossing distance, decreasing the curb radii, thus reducing turning vehicle speeds.

Figure 4.1-1a Views of the Project Site

Photograph 1. View northeast from within site

Photograph 2. View southwest from within site

Photograph 3. View north from within site

Photograph 4. View west from within site

Figure 4.1-1b Views of the Project Site Frontage at Archibald Avenue

Photograph 5. View north from southern frontage

Photograph 6. View south from southern frontage

Photograph 7. View west of southern frontage

Photograph 8. View west of central frontage

Figure 4.1-1c Views of the Project Site Frontage at Archibald Avenue

Photograph 9. View west of northern frontage

Photograph 10. View south from northern frontage

Photograph 11. View north from northern frontage

Photograph 12. View northeast from northern frontage

Scenic Views and Vistas

The area surrounding this project site is heavily developed with light industrial and commercial uses as well as major arterial roadways. Distant views of scenic vistas are visible on the project site, surrounding areas, and adjacent roadways. Scenic vistas of the San Gabriel Mountains to the north and Santa Ana Mountains to the south are accessible from public vantage points adjacent to the project site. Distant views of the Chino Hills may also be visible to the east, although not as noticeable due to their lower height relative to the mountains. However, public vantage points near the project site are limited to roadways along Archibald Avenue, and views of scenic vistas are intermittently viewed in between buildings and public and private infrastructure, and only on clear days with good air quality.

Public views westward from Archibald Avenue at the project site are limited by a dense row of eucalyptus trees, and by structures on site. The Box Spring Mountains can be viewed eastward across the Cucamonga Creek Channel from west of the project site, but the majority of these views are accessible from non-public locations or from small roads with limited use that are located near the project site, such as Hellman Avenue and Remington Avenue.

Light and Glare

Current light and glare sources on the project site are minimal, consistent with a typical dairy farm. Current light sources in the project areas include streetlights, automobile headlights, and outdoor lighting from the dairy operations and residential houses on the property. Overall, the level of light and glare in the project vicinity is typical of a semi-rural area mixed with industrial, agricultural and residential uses.

b. Regulatory Setting

State

2016 California Green Building Standards Code (CAL Green)

Section 5.106.8 of CAL Green addresses policies for light pollution reduction. It complies with lighting power requirements in the California Energy Code, California Code Regulations (CCR), Part 6, and design interior and exterior lighting such that zero direct-beam illumination leaves the building site. The 2018 Supplemental Update to the 2016 CAL Green included a clarified Section 5.106.8 on backlight, uplight, and glare, with references to new tables. Buildings must meet or exceed exterior light levels and uniformity ratios for lighting zones 1-4 as defined in Chapter 10 of the California Administrative Code, CCR, Part 1, using the strategies listed below. The project would likely be in Lighting Zone 3 (Urban areas, as defined by the 2000 U.S. Census) which allows moderately high ambient illumination.

1. Shield all luminaries or provide cutoff luminaries per Section 132 (b) of the California Energy Code
2. Contain interior lighting within each source
3. Allow no more than .01 horizontal lumen foot-candles to escape 15 feet beyond the site boundary
4. Automatically control exterior lighting dusk to dawn to turn off or lower light Levels during incentive periods

2020 CAL Green standards will be applicable to new projects starting January 1, 2020, which will include directions to the California Energy Code for ambient lighting regulations for additions and alterations.

California Scenic Highway Program

The California State legislature created the California Scenic Highway Program in 1963 to "protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment," and includes state routes identified as scenic by the California Department of Transportation (Caltrans). The "eligible" designation applies to a specific segment of the designated highway, and depends on several factors, including the breadth of the landscape visible to travelers, the scenic quality of the landscape, and the extent to which development intrudes upon a traveler's enjoyment of the view. The Legislature is responsible for making state highways eligible for designation as a scenic highway and lists them in the Streets and Highways Code sections 260-284. For Caltrans to officially designate a highway as scenic, the local government with jurisdiction over abutting land must adopt a "scenic corridor protection program" that limits development, outdoor advertising, and earthmoving, and Caltrans must agree that it meets the criteria (Caltrans 2019).

Local

Airport Land Use Compatibility Plan (ALUCP)

The project site is located within the Chino Airport Influence Area. As the Chino Airport is within the County of San Bernardino, the San Bernardino County Airport Land Use Commission (San Bernardino County ALUC) is responsible for the Chino Airport Land Use Compatibility Plan (Chino ALUCP). However, since the project site is within Riverside County, the Riverside County ALUC is responsible for review of the project with respect to its consistency with the applicable plan.

The Riverside County Airport Land Use Compatibility Plan Policy Document (Riverside County ALUC 2008) establishes policies and compatibility maps for individual airports potentially affecting land use within Riverside County, including Chino Airport. The criteria for determining airspace obstructions and other hazards to flight have been long-established in Federal Aviation Regulation (FAR) Part 77 and other Federal Aviation Administration regulations and guidelines. Land use compatibility may affect the following design aspects of the project:

- Height limitations for buildings, antennas, other types of structures, and trees should be limited in height so as not to pose a potential hazard to flight.
- Intensity limitations on nonresidential land uses, in terms of people per acre or building sizes, floor area ratios, or other design parameters. The project site is in Compatibility Zone C, which limits intensity to 75 people per acre.

City of Eastvale General Plan

The Eastvale General Plan expresses the community's vision of its long-term physical form and development (Eastvale 2012). The following objectives and policies pertaining to aesthetics are drawn from the City's General Plan and are applicable to the proposed project.

LAND USE ELEMENT

The General Plan Land Use Element describes present and planned land uses and their relationship to Eastvale's goals for development in terms of the City's character.

Objective: The City's focus will shift from being primarily centered on the quality of new development to ensuring that the developed neighborhoods, retail centers, and industrial areas remain desirable and able to compete with other, newer neighborhoods in other cities (Eastvale 2012).

Policy LU-21: Retain and enhance the integrity of existing residential, employment, and open space areas by protecting them from encroachment of land uses that would result in land use conflict due to noise, noxious fumes, glare, and traffic.

Policy LU-27: The positive characteristics and unique features of the project site and surrounding community should be considered during the design and development process.

DESIGN ELEMENT

The Design Element of the General Plan aims to ensure quality in the design of public and private development to create memorable and lively spaces throughout the community.

Objective: Development should relate to the user, the appearance and character of development, and should function in the greater context of the community.

Policy DE-1: The City of Eastvale will require that all new development is well-planned and of high quality. Design will be used to reinforce Eastvale's image as a contemporary community with vibrant, livable neighborhoods and walkable pedestrian-and bicycle-oriented development.

Policy DE-2: All new development shall adhere to the basic principles of high-quality urban design, architecture, and landscape architecture including, but not limited to, human-scaled design, pedestrian orientation, interconnectivity of street layout, and siting major buildings to hold corners and readily define entryways, gathering points, and landmarks.

- **Action DE-2.1:** To provide additional guidance to developers and the public, consider adopting a set of comprehensive Design Guidelines to establish design standards and criteria for public and private development projects.

Policy DE-3: Eastvale will strive to continuously improve the architectural quality of public and private projects. Developers proposing to rely on the use of "standard designs" or "corporate architecture" may be required to improve their designs as necessary to meet the City's overall standards for quality.

Policy DE-7: All new development projects which require development plan approval shall establish landscape and façade maintenance programs for the first three years to ensure that streetscapes and landscape areas are installed and maintained as approved.

Policy DE-16: The City will seek to reduce the unsightly appearance of overhead and aboveground utilities by placing them underground as new development occurs.

- **Action DE-16.1:** To the extent feasible, new utility facilities, including electrical transformers, water backflow preventers, and similar items, should be located underground.

- **Action DE-16.2:** Require that development on sites with existing overhead utilities be required to place these facilities underground where consistent with the guidelines of the electrical utility.
- **Action DE-16.3:** As funding becomes available, the City will underground utilities in areas where development has already occurred.

Policy DE-34: Non-residential developments shall be designed to consider their surroundings and visually enhance, not degrade, the character of the surrounding area.

Policy DE-36: Heavy truck and vehicular access shall be designed to minimize potential impacts on adjacent properties.

Policy DE-37: When more than one structure is on a commercial or other non-residential site, they should be linked visually through architectural style, colors and materials, signage, landscaping, design details such as light fixtures, and the use of arcades, trellises, or other open structures.

Policy DE-40: Loading facilities for uses requiring delivery from large trucks shall be screened from public view and located away from residential uses, and their impacts should be appropriately mitigated.

Policy DE-45: Development in industrial areas which are visible from public roadways and/or from adjacent properties shall incorporate high-quality design principles, including:

- Offices and enclosed structures oriented toward street frontages.
- Building façades that provide visual interest.
- Loading facilities and storage areas which are screened from public view along collectors and arterials.
- Visually appealing fences and walls.
- The use of landscaped buffers around parking lots and industrial structures

Policy DE-49: Non-residential developments shall include consistent and well-designed signage that is integrated with the architectural character of each building.

City of Eastvale Municipal Code

TITLE 120 – ZONING CODE

Title 120 of Eastvale's Zoning Ordinance is to facilitate prompt review of development proposals and provide for public information, review, and comment on development, create a comprehensive and consistent pattern of land uses to help ensure the provision of adequate water, sewerage, transportation, drainage, parks, open space, and public facilities, create a complete multimodal transportation network that promotes pedestrian-oriented development, safe and effective traffic circulation, and adequate facilities for all transportation modes (e.g., walking, bicycling, driving, and using transit), and ensure compatibility between residential and nonresidential development and facilitate the development of compatible mixed-use developments (Eastvale 2013).

VARIANCES

Title 120 of Eastvale's Municipal Code regulates variances of developments to ensure all new developments conform to the standards of the General Plan and Zoning Code of the city. Related to

the proposed project, Title 120 states that a variance may be approved after finding that if the project as approved with the variance is located within the Chino Airport Influence area, the approved variance is consistent with the most recently adopted version of the ALUCP.

OUTDOOR LIGHTING ORDINANCE

Title 120 of the City's Municipal Code governs outdoor lighting and the process of approval for all developments accompanied by outdoor lighting. All outdoor lighting for multifamily residential, commercial, industrial and mixed use and public/quasi-public developments is approved in conjunction with required land use and development permits for a project. Lighting regulations ensure that outdoor lighting is adequate for safety and security while avoiding the harsh contrasts in lighting levels between the project site and adjacent properties.

BUILDINGS AND CONSTRUCTION

Title 110 of the City's Municipal Code governs hours of permitted construction activities. Any construction within the city located within one-fourth of a mile from an occupied residence shall be permitted Monday through Saturday, except nationally recognized holidays, 7:00 a.m. to 7:00 p.m. There shall be no construction permitted on Sunday or nationally recognized holidays unless approval is obtained from the city building official or city engineer.

4.1.2 Impact Analysis

a. Methodology and Significance Criteria

The assessment of aesthetic impacts involves an inherently subjective qualitative analysis. Reactions to particular aesthetic conditions vary according to the viewer. This evaluation compares the existing visual environment of the project site to the anticipated visual environment after implementation of the proposed project, analyzing the nature of the anticipated change. The project site and surrounding area was viewed using Google Earth imagery and by examining photo documentation from site visits. Renderings of the proposed project design were used to consider the effects of the development on the surrounding neighborhood. Figure 4.1-2 provides an architectural elevation for Building 7 (HPA Architecture 2019) incorporated herein for visual references. Additional elevations are included in Appendix 2.0.

The impacts on aesthetics from the implementation of the proposed project would be considered significant if they would exceed the following significance criteria, in accordance with Appendix G of the CEQA Guidelines:

1. Have a substantial adverse effect on a scenic vista.
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
3. Substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, the project would conflict with applicable zoning and other regulations governing scenic quality.
4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Figure 4.1-2 Architectural Elevation – Building 6

b. Project Impacts and Mitigation Measures

Threshold 1:	Would the project have a substantial adverse effect on a scenic vista?

Impact AES-1 THE PROPOSED PROJECT WOULD NOT SUBSTANTIALLY DEGRADE THE PUBLIC VIEW OF CHINO HILLS AND THE SAN GABRIEL MOUNTAINS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

In this analysis, scenic vistas comprise viewpoints that offer expansive/panoramic views for the benefit of the public. They can be associated with a dramatic change in elevation, but they can also be available from an undeveloped, flat area looking toward features in the distance, such as mountains.

The project site is not located in any scenic area identified by the Eastvale General Plan. The General Plan identifies the Santa Ana River corridor as a scenic area, but the project is not located near the corridor and would have no impact on views of this area. As previously described, scenic vistas of the San Gabriel Mountains to the north, Santa Ana Mountains to the south, and Chino Hills to the east are intermittently accessible from public vantage points adjacent to the project site, such as Archibald Avenue on days of good air quality.

The project would convert the current dairy and residential use to a developed space with industrial buildings which would be a maximum height of 40 feet and would remove the eucalyptus trees to allow for the widening of Archibald Avenue and the extension of Limonite Avenue westward. The proposed project would not significantly diminish accessible views of the scenic vistas of the San Gabriel Mountains or Santa Ana Mountains from public vantage points for motorists or pedestrians along Archibald Avenue. Eastward views of the Chino Hills are currently intermittent along Archibald Avenue adjacent to the project site; therefore, the proposed project would not significantly diminish scenic vistas of mountains and hills. In addition, the project would extend Limonite Avenue westward, providing pedestrian and vehicle access through the project site, including additional opportunities for views of distant hills and mountains. The overall quality of views of scenic vistas from publicly accessible vantage points would not substantially change. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

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

Impact AES-2 THE PROPOSED PROJECT WOULD NOT SUBSTANTIALLY DAMAGE SCENIC RESOURCES WITHIN THE VIEWSHED OF A DESIGNATED OR ELIGIBLE STATE SCENIC HIGHWAY AS DEFINED CALTRANS AND THE CALIFORNIA SCENIC HIGHWAY PROGRAM. THERE WOULD BE NO IMPACT.

A state scenic highway is designated as scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view (Caltrans 2019). No officially designated or eligible state scenic highways or officially designated county scenic highways exist within one mile of

the project area. The closest state scenic highway from the project site is State Route 91, approximately six miles south (Caltrans 2019). There are no rock outcroppings or historic buildings on or near the project site, as discussed in Section 5.2, *Cultural Resources*. The project would remove the row of eucalyptus trees along Archibald Avenue, but they are not visible from a state scenic highway. Thus, project implementation would have no impact to scenic resources within a state scenic highway.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

There would be no impact without mitigation.

Threshold 3:	Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Impact AES-3 THE PROPOSED PROJECT WOULD ALTER THE EXISTING CHARACTER OF THE SITE FROM ONE OF A DAIRY FARM TO LARGE BUILDINGS FOR INDUSTRIAL USES. HOWEVER, THE PROJECT WOULD CONFORM TO THE CITY'S VISION AS DEFINED BY THE GENERAL PLAN AND POLICIES DESIGNED TO ENHANCE THE VISUAL QUALITY OF NEW DEVELOPMENT. THEREFORE, THE PROJECT WOULD NOT SUBSTANTIALLY DEGRADE THE EXISTING VISUAL CHARACTER OF THE SITE OR SURROUNDING AREA. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The existing visual quality of the project site and surrounding area is moderate, with the residential and industrial development, ornamental landscaping, above-ground utility infrastructure, and concrete-lined channel contrasting with agricultural, dairy, and vacant sites. Existing, developing and planned buildings and facilities (including approved projects) near the project site reflect the City's desired approach to increase non-agricultural development.

The project site would change from a dairy operation with relatively sparse structures and unpaved landscape to an industrial center with paved ground cover and multiple buildings. The mature eucalyptus trees at the terminus of Limonite Avenue would be removed and the dairy farm facilities and residences would be demolished. Limonite Avenue would be developed with a right-of-way of approximately 60 feet with a 16-foot northerly and 20-foot southerly landscape/trail easement to meet the classification of a modified Urban Arterial and feature four travel lanes with a raised center median, with easements for the landscaped parkway and multi-use trails. Archibald Avenue would be widened to 165 feet at the intersection with Limonite Avenue. Traffic signal improvements would also be constructed. The widening of Archibald Avenue would require the relocation of SCE transmission poles and overhead lines (SCE and telecommunication) along Archibald Avenue.

The project would construct industrial warehouse buildings along the future Limonite Avenue frontage (see Figure 2-4, Conceptual Site Plan, in Section 2.0, *Project Description*). The buildings would range in size from 48,125 square feet to 507,317 square feet. Each building would feature office space, dock doors, and be located on individual parcels. Most of the dock doors would be dock-height to accommodate trailer loading/unloading. Each building would also feature an at-grade door for vehicle access. The buildings would be from 30 feet to 40 feet in height. The height of

the project buildings would be consistent with the rooflines of the existing industrial buildings to the south.

Project buildings would generally be composed of a series of concrete tilt up panels, with integrated horizontal and vertical elements, and windows with mullions. Metal canopies would be strategically placed along some windows for architectural affect. Building materials would be coated in shades of white, gray, blue and other similar colors. Windows would be non-reflective, tempered glass. All buildings would have similar treatments. Figure 4.1-2 illustrates the treatments and design of the proposed buildings. The buildings have been designed to include vertical and horizontal elements and features to break up the massing of the structures and provide visual interest. The two buildings adjacent to Archibald Avenue would be set back approximately 30 feet, allowing for generous buffers with extensive landscaping. These factors combine to make the project visually attractive and would not degrade the existing visual quality of the site.

Landscaping along the site perimeter and building façades would soften views of the site and further enhance the visual character of the project. The landscape plan plant palette will feature drought-tolerant plants in compliance with Municipal Code Section 120.05.040. Landscaping throughout the project site would consist of low water use trees, shrubs and ground cover (see Figure 2-8 in Section 2.0, *Project Description*). The landscape plans would include nine types of trees, seven types of shrubs and six varieties of ground cover. Large trees would align the project site perimeter, Limonite Avenue, and Archibald Avenue. Common trees in the landscape plan consist of blue palo verde, fruitless olive, Mondell pine, Chinese elm, fern pine, Brisbane box and Australian willow. Trees would only be placed within non-restricted planting areas, to conform to ALUCP requirements.

The buildings' massing and site design would be similar to the existing industrial development immediately south of the project site. It would not substantially degrade the visual character of the area surrounding the project site even though it would change existing uses. The tones, textures, colors, and mix of materials in both the proposed architecture and the landscape plan would allow the project's potential visual attributes to align with General Plan Policy DE-34, which states that "non-residential developments shall be designed to consider their surroundings and visually enhance, not degrade, the character of the surrounding area."

The greatest impact of the project to the existing visual character of the surrounding area would be from the sides of Buildings 1 and 6, which would create large expanses of uninterrupted walls facing Archibald Avenue. A new public view would be created by the extension of Limonite Avenue. The project architecture and landscaping would lessen impacts to visual character by conforming to General Plan Policy DE-45, which provides that development in industrial areas which are visible from public roadways and/or from adjacent properties shall incorporate high-quality design principles, including:

- Offices and enclosed structures oriented toward street frontages.
- Building façades that provide visual interest.
- Loading facilities and storage areas which are screened from public view along collectors and arterials.
- Visually appealing fences and walls.
- The use of landscaped buffers around parking lots and industrial structures.

Project design characteristics and siting would conform to General Plan Policy DE-2, which states that "all new development shall adhere to the basic principles of high-quality urban design, architecture, and landscape architecture including, but not limited to, human-scaled design,

pedestrian orientation, interconnectivity of street layout, and siting major buildings to hold corners and readily define entryways, gathering points, and landmarks." Building design features, including windows, façade design elements, and landscaping features, particularly on frontages on Archibald Avenue and Limonite Avenue, would provide variation in color and material to present visually interesting structures.

Additionally, on-site utilities would be constructed underground to the extent suitable which would decrease visual impacts. SCE distribution facilities would be relocated underground within Limonite Avenue and Archibald Avenue rights-of-way. Similarly, AT&T distribution lines would be located underground along the Limonite Avenue and Archibald Avenue rights-of-way.

While project implementation would change the visual quality of the site and its surroundings, the change would not constitute a degradation. The project would visually match recent development projects in the vicinity of the project site and be consistent with the City's vision for growth and design polices. Therefore, impacts to the area's visual character would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 4:	Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Impact AES-4 **THE PROPOSED PROJECT WOULD INTRODUCE NEW SOURCES OF LIGHT AND GLARE TO THE PROJECT SITE TYPICAL OF AN INDUSTRIAL WAREHOUSE USES. HOWEVER, ADHERENCE TO STATE AND LOCAL STANDARDS AND REGULATIONS REGARDING INTERIOR AND EXTERIOR LIGHTING, SITE DESIGN, AND CONSTRUCTION PERMITTING WOULD REDUCE IMPACTS TO A LESS THAN SIGNIFICANT LEVEL.**

Under current conditions, light and glare from existing development is minimal, although the project site is in an urbanized area with existing uses that contribute to light and glare, such as vehicles traveling on Archibald Avenue and Limonite Avenue, streetlights, and exterior lighting from residential, commercial, and institutional structures.

Construction

Construction of the project would be restricted to the City's permitted construction hours, which prohibits activities between 7 p.m. and 7 a.m., and Sundays or legal holidays. This would limit the need for auxiliary lighting that would illuminate construction activities, as those would occur during the day. Therefore, no adverse light or glare impacts to adjacent properties would result from temporary construction activities.

Operation

Implementation of the proposed project would create new light sources from interior and exterior illumination associated with the buildings and security lighting in parking areas, as well as headlights of cars entering and leaving the site during non-daylight hours and from increased traffic along Archibald Avenue and Limonite Avenue. As noted in Section 2.0, *Project Description*, exterior building materials, including windows, would feature non-reflective materials, thus reducing light

reflection and glare. The metal canopies placed along the windows, however, may produce some amount of glare but reflective materials would be limited along Archibald Avenue.

Car windows could potentially produce glare when cars enter or exit the project site under operational conditions, particularly on bright, sunny days. The tree canopy predicted by the landscape plan would mitigate this glare, to the extent possible, from cars entering and exiting the site. Throughout the site, tree plantings would also moderate potential glare from cars parked on the site, although they may not eliminate it entirely. Light from delivery trucks would be minimal, as site design would conform to the City's General Plan policy that loading facilities for uses requiring delivery from large trucks shall be screened from public view and located away from residential uses, and that heavy truck and vehicular access shall be designed to minimize potential impacts on adjacent properties.

Exterior and interior lighting to fit industrial warehouse needs would conform to CAL Green and Eastvale Municipal Code requirements. Lighting would be required to conform to ALUCP requirements for compatibility with Zone C.

Adherence to the 2018 Supplemental Update to the 2016 CAL Green would limit backlight, uplight, and glare impacts from interior and exterior sources to off-site areas. Light spillage onto adjacent properties or Archibald Avenue would be minimal. Additionally, the majority of uses surrounding the project site would be agricultural or industrial and are not considered sensitive receptors of light or glare. A small number of residences northeast of the project site may experience a minimal increase in light or glare, but since the residences' frontage is northward, away from the project site, and the residences are surrounded by a wall, impacts would be limited. The project site is outside the boundary area regulated by the Riverside County Lighting Ordinance No. 655, which directs lighting methods for development to reduce light and glare within 45 miles of the Mt. Palomar Observatory.

Light and glare impacts would be typical of industrial warehouse uses and vehicular traffic and parking. Adherence to state and local standards and regulations would reduce impacts to a less than significant level.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Cumulative Impacts

As previously discussed, the project would continue the transition of the northwestern area of Eastvale and adjacent jurisdictions from rural agricultural to urban non-agricultural use, as referenced by projects included in Section 3, *Environmental Setting*. This transition is prescribed in the vision of the Eastvale General Plan. All new development in Eastvale would be subject to CAL Green requirements and policies contained in the City's General Plan and Municipal Code Design Standards and Guidelines for architecture, site design, building materials, color palette, landscaping, lighting, loading docks, storage areas, utilities, rooftop equipment, construction hours, and other features that may impact aesthetics. Adherence to these policies would reduce impacts associated with light spillage and glare and maintain visual consistency and quality with surrounding development.

Development in the northeastern portion of Eastvale would not adversely impact the Santa Ana River corridor, which Eastvale identifies as a scenic area. Publicly accessible distant views of the San Gabriel Mountains, Santa Ana Mountains, or Chino Hills State Park from major roadways would not substantially be impacted by the project and would contribute to cumulative impacts on publicly accessible views of scenic vistas. The project site and surrounding areas are not located near state-designated scenic highways, or highways eligible for designation as a scenic highway, and are outside the boundary of the impact area for the Mt. Palomar Observatory. Cumulative impacts to aesthetics, light, and glare would be less than significant.

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4.2 Air Quality

This section analyzes the effects of the proposed industrial project on air quality. It considers both the temporary impacts relating to construction activity and potential long-term impacts associated with project operation. The analysis is based on data and information in the following reports prepared by Urban Crossroads: *The Homestead Air Quality Impact Analysis* (2019a; Appendix 4.2), *The Homestead Mobile Source Health Risk Assessment* (2019c; Appendix 4.2), and *The Homestead Traffic Impact Analysis* (2019e; Appendix 4.11).

4.2.1 Setting

a. Existing Air Quality Setting

Local Climate and Meteorology

The project site is in the South Coast Air Basin (the Basin), which is bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east; and the Riverside County/San Diego County border to the south. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, as well as the San Gorgonio Pass in Riverside County. The regional climate in the Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. Air quality in the Basin is influenced primarily by meteorology and a wide range of emissions sources, such as dense population centers, substantial vehicular traffic, and industry.

Air pollutant emissions in the Basin are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point sources and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are distributed widely and include sources such as painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles and other modes of transportation, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

Air Quality Standards

The U.S. Environmental Protection Agency (USEPA) has set primary national ambient air quality standards (NAAQS) for ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), Particulate Matter (PM_{10}, $PM_{2.5}$), and lead (Pb). Primary standards are those levels of air quality deemed necessary, with an adequate margin of safety, to protect public health. In addition, California has established health-based ambient air quality standards (CAAQS) for these and other pollutants, some of which are more stringent than federal standards. Table 4.2-1 lists the current federal and state standards for regulated pollutants.

Table 4.2-1 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	-	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	24-Hour	-	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM_{10}	Annual	-	20 $\mu g/m^3$
	24-Hour	150 $\mu g/m^3$	50 $\mu g/m^3$
$PM_{2.5}$	Annual	12 $\mu g/m^3$	12 $\mu g/m^3$
	24-Hour	35 $\mu g/m^3$	-
Lead	30-Day Average	-	1.5 $\mu g/m^3$
	3-Month Average	0.15 $\mu g/m^3$	-

ppm = parts per million, $\mu g/m^3$ = micrograms per cubic meter
Source: CARB 2016

Air Pollutants of Primary Concern

The federal and state clean air acts mandate the control and reduction of certain air pollutants. Under these laws, USEPA and California Air Resources Board (CARB) have established ambient air quality standards for certain "criteria" pollutants. Ambient air pollutant concentrations are affected by the rates and distributions of corresponding air pollutant emissions, and by the climate and topographic influences discussed above. Proximity to major sources is the primary determinant of concentrations of non-reactive pollutants, such as CO and suspended particulate matter. Ambient CO levels usually follow the spatial and temporal distributions of vehicular traffic closely. A discussion of each primary criterion pollutant is provided below.

Ozone

Ozone (O_3) is produced by a photochemical reaction (i.e., triggered by sunlight) between nitrogen oxides (NO_X) and reactive organic gases (ROG).[1] NO_X is formed during the combustion of fuels, while reactive organic gases are formed during combustion and evaporation of organic solvents. Because O_3 requires sunlight to form, it mostly occurs in substantial concentrations between the months of April and October. O_3 is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most

[1] Organic compound precursors of ozone are routinely described by variations of three terms: hydrocarbons (HC), organic gases (OG), and organic compounds (OC). These terms are often modified by adjectives such as total, reactive, or volatile, and result in a rather confusing array of acronyms. Those important from an air quality perspective are: HC, THC (total hydrocarbons), RHC (reactive hydrocarbons), ROG (reactive organic gases), ROC (reactive organic compounds), and VOC (volatile organic compounds). SCAQMD uses the term VOC to denote organic precursors.

sensitive to O_3 include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide

CO is an odorless, colorless gas and causes a number of health problems including fatigue, headache, confusion, and dizziness. The incomplete combustion of petroleum fuels in on-road vehicles and at power plants is a major cause of CO. CO is also produced during the winter from wood stoves and fireplaces. CO tends to dissipate rapidly into the atmosphere; consequently, violations of the state CO standards are associated generally with major roadway intersections during peak-hour traffic conditions.

Localized CO "hotspots" can occur at intersections with heavy peak-hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high that the local CO concentration exceeds the NAAQS of 35.0 ppm or the CAAQS of 20.0 ppm. However, all areas of the Basin have remained below federal and state CO standards since 2003 (South Coast Air Quality Management District [SCAQMD] 2016).

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. Nitric oxide is the principal form of nitrogen oxide produced by combustion, but nitric oxide reacts rapidly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. Nitrogen dioxide is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis may occur in young children at concentrations below 0.3 ppm. Nitrogen dioxide absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM_{10} and acid rain.

Suspended Particulate Matter

Suspended particulate matter (PM_{10}) is particulate matter measuring no more than 10 microns in diameter; $PM_{2.5}$ is fine particulate matter measuring no more than 2.5 microns in diameter. Suspended particulates are mostly dust particles, nitrates, and sulfates. Both PM_{10} and $PM_{2.5}$ are by-products of fuel combustion and wind erosion of soil and unpaved roads, and are directly emitted into the atmosphere through these processes. Suspended particulates are also created in the atmosphere through chemical reactions. The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and fine particulates (those 2.5 microns and below) can be very different. The small particulates generally come from windblown dust and dust kicked up by mobile sources. The fine particulates are generally associated with combustion processes, and form in the atmosphere as a secondary pollutant through chemical reactions. Fine particulate matter is more likely to penetrate deeply into the lungs and poses a health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter inhaled into the lungs remains there. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an adsorbed toxic substance.

Toxic Air Contaminants

The California Health and Safety Code defines a toxic air contaminant (TAC) as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a

present or potential hazard to human health." The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines. According to CARB, diesel engine emissions are believed to be responsible for about 70 percent of California's estimated known cancer risk attributable to TACs and they make up about 8 percent of outdoor $PM_{2.5}$ (CARB 2019).

Lead

Lead (Pb) is a metal found in the environment and in manufacturing products. The major sources of Pb emissions historically have been mobile and industrial sources. In the early 1970s, the USEPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The USEPA completed the ban prohibiting the use of leaded gasoline in highway vehicles in December 1995. As a result of the USEPA's regulatory efforts to remove lead from gasoline, atmospheric lead concentrations have declined substantially over the past several decades. The most dramatic reductions in lead emissions occurred prior to 1990 due to the removal of lead from gasoline sold for most highway vehicles. Lead emissions were further reduced substantially between 1990 and 2008, with reductions occurring in the metals industries at least in part as a result of national emissions standards for hazardous air pollutants (USEPA 2014). Because of phasing out leaded gasoline, metal processing is now the primary source of lead emissions. The highest level of lead in the air is found generally near lead smelters. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers.

Current Ambient Air Quality

The South Coast Air Quality Management District (SCAQMD) is the designated air quality control agency for the Basin. The Basin is designated as a nonattainment area for the federal and state one-hour and eight-hour ozone standards, the state PM_{10} standards, the federal 24-hour $PM_{2.5}$ standard, and the federal and state annual $PM_{2.5}$ standard. The Los Angeles County portion of the Basin is also designated as nonattainment for the federal lead standard. The Basin is in attainment of all other federal and state standards (CARB 2017; 2018a).

The SCAQMD operates a network of air quality monitoring stations throughout the Basin that measure ambient concentrations of pollutants and determine whether ambient air quality meets federal and state standards. The monitoring station closest to the proposed project site is the Mira Loma Van Buren monitoring station; it is located at 5130 Poinsettia Place in the Jurupa Valley, approximately six miles east of the project site. Table 4.2-2 indicates the number of days each of the standards was exceeded at the Mira Loma Van Buren station for years in which data is available.

Table 4.2-2 Ambient Air Quality at the Mira Loma Van Buren Monitoring Station

Pollutant	2016	2017	2018
8-Hour Ozone (ppm), 8-Hr Maximum[1]	0.106	0.111	0.107
Number of Days of State exceedances (>0.070)[2]	65	64	57
Number of days of Federal exceedances (>0.070)[2]	65	64	57
Ozone (ppm), Worst Hour	0.140	0.144	0.129
Number of days of State exceedances (>0.09 ppm)	34	41	21
Number of days of Federal exceedances (>0.112 ppm)	1	2	1
Nitrogen Dioxide (ppb) - Worst Hour	64.9	65.1	54.5
Number of days of State exceedances (>0.18 ppm)	0	0	0
Number of days of Federal exceedances (0.10 ppm)	0	0	0
Particulate Matter 10 microns, mg/m^3, Worst 24 Hours	116.0	111.6	98.9
Number of days above Federal standard (>150 mg/m^3)	0	0	0
Number of days above State standard (>50 mg/m^3)	25	28	22
Particulate Matter <2.5 microns, mg/m^3, Worst 24 Hours	47.2	62.2	86.0
Number of days above Federal standard (>35 mg/m^3)	7	10	6

[1]Highest state or federal measurement reported.

[2]State and federal exceedances may differ due to differences in reporting and calculation methodologies.

Source: CARB 2018b

Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with a margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14, the elderly over 65, persons engaged in strenuous work or exercise, and people with cardiovascular and chronic respiratory diseases. The majority of sensitive receptor locations are, therefore, schools, hospitals, and residences.

The nearest sensitive receptors to the proposed project site are single-family residences north of Remington Avenue, approximately 285 feet northeast of the project site. Other sensitive receptors in the vicinity of the project site include single-family residences west of Archibald Avenue, approximately 735 feet south of the project site.

b. Regulatory Setting

Federal

As discussed in more detail below, federal and state governments have been empowered by the federal and state clean air acts to regulate the emission of airborne pollutants and have established ambient air quality standards for the protection of public health. The USEPA is the federal agency designated to administer air quality regulation, and CARB is the state equivalent under the California

Environmental Protection Agency (CalEPA). County-level air pollution control districts and air quality management districts provide local management of air quality. CARB establishes air quality standards and is responsible for control of mobile emission sources; the local air pollution control districts are responsible for enforcing standards and regulating stationary sources. CARB has established 14 air basins statewide.

Federal Clean Air Act

The USEPA is charged with implementing national air quality programs. USEPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA), passed in 1963 by the U.S. Congress and amended several times. The 1970 federal CAA amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including non-attainment requirements for areas not meeting NAAQS and the Prevention of Significant Deterioration program. The 1990 federal CAA amendments represent the latest in a series of federal efforts to regulate air quality in the United States. The federal CAA allows states to adopt more stringent standards or to include additional pollution species.

National Ambient Air Quality Standards

The federal CAA requires USEPA to establish primary and secondary NAAQS for a number of criteria air pollutants. The air pollutants for which standards have been established are considered the most prevalent air pollutants known to be hazardous to human health. NAAQS have been established for ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and Pb.

State

California Clean Air Act

The California CAA, signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practical date. CARB is the state air pollution control agency and is a part of CalEPA. CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California, and for implementing the requirements of the California CAA. CARB overseas local district compliance with federal and California laws, approves local air quality plans, submits the state implementation plans to the USEPA, monitors air quality, determines and updates area designations and maps, and sets emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

California Ambient Air Quality Standards

The California CAA requires CARB to establish CAAQS. Similar to the NAAQS, CAAQS have been established for ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, Pb, vinyl chloride, hydrogen sulfide, sulfates, and visibility-reducing particulates. In most cases, the CAAQS are more stringent than the NAAQS. The California CAA requires all local air districts to endeavor to achieve and maintain the CAAQS by the earliest practical date. The California CAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources, and provides districts with the authority to regulate indirect sources.

Assembly Bill 1493

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (Pavley), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of greenhouse gas (GHG) emissions from motor vehicles." On June 30, 2009, USEPA granted the waiver of CAA preemption to California for its GHG standards for motor vehicles beginning with the 2009 model year. Pavley I took effect for model years starting in 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" will cover 2017 to 2025. Fleet average emission standards would reach 22 percent reduction from 2009 levels by 2012 and 30 percent by 2016. The Advanced Clean Cars program coordinates the goals of the LEV, Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs and would provide major reductions in GHG emissions. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels.

Regional and Local

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is a regional planning agency that serves as a forum for regional issues relating to transportation, economics, community development, and environmental issues. SCAG is not an air quality management agency, but it is responsible for development of transportation, land use, and energy conservation measures that impact air quality. SCAG's Regional Comprehensive Plan and Guide provide growth forecasts used by SCAQMD to develop air quality and land use strategies (SCAG 2008). SCAG is charged with developing and implementing Senate Bill 375, a measure that addresses GHG reduction in the state, with participation from Eastvale and the other cities and counties that make up SCAG.

South Coast Air Quality Management District Air Quality Management Plan

The SCAQMD is required to prepare a plan for air quality improvement for pollutants for which the District is in non-compliance. The District's Air Quality Management Plan (AQMP) is updated every three years, and each update has a 20-year horizon. The 2016 AQMP was adopted on March 3, 2017 and incorporated new scientific data and notable regulatory actions that have come about since adoption of the 2012 AQMP, including the approval of the new federal eight-hour ozone standard of 0.070 ppm that was finalized in 2015 (SCAQMD 2017).

The 2016 AQMP addresses several federal and state planning requirements and incorporates new scientific information, primarily in the form of updated emissions inventories, ambient measurements, and updated meteorological air quality models (SCAQMD 2017). The 2017 AQMP builds upon the approaches taken in the 2012 AQMP for the attainment of federal particulate matter and ozone standards, and highlights the significant reductions to be achieved. It emphasizes the need for interagency planning to identify strategies to achieve reductions within the timeframes allowed under the federal CAA, especially in the area of mobile sources. The 2016 AQMP also includes a discussion of emerging issues and opportunities, such as fugitive toxic particulate emissions, zero-emission mobile source control strategies, and the interacting dynamics among climate, energy, and air pollution. The AQMP includes attainment demonstrations of the new federal eight-hour ozone standard and vehicle miles travelled emissions offsets, according to recent USEPA requirements.

City of Eastvale General Plan

Eastvale recognizes its role of air quality in preserving public health and quality of life. Chapter 7 of the City's General Plan, Air Quality and Conservation, provides the policy context for Eastvale to achieve its vision for air quality, GHG reduction, and conservation (Eastvale 2012). The chapter identifies regional sources of pollution, geographic considerations affecting air quality in Eastvale, and various goals and policies intended to address air quality issues in the city. General Plan policies relevant to the proposed project include the following (Eastvale 2012):

MULTI-JURISDICTIONAL COOPERATION

Policy AQ-3: Reduce vehicle miles traveled and motor vehicle emissions through local job creation.

Policy AQ-4: Attain performance goals and/or VMT reductions which are consistent with SCAG's Growth Management Plan.

SENSITIVE RECEPTORS

Policy AQ-5: Sensitive receptors should be separated and protected from polluting point sources to the greatest extent possible.

Policy AQ-6: Require site plan designs to protect people and land uses sensitive to air pollution.

Policy AQ-7: The City encourages the use of pollution control measures such as landscaping, vegetation, and other materials, which trap particulate matter or control pollution.

Policy AQ-8: The City encourages the planting of urban trees to remove pollutants from the air, provide shade, and decrease the negative impacts of heat on the air.

MOBILE POLLUTION SOURCES

Policy AQ-10: The City encourages new cooperative relationships between employers and employees to reduce vehicle miles traveled.

Policy AQ-11: The City encourages large employers and commercial/industrial complexes to create Transportation Management Associations.

Policy AQ-12: The City encourages employee rideshare and transit incentives for employers with more than 25 employees at a single location.

STATIONARY POLLUTION SOURCES

Policy AQ-13: The City encourages the use of building materials and methods which reduce emissions and energy use

Policy AQ-14: The City encourages the use of energy-efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces, and boiler units.

Policy AQ-15: The City encourages centrally heated facilities to use automated time clocks or occupant sensors to control heating.

Policy AQ-16: Require stationary pollution sources to minimize the release of toxic pollutants through:

- Design features;
- Operating procedures;
- Preventive maintenance;
- Operator training; and
- Emergency response planning

Policy AQ-17: To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, the Environmental Protection Agency, and the California Air Resources Board.

CONTROL MEASURES

Policy AQ-37: The City will work with the SCAQMD and implement all applicable rules and regulations to reduce particulate matter from agriculture, construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights-of-way, and off-road vehicles, as well as wind storms, to the extent possible.

Policy AQ-38: Promote and encourage the use of natural gas and electric vehicles in distribution centers.

4.2.2 Impact Analysis

a. Methodology

This air quality analysis conforms to the methodologies recommended in the SCAQMD's CEQA Air Quality Handbook (1993). The handbook includes thresholds for emissions associated with both construction and operation of a project. The proposed project's construction and operational emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2.

CalEEMod uses project-specific information, including the proposed land uses, square footages of each use (e.g., residential, hotel, commercial, parking), and project location, to estimate construction and operational emissions from new development. Project construction primarily generates diesel emissions and dust. Construction emissions include those generated by construction equipment, such as excavators, graders, cranes, dump trucks, loaders, backhoes, and bulldozers, and emissions generated by off-site vehicle trips associated with construction, such as vendor trips and worker travel to and from the project site. Emissions estimates assumed all construction equipment would be diesel-powered.

Operational emissions were also estimated using CalEEMod. Operational emissions include mobile source emissions, energy emissions, and area source emissions for the various on-site land uses proposed. CalEEMod does not provide an extensive selection of land use subtype categories, land uses that most closely fit the project were utilized. Emissions attributed to energy use include natural gas consumed for space and water heating, as well as electricity. Area source emissions are generated by landscape maintenance equipment, consumer products, and architectural coating. Mobile source emissions are generated by the increase in motor vehicle trips to and from the project site associated with operation of on-site development. Vehicle trip generation rates from the project were taken from the Homestead Traffic Impact Analysis (TIA) (Appendix 4.11). According to the TIA, the project is expected to generate a total of approximately 2,086 trip-ends per day,

which includes 390 truck trip-ends per day. Riverside County Traffic Analysis Model (RivTAM) was used to estimate trip lengths for passenger vehicles and trucks generated by the proposed project. It is common for industrial buildings to require cargo handling. Therefore, the operation of four 200-horsepower yard tractors operating four hours a day was assumed, based on the proposed square footage and consistent with SCAQMD latest available data (Appendix 4.2).

Emissions for the proposed project were modeled based on the project description as detailed in Section 2, Project Description. Construction of the proposed project was assumed to be 23 months, with full operation anticipated to begin in 2021. Construction would involve demolition, site preparation, phased grading, building construction, paving and architectural coating. The project is expected to require a maximum of 94,000 cubic yards of cut material and 61,000 cubic yards of fill material. Operation of the project was modelled based on the proposed 560,291 sf of warehousing use and 520,317 sf of high-cube fulfillment center use. As CalEEMod does not provide an extensive selection of land use subtype categories, land uses that most closely fit the project were utilized. Land uses categories included unrefrigerated warehouse, non-asphalt surface (used to model the landscaped areas), parking lot, and other asphalt surface.

Health Risk Assessment

To assess the impact of diesel particulate matter (DPM) from heavy-duty vehicles accessing the project site on nearby sensitive receptors (residents) and adjacent workers associated with the development of the project, a mobile source health risk assessment (HRA) was prepared (Appendix 4.2). The HRA estimated vehicle DPM emissions using emission factors for particulate matter less than 10µm in diameter (PM_{10}) generated with the 2017 version of the Emission FACtor model (EMFAC) developed by the ARB.

The HRA analysis was conducted in accordance with SCAQMD guidelines in *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*, which recommends using the USEPA's AERMOD model (SCAQMD 2003). An evaluation of carcinogenic chemical risk was conducted based on guidance from the SCAQMD, which recommends 10 in one million is used as the cancer risk threshold for the proposed project. An evaluation of the potential noncancerous effects of contaminant exposures was also conducted. Adverse health effects are evaluated by comparing a compound's annual concentration with its toxicity factor or Reference Exposure Level (REL). Thresholds used in the HRA are included in Table 4.2-4 below.

b. Regulatory Requirements

The project would comply with applicable air quality rules. In particular, the project would comply with the 2016 California Green Building Code (CALGreen), SCAQMD Rule 403 on dust control, and SCAQMD Rule 1113 on coatings, and other applicable provisions of the SCAQMD. CALGreen standards include indoor water usage reduction, regulation of outdoor water usage, and construction waste reduction. Rules 403 and 1113 are discussed below.

The grading phase would involve the greatest use of heavy equipment and would generate the most fugitive dust. For the purposes of construction emissions modeling, it was assumed that the project would comply with the SCAQMD Rule 403, which identifies measures to reduce fugitive dust and is required to be implemented at all construction sites in the Basin. Therefore, the following conditions would be required to reduce fugitive dust in compliance with SCAQMD Rule 403 and were included in CalEEMod for the site preparation and grading phases of construction.

1. **Minimization of Disturbance.** Construction contractors should minimize the area disturbed by clearing, grading, earth moving, or excavation operations to prevent excessive amounts of dust.
2. **Soil Treatment.** Construction contractors should treat all graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved onsite roadways to minimize fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll compaction as appropriate. Watering shall be done as often as necessary, and at least twice daily, preferably in the late morning and after work is done for the day.
3. **Soil Stabilization.** Construction contractors should monitor all graded and/or excavated inactive areas of the construction site at least weekly for dust stabilization. Soil stabilization methods, such as water and roll compaction, and environmentally safe dust control materials, shall be applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area shall be seeded and watered until landscape growth is evident, or periodically treated with environmentally safe dust suppressants, to prevent excessive fugitive dust.
4. **No Grading During High Winds.** Construction contractors should stop all clearing, grading, earth moving, and excavation operations during periods of high winds (20 miles per hour or greater, as measured continuously over a one-hour period).
5. **Street Sweeping.** Construction contractors should sweep all onsite driveways and adjacent roads at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.

The architectural coating phase would involve the greatest release of ROG. The emissions modeling for the proposed project included the use of low-VOC paint (50 grams per liter for non-flat coatings) as required by SCAQMD Rule 1113.

c. Regional Thresholds

To determine whether a proposed project would have a significant impact to air quality, Appendix G of the CEQA Guidelines questions whether the project would:

1. Conflict with or obstruct implementation of the applicable air quality plan
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard
3. Expose sensitive receptors to substantial pollutant concentrations
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people

SCAQMD recommends the quantitative regional significance thresholds for temporary construction activities and long-term project operation in the Basin listed in Table 4.2-3 (SCAQMD 2015b).

Table 4.2-3 SCAQMD Regional Air Quality Significance Thresholds

Construction Thresholds	Operational Thresholds
75 pounds per day of ROG	55 pounds per day of ROG
100 pounds per day of NO_X	55 pounds per day of NO_X
550 pounds per day of CO	550 pounds per day of CO
150 pounds per day of SO_X	150 pounds per day of SO_X
150 pounds per day of PM_{10}	150 pounds per day of PM_{10}
55 pounds per day of $PM_{2.5}$	55 pounds per day of $PM_{2.5}$

The SCAQMD recommends the quantitative air quality significance thresholds for TACs and for impacts to ambient air quality listed in Table 4.2-4.

Table 4.2-4 SCAQMD Air Quality Significance Thresholds

Pollutant/Type	Threshold
TACs	Incremental Cancer Risk $\geq$ 10 in one million Non-carcinogenic Index $\geq$ 1
PM_{10} and $PM_{2.5}$ - 24-hour	2.5 µg/m^3 (operation)
PM_{10} - Annual	1.0 µg/m^3
CO – 1 and 8-hour	SCAQMD is in attainment; impacts are significant if they cause or contribute to an exceedance of attainment standards of 20 ppm (1-hour) and 9 ppm (8-hour)
NO_2 – 1-hour	SCAQMD is in attainment; impacts are significant if they cause or contribute to an exceedance of the attainment standard of 0.18 ppm

ppm = parts per million

µg/m^3 = micrograms per cubic meter

Source: Urban Crossroads2019b (Appendix 4.2); SCAQMD 2015b

d. Localized Significance Thresholds

In addition to regional thresholds, the SCAQMD has developed Localized Significance Thresholds (LST) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), prepared to update the CEQA Air Quality Handbook. LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or State ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project size, and distance to the sensitive receptor. However, LSTs only apply to emissions within a fixed stationary location, including idling emissions during both project construction and operation. LSTs have been developed for NO_X, CO, PM_{10}, and $PM_{2.5}$. LSTs are not applicable to mobile sources such as cars on a roadway (SCAQMD 2009).

LST thresholds vary depending on the location of the project and Source Receptor Area (SRA). The appropriate SRA for this project is the Corona/Norco SRA 22. LSTs have been developed for emissions in construction areas up to 5.0 acres in size. The SCAQMD provides LST threshold lookup tables for project sites that measure one, two, or five acres. The Air Quality Impact Analysis

determined the project could actively disturb approximately 1.0 acre per day during demolition activities, 1.5 acres per day during site preparation activities, and 3.0 acres per day during grading activities. Since the look-up tables identifies thresholds at only one acre, two acres, and five acres, the Air Quality Impact Assessment used linear regression, consistent with SCAQMD guidance, in order to interpolate the threshold values for construction activities, as shown in Table 4.2-5.

The operation of the project would occur over the 56-acre parcel. As noted, the LST methodology provides look-up tables for sites with an area with daily disturbance of five acres or less. For projects that exceed five acres, the LST look-up tables can be used as a screening tool to determine which pollutants require additional detailed analysis. This screening method is a conservative approach to analyze localized impacts, because by assuming that on-site operational activities are occurring over a smaller area, the resulting concentrations of air pollutants are more highly concentrated once they reach the smaller site boundary than they would be for activities if they were spread out over a larger surface area. Table 4.2-5 shows the localized thresholds for the operation of the project. The operational LST analysis only considers on-site emissions. The LST analysis considered the on-site stationary (area) sources from CalEEMod and only the portion of mobile trips which would occur on-site.

Sensitive receptors in the project area include existing residential homes and industrial uses. The nearest sensitive receptor is located 285 feet (87 meters) northeast and the nearest non-residential receptor is located 10 feet (three meters). The Air Quality Impact Assessment used an 87-meter receptor distance to determine the screening threshold for PM_{10} and $PM_{2.5}$, and a 25-meter receptor distance for NO_2 and CO, consistent with SCAQMD LST methodology.

Table 4.2-5 LSTs for Construction in SRA-22 - Sensitive Receptors Less than 25 meters

Pollutant	Construction LST Thresholds (lbs/day)	Operational LST Thresholds (lbs/day)
NO_2	118 (Demolition)	270
	144 (Site Preparation)	
	203 (Grading)	
CO	674 (Demolition)	1,700
	841 (Site Preparation)	
	1,238 (Grading)	
PM_{10}	27 (Demolition)	13
	30 (Site Preparation)	
	40 (Grading)	
$PM_{2.5}$	8 (Demolition)	4
	9 (Site Preparation)	
	13 (Grading)	

Source: Urban Crossroads 2019a; Appendix 4.2

e. Project Impacts and Mitigation Measures

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

Impact AQ-1 THE PROJECT WOULD NOT GENERATE GROWTH WHICH WOULD EXCEED THE AQMP FORECASTS. HOWEVER, THE PROJECT WOULD GENERATE NO_X EMISSIONS THAT EXCEED THRESHOLDS WHICH COULD RESULT IN AN INCREASE IN AIR QUALITY VIOLATIONS AND CONFLICT WITH THE AQMP. THERE IS NO FEASIBLE MITIGATION TO REDUCE MOBILE NO_X EMISSIONS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

A project would be inconsistent with the AQMP if it would generate a considerable increase in regional air quality violations and affect the region's attainment of air quality standards, or if it would generate population, housing, or employment growth exceeding forecasts used in the development of the AQMP. The 2016 AQMP incorporates local city general plans and the SCAG's 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) socioeconomic forecast projections of regional population, housing, and employment growth, including those for Eastvale.

The project would develop seven industrial use buildings on an existing dairy farm. According to SCAG's 2016 RTP/SCS, the employment opportunities in Eastvale are expected to be 9,800 in 2040, an increase of 5,500 from 2012 (SCAG 2016). Using SCAG's estimated employee density for associated land use in Riverside, the proposed project would create approximately 698 jobs, as shown in Table 4.2-6 (SCAG 2001). This represents about 12.7 percent of the projected employment growth in the City. In addition, the project would replace existing jobs at the dairy farm and the new employment opportunities at the industrial facilities would likely pull from the existing labor force in the City and region. Therefore, the project would not generate population and employment growth which would exceed forecasts.

Table 4.2-6 Commercial Employee Generation Rates

Land Use	Employees per Square Foot	Proposed Square Footage	Total Employees
Light Manufacturing	1/1,548 sf	1,080,060	698

Source: Table 10A (SCAG 2001).

While the project would not exceed growth forecasts in the area, the project would result in significant and unavoidable impacts associated with operational NO_x emissions from mobile sources; see discussion under Impact AQ-2 below. Implementation of Mitigation Measures AQ-1 through AQ-4 would reduce emissions to the extent feasible, but not to a level of less than significant due to the inability to regulate tailpipe emissions from vehicle trips generated by the project. Because the project would exceed SCAQMD thresholds for NO_x emissions during operation of the project, the project could result in an increase in frequency or severity of existing air quality violations or contribute to new violations and conflict with the AQMP. Therefore, the project would conflict with the AQMP and impacts would be significant and unavoidable.

Mitigation Measures

Implementation of Mitigation Measures AQ-1 through AQ-4 would reduce operational NO_x emission impacts to the extent feasible by implementing truck idling restrictions, promoting electric vehicles,

implementing EV charging and designated carpool parking areas, and providing infrastructure for interior electric vehicles.

Significance After Mitigation

Implementation of Mitigation Measures AQ-1 through AQ-4 would not reduce NO_x emissions below SCAQMD thresholds, therefore, impacts to the adopted AQMP would be significant and unavoidable.

Threshold:	Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?

Impact AQ-2 THE PROJECT WOULD NOT EXCEED SCAQMD THRESHOLDS FOR CRITERIA POLLUTANTS DURING CONSTRUCTION. DURING OPERATION, THE PROJECT WOULD EXCEED SCAQMD THRESHOLDS FOR NO_X FROM MOBILE SOURCES. IMPLEMENTATION OF MITIGATION MEASURES AQ-1 THROUGH AQ-4 WOULD REDUCE IMPACTS TO THE EXTENT FEASIBLE. SINCE NO FEASIBLE MEASURES EXIST TO CONTROL TAILPIPE EMISSIONS, IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Construction Emissions

Construction emissions are referred to generally as temporary impacts of a project, but they have the potential to represent a significant impact with respect to air quality. Fugitive dust emissions are among the pollutants of greatest concern with respect to construction activities. Emissions from construction activities can lead to adverse health effects and nuisance concerns, such as reduced visibility and soiling of exposed surfaces. General site grading operations are the primary sources of fugitive dust emissions. However, these emissions can vary greatly, depending on the level of activity, the specific operations taking place, the number and type of equipment operated, vehicle speeds, local soil conditions, weather conditions, and the amount of earth disturbance from site grading and excavation.

Emissions of ozone precursors NO_X and VOCs are generated during the operation of construction equipment and other sources, such as construction worker vehicles and vendor trips. As mentioned under methodology, approximately 33,000 cubic yards of export material was included in the construction emissions estimation from grading activities, which would emit fugitive dust and ozone precursors from vehicles transporting material off-site. Table 4.2-7 summarizes the estimated maximum daily construction emissions each year during the construction period. These estimates assume compliance with SCAQMD Rule 403 and 1113, but do not include mitigation.

Table 4.2-7 Estimated Construction Emissions without Mitigation

	Maximum Emissions[1] (lbs/day)					
Construction Year	**VOCs**	**SO_x**	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**
2020 Maximum	7.39	0.21	63.40	57.63	12.82	6.02
2021 Maximum	61.38	0.25	66.52	77.57	15.36	5.43
Maximum	**61.38**	**0.25**	**66.52**	**77.57**	**15.36**	**6.02**
SCAQMD Regional Thresholds	75	150	100	550	150	55
Threshold Exceeded?	No	No	No	No	No	No

[1]Grading phases incorporate anticipated emissions reductions, which are required by SCAQMD Rule 403 to reduce fugitive dust. The architectural coating phases incorporate anticipated emissions reductions, which are required by Rule 1113.

Source: Urban Crossroads 2019a; Appendix 4.2

As shown in Table 4.2-7, project construction emissions would not exceed SCAQMD thresholds for any criteria pollutants. Therefore, construction emissions would not result in a cumulatively considerable increase of criteria pollutants in the region.

Operational Emissions

Operational emissions are those associated with the general use of the project after construction. Operational emissions for the project include mobile source emissions from passenger vehicles and trucks, yard trucks to handle cargo, energy emissions, and area source emissions, as detailed under methodology above. Table 4.2-8 summarizes the project's operational emissions and compares them to SCAQMD thresholds.

Table 4.2-8 Estimated Project Operational Emissions

	Estimated Emissions (lbs/day)					
Sources	**VOC**	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**SO_X**
Area	24.56	< 0.01	0.31	< 0.01	< 0.01	< 0.01
Energy	0.05	0.42	0.35	0.03	0.03	< 0.01
Mobile (Passenger Cars)	4.78	3.84	63.03	18.57	4.98	0.18
Mobile (Trucks)	2.82	104.39	18.82	14.31	5.12	0.36
On-site Equipment	0.55	6.18	0.10	0.21	0.19	0.01
Total Gross Emissions	**32.75**	**114.84**	**82.60**	**33.12**	**10.33**	**0.55**
SCAQMD Thresholds	55	55	550	150	55	150
Threshold Exceeded?	No	**Yes**	No	No	No	No

Note: Totals may not add up precisely due to rounding. Emissions reported are from the higher of winter or summer modelling scenarios.

Source: Urban Crossroads 2019a; Appendix 4.2

As shown in Table 4.2-8, the project would not exceed SCAQMD maximum daily emissions thresholds for ROG, CO, PM_{10}, $PM_{2.5}$ or SO_x. The project would exceed SCAQMD thresholds for NO_X by about 60 pounds per day. NO_x emissions from mobile sources (i.e., passenger vehicles and trucks) represent 91 percent of the total gross NO_x emissions from the operation of the proposed project. Therefore, the project would have potentially significant impacts, and the following mitigation would be required to reduce maximum daily NO_x emissions to the extent feasible.

Mitigation Measures

AQ-1 Truck Idling Signage

The truck access gates and loading docks within the truck court on the project site shall be posted with signs which include the following:

- Truck drivers shall turn off engines when not in use;
- Diesel delivery trucks servicing the project shall not idle for more than five (5) minutes; and
- Telephone numbers of the building facilities manager and the California Air Resources Board to report violations.

AQ-2 Energy Efficient Trucks

The project applicant/owner shall encourage the trucks visiting the facility to incorporate energy efficiency improvements by providing information about the Carl Moyer Program, including the benefits of truck modernization, retrofits, and/or aerodynamic kits and low rolling resistance tires, towards reduced fuel consumption.

AQ-3 Electric Vehicle Charging and Carpool Parking

The project shall be designed to incorporate electric vehicle charging stations in parking areas and provide spaces designated for low-emission, fuel efficient, or carpool/vanpool vehicles, consistent with applicable CalGreen requirements.

AQ-4 Electric Interior Vehicles

All buildings shall be designed to provide infrastructure to support use of electric-powered forklifts and/or other interior vehicles.

Significance After Mitigation

Table 4.2-9 summarizes the CalGreen requirements under Mitigation Measure AQ-3 for EV charging infrastructure and the designation of parking for low-emission, fuel efficient, or carpool/vanpool vehicles.

Table 4.2-9 CalGreen Parking Requirements

Requirement	Proposed Parking	EV Charging Infrastructure	Designated for Low-emission, Fuel Efficient, or Carpool Vehicles
Description	City Parking Ordinance EMC 120.05.060	Eight percent of the total spaces provided	Ten percent of parking
Required	774	64	78

EV=electric vehicle

Note: A total of 794 parking spaces are proposed

Source: CalGreen

The implementation of Mitigation Measures AQ-1 through AQ-4 are intended to reduce operational NO_x emissions to the extent feasible. However, implementation of these mitigation measures would not be sufficient to reduce operational NO_x emissions below SCAQMD thresholds. Approximately 91 percent of NO_x emissions would result from mobile source emissions, 47 percent of which would be from heavy duty trucks. If area, energy, and on-site equipment NO_x emissions were removed completely, the project would still exceed SCAQMD thresholds by 49 pounds per day. Eastvale does not have the regulatory authority to control tailpipe emissions. Therefore, there is no feasible mitigation which would reduce NO_x to levels that are less than significant. Therefore, impacts are considered significant and unavoidable.

While the proposed project is expected to exceed the SCAQMD's numeric regional mass daily thresholds for operational NO_x, primarily from mobile emissions, this does not in itself constitute a significant health impact to the population adjacent to the project and within the air basin. Simply exceeding the SCAQMD's numeric regional mass daily thresholds does not constitute a particular health impact to an individual receptor. The reason for this is that the mass daily thresholds are in pounds per day emitted into the air whereas health effects are determined based on the concentration of emissions in the air at a particular receptor. In addition, as noted in the *Brief of Amicus Curiae* by the SCAQMD (2015a) in the *Friant Ranch* case[2] the SCAQMD discuses that it may be infeasible to quantify health risks cause by projects similar to the proposed project. SCAQMD also states that where a health risk assessment can be prepared, the resulting maximum health risk value is only a calculation of risk and does not necessarily mean anyone will have health impacts as a result of the project. SCAQMD staff does not currently know of a way to accurately quantify ozone-related health impacts caused by NO_x or VOC emissions from relatively small projects. SCAQMD states that it is possible to determine potential health outcomes from large projects and concludes projects or emission sources which emit 6,620 pounds per day of NO_x and 89,180 pounds per day of VOC are expected to result in approximately 20 premature deaths per year and 89,947 school absences.

[2] *Sierra Club v. County of Fresno (Friant Ranch, L.P.*) (2018) 6 Cal.5th 502, Case No. S219783.

As shown in Table 4.2-7 and Table 4.2-8, the proposed project would generate approximately 66.4 pounds per day of NO_x during construction and 114.8 pounds per day of NO_x during operations. Therefore, the project's emissions are not sufficiently high enough to use a regional modeling program to correlate health effects on a basin-wide level. To correlate health effects from project related criteria air pollutant emissions SCAQMD developed a methodology to assist lead agencies in analyzing localized air quality impacts from a proposed project as they relate to CO, NO_x, $PM_{2.5}$, and PM_{10}. This methodology is collectively referred to as the localized significance thresholds (LSTs), which is detailed above under methodology and analyzed below under Impact AQ-3.

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

Impact AQ-3 THE PROJECT WOULD NOT EXCEED LST FOR CONSTRUCTION AND OPERATION ESTABLISHED TO ADDRESS EXPOSURE OF INDIVIDUALS TO CRITERIA POLLUTANTS AND THE PROJECT- RELATED TRAFFIC WOULD NOT RESULT IN THE CREATION OF CO HOTSPOTS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Localized Significance Thresholds

The SCAQMD developed LSTs to address concerns about exposure of individuals to criteria pollutants in communities. LSTs represent the maximum emissions from a project which would not cause or contribute to an air quality exceedance of the most stringent applicable federal or State ambient air quality standard at the nearest sensitive receptor. As discussed under methodology above, the nearest sensitive receptor is a residence approximately 285 feet (87 meters) northeast of the project site. Table 4.2-10 shows the localized impacts from construction activities at the nearest sensitive and industrial receptor areas in the vicinity of the project. As shown, project construction emissions would not exceed the numerical thresholds for any criteria pollutant. Therefore, the project would not expose sensitive receptors to significant criteria pollutant emissions during construction and impacts would be less than significant.

Table 4.2-10 LST Construction Emissions Analysis

	Maximum Emissions (lbs/day)			
Construction Phase	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Demolition Emissions				
Maximum Daily Onsite Emissions	33.20	21.75	2.04	1.60
SCAQMD LSTs[1]	118	674	27	8
Threshold Exceeded?	No	No	No	No
Site Preparation Emissions				
Maximum Daily Onsite Emissions	42.42	21.51	9.86	5.96
SCAQMD LSTs[1]	144	841	30	9
Threshold Exceeded?	No	No	No	No
Grading Emissions				
Maximum Daily Onsite Emissions	50.20	31.96	5.79	3.43
SCAQMD LSTs[1]	203	1,238	40	13
Threshold Exceeded?	No	No	No	No

[1] Thresholds were derived using a regression from the amount of site preparation and grading that would occur, consistent with SCAQMD guidance.
Source: Urban Crossroads 2019a; Appendix 4.2

LST analysis of the operation of the project includes emissions from on-site sources and activities and not mobile sources, as discussed under methodology above. Table 4.2-11 shows the localized impacts from operational activities at the nearest sensitive and industrial receptors areas in the vicinity of the project. As shown, project operational emissions would not exceed the numerical thresholds for any criteria pollutant. Therefore, the project would not expose sensitive receptors to significant criteria pollutant emissions during operation and impacts would be less than significant.

Table 4.2-11 LST Operational Emissions Analysis

	Maximum Emissions (lbs/day)			
Construction Phase	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Maximum Daily Onsite Emissions	12.01	4.84	1.89	0.73
SCAQMD LSTs[1]	270	1,700	13	4
Threshold Exceeded?	No	No	No	No

[1] Thresholds were derived using a regression from the amount of site preparation and grading that would occur, consistent with SCAQMD guidance.
Source: Urban Crossroads 2019a; Appendix 4.2

CO Hotspots

Areas with high vehicle density, such as congested intersections, have the potential to create high concentrations of CO, known as CO hotspots. A project's localized air quality impact is considered significant if CO emissions create a hotspot where either the California one-hour standard of 20 ppm or the federal and state eight-hour standard of 9.0 ppm is exceeded. This typically occurs from vehicle emissions at severely congested intersections.

The Basin is currently designated in attainment of CO concentration, as shown in Table 4.2-2. The Bay Area Air Quality Management District (BAAQMD) has established a screening threshold that is used as an industry standard for determining significance. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour - or 24,000 vehicles per hour where vertical and/or horizontal air does not mix - to generate a significant CO impact (BAAQMD 2017). The proposed project would not produce the volume of traffic required to generate a CO "hot spot" based on representative BAAQMD CO threshold considerations. Therefore, CO "hot spots" are not an environmental impact of concern for the proposed project, and localized air quality impacts related to mobile-source emissions for surrounding sensitive receptors would be less than significant.

Mitigation Measures

No mitigation measures would be required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

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

Impact AQ-4 THE PROJECT WOULD RELEASE TOXIC AIR CONTAMINANTS DURING CONSTRUCTION AND OPERATION. HOWEVER, EMISSIONS WOULD NOT EXCEED ESTABLISHED THRESHOLDS OR EXPOSE NEARBY RECEPTORS TO SIGNIFICANT HEALTH RISKS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Short-term Construction Toxic Air Contaminants

The project could potentially expose nearby sensitive receptors to temporary health hazards associated with TACs from DPM from the operation of construction equipment. High concentrations of DPM from construction equipment has a chronic carcinogenic effect. As detailed in Impact AQ-2, construction emissions would not exceed SCAQMD thresholds established to protect public health and air quality, and as detailed under Impact AQ-3, construction emissions would not exceed the applicable LST, which were created to address concerns about exposure of individuals to criteria pollutants and represents the maximum emissions from a project which would not cause or contribute to an air quality exceedance of the most stringent applicable federal or State ambient air quality standard at the nearest sensitive receptor.

In addition, based on the amount of construction equipment, the duration of construction activity, the overall size of the proposed project, any DPM generated from construction would be negligible, would not result in substantial pollutant concentrations, and not result in significant health risks. Therefore, the health risk associated with construction emissions would be less than significant for the nearby sensitive receptors.

Operational Toxic Air Contaminants

Operation of the project would involve heavy-duty vehicles accessing and leaving the site, which would emit DPM and potentially create carcinogenic and non-carcinogenic health risks to surrounding sensitive receptors and on-site workers. The HRA prepared for the project analyzed the exposure risk for nearby sensitive and non-sensitive receptors (Urban Crossroads 2019c: Appendix 4.2).

Residential Exposure Risk

The closest residential receptor that would have the greatest potential exposure risk to DPM generated by the project is a residence located 285 feet northeast of the project site. At this location, the maximum incremental cancer risk attributed from project emissions of DPM is estimated at 2.49 in one million, which is below the threshold of 10 in one million. At the same location, non-cancer risks were estimated to be 0.0009, which would not exceed the applicable threshold of 1.0. All other modeled residential locations would be exposed to less emissions and thus have reduced comparative risk. Therefore, the proposed project would not expose nearby sensitive residential receptors to significant health risks from DPM emissions.

On-site Worker Exposure Risk

The closed worker receptor location that would have the greatest potential exposure risk to DPM would be the adjacent industrial building approximately 10 feet south of the project site. At this location, the maximum incremental cancer risk attributed from project emissions of DPM is estimated at 0.63 in one million, which is below the threshold of 10 in one million. At the same location, non-cancer risks were estimated to be 0.002, which would not exceed the applicable threshold of 1.0.[3] All other modeled worker locations would be exposed to less emissions and thus have reduced comparative risk. Therefore, the proposed project would not expose nearby workers to significant health risks from DPM emissions.

School Exposure Risk

The nearest school to the project site is Harada Elementary School, located more than 1.5 miles east. At this location, the maximum incremental cancer risk attributed from project DPM emissions was estimated at 0.05 in one million, which is below the threshold of 10 in one million. At the same location, non-cancer risks were estimated to be 0.0001, which would not exceed the applicable threshold of 1.0. Emission exposure would decrease with distance from the project so that other schools would be exposed to fewer emissions and consequently less impacts than those at Harada Elementary School. Therefore, the proposed project would not expose nearby schools to significant health risks from DPM emissions.

Mitigation Measures

No mitigation measures would be required.

[3] Although workers would be closer to potential emissions sources, resulting risks to workers are lower due to the applied model parameters and assumptions, including years of exposure, ages during exposure, related inhalation rates, and exposure time per day. For instance, exposure for workers is 25 years, and 30 years for residents, and exposure for workers begins at age 16. See the project-specific Health Risk Assessment for further information (Urban Crossroads 2019e; Appendix 4.2).

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold:	Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Impact AQ-5 THE PROPOSED PROJECT DOES NOT CONTAIN LAND USES THAT ARE ASSOCIATED WITH ODOR COMPLAINTS. IMPACTS WOULD BE LESS THAN SIGNIFICANT

The CARB *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) identifies land uses associated with odor complaints, typically including:

- Agricultural uses
- Auto body shops
- Manufacturing facilities
- Wastewater treatment plants
- Power plants
- Landfills
- Chemical plants
- Truck stops

The project would replace a dairy farm, which is a land use that is associated with objectionable odors (manure, etc.). Construction activities from the project could emit odors from equipment exhaust and the application of asphalt and architectural coatings. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short term, and intermittent in nature and would cease upon completion of the respective phase of construction.

Operational activities of the project which could emit odors would be from outdoor storage of solid waste (refuse). The project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. No specific tenants for occupancy have been identified. However, permitted uses consistent with the proposed zoning are listed in Table 2-3 in Section 2.5.1 of the *Project Description*, and include uses that could produce odors, such as limited manufacturing and automotive work. The nearest sensitive receptor is located 285 feet northeast of the project site. Odors associated with potential manufacturing and automotive work activities would dissipate with distance from the source. In addition, any primary activity associated with uses would operate substantially indoors.

If the proposed manufacturing and automotive work contains equipment typically associated with odors and emissions, the tenants would be required to obtain permits to construct and operate from SCAQMD, which would ensure the equipment and operations would be designed with air pollution control equipment so that it would not operate in violation of Division 26 of the State Health and Safety Code.

In addition, the following rules would apply to any proposed use that includes typical operations which emit harmful odors. Rule 1151, *Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations*, requires VOC limits for automotive coatings, installation of an emission control system, following best practices for applying coatings, and recordkeeping. Compliance with Rule 1151 would reduce VOCs and TOCs from automotive coatings or paints applied to motor vehicles or parts. Rule 1171, Solvent Cleaning Operations, reduces VOCs and TOCs from the use, storage, and disposal of solvents which are often used in auto body or repair shops to clean parts, tools, and machinery. Finally, Rule 402, Nuisance, would address issues of odor annoyance from neighbors if proposed operations are producing odors that are out of compliance or causing annoyances (e.g., sanding dust and paint overspray). SCAQMD inspectors follow up on complaints by investigating

whether an alleged source complies with rule and permit requirements. In contrast, the existing dairy farm is a substantial source of onsite odors, which include multiple sources (e.g. stock pens, manure piles, wastewater ponds) that are difficult to control. The dairy farm is exempt from SCAQMD nuisance rules and regulation for odors. Therefore, the proposed project would change the land use from an odor source exempt from nuisance control to one subject to SCAQMD review and control requirements.

The HRA included dispersion modelling to determine health impacts from TOCs. The modelling shows a dispersion of emissions to the west, generally away from sensitive receptors to the northeast and the south (Urban Crossroads 2019e). Based on the above considerations, the project would not result in odors adversely affecting a substantial number of people. Therefore, project impacts associated with odors would be less than significant.

Mitigation Measures

No mitigation measures would be required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

4.2.3 Cumulative Impacts

The planned and pending projects near the proposed project are listed in Table 3-1 (Section 3, *Environmental Setting*).

The Basin is designated a nonattainment area for the federal and state one-hour and eight-hour ozone standards, the state PM_{10} standards, the federal 24-hour $PM_{2.5}$ standard, and the federal and state annual $PM_{2.5}$ standard. The Basin is in attainment of all other federal and state standards.

Any growth in the area has the potential to contribute to cumulatively significant impact related to existing exceedances of ambient air quality standards. The SCAQMD's approach to determining whether a project's emissions of criteria air pollutants are cumulatively considerable is to first determine if an individual project would result in project-level impacts to regional air quality based on SCAQMD significance thresholds. If the proposed project does not generate emissions in excess of SCAQMD thresholds, but related projects exist within a 1.0-mile radius that are part of an ongoing regulatory program (e.g., SCAQMD's Air Toxics Control Plan and AB 2588 Program aimed at reducing criteria pollutants from certain source) or are to be considered in a program EIR, then the lead agency needs to consider the additive effects of the related projects.

Neither the proposed project nor any of the projects from the cumulative list are part of an ongoing regulatory program or being studied as part of a program EIR. Therefore, the SCAQMD recommends that project-specific air quality impacts be used to determine whether a project's emissions are cumulatively considerable. As discussed in Impact AQ-1 and Impact AQ-2, the project would exceed operational NO_x emission thresholds from passenger vehicles and trucks and thereby conflict with the adopted AQMP.

Even with the complete reduction in NO_x emissions from all sources besides mobile ones, the project would exceed SCAQMD thresholds. AB1493 predicts the Advanced Clean Car program will reduce NO_x emissions by 36 percent by 2035 (CARB 2018c). Also, the program would coordinate with CARB's ZEVs mandate to have one in seven new cars be a ZEV by 2025, and to have all cars sold in 2040 be a ZEV. These policies would reduce overall NO_x emissions created by the project and

cumulative projects into the future along with those generated by cumulative development. However, the project and cumulative projects in the area would still result in a cumulatively considerable increase of a criterion pollutant (NO_x, an ozone precursor) for which SCAG is in nonattainment under federal and state standards. Therefore, cumulative impacts would be significant and unavoidable.

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4.3 Biological Resources

This section analyzes the effects of the proposed industrial project on biological resources. The analysis is based on the *Habitat Assessment and Riverside County Multiple Species Habitat Conservation Plan Consistency Analysis* prepared for the project site by ELMT Consulting (2019; see Appendix 4.3). A field survey was conducted on January 30, 2019 to document baseline conditions and assess the potential for special-status plant and wildlife species to occur on the project site that could pose a constraint to development of the proposed project. The *Habitat Assessment and Consistency Report* provides an in-depth assessment of the suitability of the on-site habitat to support burrowing owl (*Athene cunicularia*), as well as several other special-status plant and wildlife species identified by the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB), Multiple Species Habitat Conservation Plan (MSHCP) and other electronic databases as potentially occurring in the vicinity of the project site. Geographic Information System (GIS) software was utilized to map the project site in relation to MSHCP areas including Criteria Cells (core habitat and wildlife movement corridors) and areas proposed for conservation.

Special-Status Species and Natural Communities

Special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) under the federal Endangered Species Act (FESA); those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); animals designated as Species of Special Concern (SSC), Fully Protected, and/or Watch List (CDFW 2010); those species on the Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2019) and/or the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants (CNPS 2018); those plants contained on the CNPS California Rare Plant Rank (RPR) lists 1 and 2.

Local agencies may also consider and list additional plants to be of "local concern" or "narrow endemic" because of local or regional scarcity, as determined by that agency (CEQA Guidelines Section 15380).

4.3.1 Environmental Setting

a. MSHCP Jurisdictional Lands

The Western Riverside County Regional Conservation Authority (RCA) formed in 2004 to develop the Riverside County MSHCP to protect 146 native species of plants, birds, and animals, and preserve a half-million acres of habitat (RCA n.d.). The project site is located in the City of Eastvale within the Eastvale Area Plan of the MSHCP. The City is a permittee under the MSHCP and, while the project is not specifically identified as a Covered Activity, the project is covered under Section 7.1, Covered Activities Outside Criteria Area and Public/Quasi-Public (PQP) Lands. PQP Lands are a subset of MSHCP Conservation Area lands totaling approximately 347,000 acres of lands known to be in public/private ownership and expected to be managed for open space value and/or in a manner that contributes to the Conservation of Covered Species (including lands contained in existing reserves). The acreage of PQP Lands has been accounted for in the MSHCP tracking process for assembling the Conservation Area.

Public and private development that are outside of Criteria Areas and PQP Lands are permitted under the MSHCP, subject to consistency with MSHCP policies that apply to areas outside of Criteria Areas. As such, to achieve coverage, the project must be consistent with the following policies of the MSHCP:

- The policies for the protection of species associated with riparian/riverine areas and vernal pools as set forth in Section 6.1.2 of the MSHCP;
- The policies for the protection of narrow endemic plant species as set forth in Section 6.1.3 of the MSHCP;
- Vegetation mapping requirements as set forth in Section 6.3.1 of the MSHCP; and
- The requirements for conducting additional surveys as set forth in Section 6.3.2 of the MSHCP.

Based on the RCA MSHCP Information Map query and review of the MSHCP, the following determinations were made about the project site:

- The project site is not located within the designated survey area for Narrow Endemic Plant Species.
- The project site is located within the designated survey area for burrowing owl. No other special-status wildlife species surveys were identified.
- The project site is not located within or adjacent to any Criteria Cells or designated conservation areas. Therefore, the Urban/Wildlands Interface Guidelines do not apply to this project.

b. Existing Biological Resource Setting

Climatological data obtained for the Eastvale indicates the annual precipitation averages 12.0 inches per year. Almost all of the precipitation in the form of rain occurs in the months between November and March, with minimal precipitation occurring between the months of April and October. The wettest month is February, with a monthly average total precipitation of 2.88 inches, and the driest months are June and July, both with monthly average total precipitation of 0.02 inches. The average maximum and minimum temperatures are 93 and 40 degrees Fahrenheit (°F) respectively with August (monthly average high 93° F) being the hottest months and December (monthly average low 40° F) being the coldest. The temperature during the site visit was in the low 60s° F with cloudy skies and calm winds.

The project site is relatively flat with no areas of significant topographic relief. On-site surface elevation ranges from approximately 440 to 460 feet above mean sea level and generally slopes from north to south. The project site is underlain by the following soil units: Grangeville loamy fine sand, drained (0 to 5 percent slopes), Hilmar loamy find sand, Hilmar loamy sand (0 to 2 percent slopes, eroded), Hilmar loamy very fine sand (0 to 2 percent slopes), psamments, fluvents and frequently flooded soils, and riverwash. Soils on-site have been mechanically disturbed and heavily compacted from historic land uses (i.e., dairy farm activities).

Vegetation

Due to existing land uses, no native plant communities or natural communities of special concern were observed on or adjacent to the project site. The project site contains land cover types that would be classified as bare ground, disturbed, and developed. Bare ground refers to areas that no longer support vegetation within the cattle enclosures. These are continually disturbed by cows and the topsoil has a high concentration of cow manure.

The disturbed areas on the project site no longer comprise a native plant community, but rather consist of areas that have been subject to historic agricultural activities, frequent disking activities, manure stockpile activities, and support a water detention basin during the wet portions of the year. Portions of the disturbed area contain areas of bare ground due to extensive disturbance from anthropogenic disturbance, and areas that support early successional and ruderal/weedy plant species.

Plant species observed within the disturbed areas include short-podded mustard (*Hirschfeldia incana*), Russian thistle (*Salsola tragus*), wild radish (*Raphanus raphanistrum*), London rocket (Sisymbrium irio), filaree (*Erodium sp*.), fiddleneck (*Amsinckia menziesii*), common sunflower (*Helianthus annus*), pigweed (*Chenopodium album*), dwarf nettle (*Urtica urens*), cheeseweed (*Malva parviflora*), tree tobacco (*Nicotiana glauca*), and eucalyptus (*Eucalyptus sp*.). Ornamental and landscaped plant species were observed in developed areas around the residential homes.

Wildlife

Wildlife detections were based on observations that occurred during the field survey or that are expected to occur within the project site.

Fish and Amphibians

The MSHCP does not identify any covered or special-status fish or amphibian species as potentially occurring on the project site. The water detention basin on-site is seasonal and does not support water during the majority of the year as it appears to capture artificial flows from ranch activities and runoff during storm events. As a result, the basin is not expected to hold water for a significant portion of the year to provide suitable habitat for fish or amphibians. Further, the basin is not stocked with fish and does not connect to natural areas that support fish populations. Therefore, no fish or amphibians were observed and are not expected to occur on the project site.

Reptiles

The MSHCP does not identify any covered or special-status reptilian species as potentially occurring on the project site. The project site provides a limited amount of habitat for a few reptile species, but no reptiles were observed on-site during the field investigation. Common reptilian species expected to occur on-site include Great Basin fence lizard (*Sceloporus occidentalis longipes*) common side-blotched lizard (*Uta stansburiana elegans*), gopher snake (*Pituophis catenifer*), and southern alligator lizard (*Elgaria multicarinata*). Due to the high level of anthropogenic disturbances on-site and surrounding development, no special-status reptilian species are expected to occur on-site.

Birds

The project site provides minimal foraging habitat for bird species adapted to a high degree of human disturbance. Bird species detected during the field survey include northern mockingbird (*Mimus polyglottos*), white-crowned sparrow (*Zonotrichia leucophrys*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), Cassin's kingbird (*Tyrannus vociferans*), American crow (*Corvus brachyrhynchos*), yellow-rumped warbler (*Setophaga coronata*), American kestrel (*Falco sparverius*), house finch (*Haemorhous mexicanus*), red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), and mourning dove (*Zenaida macroura*).

Mammals

The MSHCP does not identify any covered or special-status mammalian species as potentially occurring on the project site. The project site and surrounding areas have the potential to support mammalian species adapted to human presence and disturbance. The only mammalian species observed during the field survey was Audubon's cottontail (*Sylvilagus audubonii*), and California ground squirrel (*Otospermophilus beecheyi*). Other common mammalian species expected to occur include coyote (*Canis latrans*), opossum (*Didelphis virginiana*), and raccoon (*Procyon lotor*). No bat species are expected to occur due to a lack of suitable roosting habitat (i.e., suitable trees, crevices, abandoned structures) within and surrounding the project site.

Special-Status Biological Resources

Queries of the following databases were conducted for the U.S. Geological Service 7.5 Minute Corona North quadrangle to obtain comprehensive information for federally and state-listed species, sensitive communities, and federally designated Critical Habitat known to or considered to have potential to occur on or near the project site:

- USFWS Critical Habitat Portal (USFWS 2018a);
- USFWS Environmental Conservation Online System (ECOS): Information, Planning and Conservation System (USFWS 2018b);
- California Natural Diversity Database (CNDDB) (CDFW 2018)
- CNPS Online Inventory of Rare, Threatened and Endangered Plants of California (CNPS 2018).

The literature search identified seven special-status plant species, 72 special-status wildlife species, and three special-status plant communities as having potential to occur in the vicinity of the project site. Special-status plant and wildlife species were evaluated for their potential to occur within the project boundaries based on habitat requirements, availability and quality of suitable habitat, and known distributions.

Special-Status Wildlife Species

Table 4.3-1 lists the special-status species that may be present on the project site and includes an evaluation of the species potential to occur on the project site based on habitat suitability and project conditions.

Table 4.3-1 Special-Status Wildlife Species with Potential to Occur on the Project Site

Scientific Name Common Name	Status FESA/CESA/ Other	Habitat Requirements	Potential for Occurrence and Basis for Determination
Birds			
Accipiter cooperii Cooper's hawk	–/–/WL	Generally found in forested areas up to 3,000 feet in elevation, especially near edges and rivers. Prefers hardwood stands and mature forests but can be found in urban and suburban areas where there are tall trees for nesting. Common in open areas during nesting season.	**Present.** There is suitable foraging habitat throughout the site, but no suitable nesting opportunities on-site. This species is adapted to urban environments and occurs commonly.
Accipiter striatus sharp-shinned hawk	–/–/WL	Found in pine, fir and aspen forests. They can be found hunting in forest interior and edges from sea level to near alpine areas. Can also be found in rural, suburban and agricultural areas, where they often hunt at bird feeders. Typically found in southern California in the winter months.	**Moderate Potential.** There is suitable foraging habitat throughout the site, but no suitable nesting opportunities on-site. This species is adapted to urban environments and occurs commonly.
Athene cunicularia Burrowing owl	–/–/SSC, MSHCP	Occurs in open, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Dependent upon fossorial mammals for burrows, most notable ground squirrels.	**Low Potential.** The western portion of the project site provides line-of-site opportunities; however, this portion of the site is heavily disturbed by routine disking activities and no suitable burrows were observed on the project site that have the potential to provide nesting opportunities.
Aquila chrysaetos golden eagle	–/–/FP, WL	Occupies nearly all terrestrial habitats of the western states except densely forested areas. Favors secluded cliffs with overhanging ledges and large trees for nesting and cover. Hilly or mountainous country where takeoff and soaring are supported by updrafts is generally preferred to flat habitats. Deeply cut canyons rising to open mountain slopes and crags are ideal habitat.	**Low Potential.** The site provides marginal foraging habitat but does not provide suitable nesting opportunities.
Buteo regalis ferruginous hawk	–/–/WL	Occurs primarily in open grasslands and fields, but may be found in sagebrush flats, desert scrub, low foothills, or along the edges of pinyon-juniper woodland. Feeds primarily on small mammals and typically found in agricultural or open fields.	**Low.** Marginal foraging habitat is present on-site. This species is commonly seen around Lake Perris, San Jacinto Wildlife Area, and the general open fields north and south of Ramona Expressway to the east of the project site. This species does not nest in southern California.
Circus cyaneus northern harrier	–/–/SSC	Frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands; seldom found in wooded areas. Mostly found in flat, or hummocky, open areas of tall, dense grasses moist or dry shrubs, and edges for nesting, cover, and feeding.	**Moderate.** There is suitable foraging habitat throughout the site, but no suitable nesting opportunities on-site.

Scientific Name Common Name	Status FESA/CESA/ Other	Habitat Requirements	Potential for Occurrence and Basis for Determination
Elanus leucurus white-tailed kite	–/–/FP	Occurs in low elevation, open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Uses trees with dense canopies for cover.	**Low.** The site provides marginal foraging habitat but does not provide suitable nesting opportunities.
Eremophila alpestris actia California horned lark	–/–/WL	Generally found in shortgrass prairies, grasslands, disturbed fields, or similar habitat types along the coast or in deserts. Trees are shrubs are usually scarce or absent. Generally rare in montane, coniferous, or chaparral habitats. Forms large flocks outside of the breeding season.	**Moderate.** The site provides suitable foraging habitat. Continuous disking activities likely prevents this species from nesting on-site.
Falco columbarius merlin	–/–/WL	Nest in forested openings, edges, and along rivers across northern North America. Found in open forests, grasslands, and especially coastal areas with flocks of small songbirds or shorebirds.	**Low.** Marginal foraging habitat is present on-site. This species does not nest in southern California.
Falco mexicanus prairie falcon	–/–/WL	Commonly occur in arid and semiarid shrubland and grassland community types. Also occasionally found in open parklands within coniferous forests. During the breeding season, they are found commonly in foothills and mountains which provide cliffs and escarpments suitable for nest sites.	**Low.** The site provides marginal foraging habitat but does not provide suitable nesting opportunities.
Falco peregrinus anatum American peregrine falcon	–/–/FP	Uncommon winter resident of the inland region of southern California. Active nesting sites are known along the coast north of Santa Barbara, in the Sierra Nevada, and in other mountains of northern California. Breeds mostly in woodland, forest, and coastal habitats. Riparian areas and coastal and inland wetlands are important habitats yearlong, especially in nonbreeding seasons.	**Moderate.** There is suitable foraging habitat throughout the site, but no suitable nesting opportunities on-site. This species is known to occur in the general vicinity of the project site.
Plegadis chihi white-faced ibis	–/–/WL	Prefers to feed in fresh emergent wetland, shallow lacustrine waters, muddy ground of wet meadows, and irrigated or flooded pastures and croplands. Nests in dense, fresh emergent wetland.	**Low.** The site provides marginal foraging habitat but does not provide suitable nesting opportunities.

FP = Fully Protected Species, MSHCP = Covered Species, SSC = State Species of Special Concern, ST = State Threatened, WL = State Watchlist Species

Source: ELMT Consulting 2019 (Appendix 4.3)

Cooper's hawk was the only special-status wildlife species observed foraging on-site during the field investigation. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that the project site has a moderate potential to support the following bird species:

- Sharp-shinned hawk (*Accipiter striatus*)
- Northern harrier (*Circus hudsonius*)
- California horned lark (*Eremophila alpestris actia*)
- American peregrine falcon (*Falco peregrinus anatum*)

The project site has a low potential to provide suitable habitat for the following bird species:

- Golden eagle (Aquila chrysaetos)
- Great egret (Ardea alba)
- Great blue heron (Ardea herodias)
- Ferruginous hawk (Buteo regalis)
- Snowy egret (Egretta thula)
- White-tailed kite (Elanus leucurus)
- Merlin (Falco columbarius)
- Prairie falcon (Falco mexicanus)
- White-faced ibis (Plegadis chihi)

No special-status reptiles, mammals, or other animals have the potential to occur on the project site. In addition, the project site does not provide suitable habitat for other special-status wildlife species known to occur in the area since the project site has been heavily disturbed from on-site disturbances and surrounding development.

Burrowing Owl

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

Despite a systematic search of the project site, no burrowing owls or recent sign (i.e., pellets, feathers, castings, or whitewash) was observed during the field investigation. The project site, in particular the western half of the project site, lacks suitable burrows capable of providing roosting and nesting opportunities for burrowing owls. Based on the results of the field investigation, it was determined that the project site has a low potential to support burrowing owls.

Nesting Birds

Vegetation within and surrounding the project site has the potential to provide refuge cover from predators, perching sites and favorable conditions for avian nesting. Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGC) (Sections 3503, 3503.3, 3511, and 3513 of the CFGC prohibit the take, possession, or destruction of birds, their nests or eggs).

No active nests or birds displaying nesting behavior were observed during the field survey. The project site and surrounding area provides foraging and minimal nesting habitat for year-round and seasonal avian residents, as well as migrating songbirds that could occur in the area that are adapted to urban environments. The project site has the potential to provide minimal suitable

nesting opportunities for birds, primarily those that nest on the open ground such as killdeer (*Charadrius vociferus*).

Special-Status Plant Communities

The CNDDB lists three special-status plant communities as being identified within the Corona North USGS 7.5-minute quadrangle: Southern California Arroyo Chub/Santa Ana Sucker Stream, Southern Cottonwood Willow Riparian Forest, and Southern Sycamore Alder Riparian Woodland. None of these special-status plant communities occur within the boundaries of the project site.

Special-Status Plant Species

The project site is not located within the MSHCP designated survey area for Narrow Endemic Plant Species. Further, anthropogenic disturbances associated with agricultural land uses and dairy farm activities have reduced, if not eliminated, the ability of the project site to provide suitable habitat for special-status plant species.

Critical Habitat

Under the federal Endangered Species Act (FESA), "Critical Habitat" is designated at the time of listing of a species or within one year of listing. Critical Habitat refers to specific areas within the geographical range of a species at the time it is listed that include the physical or biological features that are essential to the survival and eventual recovery of that species. Maintenance of these physical and biological features requires special management considerations or protection, regardless of whether individuals or the species are present or not. The project site is not located within federally designated Critical Habitat. The nearest Critical Habitat designation is located along the Santa Ana River approximately 2.5 miles south of the project site for least Bell's vireo (*Vireo bellii pusillus*), Santa Ana sucker (*Catostomus santaanae*), southwestern willow flycatcher (*Empidonax traillii extimus*), and yellow-billed cuckoo (*Coccyzua americanus*).

Jurisdictional Features

Riparian/Riverine Habitat

The majority of the project site does not support any discernible drainage courses, inundated areas, wetland vegetation, or hydric soils that would be considered jurisdictional. A water detention basin was observed on the western and southwest corner of the project site that appears to capture artificial flows from ranch activities and runoff during storm events. The detention basin is located in the uplands for dairy farm activities, does not connect to Cucamonga Creek, and does not support riparian vegetation. Therefore, it would not be considered jurisdictional or qualify as riparian/riverine habitat under the MSHCP.

Vernal Pools

Vernal pools are seasonally inundated, ponded areas that only form in regions where specialized soil and climatic conditions exist. During fall and winter rains typical of Mediterranean climates, water collects in shallow depressions where downward percolation of water is prevented by the presence of a hard pan or clay pan layer (duripan) below the soil surface. Later in the spring when rains decrease and the weather warms, the water evaporates, and the pools generally disappear by May. The shallow depressions remain relatively dry until late fall and early winter with the advent of greater precipitation and cooler temperatures. Vernal pools provide unusual "flood and drought"

habitat conditions to which certain plant and wildlife species have specifically adapted, as well as invertebrate species such as fairy shrimp.

The MSHCP lists two general classes of soils known to be associated with special-status plant species: clay soils and Traver-Domino Willow association soils. The specific clay soils known to be associated with special-status species within the MSHCP plan area include Bosanko, Auld, Altamont, and Porterville series soils, whereas Traver-Domino Willows association includes saline-alkali soils largely located along floodplain areas of the San Jacinto River and Salt Creek. Without the appropriate soils to create the impermeable restrictive layer, none of the special-status species associated with vernal pools can occur on the project site. None of these soils occur on the project site. A review of recent and historic aerial photographs (1967-2018) of the project site and its immediate vicinity did not provide visual evidence of an astatic or vernal pool conditions on or in the vicinity of the project site. No special-status plant and wildlife species associated with vernal pools were observed, and routine disturbances on-site also preclude vernal pools from existing on-site.

Wildlife Corridors and Linkages

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

The project site has not been identified as a wildlife corridor or linkage. The Santa Ana River is located approximately 2.5 miles south of the project site, which is the closest identified wildlife corridor to the project site. The proposed development would be confined to existing areas that have been heavily disturbed and surrounded by development or agriculture activities. The project site is isolated from regional wildlife corridors and linkages, and there are no riparian corridors, creeks, or useful patches of stepping-stone habitat (natural areas) within or connecting the project site to the Santa Ana River.

Cucamonga Creek borders the northern and western portions of the project site. However, this stretch of Cucamonga Creek is confined to a concrete-lined flood control channel and provides limited wildlife movement opportunities.

c. Regulatory Setting

Federal

U.S. Army Corps of Engineers

Under Section 404 of the federal Clean Water Act (CWA), the USACE has authority to regulate activities that could discharge dredge or fill material into wetlands or other “waters of the United States” (WoUS). The definition of WoUS has been the subject of recent litigation, regulatory guidance, and agency rulemaking. In current practice, jurisdictional waters are defined using the USACE’s and U.S. Environmental Protection Agency’s joint 2015 regulatory definition (80 FR 37054). In summary, WoUS include:

- Navigable waters
- Interstate waters, including interstate wetlands
- The territorial seas
- All impoundments of waters of the United States
- All tributaries of waters of the United States
- All waters adjacent to waters of the United States
- Specific waters (including western vernal pools) if there is significant nexus to a navigable or interstate water, or territorial sea

The following waters are considered WoUS if they possess a significant chemical, hydrologic, or ecological nexus to navigable waters, interstate waters, or the territorial seas:

- All waters within or partially within 4,000 feet of the high tide line or ordinary high water mark of a navigable or interstate water, territorial sea, impoundment, or tributary
- All waters within or partially within the 100-year floodplain of a navigable or interstate water or territorial sea

The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetland value or acres. In achieving the goals of the CWA, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any fill or adverse modification of wetlands that are hydrologically connected to jurisdictional waters would require a permit from the USACE prior to the start of work. Typically, when a project involves impacts to WoUS, the goal of no net loss of wetland acres or values is met through compensatory mitigation involving the creation or enhancement of similar habitats.

U.S. Fish and Wildlife Service

The USFWS implements the MBTA (16 United States Code Section 703-711) and the Bald and Golden Eagle Protection Act (16 United States Code Section 668). The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the FESA (16 United States Code Section 153 et seq.). The USFWS generally implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in "take" of any federally listed threatened or endangered species are required to obtain authorization from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of FESA, depending on the involvement by the federal government in permitting and/or funding of the project. "Take" under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. Proposed or candidate species do not have the full protection of FESA; the USFWS and NMFS advise project applicants the species could be elevated to listed status at any time.

Migratory Bird Treaty Act

The federal MBTA of 1918 was originally enacted between the United States and Great Britain (acting on behalf of Canada) for the protection of migratory birds between the two countries. The MBTA has since been expanded to include Mexico, Japan, and Russia. Under MBTA provisions, it is

unlawful "by any means or manner to pursue, hunt, take, capture (or) kill" any migratory birds as defined by the MBTA except as permitted by regulations issued by the USFWS. The term "take" is defined by the USFWS regulation to mean to "pursue, hunt, shoot, wound, kill, trap, capture or collect" any migratory bird or any part, nest, or egg of any migratory bird covered by the conventions, or to attempt those activities.

State

Porter-Cologne Water Quality Act

The State Water Resources Control Board (SWRCB) works in coordination with nine Regional Water Quality Control Boards (RWQCBs) to preserve, protect, enhance, and restore water quality throughout the state. Each RWQCB makes decisions related to water quality for its region, and may approve, with or without conditions, or deny projects that could affect waters of the state. Their authority to regulate activities that could result in a discharge of dredged or fill material comes from the CWA and the Porter-Cologne Water Quality Control Act (Porter-Cologne).

Porter-Cologne broadly defines WoUS as "any surface water or groundwater, including saline waters, within the boundaries of the state." Because Porter-Cologne applies to any water, whereas the CWA applies only to certain waters, California's jurisdictional reach overlaps and may exceed the boundaries of WoUS. For example, Water Quality Order No. 2004-0004-DWQ states that "shallow" waters of the state include headwaters, wetlands, and riparian areas. In practice, the RWQCBs may claim jurisdiction over riparian areas. Where riparian habitat is not present, such as may be the case at headwaters and urbanized areas, jurisdiction is taken to the top of bank.

The SWRCB adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State, for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The Procedures consist of four major elements: a wetland definition; a framework for determining if a feature that meets the wetland definition is a water of the state; wetland delineation procedures; and procedures for the submittal, review and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities (SWRCB 2019).

Pursuant to Section 401 of the CWA, projects regulated by the USACE must obtain a Water Quality Certification from the RWQCB. This certification ensures the proposed project will uphold state water quality standards. Because California's jurisdiction to regulate its water resources is much broader than that of the federal government, proposed impacts on waters of the state require Water Quality Certification even if the area occurs outside of USACE jurisdiction.

California Endangered Species Act

CFGC, Chapter 1.5, Sections 2050- 2116 (CESA) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with CESA, CDFW has jurisdiction over state-listed species (CFGC Section 2070). The CDFW regulates activities that may result in take of individuals (i.e., hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill). Habitat degradation or modification is not expressly included in the definition of take under the CFGC. The CDFW has interpreted take, however, to include the killing of a member of a species as the proximate result of habitat modification.

California Fish and Game Code

The CDFW derives its authority from the CFGC. CESA (CFGC Section 2050 et. seq.) prohibits take of state-listed threatened or endangered species. Take of fully protected species is prohibited under CFGC Sections 3511, 4700, 5050, and 5515. Section 86 of CFGC defines "take" as hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, capture, or kill. This definition does not include indirect harm by way of habitat modification.

CFGC Sections 3503, 3503.5, and 3511 restrict the take, possession, and destruction of birds, nests, and eggs. Section 3503.5 of the CFGC protects all birds-of-prey and their eggs and nests against take, possession, or destruction. Fully protected birds may not be taken or possessed except under specific permit (Section 3511).

SSC is a category CDFW uses for those species considered to be indicators of regional habitat changes or considered to be potential future protected species. SSC do not have any special legal status except that which may be afforded by the CFGC, as noted above. CDFW intends the SSC category as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands.

The CDFW also has authority to administer the Native Plant Protection Act (CFGC Section 1900 et seq.). The Native Plant Protection Act requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the Native Plant Protection Act, the owner of land where a rare or endangered native plant grows is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of plant(s).

Perennial, intermittent, and ephemeral streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 et seq. of the CFGC (Lake and Streambed Alteration Agreements) gives CDFW regulatory authority over work in the bed, bank, and channel (which could extend to the 100-year flood plain), consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake.

Regional Water Quality Control Board

The SWRCB and the local Los Angeles RWQCB have jurisdiction over WoS, with federal authority under the CWA Section 401 and state authority under Porter-Cologne to protect water quality, which prohibits discharges to such waters. WoS are defined as any surface water or groundwater, including saline waters, in the boundaries of the state.

Local

Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County MSHCP is a comprehensive, multi-jurisdictional habitat conservation plan that focuses on conservation of species and their associated habitats in western Riverside County. The MSHCP Plan Area encompasses approximately 1.26 million acres (1,966 square miles); it includes all unincorporated Riverside County land west of the crest of the San Jacinto Mountains to the Orange County line, and the jurisdictional areas of Temecula, Murrieta, Lake Elsinore, Canyon Lake, Norco, Corona, Riverside, Moreno Valley, Banning, Beaumont, Calimesa, Perris, Hemet, Eastvale, Jurupa Valley, Wildomar, Menifee, and San Jacinto.

The MSHCP serves as a habitat conservation plan pursuant to Section 10(a)(1)(B) of FESA, as well as a natural communities conservation plan under the Natural Communities Conservation Plan Act of 2001. The MSHCP is used to allow the participating jurisdictions to authorize "take" of plant and wildlife species identified in the MSHCP Plan Area under specific conditions/measures. Under the MSHCP, USFWS and CDFW will grant "take authorization" for otherwise lawful actions in exchange for the assembly and management of a coordinated MSHCP conservation area.

City of Eastvale General Plan

The City's General Plan Land Use, Urban Design, and Air Quality and Conservation elements seek to preserve existing natural resources in Eastvale (Eastvale 2012). Goals and policies that relate to biological resources and would apply to the project include the following:

LAND USE (LU)

Goal LU-2: A balance of land uses that maintains and enhances the City's fiscal viability, economic diversity, and environmental integrity and meets the needs of Eastvale's residents.

Policy LU-7: Calculations of the potential intensity of development on any site shall be based on gross acreage. As noted in Policy LU-5, a variety of constraints may affect a site's development potential, including land required for right-of-way for collector and arterial streets shown on the Circulation Map; public parks (as defined in the Parks, Recreation, and Open Space Chapter); public facilities such as schools, fire stations, and police facilities; floodways or floodplains; protected biological habitats; location within an Airport Compatibility Zone; and other unique constraints applicable to the property as determined by the City.

Policy LU-9: The City will participate in regional efforts to address issues of mobility, transportation, traffic congestion, economic development, air and water quality, and watershed and habitat management with cities, local and regional agencies, stakeholders, and surrounding jurisdictions.

Policy LU-41: The City shall require that proposed projects on properties containing the Water designation be reviewed for compliance with habitat, endangered species, flood control, and applicable regulations and standards.

DESIGN (DE)

Policy DE-9: Apply the following policies to areas where development is allowed and that contain natural slopes or significant elevation changes, regardless of land use designation:

a) Development shall minimize alteration of the natural landforms and natural vegetation.
b) Clustering should be used to increase the retention of slopes where appropriate.
c) Development on or near slopes shall be designed to minimize the hazards from erosion and slope failures.
d) Require hillside adaptive construction techniques, such as post and beam construction, and special foundations for development, when the need is identified in a soils and geology report which has been received and approved by the City.
e) Grading shall be limited, with the intent of preserving natural topography and retaining slope stability.

AIR QUALITY AND CONSERVATION (AQ)

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.

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.

Policy AQ-25: Minimize pollutant discharge into storm drainage systems, natural drainages, and aquifers.

Policy AQ-37: The City will work with the SCAQMD and implement all applicable rules and regulations to reduce particulate matter from agriculture, construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights-of-way, and off-road vehicles, as well as wind storms, to the extent possible.

4.3.2 Impacts Analysis

a. Methodology and Significance Thresholds

Data used for this analysis included aerial photographs, topographic maps, a CNDDB database query, accepted scientific texts to identify species, previous biological studies, survey reports prepared for the project site and the surrounding area, results of the reconnaissance field surveys, and other available literature regarding existing biological resources in and around the project area.

In accordance with Appendix G Section IV (Biological Resources) of the State CEQA Guidelines, the project would have a significant impact on biological resources if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service
3. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
4. 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
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

Impacts to biological resources may be considered less than significant where their effects have little or no importance to a given habitat. For example, disturbance to cultivated agricultural fields, or small acreages of nonnative, ruderal habitat, would be considered less than significant.

b. Project Impacts and Mitigation Measures

Threshold 1	Would the project have a significant adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Impact BIO-1 IMPLEMENTATION OF THE PROJECT COULD RESULT IN DIRECT OR INDIRECT IMPACTS TO BURROWING OWL AND NESTING BIRDS AND RAPTORS THROUGH REMOVAL OF GROUND COVER AND HABITAT, AND FROM CONSTRUCTION DURING THE BREEDING SEASON. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

Burrowing Owl

The MSHCP identifies the project site as being located within the designated survey area for burrowing owl, requiring a burrowing owl suitability assessment to be conducted. Based on the field investigation, it was determined that the western half of the project site is vegetated with a variety of relatively low-growing plant species that allow for the line-of-sight observation opportunities favored by burrowing owl. No burrowing owl or signs of burrowing owl use were detected during surveys of the site and a habitat assessment for the burrowing owl determined low potential exists for the species to occur, based on a lack of burrows. However, there remains potential for the burrowing owl to exist on the project site based on the MSHCP designation.

If burrowing owl were present during project construction, there would be the potential to impact the species directly or indirectly from noise or vibration. Pre-construction surveys and avoidance measures pursuant to Objective 6 of the MSHCP Species Conservation Objectives for burrowing owl, described below, would ensure avoidance and/or minimization of potential impacts.

Nesting Birds and Raptors

As detailed in Section 4.3.2, Regulatory Setting, the nests of most native birds and raptors are federally and state protected. No nests were specifically identified during field reconnaissance, but it is likely birds use the project site for nesting (generally from early February through late August). Vegetation within and surrounding the project site has the potential to provide refuge cover from predators, perching sites and favorable conditions for avian nesting that could be impacted by construction activities associated with the project.

Project implementation has potential to result in direct and indirect impacts to nesting birds, including common passerine species protected under the MBTA and CFGC, if they nest on the project site and/or in the immediate vicinity during construction activities. Construction would occur where non-native grassland and native and ornamental trees are present. Direct impacts from construction activities include ground disturbance and removal of trees, which could contain bird nests. Indirect impacts include construction noise, lighting, and fugitive dust. These impacts could lead to individual mortality or harassment that might reduce nesting success. Therefore, potential impacts would be significant.

Mitigation Measures

The following mitigation measures would be required to address potential impacts to burrowing owl.

BIO-1A Burrowing Owl Preconstruction Survey

Pre-construction presence/absence surveys for burrowing owl shall be conducted in the survey area where suitable habitat is present prior to ground disturbance in new areas, throughout the construction phase of the project. Pre-construction surveys shall be conducted by a qualified biologist no more than 30 days prior to grading or other significant site disturbance. Surveys shall include the development footprint and consider up to a 500-foot buffer of adjacent areas to the extent feasible (e.g. a visual survey of adjacent areas will suffice for off-site areas not accessible). The surveys shall be conducted in accordance with the most recent CDFW and California Burrowing Owl Consortium guidelines. A burrow shall be considered occupied when there is confirmed use by burrowing owl based on observations made by a qualified biologist. If owls are not found to be occupying habitat in the survey area during the pre-construction survey, the proposed disturbance activities may proceed. Take of active nests shall be avoided.

BIO-1B Burrowing Owl Avoidance Measures

If owls are discovered on and/or within 500 feet of the proposed project site, avoidance measures shall be developed in compliance with the MSHCP and in coordination with the CDFW and/or Western Riverside County Regional Conservation Authority. Such measures will include but not be limited to the following:

- Burrowing owls shall not be disturbed on-site and/or within a 500-foot buffer between February 1 and August 31 to avoid impacting nesting.
- Prior to any ground disturbance, all limits of project construction shall be delineated and marked to be clearly visible to personnel on foot and in heavy equipment. All construction-related activities shall occur inside the limits of construction and designated staging areas. Construction staging and equipment storage shall be situated outside of any occupied burrowing owl burrow locations. All construction-related movement shall be restricted to the limits of construction and staging areas.
- Avoidance measures shall include passive relocation by a qualified biologist to remove the owls between September 1 and January 31, which is outside of the typical nesting season.

BIO-2 Nesting Bird Avoidance

Prior to issuance of grading permits, the following measures shall be implemented:

- To avoid disturbance of nesting and special-status bird species protected by the Migratory Bird Treated Act and California Fish and Game Commission, activities related to the project, including but not limited to, vegetation removal, ground disturbance, and construction and demolition shall occur outside of the bird breeding season (February 1 through August 31). If construction must begin during the breeding season, then a pre-construction nesting bird survey shall be conducted no more than 30 days prior to initiation of construction activities. The nesting bird pre-construction survey shall be conducted on foot inside the project site disturbance areas. If an active avian nest is discovered during the pre-construction clearance survey, construction activities shall stay outside of a 300-foot buffer around the active nest. For listed and raptor species, this buffer shall be expanded to 500 feet.

- Inaccessible areas (e.g., private lands) shall be surveyed from afar using binoculars to the extent practical. The survey shall be conducted by a qualified biologist familiar with the identification of avian species known to occur in western Riverside County. If nests are found, an appropriate avoidance buffer shall be determined by a qualified biologist and demarcated by a qualified biologist with bright orange construction fencing, flagging, construction lathe, or other means to mark the boundary. Effective buffer distances are highly variable and based on specific project stage, bird species, stage of nesting cycle, work type, and the tolerance of a particular bird pair. The buffer may be up to 500 feet in diameter, depending on the species of nesting bird found and the biologist's observations.
- If nesting birds are located adjacent to the project site with the potential to be affected by construction activity noise above 60 dBA Leq (see Section 4.10, *Noise*, for definitions and discussion of noise levels), a temporary noise barrier shall be erected consisting of large panels designed specifically to be deployed on construction sites for reducing noise levels at sensitive receptors. If 60 dBA Leq is exceeded, an acoustician would require the construction contractor to make operational and barrier changes to reduce noise levels to 60 dBA during the breeding season (February 1 through August 31). Noise monitoring shall occur during operational changes and installation of barriers to ensure their effectiveness. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No parking, storage of materials, or construction activities shall occur within this buffer until the avian biologist has confirmed that breeding/nesting is completed, and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist, if it is determined such encroachment will not adversely impact the nesting birds.

Significance After Mitigation

Implementation of Mitigation Measures BIO-1A and BIO-1B would reduce potential impacts to special-status species to less than significant levels by avoiding impacts to individual burrowing owl in accordance with the guidelines in the MSHCP. Implementation of Mitigation Measure BIO-2 would reduce potential impacts to nesting birds and raptors to a less than significant level.

Threshold 2	Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

IMPACT BIO-2 CONSTRUCTION OF THE PROJECT WOULD NOT IMPACT ANY RIPARIAN HABITAT OR OTHER SENSITIVE NATURAL COMMUNITY IDENTIFIED IN LOCAL OR REGIONAL PLANS, POLICIES, OR REGULATIONS, OR BY CDFW OR USFWS. NO MITIGATION IS REQUIRED.

As previously described, there were no areas found on the project site that qualify as riparian/riverine habitat or other sensitive habitat under the MSHCP. The majority of the project site does not support any discernible drainage courses, inundated areas, wetland vegetation, or hydric soils that would be considered jurisdictional. A water detention basin on-site appears to capture artificial flows from dairy farm activities and runoff during storm events. Since the detention basin is located wholly in the uplands for dairy farm activities, does not connect to Cucamonga Creek, and does not support riparian vegetation, it would not be considered jurisdictional or qualify as riparian/riverine habitat under the MSHCP.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

There would be no impacts to riparian resources and sensitive natural communities from the proposed project.

Threshold 3	Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Impact BIO-3 THE PROJECT SITE DOES NOT CONTAIN ANY REGULATED WATERS, NOR WOULD CONSTRUCTION ACTIVITIES ADVERSELY AFFECT PROTECTED WETLANDS. THERE WOULD BE NO IMPACT.

Based on an assessment of habitat communities on the project site, it was determined that the project site does not contain wetlands considered jurisdictional or qualify as riparian/riverine habitat under the MSHCP, nor would project activities impact federal or state jurisdictional areas. Additionally, based on the examination of aerial photos and field observation, there is no indication that suitable fairy shrimp habitat occurs on or near the project site. The project does not contain federally protected wetlands, nor would have any impacts to federally protected wetlands. No impact would occur.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

No impacts to federally protected wetlands would occur.

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

Impact BIO-4 NO PROPOSED OR EXISTING MSHCP CORE AREAS, LINKAGES, OR HABITAT BLOCKS ARE ON OR NEAR THE PROJECT SITE. THERE WOULD BE NO IMPACT.

According to MSHCP boundaries, the project site is not within an MSHCP Criteria Cell and the project site is not part of or near any core areas, linkages, nursery sites, or habitat blocks. No habitat would be fragmented or interrupted because of project implementation. The project would have no impact on the movement of wildlife species or impede the use of native wildlife nursery sites.

In addition, Cucamonga Creek borders the northern and western portions of the project site. However, this stretch of Cucamonga Creek is confined to a concrete-lined flood control channel and provides limited wildlife movement opportunities. As such, development of the project site is not expected to impact wildlife movement opportunities or prevent the Santa Ana River from continuing to function as a wildlife corridor. Therefore, potential direct or indirect impacts to wildlife corridors or linkages are not expected to occur.

Mitigation Measures

No mitigation measures would be required.

Significant After Mitigation

There would be no impact to wildlife movement, wildlife corridors, or nursery sites.

Threshold 5	Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
Threshold 6	Would the project conflict with the provision of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plans?

Impact BIO-5 NO PROPOSED OR EXISTING MSHCP CORE AREAS, LINKAGES, OR HABITAT BLOCKS ARE ON OR NEAR THE PROJECT SITE. IMPACTS WOULD BE LESS THAN SIGNIFICANT. THERE WOULD BE NO IMPACTS RELATED TO LOCAL POLICIES AND ORDINANCES PROTECTING BIOLOGICAL RESOURCES.

The project site is located in the Eastvale Area Plan of the MSHCP. The City is a permittee under the MSHCP and, while the project is not specifically identified as a Covered Activity, the project is covered under Section 7.1, *Covered Activities Outside Criteria Area and PQP Lands*. The project site was reviewed to determine consistency with the MSHCP and was assessed for riparian/riverine habitat, riparian/riverine species, vernal pool/fairy shrimp habitat, vegetation habitats, and criteria area species. The project site is not located within or adjacent to any Criteria Cells or designated conservation areas and is not located within the designated survey area for Narrow Endemic Plant Species.

The project site is in the MSHCP survey area for western burrowing owl (*Athene cunicularia hypugaea*), a California SSC. No burrowing owl or signs of burrowing owl use were detected during surveys of the site and a habitat assessment for the burrowing owl determined low potential exists for the species to occur, based on a lack of burrows. However, there remains potential for the burrowing owl to exist on the project site based on the MSHCP designation. A pre-construction survey would be required for burrowing owl to confirm the continued absence of this species from the site as described in Mitigation Measures BIO-1A and BIO-1B and satisfy MSHCP requirements. Impacts related to conflicts with the applicable MSHCP would be less than significant with mitigation.

Mitigation Measures

Measures BIO-1A and BIO-1B.

Significance After Mitigation

Implementation of Mitigation Measures BIO-1A and BIO-1B would reduce potential impacts to special-status species to less than significant levels by avoiding impacts to individual burrowing owl in accordance with the guidelines in the MSHCP.

4.3.3 Cumulative Impacts

The following factors are considered with respect to analyzing cumulative impacts to biological resources:

- The cumulative contribution of other approved and proposed projects to fragmentation of open space in the project vicinity
- The loss of sensitive habitats and species
- The contribution of the project to urban expansion into natural areas
- Isolation of open space in the vicinity by proposed/future projects

Cumulative impacts depend on the proximity of cumulative projects to the project site and impacts from past projects in the vicinity. Native vegetation communities and open areas have almost entirely been developed in the region of the project. Over the last half-century or more, naturally vegetated open areas diminished as the landscape surrounding the project site has been built out with residential and commercial uses. Protected natural areas do occur in the region, including at Rancho Jurupa Park, Box Springs Park, and Sycamore Canyon Wilderness Park, at the edge of the urbanized areas. The planned and pending projects in the project vicinity are listed in Table 3-1 (see Section 3, Environmental Setting) and include residential, warehouse, commercial, infrastructure and recreational land uses.

The existing project site contains land cover types that would be classified as bare ground, disturbed, and developed and provides little to no high-quality, native habitat. No native plant communities or natural communities of special concern were observed on or adjacent to the project site.

Cucamonga Creek borders the northern and western portions of the project site; however, this stretch of the creek is confined to a concrete-lined flood control channel and provides limited wildlife movement opportunities. As such, development of the project site is not expected to impact wildlife movement opportunities or prevent the Santa Ana River from continuing to function as a wildlife corridor. Other surrounding sites include industrial development to the south and west and undeveloped parcels to the north and east that historically supported agricultural and cattle land uses. The project site offers no connectivity to open spaces or potential for wildlife movement through the site.

Although this project would have the potential to adversely impact biological resources, such as nesting birds and burrowing owls, these resources are common in the region and the cumulative effect will be minimal from proposed developments. The existing project site is a dairy farm and currently provides little to no wildlife habitat. It is anticipated that for other developments that would have significant impacts on these resources, mitigation measures such as pre-construction surveys for sensitive biological resources, mitigation for impacts to sensitive habitats and/or sensitive biological resources, and payment of all MSHCP fees including the Development Mitigation Fee, would be required. Other developments would also be required to comply with all applicable laws and regulations governing biological resources including all MSHCP policies and measures regarding cumulative impacts.

With the proposed mitigation measures identified in this section of the EIR, coupled with policies and regulations applying to this and other projects, impacts to sensitive habitats and biological resources would be less than significant at the project level. In addition, individual development proposals are reviewed separately by the appropriate jurisdiction and undergo appropriate environmental review when it is determined that the potential for significant impacts exist. If future projects would result in impacts to sensitive habitats and biological resources, impacts to such resources would be addressed on a case-by-case basis. Furthermore, all projects are required to comply with the MSHCP. As such, projects, including the proposed project, would not contribute to

cumulative impacts on sensitive habitats and biological resources outside the project site. Therefore, impacts related to sensitive habitats and biological resources would not be cumulatively considerable.

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4.4 Energy

This section analyzes the energy impacts of developing and operating the proposed project. This analysis is based on Appendix G, Environmental Checklist Form, of the California Environmental Quality Act (CEQA) Guidelines. To assure project decisions consider energy implications, CEQA requires that Environmental Impact Reports (EIR) include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

The analysis is supported by data and information from the following technical reports prepared by Urban Crossroads: *The Homestead Air Quality Impact Analysis* (2019a; Appendix 4.2), *The Homestead Greenhouse Gas Analysis* (2019b; Appendix 4.5), and *The Homestead Traffic Impact Analysis* (2019e; Appendix 4.11). Calculations for energy derived from project fuel consumption are presented in Appendix 4.4. Air quality impacts are discussed in Section 4.2, *Air Quality*, greenhouse gas (GHG) and climate change impacts are discussed in Section 4.5, *Greenhouse Gas Emissions*, and traffic impacts are discussed in Section 4.11, *Transportation and Traffic*, of this EIR.

4.4.1 Setting

a. Existing Energy Setting

Energy use can affect air quality and other natural resources adversely. Energy is primarily categorized in three areas: electricity, used in buildings and cities for lighting and other services; natural gas used for building heating, cooking, and other industrial processes; and fuels used for transportation. Fossil fuels used for any of these types of energy must be burned to create electricity that powers homes and commercial/industrial buildings, to create heat, and to power vehicles. The burning or combusting of fuels releases pollutants and GHG emissions. Many factors affect the level of impact from fuels. When used in transportation, the impact from energy corresponds to the fuel efficiency of cars, trucks, and public transportation; the mode of travel, such as auto, carpool, and public transit; and miles traveled by these modes as well as the type of fuel. Construction and routine operation and maintenance of transportation infrastructure also consume energy as do residential, commercial, and industrial land uses. This typically occurs through the use of natural gas for heating, cooking, and industrial processes along with the use of electricity.

Energy Production

The two largest sources of energy produced in California in 2017 were renewable energy sources, at approximately 1,085.5 trillion British thermal units (Btu), and crude oil, at approximately 996.4 trillion Btu. Other sources of energy produced in California include nuclear electric power, natural gas, and biofuels (United States Energy Information Administration [USEIA] 2018a). Crude oil was used as transportation fuel primarily, with a portion used in industrial processes. In this analysis, renewable energy sources include geothermal, solar, wind, biomass, and hydroelectric energy generation. In 2018, about 34 percent of the electricity used to serve California was produced from renewable resources (California Energy Commission [CEC] 2019a).

In 2017, solar photovoltaic (PV) and solar thermal installations provided about 16 percent of California's net electricity generation. California ranked second in the nation in conventional hydroelectric generation and first as a producer of electricity from solar, geothermal, and biomass resources. California's total energy consumption is second-highest in the nation, but, in 2017, the

state's per capita energy consumption ranked 48th, due in part to its mild climate and its energy efficiency programs (USEIA 2018b).

Electricity

In 2018, California used 285,488 gigawatt-hours (GWh) of electricity, of which 31 percent were from renewable resources. In recent years, electricity demand has been flat or slightly declining as energy efficiency programs have resulted in end-use energy savings and as customers install behind-the-meter (BTM) residential solar PV systems that directly displaces utility-supplied generation. In 2018, BTM residential solar generation was estimated to be 13,582 GWh, a 20 percent increase from 2017. The strong growth in residential solar has had a measurable impact on utility served load and, consequently, on the total system electric generation summary (CEC 2019b).

Southern California Edison (SCE) would provide electricity to the project. Table 4.4-1 shows the electricity and natural gas consumption by sector and total for SCE.

Table 4.4-1 Electricity Consumption in 2018 for the SCE Service Area

Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Streetlight	Total Usage
3,150.9	31,165.5.3	4,310.9	13,218.4	2,359.1	28,617.1	578.0	83,400.0

Notes: Usage expressed in GWh

Source: CEC 2019b

SCE's energy sources include renewable power sources, large hydroelectric, natural gas, nuclear, and unspecified sources of power (electricity from transfers that are not traceable to specific generation sources). SCE's "Green Rate" program provides an option for customers to offset half or all of their energy usage by paying into a fund for solar energy sources. Table 4.4-2 shows the 2017 energy sources for SCE compared to California as a whole.

Table 4.4-2 2018 SCE and California Energy Sources

Energy Sources	Percent of Power Sources			
	SCE Power Mix	SCE Green Rate 50% Option	SCE Green Rate 100% Option	California Power Mix
Biomass and Biowaste	1	0	0	2
Geothermal	8	4	0	5
Small Hydroelectric	1	0	0	2
Solar	13	57	100	11
Wind	13	7	0	11
Renewable Energy Sources Total	**36**	**68**	**100**	**31**
Coal	0	0	0	3
Large Hydroelectric	4	2	0	11
Natural Gas	17	8	0	35
Nuclear	6	3	0	9
Other	0	0	0	<1
Unspecified Sources[1]	37	18	0	11
Total Power	**100**	**100**	**100**	**100**

[1]Electricity from transfers that are not traceable to specific generation sources.

Source: CEC 2019b

Natural Gas

California consumed approximately 12,640 million U.S. therms (MMthm) of natural gas in 2018 (CEC 2019c). The project site would be provided natural gas by Southern California Gas Company (SCG). SCG is the principal distributor of natural gas in Southern California and provides natural gas for residential, commercial, and industrial markets, as well as for electric generation (California Gas and Electric Utilities 2018).

Table 4.4-3 shows the natural gas consumption by sector and total for SCG. In 2018, SCG provided approximately 41 percent of the total natural gas usage in California, with approximately 42 percent consumed for residential use and 58 percent for industrial, commercial, and other uses. Specifically, Riverside County consumed approximately 398.5 MMthm of natural gas in 2018, with approximately 65 percent consumed for residential use and 35 percent for non-residential use (CEC 2019c).

Table 4.4-3 Natural Gas Consumption in 2018 for SCG Service Area

Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Total Usage
77.6	913.0	74.5	1,714.4	229.2	2,147.4	5,156.1

Notes: Usage expressed in MMThm

Source: CEC 2019c

Petroleum

In 2017, approximately 40 percent of the state's energy consumption was used for transportation activities (USEIA 2018a). Though California's population and economy are expected to grow,

gasoline demand is projected to decline from roughly 15.8 billion gallons in 2017 to between 12.3 billion and 12.7 billion gallons in 2030, a 20 to 22 percent reduction. This decline comes in response to both increasing use of electric vehicles (EVs) and higher fuel economy for new gasoline vehicles (CEC 2018a). California consumed 576.9 trillion Btu of petroleum energy in 2017, approximately 15.7 percent of total energy consumed in the state (USEIA 2018c).

Alternative Vehicle Fuels

Various statewide regulations and plans encourage alternative fuel use to reduce GHG emissions and criteria pollutant emissions. These include the Low Carbon Fuel Standard and Senate Bill (SB) 32, as well as myriad other statewide and local air district regulations. Conventional gasoline and diesel may be replaced with different alternative fuels, depending on the capability of the vehicle. The most common alternative fuel vehicles are electric and electric-hybrid vehicles, but other types include biodiesel, hydrogen, and natural gas. Descriptions of the most widely used alternative fuels include the following.

- Hydrogen is being explored for use in combustion engines and fuel cell EVs. The interest in hydrogen as an alternative transportation fuel stems from its clean-burning qualities, its potential for domestic production, and the fuel cell vehicle's potential for high efficiency: hydrogen is two to three times more efficient than gasoline. Currently, California has 34 hydrogen refueling stations. The nearest hydrogen refueling station to the project site is at 1850 E. Holt Boulevard in Ontario, which is offline and not operational (U.S. Department of Energy [DOE] 2019). Fuel cells are being explored as a way to use electricity generated on-board the vehicle to power electric motors.
- Biodiesel is a renewable alternative fuel that can be manufactured from vegetable oils, animal fats, or recycled restaurant grease. Biodiesel is biodegradable and cleaner-burning than petroleum-based diesel fuel. Generally, biodiesel can run in any diesel engine without alterations, but fueling stations have been slow to make it available. There are ten biodiesel refueling stations in California and the closest one to the project site is Downs Energy at 1296 Magnolia Avenue in Corona (DOE 2019).
- Electricity can power electric and plug-in hybrid EVs directly from the power grid. Generally, these vehicles draw from the electricity grid and store the energy in their batteries. The nearest EV charging station is at the Silverlakes Sports Complex at 5555 Hamner Avenue in Norco.
- Natural Gas is considered an alternative fuel and is currently being used in vehicles in two forms: compressed natural gas and liquefied natural gas. Compressed natural gas is used in light-, medium, and heavy-duty vehicles and achieves similar fuel economy as traditional diesel or gasoline fuels. Liquefied natural gas is costly to produce and therefore is used in limited applications, typically in medium- and heavy-duty vehicles (USEIA 2018d). The closest liquified natural gas station is located at 1735 S Turner Avenue in Corona. The closest compressed natural gas station is at 11888 Mission Boulevard in Jurupa Valley (DOE 2019).

b. Regulatory Setting

Programs and policies at the federal, state, and local levels have emerged to enhance the previous trend towards energy efficiency; these are discussed in the following section.

Federal Regulations

Corporate Average Fuel Economy Standards

The Corporate Average Fuel Economy (CAFE) standards are federal rules established by the National Highway Traffic Safety Administration (NHTSA) that set fuel economy and GHG emissions standards for new passenger cars and light trucks sold in the United States. The CAFE standards become more stringent each year, reaching an estimated 38.3 miles per gallon (mpg) for the combined industry-wide fleet for model year 2020 (77 Federal Register 62624 et seq. [October 15, 2012 Table I-1). It is, however, legally infeasible for individual municipalities to adopt more stringent fuel efficiency standards. The Clean Air Act (CAA) (42 United States Code [USC] Section 7543[a]) states that "no state or any political subdivision therefore shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this part." In August 2016, the United States Environmental Protection Agency (USEPA) and NHTSA announced the adoption of the phase two programs related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower carbon dioxide (CO_2) emissions by approximately 1.1 billion metric tons (MT) of CO_2 and reduce oil consumption by up to two billion barrels over the lifetime of the vehicles sold under the program.

Energy Policy and Conservation Act

Enacted in 1975, this legislation established fuel economy standards for new light-duty vehicles (autos, pickups, vans, and sport-utility vehicles). The law placed responsibility on the NHTSA, a part of the U.S. Department of Transportation, for establishing and regularly updating vehicle standards. The USEPA administers the CAFE program, which determines vehicle manufacturers' compliance with existing fuel economy standards. Since the inception of the program, the average fuel economy for new light-duty vehicles steadily increased from 13.1 mpg for the 1975 model year to 30.7 mpg for the 2014 model year and is expected to increase to 54.5 mpg by 2025.

Energy Star Program

In 1992, the USEPA introduced Energy Star as a voluntary labeling program to identify and promote energy-efficient products to reduce GHG emissions. The program applies to major household appliances, lighting, computers, and building components, such as windows, doors, roofs, and heating and cooling systems. Under this program, appliances that meet specification for maximum energy use established under the program are certified to display the Energy Star label. In 1996, the USEPA joined with the Energy Department to expand the program, which now includes qualifying commercial and industrial buildings as well as homes.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 was designed to improve vehicle fuel economy and help reduce nationwide dependence on foreign oil. It expands the production of renewable fuels, reducing dependence on oil, and confronting global climate change. Specifically, it increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard by requiring fuel producers to use at least 36 billion gallons of biofuel in 2022 and reduces U.S. demand for oil by setting a national fuel economy standard of 35 mpg by 2020.

State Regulations

California Energy Action Plan

The CEC, in collaboration with California Public Utilities Commission (CPUC), is responsible for preparing the California Energy Action Plan (EAP), which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The 2003 California EAP 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 in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs; and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

In the October 2005 EAP II, the CEC and CPUC updated their energy policy vision by adding some important dimensions to the policy areas included in the original EAP, such as information on the emerging importance of climate change, transportation-related energy issues, and research and development activities. The CEC adopted an update to the EAP II in February 2008 that supplements the earlier EAPs and examines the state's ongoing actions in the context of global climate change. In 2008, the CEC determined an update to the plan was not needed due to state regulations such as Assembly Bill (AB) 32.

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to AB 2076 (Chapter 936, Statutes of 2000), the CEC and California Air Resources Board (CARB) prepared and adopted a joint-agency report, Reducing California's Petroleum Dependence. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT. One performance-based goal for AB 2076 is to reduce petroleum demand to 15 percent below 2003 demand. Furthermore, in response to the CEC's 2003 and 2005 Integrated Energy Policy Reports, the Governor directed the CEC to take the lead in developing a long-term plan to increase alternative fuel use.

Integrated Energy Policy Report

SB 1389 (Chapter 568, Statutes of 2002) required the CEC to conduct assessments and forecasts of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The CEC uses these assessments and forecasts to develop energy policies and recommendations to conserve resources, protect the environment, ensure energy reliability, enhance the State's economy, and protect public health and safety.

Senate Bill X1-2: California Renewable Energy Resources Act

In 2011, the Governor signed SB X1-2, which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 33 percent of their electricity supply from renewable sources by 2020. The CPUC and CEC implement the statewide RPS program through rulemakings and monitoring the activities of electric energy utilities in the State.

Senate Bill 1078: California Renewables Portfolio Standard Program

SB 1078 (Chapter 516, Statutes of 2002), and as expanded under SB X1-2, establishes a Renewables Portfolio Standard (RPS) for electricity supply. The initial RPS program only required electrical corporations to provide 20 percent of their supply from renewable sources by increasing its total procurement at least one percent each year to reach the 20 percent goal. SB X1-2 expanded this law by making it applicable to retail sellers of electricity and required procurement from eligible renewable energy resources to 33 percent by 2020.

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources to be increased to 50 percent by December 31, 2030. This act also requires doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

Senate Bill 100

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the state's RPS Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 44 percent by 2024, 60 percent by 2030, and 100 percent by 2045.

Assembly Bill 1493: Reduction of Greenhouse Gas Emissions

AB 1493 (Chapter 200, Statutes of 2002), known as the Pavley Bill, amended Health and Safety Code sections 42823 and added 43018.5 requiring CARB to develop and adopt regulations that achieve maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles, light-duty trucks, and other vehicles used for noncommercial personal transportation in California.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statutes of 2005) required the CEC to prepare a state plan to increase the use of alternative fuels in California. The CEC prepared the State Alternative Fuels Plan (SAF Plan) in partnership with CARB and in consultation with other federal, state, and local agencies. The SAF Plan presents strategies and actions California must take to increase the use of alternative nonpetroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The SAF Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Bioenergy Action Plan, Executive Order S-06-06

Executive Order (EO) S-06-06, April 25, 2006, establishes targets for the use and production of biofuels and biopower, and directs State agencies to work together to advance biomass programs in California, while providing environmental protection and mitigation. The EO establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels in California by 2010, 40 percent by 2020, and 75 percent by 2050. EO S-06-06 also calls for the state to meet a

target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies those barriers and recommends actions to address them so that the State can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 Plan and provides a more detailed action plan to achieve the following goals:

- Increase environmentally and economically sustainable energy production from organic waste
- Encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications
- Create jobs and stimulate economic development, especially in rural regions of the State
- Reduce fire danger, improve air and water quality, and reduce waste

Title 24, California Code of Regulations

California Code of Regulations, Title 24, Part 6, is California's Energy Efficiency Standards for Residential and Non-residential Buildings. The CEC established Title 24 in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and nonresidential buildings. The standards are updated on an approximately three-year cycle to allow consideration and possible incorporation of new efficient technologies and methods.

In 2016, the CEC updated Title 24 standards with more stringent requirements effective January 1, 2017. The building efficiency standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary due to local climatologic, geologic, or topographic conditions, provided these standards exceed those provided in Title 24.

The 2019 update to the Building Energy Efficiency Standards under Title 24 applies to buildings for which an application for a building permit is submitted on or after January 1, 2020. In nonresidential buildings, the standards mainly update indoor and outdoor lighting and use of light emitting diode (LED) technology as well as HVAC ventilation and filtration requirements (CEC 2018b).

California Green Building Standards Code (2016), California Code of Regulations Title 24, Part 11

The California Green Building Standards Code, commonly referred to as "CalGreen" was brought into effect on August 1, 2009 to outline architectural design and engineering principles that are in synergy with environmental resources and public welfare. CalGreen sets minimum standards for buildings, and since 2016, applies to new building construction and some alterations/additions within certain parameters.

The 2016 version of CalGreen laid out the minimum requirements for newly constructed residential and nonresidential buildings to reduce GHG emissions through improved efficiency and process improvements. It also includes voluntary tiers to encourage building practices that improve public health, safety, and general welfare by promoting a more sustainable design. If the project is submitted for building plan check on January 1, 2020 or after, the 2019 code cycle will be effective. The 2019 update includes new requirements for construction and sustainable design, and inclusion of future EV charging stations, landscaping and irrigation such as shade trees, and air filtration systems (CalGreen Energy Systems 2019).

California Air Resources Board

CARB has a number of regulations and standards that seek to limit emissions from mobile sources and pollution from specific types of operation or source pollution. These policies indirectly impact energy consumption. These include:

- In-Use Off-Road Diesel Rule: Imposes limits on idling, restricts the addition of older vehicles, and requires the retirement or replacement of older engines depending on their fleet size category.
- Phase 1 Medium- and Heavy-Duty Engine and Vehicle GHG Emission Standards: establishes standards for new medium- and heavy-duty engines and vehicles sold in California.
- Advanced Clean Cars Plan: Coordinates regulating smog-causing pollutants and GHG emissions through developing more stringent emissions standards for vehicles and improving the number of zero-emission vehicles on the roadways.
- Airborne Toxic Control Measure (ACTM) to Limit Diesel-Fueled Commercial Motor Vehicle Idling: prohibits idling of diesel-fueled commercial motor vehicles with gross vehicle weight ratings greater than 10,000 pounds, including buses and trucks, for more than five minutes at any location.

Local Regulations

Western Riverside Energy Partnership

The Western Riverside Energy Partnership (WREP) is a local government partnership between SCE, SCG, and 14 jurisdictions in the Western Riverside Council of Governments (WRCOG) subregion, designed to achieve energy savings, reduce utility bills, and enhance the level of comfort in municipal, commercial, and residential buildings. The WREP promotes energy efficiency by increasing community awareness and participation in energy efficiency, demand response, and self-generation programs. WREP assists businesses in addressing the specific challenges of reducing energy usage, lowering utility bills, cutting GHG emissions, and educating tenants, management, and facility operations personnel.

WRCOG Climate Action Plan

WRCOG's 2014 Climate Action Plan, dubbed *CAPtivate: A Healthy Western Riverside County*, establishes a subregional GHG emissions target of 15 percent below 2010 levels by 2020 and 49 percent below 2010 levels by 2035. Twelve of WRCOG's member cities, including Eastvale, are participating in the subregional climate action plan; the other six member cities already have adopted local climate action plans. *CAPtivate* identifies feasible actions WRCOG communities can take before 2020 and highlights more innovative approaches that will be needed to meet the 2035 target. The plan organizes GHG reduction measures into four categories, including energy, and provides strategies within each (WRCOG 2018).

City of Eastvale General Plan

The General Plan contains objectives and policies that seek to reduce energy use in Eastvale and to provide renewable energy sources. The Air Quality and Conservation Element contains energy conservation items. Goals and policies that relate to the project include:

> **Policy AQ-13**: The City encourages the use of building materials and methods which reduce emissions and energy use.

Policy AQ-14: The City encourages the use of energy-efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces, and boiler units.

Policy AQ-15: The City encourages centrally heated facilities to use automated time clocks or occupant sensors to control heating.

Policy AQ-26: Permit and encourage the use of passive solar devices and other state-of-the-art energy conservation measures.

Policy AQ-27: Support and encourage voluntary efforts to provide active and passive solar access opportunities in new developments.

Policy AQ-28: The City encourages energy-efficient materials and systems, including shade design technologies, for buildings.

Policy AQ-33: The City encourages the incorporation of energy-efficient design elements beyond code requirements, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling.

Policy AQ-34: The City shall review all development proposals to ensure that all services and utilities can be provided in an energy-efficient and effective manner.

Policy AQ-36: The City shall support the inclusion of energy-efficient design and renewable energy technologies in public and private projects.

Policy AQ-38: Promote and encourage the use of natural gas and electric vehicles in distribution centers.

City of Eastvale Municipal Code

Municipal Code Section 120.05.040 – Landscaping, general provisions: Requires a minimum percentage of parking area (30-50 percent) to be shaded.

Municipal Code Section 120.05.050 – Outdoor Lighting: Requires energy-efficient outdoor lighting fixtures and lamps (high-pressure sodium, metal halide, low-pressure sodium, hard-wired compact fluorescent or other lighting technology that is of equal or greater efficiency). New outdoor lighting fixtures shall be energy efficient with a rated average bulb life of not less than 10,000 hours.

4.4.2 Impact Analysis

a. Methodology

Construction energy demand and operational energy demand were calculated based on information contained in the California Emissions Estimator Model (CalEEMod) run prepared for the project's air quality and GHG emissions studies (Appendices 4.2 and 4.5, respectively). CalEEMod is the primary tool for estimating future project energy use. Construction energy demand considers diesel fuel consumption associated with operation of construction equipment and vendor/hauling truck trips, as well as gasoline fuel consumption associated with worker trips to and from construction sites. Energy demand for off-road construction equipment is based on anticipated equipment, usage hours, horsepower, load factors, and construction phase duration provided by the CalEEMod output, as well as *Exhaust and Crankcase Emission Factors for Nonroad Compression Ignition Engines* (USEPA 2018a). Hauling, vendor, and worker trip fuel consumption considers anticipated

daily trips, default trip lengths, and average fuel efficiency values obtained from the Bureau of Transportation Statistics [U.S. Department of Transportation (DOT) 2018].

Operational energy demand considers transportation-based fuel consumption as well as electricity and natural gas consumption associated with the project.

Operational energy demand is analyzed based on a land uses that most closely fit the project. Land uses categories used in the project CalEEMod analysis include unrefrigerated warehouse, non-asphalt surface (used to model the landscaped areas), parking lot, and other asphalt surface. Non-residential energy demand factors are based on CEC's 2006 California Commercial End-Use Survey (CEUS). The CEUS is a comprehensive study of commercial sector energy use, primarily designed to support the state's energy demand forecasting activities. The CEUS is used to calculate annual whole-building energy use estimates at the forecasting zone level by building type. The study captured detailed building systems data, building geometry, electricity and gas usage, thermal shell characteristics, equipment inventories, operating schedules, and other commercial building characteristics (CEC 2006).

Transportation-based fuel consumption is based on vehicle miles traveled and fleet mix obtained from CalEEMod outputs from the air quality analysis.

Electricity and natural gas consumption were also based on CalEEMod outputs and compared to existing consumption in the SCE and SCG service areas.

b. Project Impacts and Mitigation Measures

According to Appendix G of the CEQA Guidelines, an energy-related impact would be considered significant if the project would result in one or more of the following conditions:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Threshold 1:	Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact E-1 THE PROJECT WOULD CONSUME ELECTRICITY, NATURAL GAS, AND FUEL DURING CONSTRUCTION AND OPERATION. HOWEVER, THE PROJECT WOULD NOT PLACE SIGNIFICANT ADDITIONAL DEMAND ON SCE OR SCG AND WOULD COMPLY WITH APPLICABLE CONSERVATION STANDARDS. NEITHER PROJECT CONSTRUCTION NOR OPERATION WOULD RESULT IN WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction Energy Demand

During project construction, energy would be consumed in the form of petroleum-based fuels used to power off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, and vehicles used to deliver materials to the site. The manufacturing of construction materials would also involve energy use. Due to the large number of materials and manufacturers involved in the production of construction materials, including manufacturers in other states and countries, upstream energy use cannot be estimated reasonably or accurately. However, it is reasonable to assume that manufacturers of building materials such as

concrete, steel, lumber, or other building materials would employ energy conservation practices in the interest of minimizing the cost of doing business. Consistent with CEQA Guidelines Section 15145, this analysis does not evaluate upstream energy use as it is too speculative.

The proposed project would require site preparation and grading; pavement and asphalt installation; building construction; architectural coating; and landscaping and hardscaping. Construction would be typical for the region and building types. The total consumption of gasoline and diesel fuel during project construction was estimated using the assumptions and factors from the CalEEMod run used to estimate construction air emissions in the air quality assessment. Worker trips to and from the project site are assumed to use gasoline fuel from passenger cars and light/medium trucks.

Table 4.4-4 presents the estimated construction phase energy consumption, indicating construction equipment, vendor trips, and worker trips would consume approximately 394,000 gallons of fuel over the project construction period. Construction equipment would consume approximately 96,400 gallons of diesel fuel; vendor/haul trips would consume approximately 117,200 gallons of diesel fuel; and worker trips would consume approximately 180,500 gallons of gasoline fuel over the project's construction period of 11 months. According to the California Annual Retail Fuel Outlet Report Results (CEC-A15), retail diesel sales in Riverside County totaled approximately 132 million gallons, while retail gasoline sales totaled approximately 1.05 billion gallons in 2018 (CEC 2019d). Therefore, fuel consumption associated with project construction would account for approximately 0.16 percent of annual retail diesel sales and approximately 0.17 percent of annual retail gasoline sales in Riverside County. Therefore, energy consumption from project construction would not represent a wasteful or inefficient use of energy resources.

Table 4.4-4 Project Construction Fuel Consumption

Fuel Type[1]	Gallons	MBtu[2]
Diesel Fuel (Construction Equipment)[1]	96,372.9	12,283.7
Diesel Fuel (Vendor/Haul Trips)[2]	117,212.8	14,939.9
Other Petroleum Fuel (Worker Trips)[3]	180,528.3	19,817.0
Total	**394,114.0**	**47,041**

Notes: Totals may not add up precisely due to rounding.

[1]Fuel demand rates for construction equipment, hauling and vendor trips, and worker trips are derived from CalEEMod outputs (Urban Crossroads 2019a), fuel consumptions factors for construction vehicle engines (U.S. EPA 2018a), and fuel consumption data from the (U.S. DOT 2018). See Appendix 4.4 for calculations and analysis.

[2]CaRFG CA-GREET 3.0 fuel specification of 109,772 Btu/gallon used to identify conversion rate for fuel energy consumption for worker trips specified above. Low-sulfur Diesel CA-GREET 3.0 fuel specification of 127,460 Btu/gallon used to identify conversion rate for fuel energy consumption for construction equipment specified above (CARB 2018f).

Similar to the manufacturers utilizing energy conservation methods to reduce costs, it is reasonable to assume contractors would avoid wasteful, inefficient, and unnecessary fuel consumption during construction to reduce construction costs. The project would comply with the CARB In-Use Off-Road Diesel-Fueled Fleets Regulation, which imposes limits on idling and restricts the use of older vehicles. This would reduce fuel consumption and lead to the use of fuel-efficient vehicles on the construction site. Construction equipment would be maintained to applicable standards, and construction activity and associated fuel consumption and energy use would be temporary and typical for construction sites. Therefore, the project would not involve the inefficient, wasteful, and unnecessary use of energy during construction, and the construction-phase impact related to energy consumption would be less than significant.

Operational Energy Demand

Project operation would increase area energy demand from greater electricity, natural gas, and diesel/gasoline consumption at the site, which is currently used as a dairy farm. Natural gas and electricity would be used for heating and cooling systems, lighting, appliances, and water use. Diesel and gasoline consumption would be attributed to the employees accessing the site, truck deliveries to and from the site, and vehicles used for on-site goods movement.

The project incorporates and expresses the following design features and attributes promoting energy efficiency and sustainability:

- Project buildings would be designed to support solar PV panel systems on the rooftops. Installation of the PV system would be determined by the individual building tenant.
- On-site outdoor cargo handling equipment (CHE) (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and other on-site equipment) would be powered by non-diesel fueled engines. Non-diesel gasoline uses less energy than diesel fuel (see footnote six, Table 4.4-7 below).
- On-site indoor forklifts will be powered by electricity.
- The project would use drought-tolerant landscaping, water-efficient irrigation techniques, and high-efficiency toilets and other appliances that would reduce energy use associated with water demand management, pursuant to CalGreen requirements.

Table 4.4-5 shows the estimated electricity usage per year based on the land use type. Electricity consumption is based on CalEEMod outputs from the air quality analysis. The outputs include Title 24 standards for the various land uses of the project and are baseline values determined through CEC surveys and studies.

Table 4.4-5 Project Anticipated Electricity Consumption per Year

Land Use	Total Estimated Consumption (Kw hours/year)
Unrefrigerated Warehouse – No Rail	1,064,550
Unrefrigerated Warehouse – Rail	988,602
Total	**2,053,152**

Source: Table 5.3 *Energy by Land-Use* in GHG Report CalEEMod output (Urban Crossroads 2019b; Appendix 4.5).

Operation of the project is estimated to consume approximately 2,053,152 KWh per year, or approximately 2.05 GWh per year. SCE would serve the project, and the company provided 83,400 GWh in its service area in 2018. Furthermore, electricity consumption in Riverside County totaled approximately 15,981 GWh in 2018. Therefore, operation of the project would represent less than 0.003 percent of SCE's annual electricity demand and approximately 0.01 percent of annual electricity demand in Riverside County. Therefore, the project would not place a significant demand on SCE's electricity supply.

Natural gas would be consumed during the operation of the project including, but not limited to, space heating, water heating, and appliance use. Table 4.4-6 shows estimated natural gas consumption to operate the project, based on associated land uses and CalEEMod outputs presented in the GHG Report.

Table 4.4-6 Project Anticipated Natural Gas Consumption per Year

Land Use	Total Estimated Consumption (BTUs/year)
Unrefrigerated Warehouse – No Rail	801,216,000
Unrefrigerated Warehouse – Rail	744,053,000
Total	**1,545,269,000**

Source: Table 5.2 *Energy by Land Use- Natural Gas: Mitigated* GHG Report CalEEMod output (Urban Crossroads 2019b; Appendix 4.5)

The project would consume an estimated 1.545 million Btu (or approximately 0.015 MMThms) per year during operation. SCG would provide natural gas to the project. The company distributed approximately 5,156 MMThms and 398.5 MMthms throughout its service area and in Riverside County, respectively (CEC 2019c). The project would consume less than 0.001 percent of SCG' annual natural gas demand and approximately 0.003 percent of the total natural gas produced by SCG for Riverside County in 2018. Therefore, the project would not place a significant demand on the company's natural gas supply.

The estimated energy consumption from gasoline use was determined based on the average daily trips of the project from the Traffic Impact Analysis (Urban Crossroads 2019e; Appendix 4.11) and the estimated trip rates and length from the associated land uses within the project. The estimated number of average daily trips associated with the proposed project is used to determine the energy consumption associated with fuel use from the operation of the project. The majority of the fuel consumption would be from motor vehicles traveling to and from the project site. The GHG Report analyzed two separate CalEEMod runs in order to more accurately model emissions resulting from vehicle operations. The first run analyzed emissions from automobiles (passenger cars, small trucks, and motorcycles), which incorporated an estimated trip length of 14.4 miles and assumed a fleet mix of 61.4 percent Light-Duty-Auto vehicles (passenger cars), 25.3 percent Light-Duty Trucks, and 13.3 percent Medium-Duty Trucks. The second CalEEMod run analyzed emissions from heavy trucks accessing the proposed industrial land uses, with a fleet mix consisting entirely of heavy-duty trucks and an estimated trip length of 26.2 miles. In total, the CalEEMod outputs indicate the project would result in 14,044,263 annual VMT (Appendix C). Table 4.4-7 shows the estimated total annual fuel consumption of the project using the estimated VMT and vehicle fleet mix from the CalEEMod outputs appended to the GHG Report.

Table 4.4-7 Estimated Project Transportation Energy Consumption

Vehicle Type[1]	Percent of Vehicle Trips[2]	Annual Vehicle Miles Traveled[3]	Average Fuel Economy (miles/gallon)[4]	Total Annual Fuel Consumption (gallons)	Total Fuel Consumption (MBtu)[6]
CalEEMod Run 1: Automobiles					
Passenger Cars	61.4	5,436,936	24.2	224,667	24,665
Light/Medium Trucks	38.6	3,418,009	17.5	195,315	21,443
Total	**100.0**	**8,854,945**		**419,982**	**46,108**
CalEEMod Run 2: Heavy Trucks					
Heavy Trucks	100.0	5,189,318	6.5	798,357	101,762
Total		**14,044,263**		**1,209,339**	**147,870**

Notes: Totals may not add up precisely due to rounding.

[1]Vehicle classes provided in CalEEMod do not correspond exactly to vehicle classes in DOT fuel consumption data, except for motorcycles. Therefore, it was assumed that passenger cars correspond to the light-duty, short-base vehicle class, light/medium trucks correspond to the light-duty long-base vehicle class, and heavy trucks/other correspond to the single unit, 2-axle 6-tire or more class.

[2]Percent of vehicle trips from the GHG Report (Urban Crossroads 2019b; Appendix 4.5).

[3]Mitigated annual VMT found in Table 4.2 *Trip Summary Information* in GHG Report CalEEMod output for Run 1 and Run 2 (Ibid.).

[4]Average Fuel Economy: USEIA 2019.

[5]DOE 2018.

[6]CaRFG fuel specification of 109,786 Btu/gallon used to identify conversion rate for fuel energy consumption for automobile vehicle classes and fuel specification of 127,464 Btu/gallon used for diesel conversion rate for heavy trucks (CARB 2018; Schremp 2017).

The project would consume approximately 1.2 million gallons of fuel each year for transportation uses, or approximately 148,000 MBtu in transportation energy consumption per year, and it would use electricity and natural gas for the operation of the industrial uses. As described above, the project's estimated electricity and natural gas demand would account for 0.01 percent or less of SCE's and SCG annual demand in Riverside County. Given this small fraction of regional energy consumption, the project's estimated electricity and natural gas use would not have a substantial effect on energy supplies or place significant demand on SCE or SCG, which would serve the site. Furthermore, the project would be subject to applicable building codes at the time of construction, which are continuously evolving to include more energy-efficient requirements. The project would also implement signage intended to reduce truck idling, require operators of the proposed facilities to encourage trucks to incorporate energy efficiency improvement features, provide EV and carpool parking, and design buildings to accommodate electric-powered forklifts and other interior vehicles to reduce operational energy demand, in accordance with Mitigation Measures AQ-1 through AQ-4 described in Section 4.2, *Air Quality*.

In conclusion, energy consumption associated with project construction would be temporary and typical of similar projects, and would not result in wasteful, inefficient, or unnecessary energy use. The operation of the project would increase the use of electricity, natural gas, and gasoline/diesel fuel from existing conditions on-site. However, the increase would be typical of other industrial projects and otherwise would not result in wasteful, inefficient, or unnecessary energy use, and energy providers would have sufficient supplies to serve the project. The project would comply with applicable regulations. Therefore, the operation would not result in wasteful or unnecessary energy consumption or conflict with existing energy standards and regulations. Impacts would be less than significant, and no mitigation would be required.

Mitigation Measures

Mitigation Measures AQ-1 through AQ-4.

Significance After Mitigation

Impacts would be less than significant with mitigation.

Threshold 2:	Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact E-2 THE PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT STATE REGULATIONS OR THE EASTVALE GENERAL PLAN. THERE WOULD BE NO IMPACT.

As discussed above under Regulatory Setting, SB 100 mandates 100 percent clean electricity for California by 2045. Because the project would be powered by the existing electricity grid, the project would eventually be powered by renewable energy mandated by SB 100 and would not conflict with this statewide plan. Additionally, project buildings would be designed to support solar PV panel systems on the rooftops for potential clean energy produced on-site. The buildings would also be subject to energy efficiency standards pursuant to CCR Title 24 requirements.

As described above in *Regulatory Setting*, the General Plan contains policies targeting energy efficiency. As demonstrated in Table 4.4-8, the project would be consistent with applicable General Plan policies intended to encourage energy efficiency. As such, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and there would be no impact.

Table 4.4-8 Project Consistency with Applicable General Plan Policies

Policies	Project Consistency
Chapter 7: Air Quality and Conservation	
Policy AQ-13: The City encourages the use of building materials and methods which reduce emissions and energy use.	**Consistent.** The project buildings would be solar PV ready and would also be designed in compliance with Title 24 requirements to reduce emissions and energy use.
Policy AQ-14: The City encourages the use of energy-efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces, and boiler units.	**Consistent.** The project buildings would be designed and constructed to be solar ready, to facilitate easy installation of solar PV infrastructure for solar power generation. Project buildings would be designed to implement energy conservation features, including efficient HVAC systems, pursuant to the most recent Title 24 standards.
Policy AQ-15: The City encourages centrally heated facilities to use automated time clocks or occupant sensors to control heating.	**Consistent.** Project buildings would be designed pursuant to Title 24 requirements, which mandates that unitary heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat with a clock mechanism.
Policy AQ-26: Permit and encourage the use of passive solar devices and other state-of-the-art energy conservation measures.	**Consistent.** The project buildings would be designed and constructed to be solar ready, to facilitate easy installation of solar PV infrastructure for solar power generation. Buildings would be designed to implement energy conservation features, such as energy efficient lighting and HVAC systems, pursuant to the most recent Title 24 standards. The project would conform to Municipal Code Section 120.05.050 requirements for outdoor lighting, to the extent consistent with ALUCP requirements for compatibility with Zone C. The parking lot area lighting would utilize energy-efficient LED shielded fixtures with energy savings control options and occupancy sensing units.

Policies	Project Consistency
Policy AQ-27: Support and encourage voluntary efforts to provide active and passive solar access opportunities in new developments.	**Consistent.** The project buildings would be designed and constructed to be solar ready, to facilitate easy installation of solar PV infrastructure for solar power generation.
Policy AQ-28: The City encourages energy-efficient materials and systems, including shade design technologies, for buildings.	**Consistent.** The project buildings would be designed in compliance with Title 24 requirements to reduce emissions and energy use, including shade design technologies, as mandated by the 2019 CalGreen update. Windows would be anti-reflective to reduce solar heat, ultraviolet radiation and glare.
Policy AQ-33: The City encourages the incorporation of energy-efficient design elements beyond code requirements, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling.	**Consistent.** Project buildings would be designed in compliance with Title 24 requirements to reduce emissions and energy use, including shade design technologies, as mandated by the 2019 CalGreen update.
Policy AQ-34: The City shall review all development proposals to ensure that all services and utilities can be provided in an energy-efficient and effective manner.	**Consistent.** The project developer would work with utilities providers to relocate utilities along Archibald Avenue and extend utilities along future Limonite Avenue in conjunction with the project.
Policy AQ-36: The City shall support the inclusion of energy-efficient design and renewable energy technologies in public and private projects.	**Consistent.** The project buildings would be designed and constructed to be solar ready, to facilitate easy installation of solar PV infrastructure for solar power generation. Project buildings would be designed to implement energy conservation features, including efficient HVAC systems, pursuant to the most recent Title 24 standards. Windows would be anti-reflective to reduce solar heat, ultraviolet radiation and glare. Parking spaces would be dedicated for EV charging and include the installation of infrastructure for future charging facilities.
Policy AQ-38: Promote and encourage the use of natural gas and electric vehicles in distribution centers.	**Consistent:** On-site indoor forklifts would be powered by electricity.

Source: Eastvale 2012

4.4.3 Cumulative Impacts

As discussed in Section 3, *Environmental Setting*, cumulative development in Eastvale and surrounding cities and county would include residential development, industrial, commercial, and public facilities/infrastructure. Each of the future developments would increase the consumption of energy and energy demand in the region. Energy consumption by the cumulative projects would be regulated by Energy Efficiency Standards embodied in Title 24 of the California Building Code, which apply to new construction of both residential and non-residential buildings, and indirect energy reduction measures from GHG reduction policies. Homes built in 2020 and beyond will be highly efficient and include PV generation to meet the home's expected annual electric needs (CEC 2018b).

Eastvale and WRCOG have policies and programs to reduce overall energy consumption in Eastvale and the region. Pursuant to the policies included in its General Plan, Eastvale encourages energy efficient design in public and private development. The WRCOG participates in the Home Energy Renovation Opportunity (HERO) financing program for residents to conduct energy-efficient home improvements and afford renewable energy products, and the WREP is designed to optimize opportunities to achieve energy savings, in municipal, commercial, and residential buildings

(WRCOG n.d.). SCE has programs for residences and businesses to reduce electricity consumption, including incentives for solar systems and EVs (SCE 2019a). SCG provides rebates on energy efficient clothes washers, dishwashers, attic/wall insulation, natural gas storage water heaters and furnaces (SCG 2019). Planned, pending, and reasonably foreseeable projects would be subject to these applicable policies, and ongoing implementation of the programs described above would continue to reduce energy demand associated with future projects.

Moreover, as previously mentioned, SCE customers consumed 29 percent of the state's electricity use and SCG customers consumed 40 percent of the state's natural gas use. The cumulative projects in the area would consume a fraction of the energy supplies from SCE and SCG and would not substantially increase statewide energy demand. Moreover, SCG projects natural gas demands to decrease at an annual average rate of approximately 0.74 percent from 2018 to 2035, and SCE aims to double the amount of carbon-free electricity in its supply by 80 percent (SCE 2019b). Therefore, SCG and SCE would have adequate supplies and the cumulative projects would not place a significant demand on the suppliers. Therefore, no cumulative impacts (including project specific impacts and operations) are anticipated to result in the wasteful use of energy. Impacts would be less than significant.

4.5 Greenhouse Gas

This section analyzes greenhouse gas (GHG) emissions associated with the project and potential impacts related to climate change. It considers both the temporary impacts relating to construction activity and potential long-term impacts associated with project operation. The analysis is based on data and information in the following reports prepared by Urban Crossroads: *Greenhouse Gas Analysis* (2019b; Appendix 4.5) and *Traffic Impact Analysis* (2019e; Appendix 4.11).

4.5.1 Setting

a. Climate Change and Greenhouse Gases

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere, and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills.

Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and SF_6 (United States Environmental Protection Agency [USEPA] 2018). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO_2e), and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane CH_4 has a GWP of 25, meaning its global warming effect is 25 times greater than carbon dioxide on a molecule per molecule basis (Intergovernmental Panel on Climate Change [IPCC] 2007).

b. Greenhouse Gas Emissions Inventory

Worldwide anthropogenic emissions of GHGs were approximately 46,000 million metric tons (MMT, or gigatonne) CO_2e in 2010 (IPCC 2014). CO_2 emissions from fossil fuel combustion and industrial processes contributed about 65 percent of total emissions in 2010. Of anthropogenic GHGs, carbon dioxide was the most abundant accounting for 76 percent of total 2010 emissions. Methane emissions accounted for 16 percent of the 2010 total, while nitrous oxide and fluorinated gases accounted for six percent and two percent respectively (IPCC 2014).

Federal Emissions Inventory

Total United States GHG emissions were 6,511.3 million metric tons (MMT or gigatonnes) of CO_2e in 2016 (USEPA 2018). Total United States emissions have increased by 2.4 percent since 1990; emissions decreased by 1.9 percent from 2015 to 2016 (USEPA 2018). The decrease from 2014 to 2015 was a result of multiple factors, including: (1) substitution from coal to natural gas and other

non-fossil energy sources in the electric power sector, and (2) warmer winter conditions in 2016 resulting in a decreased demand for heating fuel in the residential and commercial sectors (USEPA 2018). Since 1990, U.S. emissions have increased at an average annual rate of 0.1 percent. In 2015, the industrial and transportation end-use sectors accounted for 29 percent each of GHG emissions (with electricity-related emissions distributed), respectively. Meanwhile, the residential and commercial end-use sectors accounted for 15 percent and 16 percent of CO_2e emissions, respectively (USEPA 2018).

California Emissions Inventory

Based on the California Air Resources Board's (CARB) California Greenhouse Gas Inventory for 2000-2017, California produced 424 MMT of CO_2e in 2016 (CARB 2018a). The major source of GHGs in California is associated with transportation, contributing 40 percent of the state's total GHG emissions. The industrial sector is the second largest source, contributing 21 percent of the state's GHG emissions, and electric power accounted for approximately 15 percent (CARB 2018a). California emissions are due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate. CARB has projected that statewide unregulated GHG emissions for the year 2020 will be 509 MMT of CO_2e (CARB 2018b). These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

Local Emissions Inventory

Eastvale does not have an adopted Climate Action Plan or current GHG inventory. The Western Riverside Council of Governments (WRCOG), the subregional planning agency which includes Eastvale, prepared a Subregional Climate Action Plan (CAP) with a 2010 GHG inventory for participating jurisdictions. According to the Subregional CAP, Eastvale produced approximately 200,000 metric tons (MT) CO_2e in 2010, which equates to a per capita emissions rate of 3.6 MT CO_2e (WRCOG 2014). Similar to the State, the major source of GHGs in Eastvale is associated with transportation, contributing 70 percent of the City's total emissions. Residential energy use is the second largest source, contributing 17 percent of the City's emissions, followed by commercial/industrial uses, which contributed 12 percent.

c. Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources though potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Long-term trends have found that each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The observed global mean surface temperature (GMST) for the decade from 2006 to 2015 was approximately 0.87° Celsius (C) (0.75°C to 0.99°C) higher than the average GMST over the period from 1850 to 1900. Furthermore, several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations confirm that LSAT as well as sea surface temperatures have increased. Due to past and current activities, anthropogenic GHG emissions are increasing global mean surface temperature at a rate of 0.2°C per decade. In addition to these findings, there are identifiable signs that global warming is currently

taking place, including substantial ice loss in the Arctic over the past two decades (IPCC 2014 and 2018).

According to *California's Fourth Climate Change Assessment*, statewide temperatures from 1986 to 2016 were approximately 1° Fahrenheit (F) to 2°F higher than those recorded from 1901 to 1960. Potential impacts of climate change in California may include loss in water supply from snow pack, sea level rise, more extreme heat days per year, more large forest fires, and more drought years (State of California 2018). While there is growing scientific consensus about the possible effects of climate change at a global and statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy. In addition to statewide projections, *California's Fourth Climate Change Assessment* includes regional reports that summarize climate impacts and adaptation solutions for nine regions of the state as well as regionally-specific climate change case studies (California 2018). Below is a summary of some of the potential effects that could be experienced in California as a result of climate change.

Air Quality

Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone (O_3), but the magnitude of the effect, and therefore its indirect effects, are uncertain. As temperatures have increased in recent years, the area burned by wildfires throughout the state has increased, and wildfires have been occurring at higher elevations in the Sierra Nevada Mountains (California 2018). If higher temperatures continue to be accompanied by an increase in the incidence and extent of large wildfires, air quality would worsen. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (California Natural Resources Agency 2009).

Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future precipitation trends and water supplies in California. For example, many southern California cities have experienced their lowest recorded annual precipitation twice within the past decade; however, in a span of only two years, Los Angeles experienced both its driest and wettest years on record (California Department of Water Resources [DWR] 2008). This uncertainty regarding future precipitation trends complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. However, the average early spring snowpack in the western United States, including the Sierra Nevada Mountains, decreased by about ten percent during the last century. During the same period, sea level rose over 5.9 inches along the central and southern California coast (California 2018). The Sierra snowpack provides the majority of California's water supply by accumulating snow during the state's wet winters and releasing it slowly during the state's dry springs and summers. A warmer climate is predicted to reduce the fraction of precipitation falling as snow and result in less snowfall at lower elevations, thereby reducing the total snowpack (DWR 2008; California 2018). The State of California projects that average spring

snowpack in the Sierra Nevada and other mountain catchments in central and northern California will decline by approximately 66 percent from its historical average by 2050 (California 2018).

Hydrology and Sea Level Rise

As discussed above, climate change could potentially affect the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Climate change has the potential to induce substantial sea level rise in the coming century (California 2018). The rising sea level increases the likelihood and risk of flooding. The rate of increase of global mean sea levels over the 2001-2010 decade, as observed by satellites, ocean buoys and land gauges, was approximately 3.2 millimeters (mm) per year, which is double the observed 20th century trend of 1.6 mm per year (World Meteorological Organization [WMO] 2013). As a result, global mean sea levels averaged over the last decade were about eight inches higher than those of 1880 (WMO 2013). Sea levels are rising faster now than in the previous two millennia, and the rise is expected to accelerate, even with robust GHG emission control measures. The most recent IPCC report predicts a mean sea–level rise of 10 to 37 inches by 2100 (IPCC 2018). A rise in sea levels could completely erode 31 to 67 percent of southern California beaches, result in flooding of approximately 370 miles of coastal highways during 100-year storm events, jeopardize California's water supply due to salt water intrusion, and induce groundwater flooding and/or exposure of buried infrastructure (California 2018). In addition, increased CO_2 emissions can cause oceans to acidify due to the carbonic acid it forms. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture

California has a $50 billion annual agricultural industry that produces over a third of the country's vegetables and two-thirds of the country's fruits and nuts (California Department of Food and Agriculture 2018). Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, certain regions of agricultural production could experience water shortages of up to 16 percent; water demand could increase as hotter conditions lead to the loss of soil moisture; crop-yield could be threatened by water-induced stress and extreme heat waves; and plants may be susceptible to new and changing pest and disease outbreaks (California 2018). In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (California Climate Change Center 2006).

Ecosystems and Wildlife

Climate change and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the annual average maximum daily temperatures in California could rise by 4.4 to 5.8°F in the next 50 years and by 5.6 to 8.8°F in the next century (California 2018). Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals related to: (1) timing of ecological events; (2) geographic distribution and range; (3) species' composition and the incidence of nonnative species within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan 2006; California 2018).

d. Regulatory Setting

Federal Regulations

The U.S. Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al*. ([2007] 549 U.S. 05-1120) held that the USEPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act. The USEPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines, and requires annual reporting of emissions. In 2012, the USEPA issued a Final Rule that establishes the GHG permitting thresholds that determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

In 2014, the U.S. Supreme Court in *Utility Air Regulatory Group v. EPA* (134 S. Ct. 2427 [2014]) held that USEPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits that are otherwise required (based on emissions of other pollutants) may continue to require limitations on GHG emissions based on the application of Best Available Control Technology (BACT).

California Regulations

CARB is responsible for the coordination and oversight of State and local air pollution control programs in California. California has numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below.

California Advanced Clean Cars Program

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, USEPA granted the waiver of Clean Air Act preemption to California for its GHG emission standards for motor vehicles beginning with the 2009 model year. Pavley I regulates model years from 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the Low Emissions Vehicles (LEV), Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs, and would provide major reductions in GHG emissions. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels (CARB 2011).

Assembly Bill 32

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006," which was signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO_2e. The Scoping Plan was approved by CARB on December 11, 2008 and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction

measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan.

In May 2014, CARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan update defined CARB's climate change priorities for the next five years and set the groundwork to reach post-2020 statewide goals. The update highlighted California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the State's longer-term GHG reduction strategies with other State policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use (CARB 2014).

Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Natural Resources Agency (Resources Agency) adopted amendments to the CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and climate change impacts.

Senate Bill 375

SB 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPOs) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. WRCOG is a subregion within the Southern California Association of Governments (SCAG) region. SCAG was assigned targets of an eight percent reduction in GHGs from transportation sources by 2020 and a 19 percent reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

Senate Bill 32

On September 8, 2016, the governor signed Senate Bill 32 (SB 32) into law, extending AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies and policies, such as SB 350 and SB 1383 (see below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with statewide per capita goals of six metric tons (MT) CO_2e by 2030 and two MT CO_2e by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate

for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in the state (CARB 2017).

Senate Bill 1383

Adopted in September 2016, SB 1383 requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. The bill requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

The bill also requires the California Department of Resources Recycling and Recovery (CalRecycle), in consultation with the CARB, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

Senate Bill 100

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the state's Renewables Portfolio Standard Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

Executive Order B-55-18

On September 10, 2018, the governor issued Executive Order (EO) B-55-18, which established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

California Environmental Quality Act

Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted CEQA Guidelines provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. To date, a variety of air districts have adopted quantitative significance thresholds for GHGs.

For more information on the Senate and Assembly Bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and www.arb.ca.gov/cc/cc.htm.

Local Regulations

SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy

On September 23, 2010, CARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. SCAG was assigned targets of an eight percent reduction in GHGs from transportation sources by 2020 and a 13 percent reduction in GHGs from transportation sources by

2035. On April 7, 2016, SCAG adopted the 2016-2040 RTP/SCS. It includes a number of strategies and objectives to encourage transit-oriented and infill development and use of alternative transportation to minimize vehicle use.

WRCOG Climate Action Plan

WRCOG's 2014 Climate Action Plan, dubbed *CAPtivate: A Healthy Western Riverside County*, establishes a subregional GHG emissions target of 15 percent below 2010 levels by 2020 and 49 percent below 2010 levels by 2035 (WRCOG 2018). The WRCOG Subregional CAP establishes 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. Eastvale is a participant party to the WRCOG Subregional CAP and is subject to applicable policies and programs.

City of Eastvale General Plan

The City's General Plan contains objectives and policies that seek to reduce GHG emissions in the City. The Land Use, Circulation and Infrastructure, and Air Quality and Conservation Elements contains GHG reduction items. Goals and policies that relate to the project include:

Policy LU-11: Development should be located to capitalize on multimodal transportation opportunities and promote compatible land use arrangements that reduce reliance on the automobile.

Policy LU-28: The Land Use Map should provide for land use arrangements that reduce reliance on the automobile and improve opportunities for pedestrian, bicycle, neighborhood electric vehicle, and transit use in order to minimize congestion and air pollution.

Policy C-25: Incorporate the potential for public transit service in the design of developments that are identified as major trip attractions (i.e., retail and employment centers).

Policy AQ-3: Reduce vehicle miles traveled and motor vehicle emissions through local job creation.

Policy AQ-10: The City encourages new cooperative relationships between employers and employees to reduce vehicle miles traveled.

Policy AQ-12: The City encourages employee rideshare and transit incentives for employers with more than 25 employees at a single location.

Policy AQ-13: The City encourages the use of building materials and methods which reduce emissions and energy use.

Policy AQ-14: The City encourages the use of energy-efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces, and boiler units.

Policy AQ-17: To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, the Environmental Protection Agency, and the California Air Resources Board.

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.

Policy AQ-27: Support and encourage voluntary efforts to provide active and passive solar access opportunities in new developments.

Policy AQ-28: The City encourages energy-efficient materials and systems, including shade design technologies, for buildings.

Policy AQ-33: The City encourages the incorporation of energy-efficient design elements beyond code requirements, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling.

Policy AQ-28: Promote and encourage the use of natural gas and electric vehicles in distribution centers.

4.5.2 Impact Analysis

a. Methodology

Calculations of CO_2, CH_4, and N_2O emissions are provided to identify the magnitude of potential project effects. The analysis focuses on CO_2, CH_4, and N_2O because these make up 98.9 percent of all GHG emissions by volume (IPCC 2014) and are the GHG emissions that the project would emit in the largest quantities. Emissions of all GHGs are converted into their equivalent GWP in terms of CO_2 (CO_2e). GHG emissions associated with the proposed project were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 (see Appendix 4.5 for the Greenhouse Gas Analysis).

Construction Emissions

Although construction activity is addressed in this analysis, the California Air Pollution Control Officers Association (CAPCOA) does not discuss whether any of the suggested threshold approaches adequately address impacts from temporary construction activity. As stated in the *CEQA and Climate Change* white paper, "more study is needed to make this assessment or to develop separate thresholds for construction activity" (CAPCOA 2008). Nevertheless, air districts such as the South Coast Air Quality Management District (SCAQMD) (2011) have recommended amortizing construction-related emissions over a 30-year period in conjunction with the proposed project's operational emissions.

Construction of the proposed project would generate temporary GHG emissions primarily as a result of operation of construction equipment on-site, vehicle trips from the transport of construction workers to and from the project site, and from the export of earth materials off-site by heavy trucks. CalEEMod provides an estimate of emissions associated with the construction period, based on the duration of construction activity, area of disturbance, and anticipated equipment used during construction.

Operational Emissions

CalEEMod provides operational emissions of CO_2, N_2O, and CH_4. Emissions from energy use include electricity and natural gas use. The emissions factors for natural gas combustion are based on EPA's AP-42 (*Compilation of Air Pollutant Emissions Factors*) and CCAR General Reporting Protocol. Electricity emissions are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour (CAPCOA 2017). The default electricity consumption values in CalEEMod include the California Energy Commission [CEC]-sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies.

Emissions associated with area sources, including consumer products, landscape maintenance, and architectural coating were calculated in CalEEMod and utilize standard emission rates from CARB, USEPA, and emission factor values provided by the local air district (CAPCOA 2017).

Emissions from waste generation were also calculated in CalEEMod and are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste (CAPCOA 2017). Waste disposal rates by land use and overall composition of municipal solid waste in California was primarily based on data provided by CalRecycle.

Emissions from water and wastewater usage calculated in CalEEMod were based on the default electricity intensity from the CEC's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for northern and southern California.

The project related GHG emissions are derived primarily from vehicle trips generated by the project. Trip characteristics available from The *Homestead Traffic Impact Analysis* (TIA) was utilized in this analysis (Urban Crossroads 2019e; Appendix 4.11). The project is expected to generate a total of approximately 2,086 trip-ends per day (actual vehicles), which includes 390 truck trip-ends per day. The Riverside County Traffic Analysis Model (RivTAM) was used to estimate trip lengths for passenger vehicles and trucks generated by the proposed project. Two separate CalEEMod runs were analyzed in order to more accurately model emissions resulting from vehicle operations. The first run analyzed passenger car emissions, which incorporated the RivTAM calculated trip length of 14.4 miles for passenger cars. The second run analyzed truck emissions, which incorporated the RivTAM truck trip length of 36.2 miles. In addition, it is common for industrial buildings to require cargo handling. Therefore, the operation of four 200-horsepower yard tractors operating four hours a day was assumed, based on the proposed square footage and consistent with SCAQMD latest available data (Appendix 4.5).

b. Significance Thresholds

Based on Appendix G of the CEQA Guidelines, impacts related to GHG emissions from the project would be significant if the project would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and/or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

The vast majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to significant cumulative effects, even if individual changes resulting from a project are limited. As a result, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15064[h][1]).

According to CEQA Guidelines, projects can tier from a qualified GHG reduction plan that allows for project-level evaluation of GHG emissions through the comparison of the project's consistency with the GHG reduction policies included in a qualified GHG reduction plan. This approach is considered by the Association of Environmental Professionals (AEP) in its white paper, *Beyond Newhall and 2020*, to be the most defensible approach presently available under CEQA to determine the

significance of a project's GHG emissions (AEP 2016). The SCAQMD has not adopted GHG emissions thresholds that apply to land use projects where the SCAQMD is not the lead agency. However, Eastvale does not have an adopted CAP which contains adopted quantitative GHG emissions thresholds.

To evaluate whether a project may generate a quantity of GHG emissions that may have a significant impact on the environment, a number of operational bright-line significance thresholds have been developed by state agencies. Significance thresholds are numeric mass emissions thresholds that identify the level at which additional analysis of project GHG emissions is necessary. Projects that attain the significance target, with or without mitigation, would result in less than significant GHG emissions.

SCAQMD has adopted a numerical threshold of 10,000 MT CO_2e per year for industrial, stationary projects. The SCAQMD adopted industrial threshold was selected because the proposed project is more analogous to an industrial use than any other land use such as commercial or residential in terms of its expected operating characteristics. In addition, the traffic generation rates used in the Traffic Impact Analysis is based on warehouse and industrial land use categories. The 10,000 MT CO_2e threshold has been used as the significance threshold by many local government lead agencies throughout the SCAG region since the SCAQMD adopted this threshold. To be a conservative, the Greenhouse Gas Analysis applied the 10,000 MTCO_2e threshold to all sources of project-related GHG emissions whether a stationary source, mobile source, area source, or other, where the SCAQMD uses the threshold to determine the significance of stationary source emissions.

Use of this threshold is also consistent with guidance provided in the CAPCOA CEQA and Climate Change handbook, as such, the City has opted to use a non-zero threshold approach based on Approach 2 of the handbook (CAPCOA 2008). Threshold 2.5 (Unit-Based Thresholds Based on Market Capture) establishes a numerical threshold based on capture of approximately 90 percent of emissions from future development. The latest threshold developed by SCAQMD using this method is 10,000 MT CO_2e based on the review of 711 CEQA projects.

c. Project Impacts and Mitigation Measures.

Threshold:	Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact GHG-1 THE PROPOSED PROJECT WOULD GENERATE GHG EMISSIONS THAT EXCEED THE ESTABLISHED GHG INDUSTRIAL THRESHOLD EVEN WITH THE IMPLEMENTATION OF MITIGATION MEASURES BECAUSE THERE ARE NO FEASIBLE MEASURES TO CONTROL MOBILE EMISSIONS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Development of the proposed project would generate GHG emissions from construction and operation of the project. As detailed above the project would produce direct and indirect GHG emissions from the use of construction equipment, consumer products and landscaping equipment, electrical and natural gas consumption, water use and wastewater generation, and from the disposal of solid waste. Mobile emissions from trucks accessing the site and from employee' vehicles would be the greatest source of GHG emissions from the project. Table 4.5-1 details the GHG emissions associated with the project.

Emissions of O_3, NO_X, VOC, and CO have been decreasing in the South Coast Air Basin (SCAB) since 1975. These decreases result primarily from motor vehicle controls and reductions in evaporative emissions. Although vehicle miles traveled (VMT) in the SCAB continue to increase, NO_X and VOC

levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower emitting vehicles. NO_X emissions from electric utilities have also decreased due to use of cleaner fuels and renewable energy (CARB 2013).

The latest State of the Air Report compiled for the SCAB was produced in 2018 and indicates that air quality in the SCAB has significantly improved in terms of both pollution levels and high pollution days over the past three decades. The area's average number of high O_3 days dropped from 230 days in the initial 2000 State of the Air report (1996–1998) to 146 days in the 2018 report. The region has also seen a dramatic reduction in particulate matter pollution during this same period. (American Lung Association 2018.)

Table 4.5-1 Estimated GHG Emissions without Mitigation

Emission Source	Emissions (MT CO_2e per year)
Construction	
Amortized over 30 years	126.73
Operational (excluding Mobile)	
Area	0.08
Energy	815.17
Solid Waste	510.83
Water	1,104.47
On-site Equipment	205.01
Mobile	
Passenger Cars	2,730.03
Trucks	6,356.57
Total GHG Emissions	**11,848.90**
SCAQMD Threshold	10,000
Project Exceeds Threshold?	**Yes**

Source: Urban Crossroads 2019b, Appendix 4.5

The project would include a number of project design features that would help reduce GHG emissions:

- Infrastructure to support photo-voltaic solar panels
- All indoor forklifts would be powered by electricity
- A water efficient landscape plan

However, the project would still result in approximately 11,848 MT CO_2e per year from construction, area, energy, waste, water usage, and mobile emission sources, which would exceed SCAQMD emission thresholds and result in a potentially significant impact. GHG emissions from mobile sources represent 77 percent of total GHG emissions that would be created as a result of project development. Because neither the project proponent nor the lead agency has regulatory authority over tailpipe emissions, there are no feasible mitigation measures that would reduce GHG emissions to levels that are less than significant. The following mitigation measures would reduce GHG emissions to the extent feasible. However, the project would have significant and unavoidable impacts.

Mitigation Measures

Implementation of Mitigation Measures AQ-1 through AQ-4, detailed in Section 4.2, *Air Quality*, would be implemented to reduce GHG emissions. Mitigation Measure AQ-1 would require signs at truck access gates to direct truck and delivery drivers to reduce idling time. Mitigation Measure AQ-2 would require the facility operators to encourage trucks to incorporate energy efficiency improvements to reduce fuel consumption. Mitigation Measure AQ-3 would require designated electric vehicle (EV) charging and carpool spaces in the parking areas, and Mitigation Measure AQ-4 would require the building design to include infrastructure to support electric-powered forklifts and other operating interior vehicles.

Significance After Mitigation

With the implementation of the mitigation measures, the project would still exceed the SCAQMD threshold of 10,000 MT CO_2e per year. Besides the project design features detailed under Impact GHG-1, there are no feasible measures that would reduce emissions from vehicle trips generated by the proposed project to a less than significant level. Therefore, project-related GHG emissions would remain significant and unavoidable.

Threshold:	Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

Impact GHG-2 THE PROJECT WOULD BE CONSISTENT WITH THE GOALS AND GHG REDUCTION MEASURES OF THE SCAG'S 2040 RTP/SCS AND WRCOG'S CAP, AS WELL AS WITH APPLICABLE MEASURES IN THE 2008 AND 2017 SCOPING PLAN. HOWEVER, THE PROJECT WOULD EXCEED ESTABLISHED THRESHOLDS TO MEET GHG REDUCTION TARGETS AND POLICIES. THEREFORE, IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

SCAG 2040 RTP/SCS

The SCAG 2040 RTP/SCS was created to outline a growth strategy to meet GHG emission reduction targets. As discussed in Section 4.2, *Air Quality*, the project would not exceed the population growth assumptions and would not inhibit the measures identified in the 2040 RTP/SCS to meet SCAG's required targets from being implemented. Therefore, the project would not conflict with the SCAG 2040 MTP/SCS.

WRCOG Climate Action Plan

Eastvale is a participating agency in the Subregional CAP developed by WRCOG. This plan includes measures established to reduce GHGs in the region. Table 4.5-2 provides an evaluation of project consistency with applicable GHG reduction measures in WRCOG's Subregional CAP.

Table 4.5-2 Project Consistency with WRCOG Subregional CAP

Measure	Consistent?
SR-1: Renewables Portfolio Standard	**Consistent.** The project would be provided energy from Southern California Edison, which would comply with renewable portfolio requirements.
SR-2: California Building Energy Efficiency Standards (Title 24, Part 6)	**Consistent.** The project would comply with the most recent California Building Energy Efficiency Standards in Title 24, Part 6.
SR-4: HERO Commercial Program	**Consistent.** The project does not have established occupants for the proposed buildings. Future tenants can choose to participate in this program and the project would not conflict with its implementation.
SR-5: Utility Programs	**Consistent.** The project does not have established occupants for the proposed buildings. Future tenants can choose to participate in this program and the project would not conflict with its implementation.
SR-6: Pavley and Low Carbon Fuel Standards	**Consistent.** This measure would apply to all fuel purchased and in the state.
SR-11: Goods Movement	**Consistent.** There are no established tenants for the project. However, trucks from warehouse or facilities involved in the movement of goods would comply with established engine and fuel standards.
SR-12: Electric Vehicle Plan and Infrastructure	**Consistent.** The project would provide EV infrastructure and charging stations in the parking lot.
SR-13: Construction and Demolition Waste Diversion	**Consistent.** The project would be required to recycle a minimum of 65 percent of construction materials and project operations in accordance with State and City requirements.
SR-14: Water Conservation and Efficiency	**Consistent.** The project would implement a water efficient landscape plan consistent with City requirements, use high-efficient fixtures and otherwise comply with the California Green Building Standards Code.
T-2: Bicycle Parking	**Consistent.** The project would comply with the City of Eastvale standards for bicycle parking.
T-12: Limit Parking Requirements for New Development	**Consistent.** The project would comply with the City of Eastvale parking standards.

Source: Urban Crossroads 2019b

2008 Scoping Plan and AB 32

The 2008 Scoping Plan identifies strategies to reduce California's GHG emissions in support of AB 32 which requires GHG reductions to 1990 levels by 2020. 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. Table 4.5-3 identifies the Scoping Plan measures, indicates whether they are applicable to the proposed project and, if so, if the project is consistent with the measures. As shown in the table, the project would not conflict with any of the provisions of the 2008 Scoping Plan and supports a number of the action measures.

Table 4.5-3 Project Consistency with the 2008 Scoping Plan

Measure	Consistent?
Cap-and-Trade Program	**Consistent.** The tenants for the proposed project are speculative but could include industrial uses. No power or fuel generation would occur as part of the project and the project would not interfere with participation in the Cap-and-Trade Program by eligible businesses.
Light-Duty Vehicle Standards	**Not applicable.** These are CARB enforced measures that are not directly applicable to the proposed project, but to vehicles sold in California. Emission standards for vehicles have become more stringent over time.
Energy Efficiency	**Consistent.** The project would include a variety of building, water, and solid waste efficiency measures, consistent with the most current CALGreen and City requirements.
Renewables Portfolio Standard	**Consistent.** The project would be provided energy from Southern California Edison, which would comply with renewable portfolio requirements.
Low Carbon Fuel Standard	**Not applicable.** This establishes a reduced carbon intensity for transportation fuels. Vehicles accessing the site and obtaining fuel in California would utilize fuels that meet current standards.
Regional Transportation-Related GHG Targets	**Not applicable.** This is a land use and transportation planning initiative that would be implemented on a regional basis (e.g., sustainable community strategy).
Vehicle Efficiency Measures	**Not applicable.** This identifies measures such as tire-fuel efficiency, lower friction oil, and reduced air conditioning use which is not applicable to the project.
Goods Movement	**Not applicable.** Identifies measures to improve goods movement efficiencies such as advanced combustion strategies, friction reduction, waste heat recovery, and electrification of accessories. While these measures are not directly applicable to the project, any activity associated with goods movement would be required to comply with these measures as adopted. As such, the proposed project would not interfere with their implementation.
Million Solar Roofs (MSR) Program	**Consistent.** The project includes the installation of infrastructure within the roof designed to support solar panels in the future, consistent with Title 25 requirements.
Medium- and Heavy-Duty Vehicles.	**Not applicable.** MD and HD trucks and trailers for industrial uses are subject to aerodynamic and hybridization requirements as established by CARB; the proposed project would not interfere with implementation of these requirements and programs.
Industrial Emissions	**Not applicable.** These measures are for larger-scaled industrial projects and other more intensive uses such as refineries.
High Speed Rail	**Not applicable.** The project has no relationship to the development or operation of a high speed rail system.
Green Building Strategy	**Consistent.** The project would include a variety of building, water, and solid waste efficiency measures, consistent with the most current CALGreen requirements.
High Global Warming Potential Gases	**Not applicable.** The project would not include uses which release high GWP gases. Any uses in the project would comply with future and current requirements (e.g., air conditioning, fire protection suppressant).
Recycling and Waste	**Consistent.** The project would be required to recycle a minimum of 65 percent of waste from construction and operation in accordance with State and City requirements.

Measure	Consistent?
Sustainable Forest	**Not applicable.** This measure targets forest land and the forest sector. There are no forestry components associated with the proposed project.
Water	**Consistent.** The project would include low-flow fixtures and efficient landscaping in accordance with State requirements.
Agriculture	**Not applicable.** The project would not involve an agricultural use.

Source: Urban Crossroads 2019b

2017 Scoping Plan and EO B-55-18

The 2017 Scoping Plan outlines a pathway to achieving the reduction targets set under SB 32, which is considered an interim target toward meeting the State's long-term 2045 goal established by EO B-55-18. The 2017 Scoping Plan also provides policies and outlines a pathway to achieving the reduction targets set under SB 32. Many strategies in the Scoping Plan are not applicable to specific project-level applications. Table 4.5-4 identifies the Scoping Plan measures, indicates whether they are applicable to the proposed project and, if so, if the project is consistent.

Table 4.5-4 Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Measure	Consistent?
Implement SB 350 by 2030	
Increase the Renewables Portfolio Standard to 50 percent of retail sales by 2030 and ensure grid reliability.	**Consistent.** This measure is not directly applicable to development projects, but the proposed project would be provided energy from Southern California Edison, which would comply with renewable portfolio requirements.
Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.	**Consistent.** Although this measure is directed towards policymakers, the proposed project would be designed and constructed to implement the energy efficiency measures for new industrial developments and would include several measures designed to reduce energy consumption.
Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in Integrated Resource Planning (IRP) to meet GHG emissions reductions planning targets in the IRP process. Load serving entities and publicly- owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs.	**Consistent.** The proposed project would be designed and constructed to implement the energy efficiency measures, where applicable by including several measures designed to reduce energy consumption. The proposed project includes energy efficient field lighting and fixtures that meet the current Title 24 Standards throughout the project site and would be a modern development with energy efficient heaters, and air conditioning systems.
Implement Mobile Source Strategy (Cleaner Technology and Fuels)	
At least 1.5 million zero emission and plug in hybrid light-duty electric vehicles by 2025.	**Not applicable.** Vehicles that access the project site would comply with applicable standards.
At least 4.2 million zero emission and plug in hybrid light-duty electric vehicles by 2030.	**Not applicable.** Vehicles that access the project site would comply with applicable standards.
Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations.	**Not applicable.** These are CARB enforced measures that are not directly applicable to the proposed project, but to the fleet of vehicles sold in California.
Medium- and Heavy-duty GHG Phase 2.	**Not applicable.** The proposed project would not interfere with implementation of these requirements and programs.

Measure	Consistent?
Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO_x standard.	**Not applicable.** The proposed project would not interfere with implementation of these requirements.
Last Mile Delivery: New regulation that would result in the use of low NO_X or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining fleet through 2030.	**Not applicable.** Tenants would be required to comply with any applicable new regulations.
Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."	**Somewhat applicable.** The proposed project would reduce VMT by placing new employment generating uses near existing and new residential uses, and adjacent to commercial areas. The project would be within walking distance to retail uses including restaurants that employees may patronize. The project would construct a segment of the westward extension of Limonite Avenue, improving east-west connectivity, and reducing out of direction miles. In addition, the location of this project in the most western portion of Riverside County is in close proximity to transportation hubs including the ports of Los Angeles and Long Beach and major freeways.
Increase stringency of SB 375 Sustainable Communities Strategy (2035 targets).	**Not applicable.** This measure if beyond the scope of an individual project.
By 2019, adjust performance measures used to select and design transportation facilities	
Harmonize project performance with emissions reductions and increase competitiveness of transit and active transportation modes (e.g. via guideline documents, funding programs, project selection, etc.).	**Not applicable.** Although this is directed towards CARB and Caltrans, the proposed project would be designed to promote and support pedestrian activity on-site and in the project site area through development of sidewalks and paths along Limonite Avenue and the improvement of the Limonite Avenue and Archibald Avenue intersection. The project site is within proximity to residential neighborhoods and planned commercial centers.
By 2019, develop pricing policies to support low-GHG transportation (e.g., low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).	**Not applicable.** This measure is directed towards policymakers, and is not applicable to individual projects.

Measure	Consistent?
Implement California Sustainable Freight Action Plan	
Improve freight system efficiency.	**Not applicable.** When adopted, this measure would apply to applicable trucks accessing the project site, this may include existing trucks or new trucks that are part of the statewide goods movement sector.
Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.	**Not applicable.** This measure would be applicable to a portion of the statewide fleet and not directly applicable to the project.
Adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18 percent.	**Not applicable.** When adopted, this measure would apply to all fuel purchased in the state.
Implement the Short-Lived Climate Pollutant Strategy (SLPS) by 2030	
40 percent reduction in methane and hydrofluorocarbon emissions below 2013 levels.	**Not applicable.** When adopted, the project would be required to comply with SLPS reduction measures.
50 percent reduction in black carbon emissions below 2013 levels.	**Not applicable.** This measure focusses on strategies for increasing the use of forests as a carbon sink rather than an emission source.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	**Not applicable.** This measure provides for regulation and program development.
Implement the post-2020 Cap-and-Trade Program with declining annual caps.	**Not applicable.** The tenants for the proposed project are speculative but could include industrial uses. No power or fuel generation would occur as part of the project and the project would not interfere with participation in the Cap-and-Trade Program by eligible businesses.

Source: Urban Crossroads 2019b

As shown in Table 4.5-4, the project is consistent with all applicable measures in the 2017 Scoping Plan. However, the project would impede substantial progress toward meeting the SB 32 and EO B-55-18 targets if the project's GHG emissions exceeded the applicable GHG threshold. As discussed under Impact GHG-1, the project's GHG emissions would exceed SCAQMD's 10,000 MT CO_2e threshold. As a result, the project would conflict with the reduction targets of 2017 Scoping Plan and EO B-55-18.

Mitigation Measures

As discussed under Impact GHG-1, implementation of Mitigation Measures AQ-1 through AQ-4, detailed in Section 4.2, Air Quality, would reduce GHG emissions to the extent feasible.

Significance After Mitigation

With the implementation of the mitigation measures, the project would still exceed the SCAQMD threshold of 10,000 MT CO_2e per year. Because there are no feasible mitigation measures to reduce project impacts to less than significant, the project would conflict with adopted policies established to reduce GHG emissions and impacts would still be significant and unavoidable.

4.5.3 Cumulative Impacts

As discussed in Section 3, Environmental Setting, cumulative development in Eastvale and surrounding area would include residential development, industrial, commercial, and public facilities/infrastructure. Each of the proposed developments would generate GHG emissions from vehicle trips, electrical and water use, and other sources. The analysis of GHG emissions is cumulative in nature, as emissions affect the accumulation of GHGs in the earth's atmosphere. Projects that fall below provided thresholds are considered to have a less than significant impact, both individually and cumulatively.

As indicated in Impact GHG-1 and Impact GHG-2, the project would have a significant and unavoidable impact on GHG emissions, primarily due to the mobile emissions from the project. The Advanced Clean Cars program would provide major reductions in GHG emissions. By 2025, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels (CARB 2011). In addition, new regulations governing fuel efficiencies in passenger vehicles and trucks would further help reduce GHG emissions of the proposed project and cumulative projects. However, as this project would exceed current thresholds and there are no feasible mitigation measures to reduce GHG emissions to a less than significant level, the project would still have a cumulatively significant and unavoidable impact.

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4.6 Hazards and Hazardous Materials

Based on Appendix G of the CEQA Guidelines, this section analyzes the project's potential impacts regarding hazards and hazardous materials. The analysis considers potential hazards or hazardous conditions affecting the project site and considers potential hazards resulting from the project, including potential effects at off-site land uses. The analysis in this section is based, in part, on the *Phase I Environmental Site Assessmen*t (ESA) and the Phase II ESA, both prepared by Stantec Consulting Services, Inc. (Stantec 2019a and 2019b), attached as Appendix 4.6 of this EIR.

4.6.1 Setting

a. Physical Setting

The project site consists of approximately 50 acres of land located in the northwestern corner of Riverside County in the city of Eastvale, California. The land is currently occupied by an active dairy farm and includes three residential units accessible from Archibald Avenue. The surrounding properties consist of vacant land, some of which are in the process of being developed, as well as commercial warehouses to the south of the project site.

The project site is at an elevation of approximately 640 feet above mean sea level (msl). The regional topographic gradient is flat in the east/west direction; there is a slight downward gradient (less than 15 degrees) from north to south. Based on the topography, surface water on the property infiltrates the ground surface or flows towards the southwest into drainage ponds.

Cucamonga Creek is parallel and adjacent to the western boundary of the project site and is approximately 624 feet above msl. Depth to groundwater is estimated between 100 and 125 feet below ground surface (bgs) and flow direction is to the south.

Phase I ESA

An ESA assessed potential existing hazards on the project site. The following tasks were undertaken as part of the ESA investigation:

- The physical characteristics of the site were evaluated through a review of topographic, geologic, soils and hydrologic data.
- Site history was researched through a review of land deeds, fire insurance maps, city directories, aerial photographs, prior reports, and interviews.
- Current site conditions were noted, including observations and interviews regarding the following:
  - The presence or absence of hazardous substances or petroleum products;
  - Observations of pits, ponds, lagoons, waste streams, or waste collection areas;
  - Equipment that utilizes oils which potentially contain PCBs; and
  - Storage tanks (aboveground and underground).
- Usage of surrounding area properties and the likelihood for releases of hazardous substances and petroleum products (if known and/or suspected) to migrate onto the site was evaluated.
- Information in referenced environmental agency databases and local environmental records, within specified minimum search distances was reviewed.
- Past site ownership was reviewed through prior reports and local municipal files.

The ESA revealed the following evidence of recognized environmental conditions (RECs) in connection with the project site:

- Agricultural use
- Presence of livestock

Historical agricultural activities are considered a REC due the potential for residual pesticides or heavy metals associated with herbicide applications to be present above regulatory screening levels, human health risk criteria or California hazardous waste levels. Due to the high concentrations of nitrates commonly found in cow effluent, there is a concern that wash down water concentrated with nitrates may have impacted groundwater beneath the project site. Improper fertilizer or manure disposal practices by the dairy farm can affect soil and/or groundwater quality and represents a REC. Methane, due to its explosive nature, can create unsafe conditions when present in high concentrations and/or pressures underneath building structures.

Dairy farm operations are observed to have begun circa 1985 based on review of aerial photographs. The ESA recommended performing a methane survey to evaluate potential impacts to the subsurface from dairy farm operations. Additionally, sampling of groundwater is recommended if redevelopment plans include installation of on-site wells or use of groundwater for residential purposes. However, the project would connect to the domestic water supply and no on-site wells are proposed.

Phase II ESA

A Phase II investigation was conducted to further evaluate recognized environmental conditions identified in the Phase I ESA discussed above.

- Investigate the potential for project soils to contain residual pesticides or heavy metals associated with herbicide applications resulting from past agricultural use, with consideration of:
  - Worker safety during construction; or
  - Characterization of soil for off-site disposal
- Conduct a methane survey to evaluate potential impacts to the subsurface from current and past dairy farm operations.

Soil and soil vapor samples were collected at 15 locations on the project site and tested for pesticides, heavy metals, methane, oxygen and carbon dioxide. Testing results indicate that most of the constituents are present within southern California regional background levels, and generally do not exceed applicable screening levels, require further investigation or clean-up.

Low levels of organochlorine pesticides were detected throughout the site. The pesticide dieldrin was detected in shallow soil at one location in excess of residential screening levels, but lower than commercial screening levels. Because this concentration is below applicable screening levels for the proposed use, and is limited in distribution, it is considered a *de minimis* condition. Nonetheless, the Phase II recommended removal of the soil in this area, and testing of the bottom and sidewall of the excavation areas to confirm residual pesticide levels remain below screening levels.

b. Regulatory Setting

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 Regulations

Several federal agencies regulate hazardous materials. These include the U.S. Environmental Protection Agency (USEPA), 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) of 1976 - 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 USEPA 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.

The USEPA 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 Regulations

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), California Air Resources Board (CARB), 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;
- Hazard Communication; 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 California. 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

RCRA 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 determine 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 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.

Rule 1403

SCAQMD Rule 1403 governs work practice requirements for asbestos in all renovation and demolition activities. The purpose of the rule is to protect the health and safety of the public by limiting dangerous emissions from the removal and associated disturbance of asbestos-containing materials (ACM).

Local

City of Eastvale General Plan Goals and Policies

The General Plan Safety Element establishes Goals and Policies addressing community health and safety, including potential hazards and hazardous materials concerns. Eastvale Goals and Policies implemented 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 allow Eastvale to respond appropriately under hazardous, emergency, or disaster conditions.

City of Eastvale Emergency Operations Plan

The Emergency Operations Plan (EOP) establishes the overall approach for emergency response, including organization and task management, identification of policies and procedures, and coordination of planning efforts of the various emergency staff and service elements utilizing the Standardized Emergency Management System (SEMS) the National Incident Management System (NIMS). The objective of this plan is to incorporate and coordinate facilities and personnel into an efficient organization capable of responding effectively to any emergency.

The EOP encompasses a broad range of large-scale emergencies and disasters, including:

- Major Earthquakes
- Hazardous Materials
- Wildfire
- Flooding
- Civil Unrest
- Power Outage
- Terrorism
- Public Health Emergencies

The latest revision to the EOP occurred in April 2018 (Eastvale 2018c).

City of Eastvale Local Hazard Mitigation Plan

The Local Hazard Mitigation Plan (LHMP) identifies the region's hazards, reviews and assesses past disaster occurrences, estimates the probability of future occurrences and sets goals to mitigate potential risks to reduce or eliminate long-term risk to people and property from natural and man-made hazards. The LHMP, updated every five years, is created in coordination with the Riverside County Emergency Management Department (EMD) comprised of participating federal, State and local jurisdictions agencies, special districts, school districts, non-profit communities, universities, businesses, tribes and general public (Eastvale 2018c).

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 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, seven days a week. The Branch also oversees the two Participating Agencies (Corona Fire and Riverside Fire) that implement hazardous materials programs within the County.

County Airport Land Use Commission

The project site is located within the Chino Airport Influence Area. As the Chino Airport is within the County of San Bernardino, the San Bernardino County Airport Land Use Commission (ALUC) is responsible for the Chino Airport Land Use Compatibility Plan. However, since the project site is within Riverside County, the Riverside County ALUC is responsible for review of the project with respect to its consistency with the applicable plan.

The Riverside County Airport Land Use Compatibility Plan Policy Document (ALUCP) establishes various policies and compatibility maps for individual ALUCP airports, including Chino Airport (Airport). Riverside County Airport Land Use Commission (Riverside County ALUC) review is required when a project is located within the boundaries of an Airport Influence Area and the project proposes a legislative action like a General Plan Amendment, Specific Plan Amendment, Zone Change, or Zoning Ordinance. Since the project proposes a Zone Change, Riverside County ALUC review is required. Additionally, pursuant to the Zoning Code, the City Council must make a finding that the proposed Zone Change is consistent with the applicable Airport Land Use Compatibility Plan (Riverside County 2008).

4.6.2 Impact Analysis

a. Methodology and Significance Thresholds

Consistent with the CEQA Guidelines as adopted and implemented by 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;
- 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, and the project would result in a safety hazard or excessive noise for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Threshold:	Would the project 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 likely release of hazardous materials into the environment?

Impact HAZ-1 GIVEN THE OPPORTUNITY FOR CONTAMINATED SOILS TO OCCUR ON THE PROJECT SITE, PROJECT CONSTRUCTION WOULD POTENTIALLY 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 LIKELY RELEASE OF HAZARDOUS MATERIALS INTO THE ENVIRONMENT. MITIGATION MEASURE HAZ-1 AND HAZ-2 WOULD REDUCE IMPACTS TO LESS THAN SIGNIFICANT.

Construction-Related Impacts

During project construction, accidental conditions could occur as a result of any of the following: direct dermal contact with hazardous materials; incidental ingestion of hazardous materials, or inhalation of airborne dust released from dried hazardous materials. The transportation of hazardous materials could result in accidental spills, leaks, toxic releases, fire, or explosion. Appropriate documentation for all hazardous waste that is transported, stored, or used in connection with specific project-site activities would be provided as required for compliance with existing hazardous materials regulations codified in the CCR.

The ESA identified potential for the site to contain hazardous materials given its prior agricultural use and the past and current dairy farm operation. As previously discussed in Section 4.6.1, agricultural activities may be considered a REC due the potential for residual pesticides or heavy metals associated with herbicide applications, high concentrations of nitrates commonly found in cow effluent, and impacted soil and groundwater on and beneath the project site. Given the potential for contaminated soils on the project site, there is a possible hazard for construction workers to be exposed to contaminants via dust on the project site. There is also a concern for potential off-site disposal of soils that may occur during project construction.

As previously discussed herein—see Section 4.6.1.1, *Physical Setting*—a Phase II ESA was conducted to further evaluate the project site for residual pesticides, heavy metals, and methane. The results of sampling and testing indicate that most of the constituents are present within southern California regional background levels, and generally do not exceed applicable screening levels, require further investigation or clean-up. On residual pesticide—dieldrin—is present in de minimis levels at one sampling site. The Phase II recommended removal of the soil in this area and testing of the bottom and sidewall of the excavation areas to confirm residual pesticide levels remain below screening levels.

Given the presence of residual pesticide on site, project construction has the potential to create a significant hazard to construction workers and/or the public and environment during routine activities such as excavation, soil transport, and off-site soil disposal. Compliance with federal, State, and local laws, regulations, and Cal/OSHA training programs, would minimize potential impacts associated with the routine transport, use, or disposal of hazardous materials during construction.

The existing structures on-site would be demolished as part of implementing the project. Most of the onsite structures are associated with the circa 1985 dairy farm and are not likely to be associated with ACM. However, one of the homes to be demolished (6207 Archibald Avenue) is more than 45 years old. As the use of ACM in home construction was more commonplace prior to

1977, demolition may expose workers and the environmental to ACM. Compliance with SCAQMD Rule 1403 involves assessment of all structures associated with demolition for ACM and notification of the SCAQMD regarding evaluation and demolition. Impacts to associated with worker exposure and environmental release of ACM would be potentially significant.

Operation-Related Impacts

Future tenants for the proposed project facilities are unknown. Generally, maintenance and upkeep of facilities on-site, including cleaning of workspaces, parking areas, restroom facilities and maintenance of landscaping occasionally require the use of various solvents, cleaners, paints, oils/fuels, and pesticides/herbicides. Transport, use, and storage of hazardous materials during the construction and operation of the site would be conducted pursuant to all applicable local, State, and federal laws, including but not limited to Title 49 of the Code of Federal Regulations implemented by Title 13 of the California Code of Regulations, which describes strict regulations for the safe transportation of hazardous materials, and in cooperation with the County's Department of Environmental Health. As required by California Health and Safety Code Section 25507, a business shall establish and implement a Hazardous Materials Business Emergency Plan for emergency response to a release or threatened release of a hazardous material. As required, the hazardous materials would be stored in locations according to compatibility and in storage enclosures (i.e., flammable material storage cabinets and biological safety cabinets) or in areas or rooms specially designed, protected, and contained for such storage, in accordance with applicable regulations.

Under the California Hazard Communication Regulation, chemical manufacturers, distributors, or importers must provide Safety Data Sheets (formerly Material Safety Data Sheets) for each hazardous chemical to downstream users to communicate information on these hazards. All businesses of more than ten employees must comply when employees may be exposed to hazardous substances found in the workplace under normal conditions of use as well as in reasonably foreseeable emergency conditions (i.e., a spill or release of a flammable chemical). Businesses are also required to train employees on protocols in the event of a chemical spill or a leak from a sealed container (California Department of Industrial Relations 2012).

Adherence to Eastvale and Riverside County Department of Environmental Health plans and regulations would reduce the potential for contamination from hazardous materials through proper cleanup, disposal, and remediation. The Riverside County Office of the Fire Marshall regulates and enforces the provisions of the Uniform Fire Code relating to hazardous materials, including the use and storage of hazardous materials that are ignitable, reactive, corrosive, or toxic. Businesses using such materials are subject to permitting and inspection. Therefore, impacts due to reasonably foreseeable upset and accident conditions during operation of the project would be less than significant.

Potential hazardous materials, such as fuel, paint products, lubricants, solvents, and cleaning products, may be used and/or stored on-site during the construction of the proposed project. However, due to the limited quantities of these materials to be used by the project, they are not considered hazardous to the public at large.

Additionally, sampling of groundwater is recommended by the ESA if the project were to include installation of on-site wells or use of groundwater for residential purposes. However, the project would develop industrial uses only, and does not propose the use of on-site wells. Impacts associated with project operation would be less than significant with the implementation of mitigation measures.

Mitigation Measures

Mitigation Measure HAZ-1 would safeguard construction workers from residual pesticides found on the project site and HAZ-2 would provide for the proper testing and abatement of potential ACM structures on site.

HAZ-1

Prior to the issuance of a building permit, the Applicant shall remove dieldrin containing soil and conduct post removal testing consistent with the recommendation in the Phase II ESA (October 2019) prepared by Stantec for the project site. The soil removal and post-removal testing results shall be documented in a report and provided to the City of Eastvale for confirmation that the residual pesticide levels remain below screening levels. The Applicant shall take additional remediation actions If recommended based on the post-removal results to the satisfaction of the City.

HAZ-2

Prior to issuance of a demolition permit, the Applicant shall provide evidence that the single-family residence at 6207 Archibald Avenue has been evaluated for asbestos containing materials (ACM) by a certified asbestos consultant. If ACM are found to be present in building materials to be removed, demolished and disposed, the Applicant shall submit a plan signed by a certified asbestos consultant for the removal of the identified ACM in accordance with all applicable laws and regulations, including but not necessarily limited to: California Code of Regulations, Title 8; Business and Professions Code; Division 3; California Health and Safety Code 25915-25919.7.

Significance After Mitigation

Impacts related to the routine transport, use, or disposal of hazardous materials would be less than significant with implementation of Mitigation Measure HAZ-1 and HAZ-2.

Threshold:	Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Impact HAZ-2 THE PROJECT WOULD NOT EMIT HAZARDOUS EMISSIONS OR HANDLE HAZARDOUS OR ACUTELY HAZARDOUS MATERIALS, SUBSTANCES, OR WASTE WITHIN ONE-QUARTER MILE OF AN EXISTING OR PROPOSED SCHOOL. THERE WOULD BE NO IMPACT.

The site is not located within one-quarter mile of an existing or proposed school. The nearest school is Rosa Parks Elementary, located approximately 0.65 mile to the south. The project does not include elements or aspects that would create or otherwise result in hazardous emissions that would affect this or other schools. Development of the project would therefore not result in potentially significant impacts related to hazardous emissions or hazardous materials handling within one-quarter mile of an existing or proposed school.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

There would be no impact related to hazardous emissions or the handling of hazardous materials within one-quarter mile of a school.

Threshold:	Would the project 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?

Impact HAZ-3 THE PROJECT WOULD NOT 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. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

As part of the ESA, 27 regulatory databases were consulted pursuant to Section 65962.5, in addition to local regulatory agency records; see *Environmental Agency Database Search Report* of the ESA (Stantec 2019; Appendix 4.6). The project site is listed as 6207 Archibald Avenue, Corona[1] and is listed in the EMI, ENF, CIWQS, and FINDs environmental databases. The EMI database listing is related to emissions of total organic hydrocarbon gases, reactive organic gases, and particulate matter between 2006 and 2016. There were no reported violations with SCAQMD. The ENF database listing was related to solid wastes and stormwater runoff with no reported violations.

The ESA concluded that based on distance from the property, position of sites with respect to assumed groundwater flow direction, the native soils, and regulatory status, none of the sites identified in the environmental records search report are expected to affect soil or groundwater quality at the property. The environmental records search identified no RECs, HRECs or de minimis conditions at or near the property related to these records. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

Impacts related to hazardous materials sites would be less than significant without mitigation.

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

Impact HAZ-4 THE PROJECT WOULD NOT RESULT IN A SAFETY HAZARD OR EXCESSIVE NOISE FOR PEOPLE RESIDING OR WORKING IN THE PROJECT AREA DUE TO AIRPORT/AIRSTRIP OPERATIONS.

The Chino Airport is approximately one mile west of the project site. The project site is located in the Chino Airport Influence Area, and within Compatibility Zone C. According to the Riverside County ACLUP, this zone allows an intensity average of 75 people per acre for non-residential land uses, and no vegetation over four feet in height within certain areas of the project site.

[1] The site is currently part of the City of Eastvale; but was historically part of the City of Corona.

Review of the project by the Riverside County ALUC for land use compatibility is required. The project Applicant has submitted the project plans to the Riverside County ALUC for that agency's review. As part of its review, the ALUC would evaluate the project consistency with the ALUCP.

The ALUC would identify any project revisions or limitations necessary to preclude or minimize potential airport/airstrip hazards that could affect or result from the project. Prior to approval by Eastvale, the project Applicant would be required to document review of the project by the Riverside County ALUC. Any project revisions or limitations recommended by the ALUC would be considered prior to approval by Eastvale. Additionally, the City Council must make a finding that the proposed Zone Change is consistent with the Riverside County Airport Land Use Compatibility Plan.

Based upon the above considerations, the potential for the project to result in a safety hazard for people residing or working in the project area due to airport/airstrip operations would be less than significant.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

Impacts related to hazards and nearby airport operations would be less than significant without mitigation.

Threshold:	Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact HAZ-5 THE PROJECT WOULD NOT INTERFERE WITH VEHICULAR CIRCULATION ROUTES OR THE ABILITY OF EMERGENCY RESPONSE SERVICES. THEREFORE, IT WOULD NOT IMPAIR IMPLEMENTATION OF OR PHYSICALLY INTERFERE WITH AN ADOPTED EMERGENCY RESPONSE PLAN OR EMERGENCY EVACUATION PLAN.

Development of the project would not interfere with Eastvale's EOP or LHMP, nor cause permanent alteration to vehicle circulation routes, as discussed in Section 4.11, *Transportation and Traffic*. Impact T-2 of Section 4.11 concludes that with implementation of the TIA recommended configuration of the driveways and frontage improvements as part of the project design, impacts related to hazards associated with design features, emergency access, or incompatible uses would be less than significant. Further, the project does not propose or require facilities or operations that would interfere with any identified emergency response or emergency evacuation plan. In accordance with Eastvale policies, coordination with the local fire and police departments during construction would ensure that potential interference with emergency response and evacuation efforts are avoided.

General Plan Policy S-21 provides that Eastvale shall ensure that sufficient resources are available to expand emergency protection and safety services as the community grows. General Plan Policy LU-30 requires Eastvale to coordinate with agencies such as Riverside County Fire Department (RCFD) on supporting infrastructure and services, including police services. As discussed in Section 4.10, *Public Services*, both RCFD and Riverside County Sheriff's Department (RCSD) would be able to service the project at existing staffing levels.

Further, potential temporary traffic/access disruption that may occur during project construction would be addressed through the implementation of the project Construction Traffic Management Plan. The potential for the project to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan is therefore considered less than significant.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

Impacts related to implementation or physical interference with an emergency plan would be less than significant without mitigation.

Threshold:	Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Impact HAZ-6 THE PROJECT IS NOT LOCATED IN A VERY HIGH FIRE HAZARD ZONE AND WOULD NOT EXPOSE PEOPLE OR STRUCTURES TO A SIGNIFICANT RISK OF LOSS, INJURY OR DEATH INVOLVING WILDLAND FIRES. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

No wildlands are located in the vicinity of the project site. The project site and surrounding areas are designated as "non-very high fire hazard zones" (non-VHFHZs) [California Department of Forestry and Fire Protection (Cal FIRE) 2007]. The Local Hazard Mitigation Plan (LMHP) states that the potential for large and damaging fires to Eastvale is present throughout much of the year, specifically in the Santa Ana River bed during autumn and winter months when the Santa Ana winds are present (Eastvale 2018b). The project site is located 1.89 miles north of the Santa Ana River Bed and is not considered to be an area at greater risk of wildfire. The site is also adjacent to a concrete channel to the west. The areas surrounding the project site are either developed or approved for development, such that, the project site would ultimately be fully surrounded by urban development.

Eastvale is provided fire protection services by the Riverside County Fire Department (RCFD), which operates in coordination with Cal FIRE. As discussed in Section 4.10, *Public Services*, RCFD provides municipal and wildland fire protection among other full-service operations. The project would be located in the existing RCFD service area. Station 31, the station that would serve the project site, would be able to provide fire protection services for the proposed project (Reinertson 2019).

Pre-construction coordination and adherence to local fire regulations during construction and operation of the project would be required, acting to reduce potential fire hazards. The project does not propose or require facilities or operations that would exacerbate or contribute substantively to any existing fire hazards. On this basis, the potential for the project to expose people or structures to significant risk involving wildland fires is considered less than significant.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

Impacts related to exposure of people or structures to a significant risk of loss, injury or death involving wildland fires would be less than significant without mitigation.

4.6.3 Cumulative Impacts

Cumulative development in Eastvale and the surrounding area would modify existing land use patterns through the development of vacant lots or through redevelopment. Planned and pending projects include the residential project within San Bernardino County to the north of the project site, and the Merge project to the east which similarly proposed a rezone from A-2 Heavy Agricultural to Industrial Park (I-P) and General Commercial (C-1/C-P). Development of the project would cumulatively increase the potential for exposure of people to hazards and hazardous materials, including soil contamination, pesticides, LBP, asbestos, groundwater contamination of PCE, and upset risks along major transportation routes. The project would incrementally contribute to this cumulative effect. However, as discussed throughout this section, such risks of exposure are reduced through adherence to existing federal, State, and local regulations. USEPA and U.S. DOT laws regulate the safe interstate transportation of hazardous materials and waste.

Impacts associated with hazards and hazardous materials are generally site-specific**.** Accordingly, as required under applicable laws and regulations, potential impacts associated with cumulative developments would be addressed on a case-by-case basis and appropriate mitigation would be designed to mitigate impacts resulting from individual projects, depending upon the type and severity of hazards present. Enforcement of federal, State, and local laws and regulations would ensure that hazards to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would remain less than significant. Therefore, cumulative impacts related to hazards and hazardous materials would be less than significant.

As discussed in Section 4.8, *Land Use and Planning*, increased development within the vicinity of the Chino Airport could expose residents, employees, and visitors to potential aircraft-related hazards. Approved, planned, and pending projects in Eastvale, which involve residential, industrial, and commercial development, may also be within ALUC Safety Areas or Compatibility Zones, thereby potentially exposing persons to risk of airport safety hazards. The severity of potential hazards for individual projects would depend upon the location, type, and size of development and the specific hazards associated with individual sites and would require evaluation on a project-by-project basis. As such, cumulative impacts would be based on each project's contribution to cumulative aircraft related hazards in Eastvale. As discussed in Impact HAZ-4 above, upon review and approval for the Riverside County ALUC, the uses proposed for the project would be consistent with Compatibility Zone C's requirement for no more than 75 people per acre for non-residential land uses and no vegetation over four feet in height within certain areas of the project site. Additionally, the City Council must make a finding that the proposed Zone Change is consistent with the Riverside County ALUCP. As such, the project would not result in a substantial contribution to cumulative aircraft related hazards in Eastvale. Any other development in Eastvale, if approved pursuant to the General Plan Land Use Element policies, would also be subject to review by the Riverside County ALUC and, therefore, would not result in a substantial contribution to cumulative aircraft related hazards in Eastvale.

4.7 Hydrology and Water Quality

This section analyzes the effects of the proposed project on water quality and hydrological resources. The analysis is based on data and information in the following reports prepared for the project: the *Homestead Preliminary Drainage Report* (Kimley-Horn and Associates, Inc. 2019a; Appendix 4.7), the *Preliminary Project Specific Water Quality Management Plan (WQMP)* (Kimley-Horn and Associates, Inc. 2019b; Appendix 4.7), and the *Preliminary Geotechnical Investigation and Percolation Testing for the Homestead Industrial Business Park* (Geocon West, Inc. 2019; Appendix 5.3).

4.7.1 Setting

a. Existing Hydrologic and Water Quality Setting

The project site is in the Santa Ana River Hydrologic Unit in the South Coast Hydrologic Region (U.S. Geological Survey [USGS] 2019; California Department of Water Resources [DWR] 2016). Within the Santa Ana River Hydrologic Unit, the project site is in the Lower Cucamonga Creek Watershed. The Santa Ana Regional Water Quality Control Board (SARWQCB) governs basin planning and water quality in the Santa Ana River Hydrologic Unit.

The region is characterized by a warm, semi-arid climate, exhibiting hot, dry summers and cooler, wetter winters. The average monthly high temperature ranges from approximately 68 to 96 degrees Fahrenheit (°F), with an annual average high temperature of approximately 88°F. Records show that average annual rainfall is approximately 8.4 inches, with monthly averages ranging from 0 to 1.9 inches. Most rainfall typically occurs from November through April (Jurupa Community Services District [JCSD] 2016).

Surface Water Resources and Drainage

The project site is an approximately 56-acre property consisting of a dairy operation and three single-family homes with associated driveways, lawns/landscaping, and yards. The site is developed with six building structures, 23 sheds, and asphalt. As described in Section 4.3, *Biological Resources*, the majority of the project site does not support any discernible drainage courses, inundated areas, wetland vegetation, or hydric soils that would be considered jurisdictional. However, a water detention basin on the western and southwestern corner of the project site captures artificial flows from dairy operations and runoff during storm events. The detention basin receives runoff from dairy farm activities, does not directly connect to nearby water features and does not support riparian vegetation. Cucamonga Creek flows in a concrete-lined channel immediately west of the project site, while San Bernardino County Flood Control District's County Line Channel flows immediately north of the project site before discharging to Cucamonga Creek near the site's northwest corner.

Currently, drainage on the project site flows from higher elevations in the northeast corner of the project site (approximately 654 feet above mean sea level) to lower elevations in the southern and western portions of the project site (ranging from approximately 636-641 feet above mean sea level). The majority of the project site drains to a shallow pond in the southwestern portion of the site before discharging to a 54-inch Riverside County Flood Control and Water Conservation District (RCFCWCD) storm drain (Lateral F3) via an existing spillway. Lateral F3 then conveys runoff from the site to Cucamonga Creek channel. An approximately three-acre portion of the project site, generally

including the existing single-family homes south of Limonite Avenue, drains to Archibald Avenue and surface drains to an existing City detention basin at Schleisman Road (approximately 0.9 mile south).

Cucamonga Creek flows to Mill Creek—approximately 3.6 miles southwest of the project site—which subsequently discharges to Chino Creek and, ultimately, the Santa Ana River near Prado Dam. Figure 4.7-1 shows surface water resources near the project site and nearby surface water flowlines as delineated in the USGS's National Hydrography Dataset.

Groundwater Resources

The project site is underlain by the 240-square mile Upper Santa Ana Valley Groundwater Basin, Chino Subbasin (Groundwater Basin Number 8-2.01) (DWR 2006). The Chino Subbasin spans southwest San Bernardino, northwest Riverside, and western Los Angeles County, with groundwater stored primarily in Holocene and Pleistocene alluvial deposits. With approximately five million acre-feet (AF) of water stored in the sub-basin, the Chino Subbasin is one of the largest in southern California (Chino Basin Watermaster 2019). Figure 4.7-2 shows the boundaries of the Chino Subbasin and other nearby groundwater basins in relation to the project site.

After decades of rapid population growth, increasing groundwater production, and declining water quality, the 1978 *Chino Basin Municipal Water District v. City of Chino et al.* judgment (1978 Judgment) settled extraction rights in the Chino Subbasin (Chino Basin Watermaster 2019). Under the adjudication, groundwater producers in the subbasin are allocated a base water right, a fraction of the sub-basin's safe yield. To oversee the management of the subbasin and implement the terms of the adjudication, the 1978 Judgment created the Chino Basin Watermaster. The Watermaster files annual reports to the court verifying compliance with the judgment.

Under the 1978 Judgment, safe yield from the Chino Subbasin is set at approximately 145,000 acre-feet per year (AFY) (Chino Basin Watermaster 2019). Sources of inflow to the Chino Subbasin include direct infiltration of precipitation and surface flow, as well as underflow of groundwater from adjacent basins (DWR 2006). JCSD, the drinking water service provider to the project site, maintains a total production right of 14,659 AFY from the Chino Subbasin, which includes its base water right and rights acquired through agricultural land use conversions (JCSD 2016).

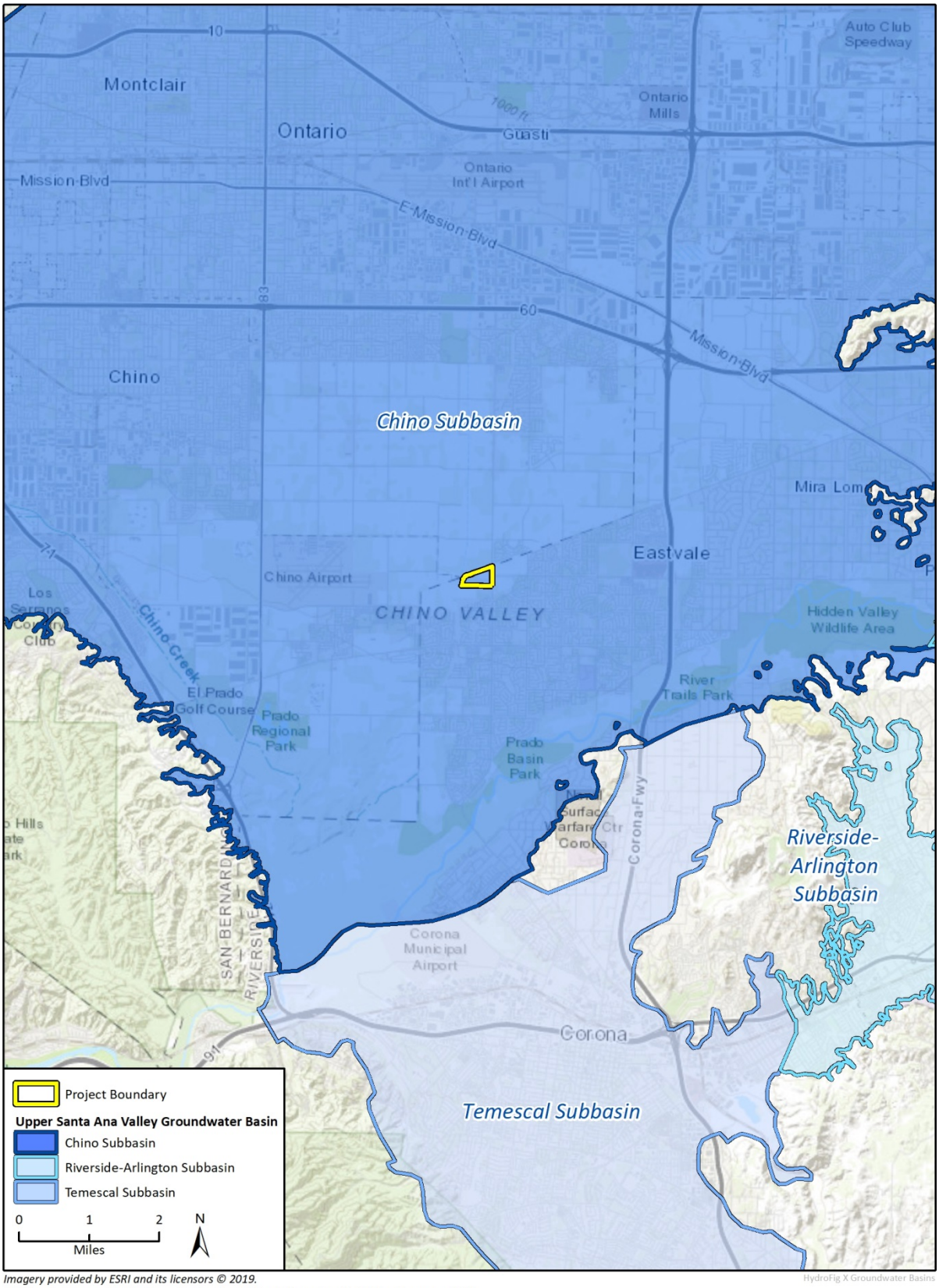
Water quality sampling throughout the Chino Subbasin shows levels of nitrate exceeding the maximum contaminant level for drinking water in 73 of 164 sampled public supply wells, and primary inorganic chemicals exceeding the maximum contaminant level in 17 of 153 wells (DWR 2006). Total dissolved solids (TDS) content in the southern portion of the subbasin, in which the project site is located, regularly exceeds the 500 milligrams per liter recommended secondary maximum contaminant level.[1] To address rising TDS levels in the subbasin, JCSD, the Santa Ana River Water Company, Inland Empire Utilities Agency, Western Municipal Water District, and the cities of Chino, Chino Hills, Ontario, and Norco formed the Chino Desalter Authority (CDA) in 2001. The CDA treats approximately 28,000 AFY at two desalter facilities through a process involving pretreatment, filtration, air stripping, ion exchange, reverse osmosis, and disinfection (JCSD 2016).

[1] Secondary maximum contaminant levels are non-mandatory water quality standards intended to address the taste, color, and odor of drinking water supplies.

Figure 4.7-1 Surface Waters

Imagery provided by Microsoft Bing and its licensors © 2019.
Additional data provided by U.S. Geological Survey National Hydrography Dataset version 2.2.1, 2019.

Figure 4.7-2 Groundwater Subbasins



Imagery provided by ESRI and its licensors © 2019.
Additional data provided by Riverside County; California Department of Water Resources 2018.

HydroFig X Groundwater Basins

Seepage or perched groundwater was encountered in soil borings collected during the geotechnical investigation. Groundwater was encountered in the northern portion and western portions of the project site. Groundwater was not encountered at any other boring locations to depths of 30 to 50 feet below ground surface (bgs). However, the geotechnical report notes that groundwater should be expected near the detention pond in the southwestern portion of the project site (Geocon West, Inc. 2019).

Table 4.7-1 presents recorded depths to groundwater on and near the site area. Groundwater levels in the Chino sub-basin declined by approximately 80 feet between the 1920s and 1980. Following adjudication of the sub-basin in 1978, groundwater elevations recovered by approximately 20 feet in 2000 (DWR 2006).

Table 4.7-1 Depth to Groundwater

Site	Local Well ID	Distance from Project Site	Depth to Groundwater (bgs)[1]	Date of Measurement[2]
Project Site				
Boring B-2[3]	N/A	On-site	24.5	March 2019
Boring B-4[3]	N/A	On-site	18.3	March 2019
Nearby Wells				
Well Site Code: 339825N1175757W001	Chino-1208662	1.1 mile (northeast)	133.8	May 11, 2011
Well Site Code: 339566N1175810W001	Chino-1207984	1.4 miles (southeast)	55.3	September 9, 2010
Well Site Code: 339534N1176112W001	Chino-1207982	1.6 miles (southwest)	37.9	August 15, 2011

[1]bgs = below ground surface (in feet)

[2]The most recent available groundwater level measurement available was used. Where measurement was recorded as "questionable data," the most recently available non-questionable data point was used.

[3]These data points reflect the only soil borings to encounter groundwater on the project site during preparation of the geotechnical study.

Sources: Geocon West, Inc. 2019 (Appendix 5.3); DWR 2018

Water Quality

The primary sources of surface and groundwater pollution enter the water system via stormwater runoff from paved areas. This urban runoff can contain hydrocarbons, sediments, pesticides, herbicides, toxic metals, and coliform bacteria. Leaking septic tanks can cause similar types of contamination. Illegal waste dumping can introduce contaminants such as gasoline, pesticides, herbicides, and other harmful chemicals.

There are two major classes of pollutants: point source and non-point source. Point-source pollutants can be traced to their original source and are discharged directly from pipes or spills. Raw sewage discharging directly into a stream is an example of a point-source water pollutant. Non-point-source pollutants cannot be traced to a specific original source. Non-point-source pollution is caused by precipitation runoff collecting natural and human-made pollutants before depositing them into various watersheds, including lakes, rivers, wetlands, coastal waters, and groundwater. Non-point-source pollutants include, but are not limited to:

- Excess fertilizers, herbicides, and insecticides from agricultural lands and residential areas
- Oil, grease, and toxic chemicals from urban runoff
- Sediment from improperly managed construction sites, crop and forest lands, and eroding stream banks
- Salt from irrigation practices
- Bacteria and nutrients from livestock, pet wastes, and faulty septic systems. (United States Environmental Protection Agency [USEPA] 2018c)

The project site is in the Lower Cucamonga Creek (Hydrologic Unit Code 180702030705). Water from the site drains to Cucamonga Creek (Reach 1), which flows to Mill Creek (Prado Area), Chino Creek (Reach 1A), and the Santa Ana River (Reach 3) at Prado Dam. The SARWQCB develops water quality standards for surface waters in the Santa Ana River watershed to fulfill designated beneficial uses of the water bodies. Water bodies that fail to meet these standards are listed as impaired, and a total maximum daily load (TMDL) limit may be required to allocate the maximum pollutant load the water body may receive and still meet its water quality standards. Cucamonga Creek (Reach 1) is listed as impaired on the 2014/2016 California 303(d) list and has an Integrated Report category of five, indicating water quality standards are not met and a TMDL is required but not yet completed for at least one of the pollutants listed for the segment (State Water Resources Control Board [SWRCB] 2018). Designated beneficial uses and impairments for Cucamonga Creek (Reach 1) and downstream reaches of Mill Creek, Chino Creek, the Santa Ana River, and Prado Reservoir are summarized in Table 4.7-2.

Table 4.7-2 Impairment Status of Downstream Surface Waters

Water Body	Designated Beneficial Uses	Impairments	Integrated Report Category
Cucamonga Creek (Reach 1)	Groundwater Recharge, Non-Contact Water Recreation, Limited Warm Freshwater Habitat, Wildlife Habitat	Cadmium (TMDL Required); Copper (TMDL Required); Lead (TMDL Required); Zinc (TMDL Required)	Category 5
Mill Creek (Prado Area)	Water Contact Recreation, Non-Contact Water Recreation, Warm Freshwater Habitat, Wildlife Habitat, Rare, Threatened or Endangered Species	Indicator Bacteria (TMDL Approved); Nutrients (TMDL Required); Total Suspended Solids (TMDL Required)	Category 5
Chino Creek (Reach 1A)	Water Contact Recreation, Non-Contact Water Recreation, Warm Freshwater Habitat, Wildlife Habitat, Rare, Threatened or Endangered Species	Indicator Bacteria (TMDL Approved); Nutrients (TMDL Required)	Category 5
Prado Flood Control Basin	Water Contact Recreation, Non-Contact Water Recreation, Warm Freshwater Habitat, Wildlife Habitat, Rare, Threatened or Endangered Species	pH (TMDL Required)	Category 5
Santa Ana River (Reach 3)	Agricultural Supply, Groundwater Recharge, Water Contact Recreation, Non-Contact Water Recreation, Warm Freshwater Habitat, Wildlife Habitat, Rare, Threatened or Endangered Species, Spawning, Reproduction and Development	Copper (TMDL Required) Lead (TMDL Required) Indicator Bacteria (TMDL Approved)	Category 5

Water Body	Designated Beneficial Uses	Impairments	Integrated Report Category
Santa Ana River (Reach 2)	Agricultural Supply, Groundwater Recharge, Water Contact Recreation, Non-Contact Water Recreation, Warm Freshwater Habitat, Wildlife Habitat, Rare, Threatened or Endangered Species	Not Impaired	Category 1
Santa Ana River (Reach 1)	Water Contact Recreation, Non-Contact Water Recreation, Warm Freshwater Habitat (intermittent), Wildlife Habitat (intermittent)	Not Impaired	Category 1

Category 5 Criteria: A water segment where standards are not met and a TMDL is required, but not yet completed, for at least one of the pollutants being listed for this segment.

Category 1 Criteria : A water that fully supports at least one of its California beneficial uses, has other uses that are not assessed or lack sufficient information to be assessed, and for which no assessed uses are not supported.

Note: Pursuant to the Clean Water Act section 303(d), each state is required to submit to the USEPA a list identifying water bodies not meeting water quality standards. The water bodies listed in this table are on California's 2014/2016 303(d) list for the pollutants indicated.

Source: SWRCB 2018

Flooding and Other Potential Hazards

Primary flood risk areas in Eastvale are concentrated along the Santa Ana River in the southern portion of the city. No portion of Eastvale is located in a potential inundation area for seismic or geologic dam failure (Eastvale 2012). The project site is located in Zone X, an area of minimal flood hazard designated by the Federal Emergency Management Agency (FEMA) (FEMA 2008).

The project site is over 30 miles from the Pacific Ocean. No substantial bodies of water pose seiche or tsunami risks to the project site. Mudflows are commonly associated with landslide risks, and the project site is relatively flat with no identified landslide risks that could trigger mudflows.

b. Regulatory Setting

Federal

Clean Water Act

Congress enacted the Clean Water Act (CWA), formally the Federal Water Pollution Control Act of 1972, with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the U.S. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and non-point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). SWRCB and its nine Regional Water Quality Control Boards (RWQCB) administer NPDES permitting authority. The project site is under the jurisdiction of the RWQCB Region 8 (Santa Ana Region, SARWQCB).

Section 401 of the CWA requires that the RWQCB certify any activity that may result in discharges into a state water body. This certification indicates the proposed activity does not violate federal and/or state water quality standards. The limits of non-tidal waters extend to the Ordinary High Water Mark, defined as the line on the shore established by the fluctuation of water and indicated by physical characteristics, such as natural line impressed on the bank, changes in the character of

the soil, and presence of debris. The United States Army Corps of Engineers may issue either individual, site-specific permits or general, nationwide permits for discharge into waters of the U.S.

Section 303(d) of the CWA (CWA, 33 USC 1250, et seq., at 1313(d)) requires states to identify "impaired" water bodies as those which do not meet water quality standards. States are required to compile this information in a list and submit the list to the USEPA for review and approval. This list is known as the Section 303(d) list of impaired waters. As part of this listing process, states must prioritize waters and watersheds for future development of TMDLs. The SWRCB and RWQCBs enact ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, and to develop TMDL requirements.

National Pollutant Discharge Elimination System

The primary regulatory control relevant to the protection of water quality is the NPDES permit administered by the SWRCB. The SWRCB establishes requirements prescribing the quality of point sources of discharge and water quality objectives. These objectives are established based on the designated beneficial uses (e.g., water supply, recreation, and habitat) for a particular surface water body. The NPDES permits are issued to point source dischargers of pollutants to surface waters pursuant to Water Code Chapter 5.5, which implements the federal CWA. Examples include, but are not limited to, public wastewater treatment facilities, industries, power plants, and groundwater cleanup programs discharging to surface waters (SWRCB, Title 23, Chapter 9, Section 2200). The RWQCB establishes and regulates discharge limits under the NPDES permits.

State

Porter-Cologne Water Quality Control Act

The SWRCB regulates water quality through the Porter-Cologne Water Quality Control Act of 1969, which contains a complete framework for the regulation of waste discharges to both surface waters and groundwater of the State. RWQCBs regulate stormwater quality under authorities of the federal CWA and the state Porter-Cologne Water Quality Control Act.

NPDES Statewide Construction General Permit

Construction projects that disturb one or more acres of soil or are part of a larger common plan of development that disturbs one or more acres of soil must obtain coverage under the statewide NPDES General Permit for Discharges of Stormwater Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ). To obtain coverage under the Construction General Permit, a project-specific Stormwater Pollution Prevention Plan (SWPPP) must be prepared. The SWPPP outlines best management practices (BMP) to reduce stormwater and non-stormwater pollutant discharges including erosion control, minimizing contact between construction materials and precipitation, and implementation of strategies to prevent equipment leakage or spills.

Sustainable Groundwater Management Act

In September 2014, the governor signed legislation requiring that California's critical groundwater resources be sustainably managed by local agencies. The Sustainable Groundwater Management Act (SGMA) gives local agencies the power to sustainably manage groundwater and requires groundwater sustainability plans to be developed for medium- and high-priority groundwater basins, as defined by DWR.

The project site overlies the Chino Subbasin. As an adjudicated groundwater basin, the Chino Subbasin is not required to prepare a groundwater sustainability plan (GSP) pursuant to the requirements of SGMA.

Local

Water Quality Control Plan for the Santa Ana River Basin (Basin Plan)

Eastvale is under the jurisdiction of RWQCB Region 8, the SARWQCB, which provides permits for projects that may affect surface waters and groundwater locally and is responsible to prepare the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan). The Basin Plan designates beneficial uses of waters in the region and establishes narrative and numerical water quality objectives. Water quality objectives, as defined by the CWA Section 13050(h), are the "limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses or the prevention of nuisance within a specific area." California has developed TMDLs, which are a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality objectives established by the region. The Basin Plan serves as the basis for the SARWQCB's regulatory programs and incorporates an implementation plan to meet water quality objectives. Basin Plans undergo a triennial review process, with the SARWQCB's Basin Plan most recently updated in June 2019 (SARWQCB 2019).

Municipal Regional Stormwater NPDES Permit

On January 29, 2010, the SARWQCB adopted Order R8-2010-0033, as amended by Order R8-2013-0024 (NPDES Permit and Waste Discharge Requirements for the Riverside County Flood Control and Water Conservation District, the County of Riverside, and the Incorporated Cities of Riverside County within the Santa Ana Region) otherwise known as the municipal separate storm sewer system (MS4) permit. Eastvale was added as a co-permittee under the Riverside County MS4 permit in the 2013 amendment. One component of the MS4 permit requires the development of site-specific WQMPs for new development and significant redevelopment projects. WQMPs include site design, source control, and treatment elements to reduce stormwater pollution from urban runoff.

On April 7, 2015, the SARWQCB adopted statewide Trash Provisions to address impacts of trash on surface waters in the region. The Trash Provisions outline additional requirements for co-permittees under the MS4 permit, including either installation of Full Capture Systems for all storm drains capturing runoff from priority land uses, or a combination of full capture systems, multi-benefit projects, treatment controls, and/or institutional controls to reduce trash accumulation in surface waters (SARWQCB 2017).

Riverside County Drainage Area Management Plan

The Riverside County Drainage Area Management Plan (DAMP), developed by the RCFCWCD and other co-permittees to the MS4 Permit, outlines programs and policies to manage urban runoff (Riverside County 2017a). The DAMP includes development review procedures for co-permittees, required construction BMPs and inspection frequency, annual reporting and evaluation framework, and TMDL implementation strategies. The DAMP is the primary document outlining compliance procedures for co-permittees to adhere to the requirements of the MS4 Permit in Riverside County.

Riverside County Watershed Action Plan

The Riverside County Watershed Action Plan is intended to enable co-permittees under the Riverside County MS4 Permit to address watershed-level water quality impacts associated with urbanization (County of Riverside 2017b). The Watershed Action Plan describes the Santa Ana Watershed, applicable MS4 programs (e.g., the DAMP, WQMPs), and the development review process for new development and redevelopment projects.

Design Handbook for Low Impact Development Best Management Practices

Developed in 2011 by the RCFCWCD, the Design Handbook for Low Impact Development Best Management Practices describes low-impact development (LID) guidelines for projects to reduce downstream erosion by more closely mimicking pre-project hydrology and minimizing pollutant runoff. The Handbook details strategies for selecting appropriate LID BMPs, design capture volume requirements for BMPs, and sizing calculation methodology for BMP implementation in specific watersheds in the County.

City of Eastvale Municipal Code

Chapter 14.12 of the Eastvale Municipal Code contains the City's stormwater/urban runoff management and discharge controls ordinance. The ordinance is intended to reduce pollutants in stormwater, regulate illicit connections and discharges to the storm drain system, and protect and enhance the quality of water resources in Eastvale in accordance with applicable federal, state, and regional regulations. Section 14.12.060 prohibits the discharge of any pollutants to any street, alley, sidewalk, storm drain, inlet, catch basin, or conduit and applies to all construction sites, new development and redevelopment, existing development, and commercial and industrial facilities in Eastvale. Section 14.12.090 prohibits discharges in violation of the municipal NPDES permit (MS4 permit) or any NPDES permit for industrial or construction activity. Finally, Section 14.12.110 contains the ordinance's enforcement provisions and allows Eastvale to make BMPs a condition of approval to the issuance of a City permit.

City of Eastvale General Plan

The General Plan was adopted in June 2012 to establish a broad planning framework for the City (Eastvale 2012). The Land Use and Air Quality and Conservation Elements contain policies relevant to hydrology and water quality, including the following:

LAND USE ELEMENT

Policy LU-9: The City will participate in regional efforts to address issues of mobility, transportation, traffic congestion, economic development, air and water quality, and watershed and habitat management with cities, local and regional agencies, stakeholders, and surrounding jurisdictions.

AIR QUALITY AND CONSERVATION ELEMENT

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.

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.

Policy AQ-23: The City encourages native, drought-resistant landscape planting.

Policy AQ-24: Support and engage in educational outreach programs with other agencies that promote water conservation and widespread use of water-saving technologies.

Policy AQ-25: Minimize pollutant discharge into storm drainage systems, natural drainages, and aquifers.

Additionally, the Safety Element contains policies pertaining to development in floodplain areas and substantial modification of watercourses. As described above, the project site is not located in a floodplain and, aside from the water detention pond associated with agricultural uses, does not support any discernible drainage courses, inundated areas, wetland vegetation, or hydric soils that would be considered jurisdictional watercourses.

4.7.1 Impact Analysis

a. Methodology and Significance Thresholds

The analysis of hydrologic and water quality impacts is based on information and data contained in the *Homestead Preliminary Drainage Report* and the *Preliminary Project Specific WQMP* (Appendix 4.7), including site runoff estimates, soil properties, impervious surface area, and water quality BMPs. The *Preliminary Drainage Report* used methodologies outlined in the Riverside County Hydrology Manual to perform hydrologic and hydraulic calculations and estimated storm flows using the RCFCWCD's Rational Method Hydrology Computer Program. The *Preliminary Project-Specific WQMP* was prepared in accordance with requirements of the Riverside County MS4 Permit using the SARWQCB's WQMP template.

In addition to the studies referenced above, aerial imagery, grading plans, and drainage plans for the site were reviewed to analyze pre- and post-construction hydrology. Documents published by the SWRCB and SARWQCB, including plans and permits, were reviewed to provide information on existing water quality as well as required water quality improvement measures. Finally, the federal Flood Insurance Rate Maps were assessed to determine flood potential on the project site

In accordance with Appendix G of the CEQA Guidelines, a hydrology and water quality impact is considered significant if the proposed project would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    a. result in substantial erosion or siltation on- or off-site;
    b. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

c. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

d. impede or redirect flood flows

4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

b. Project Impacts and Mitigation Measures

Threshold:	Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Impact HWQ-1 CONSTRUCTION AND OPERATION OF THE PROJECT COULD INCREASE EROSION AND STORMWATER RUNOFF DUE TO SITE DISTURBANCE AND INCREASED IMPERVIOUS SURFACE AREA. COMPLIANCE WITH APPLICABLE REGULATIONS AND POLICIES, INCLUDING PREPARATION OF A SWPPP DURING CONSTRUCTION AND ON-SITE CAPTURE AND TREATMENT OF STORMWATER RUNOFF THROUGH BIOFILTRATION SYSTEMS AND DETENTION BASINS DURING OPERATION, WOULD REDUCE WATER QUALITY IMPACTS SUCH THAT THEY WOULD BE LESS THAN SIGNIFICANT.

The project site currently contains a dairy operation and three single-family homes. Typical water quality impacts associated with dairy and livestock operations include runoff and leaching of nutrients and bacteria from manure and erosion/sedimentation from livestock movement across non-vegetated soils. The proposed project would involve construction of industrial development, changing the nature of water quality impacts associated with land uses on the site. Grading and other construction activities associated with the proposed project would have the potential to generate soil erosion and to increase sediment loads in stormwater runoff. Spills, leakage, or improper handling and storage of substances such as oils, fuels, chemicals, metals, and other substances from vehicles, equipment, and materials used during all construction phases could also cause pollutants to be present in stormwater runoff and impact water quality. Further, operation of the proposed project would increase impervious surface area on the project site, which can result in increased runoff and degraded water quality.

The proposed project would be subject to federal, state, and local standards and regulations protecting water quality and hydrological resources discussed above, including the CWA, Riverside County MS4 Permit, the Eastvale Municipal Code, and applicable policies of the City's General Plan. Potential construction and operational water quality impacts, as well as applicable regulatory requirements addressing these impacts, follow.

Construction

Grading, excavation, and other construction activities associated with the proposed project could adversely affect water quality due to erosion resulting from exposed soils and the generation of water pollutants, including trash, construction materials, and equipment fluids.

According to the geotechnical study prepared for the project (Appendix 5.3), grading for the project is anticipated to result in cuts and fills of up to 10 feet, based on the site's existing topography. Soil disturbance associated with site preparation and grading activities would result in looser, exposed

soils, which are more susceptible to erosion. The project site is underlain predominantly by Hilmar and Grangeville loamy sands, with erosion factors (K factors) ranging from 0.20 to 0.24, indicating moderate potential for sheet and rill erosion by water (Natural Resources Conservation Service 2019).

Because the project would result in disturbance of more than one-acre, on-site construction activities would be subject to the NPDES Statewide General Construction Activity Stormwater permit. Compliance with the NPDES construction permit is further reiterated and required under the City's stormwater drainage system protection regulations (Eastvale Municipal Code, Title 14). For all covered projects, the NPDES construction permit requires visual monitoring of stormwater and non--stormwater discharges, sampling, analysis, and monitoring of non-visible pollutants, and compliance with all applicable water quality standards established for receiving waters potentially affected by construction discharges. Additionally, construction site operators would be responsible for preparing and implementing a SWPPP that outlines project-specific BMPs to control erosion, sediment release, and otherwise reduce the potential for discharge of pollutants in stormwater. Typical BMPs include:

- Utilizing temporary de-silting basins to minimize amounts of on-site soils and contaminants carried downstream by surface water flows
- Conducting construction vehicle maintenance in staging areas where appropriate controls have been established to prevent deposition of fuels, motor oil, coolant, and other hazardous materials into areas where they may enter surface water and groundwater
- Restricting the use of chemicals that may be transferred to surface waters by stormwater flows or leach to groundwater basins through water percolation into the soil
- Requiring that permanent slopes and embankments be vegetated following final grading
- Installation of silt fences, erosion control blankets
- Proper handling and disposal of wastes
- Installation of anti-tracking pads at site exits to prevent off-site transport of soil materials

Implementation of construction BMPs would minimize surficial erosion and transport of pollutants, and would comply with applicable NPDES requirements, thereby protecting water quality both on- and off-site.

Operation

According to the *Preliminary Project Specific WQMP*, the existing project site contains approximately 142,000 square feet (sf), or less than six percent, impervious area. With implementation of the proposed project, the impervious area would increase substantially due to the construction of buildings, parking lots, and roadways on the project site, totaling approximately 2,190,000 sf. Table 4.7-3 summarizes impervious surface cover under existing and proposed project conditions.

Increased impervious area on the project site could result in increased runoff that can carry pollutants to downstream water bodies and adversely affect water quality. Common pollutants associated with urban, industrial development that could be discharged during operation of the project include automotive chemicals and metals that accumulate on roadways and parking lots; fertilizers, pesticides, and herbicides applied to ornamental landscaping; petroleum hydrocarbons spilled by leaky equipment or refueling activities; and trash and debris.

Table 4.7-3 Impervious Surface Areas

Site Conditions	Impervious Surfaces	Impervious Area (sf)	Percent of Project Site (%)[1]
Existing	Homes, driveways, agricultural sheds, auxiliary buildings, and circulation areas	142,000	5.8
Proposed Project	Roadway, parking lots/on-site circulation, sidewalks, roofs/buildings	2,190,000	89.8

sf = square feet

[1]Percentage calculated based on a 56-acre project site.

Source: Appendix 4.7

Under the MS4 permit issued by the SARWQCB, permittees, including Eastvale, must require BMPs, where feasible, to capture and treat stormwater prior to discharge to their MS4 facilities. Such BMPs include, where appropriate, LID techniques to be implemented at new development and significant redevelopment project sites. Because the project would create or replace 10,000 sf or more of impervious surface on the project site, it constitutes new or significant redevelopment under the MS4 and is required to implement BMPs.

On-site runoff would be captured and treated by a network of proposed bioretention/biotreatment BMPs, including Modular Wetland System Linear (MWS Linear) biofiltration systems at stormwater catch basins that would connect to an underground storm sewer system flowing to three underground detention basins. Upon entering the MWS Linear biofiltration systems, stormwater would first undergo pre-treatment, including separation of trash, sediment, and debris and flow through pre-filter cartridges to remove hydrocarbons and suspended solids. Within the MWS Linear system, stormwater would undergo biofiltration, including treatment through WetlandMEDIA filters intended to reduce nutrients, sediments, and sediment-bound contaminants. Pre-treatment and biofiltration prior to entering the storm sewer system would reduce adverse water quality impacts to groundwater and downstream water bodies. In addition to the BMPs described above, the project would implement permanent structural and operational source control BMPs to reduce water quality impacts associated with project operation. These measures are described in Table 4.7-4.

Table 4.7-4 Permanent Structural and Operational Water Quality BMPs

Potential Sources of Polluted Runoff	Permanent Structural Source Control BMPs	Operational Source Control BMPs
On-site stormdrain inlets	Mark all inlets with the words "Only Rain Down the Storm Drain" or similar	Maintain and periodically repaint or replace inlet markings
Loading docks	N/A	Move loaded and unloaded items indoors as soon as possible
Plazas, sidewalks, and parking lots	Plazas, sidewalks, and parking lots surface drain to Modular Wetlands System Linear biofilters	Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris Collect debris from pressure washing to prevent entry into the storm drain system. Collect wash water containing any cleaning agent or degreaser and discharge to the sanitary sewer, not to a storm drain
Roof drainage and HVAC condensate	Roof drains will discharge through the adjacent curb face and drain to Modular Wetlands System Linear biofilters	N/A

Source: Table G.1, WQMP (Appendix 4.7)

Maintenance of source control and structural BMPs would be the responsibility of the project applicant/owner, as detailed in the Preliminary WQMP. Parking lot/pavement area would be visually inspected weekly for trash, debris, or other environmentally hazardous materials and such materials would be removed immediately upon visual observation of adverse conditions. Storm drain inlets, outlets, cleanouts, manholes, and pipelines would be inspected quarterly and after each storm event and maintained as necessary. Biofiltration facilities would be inspected and maintained twice monthly and after storm events.

Water quality impacts associated with construction of the project would be reduced by adherence to the requirements of the NPDES Construction General Permit, specifically preparation and implementation of a SWPPP. During operation, the biofiltration BMPs and detention basins would capture and treat on-site runoff. Additional permanent structural and operational BMPs would further reduce pollution of stormwater runoff associated with proposed land uses on the project site. Compliance with federal, state, and local regulations would require that stormwater runoff is captured and treated on-site, thereby protecting water quality both on- and off-site. Therefore, implementation of the proposed project would not violate any water quality standards or waste discharge requirements, nor would it otherwise substantially degrade surface water or groundwater quality.

Therefore, for the reasons stated above, impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Significance After Mitigation

Impacts associated with violation of water quality standards or waste discharge requirements, or substantial degradation of surface or groundwater quality would be less than significant without mitigation.

Threshold:	Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Impact HWQ-2 THE PROPOSED PROJECT WOULD NOT INVOLVE ON-SITE GROUNDWATER EXTRACTION BECAUSE THE PROJECT WOULD BE SERVED BY JCSD'S EXISTING AND PLANNED SUPPLIES, REDUCING POTENTIAL IMPACTS TO GROUNDWATER LEVELS. IMPERVIOUS SURFACE COVER WOULD INCREASE ON THE PROJECT SITE UNDER THE PROPOSED PROJECT, REDUCING THE POTENTIAL FOR RECHARGE OF THE UNDERLYING AQUIFER. HOWEVER, ON-SITE RUNOFF WOULD CONTINUE TO DISCHARGE TO CUCAMONGA CREEK AND, ULTIMATELY, UNLINED REACHES OF MILL CREEK, CHINO CREEK, AND THE SANTA ANA RIVER, WHERE ADDITIONAL POTENTIAL FOR INFILTRATION AND RECHARGE EXISTS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

The proposed project would not involve on-site groundwater extraction that would result in substantial drawdown of an underlying aquifer. As discussed in Section 4.13, *Utilities and Service Systems*, the project would be served by JCSD's existing and projected water supplies, which are drawn from the adjudicated Chino Subbasin and nearby adjudicated Riverside-Arlington groundwater basin and based on each basin's respective safe yield. Therefore, the project would not substantially decrease groundwater supplies such that it would impede sustainable groundwater management of the Chino Subbasin.

In its current condition, the project site contains approximately 142,000 sf of impervious surface associated with the existing homes, driveways, and agricultural buildings (Table 4.7-3). The project would result in a substantial increase in impervious surfaces, totaling approximately 2,190,000 sf. This increase in impervious surface cover could reduce on-site infiltration and, consequently, could result in a localized reduction in groundwater elevations.

Despite being largely devoid of impervious surfaces, the existing site condition provides low groundwater recharge potential. Soils underlying the dairy operation experience compaction due to lack of vegetation and repeated livestock movement, minimizing infiltration. On March 28, 2019, Geocon West, Inc. conducted percolation testing of soils underlying the project site (Appendix 5.3). At three of the four testing sites, percolation rates ranged from 0.0 to 0.51 inches per hour, indicating slow percolation and limited groundwater recharge potential on-site.

Although the low infiltration rate of soils on the project site limits its potential to provide recharge benefits, downstream water bodies, specifically Cucamonga Creek and the Santa Ana River, have a designated beneficial use of Groundwater Recharge (Table 4.7-2). All on-site runoff would flow through proposed biofilters to the underground storm drain and detention basins. As with current drainage patterns, stormwater that discharges from the proposed on-site stormwater drainage system would flow off-site through the Lateral F3 storm drain to Cucamonga Creek, Mill Creek, Chino Creek, and the Santa Ana River where infiltration opportunity exists for recharge of the underlying Chino Subbasin. Given that post-development drainage would preserve flow to downstream surface water bodies where groundwater recharge could continue to occur, impacts with respect to depletion of groundwater supplies and interference with recharge would be less than significant.

Mitigation Measures

Mitigation would not be required.

Significance After Mitigation

Impacts associated with substantial decrease in groundwater supplies or interference with groundwater recharge would be less than significant without mitigation.

Threshold:	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?
Threshold:	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
Threshold:	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Impact HWQ-3 UNDER THE PROPOSED PROJECT, ON-SITE STORMWATER RUNOFF WOULD BE CAPTURED AND TREATED VIA STORMWATER DRAINAGE SYSTEM CONSISTING OF CATCHMENT BASINS, BIOFILTRATION SYSTEMS, AND DETENTION BASINS DESIGNED TO ACCOMMODATE THE 85TH PERCENTILE, 24-HOUR STORM EVENT. THE PROPOSED PROJECT WOULD NOT RESULT IN SUBSTANTIAL OFF-SITE HYDROMODIFICATION IMPACTS AND WOULD NOT ALTER THE COURSE OF A RIVER OR STREAM. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

The project would largely maintain existing drainage patterns on the project site. On-site drainage would continue generally from higher elevations on the northeastern portion of the site (near Archibald Avenue) to lower elevations on the southwestern portion of the site (near Cucamonga Creek). An approximately two-acre portion of the eastern side of the project site would continue to drain toward Archibald Avenue under post-development conditions. Figure 4.7-3 shows the existing hydrology of the project site. Figure 4.7-4 shows the hydrology of the project site under the proposed project.

As described in Section 4.7.1, *Setting*, the majority of the project site does not support any discernible drainage courses, inundated areas, wetland vegetation, or hydric soils that would be considered jurisdictional. While there is a detention basin on the southern and western portion of the project site, the site does not contain any streams or rivers that would be altered by the proposed project.

The majority of project site runoff is discharged to the Lateral F3 storm drain via a shallow pond in the southwestern corner of the project site. According to the *Preliminary Drainage Report*, Lateral F3 was designed to receive a 100-year peak site discharge of 93 cubic feet per second (cfs). While the project would largely maintain existing drainage patterns, the increase in impervious surface area would substantially increase site runoff to the Lateral F3 storm drain. According to the *Preliminary Drainage Report*, undetained flow from the project site would total approximately

144 cfs during the 100-year, 24-hour storm event. When combined with anticipated flow from Limonite Avenue, which would also discharge to the Lateral F3 storm drain, total undetained flow from the project site would be approximately 167 cfs, or approximately 74 cfs greater than the maximum design capacity of the Lateral F3 storm drain (Kimley-Horn and Associates, Inc. 2019a). Discharge from the site in excess of the design capacity for the Lateral F3 storm drain would have the potential to result in flooding on- and off-site, as well as excessive erosion and siltation downstream due to increased volume and velocity of stormwater.

Stormwater detention facilities are proposed to reduce the rate of discharge from the project site and treat runoff prior to discharge. As indicated in Table 4.7-5, without the proposed detention facilities, the project would exceed the allowable discharge to the Lateral F3 storm drain (93 cfs) by approximately 80 percent.

Pursuant to the requirements of the MS4 permit, the project would incorporate LID BMPs designed to capture and treat runoff from the 85th percentile, 24-hour storm event. Post-development drainage conditions would direct all surface runoff to a network of catch basins dispersed throughout the project site. At the catch basins, stormwater would enter the underground stormwater drainage system, first flowing through proposed MWS Linear biofiltration systems, then entering proposed storm sewer lines connected to three underground detention basins. The purpose of the proposed detention basins is to capture and slow the flow of stormwater to the Lateral F3 storm drain.

Detention basins would consist of 72-inch diameter pipes ranging from approximately 400 to 1,280 feet in length, with volumes ranging from approximately 11,100 to 36,200 cubic feet. Table 4.7-5 summarizes undetained and detained stormwater discharge from the project site.

Table 4.7-5 Post-Development Runoff Conditions Summary

	Modeled Undetained Site Runoff (cfs)[1]	Proposed Post-Development Site Runoff (cfs)[2]
Total On-site	144	70
Limonite Avenue	23	23
Total Project	167	93
Allowable Discharge	93	93
Exceeds Allowable Discharge?	**Yes**	**No**

cfs = cubic feet per second

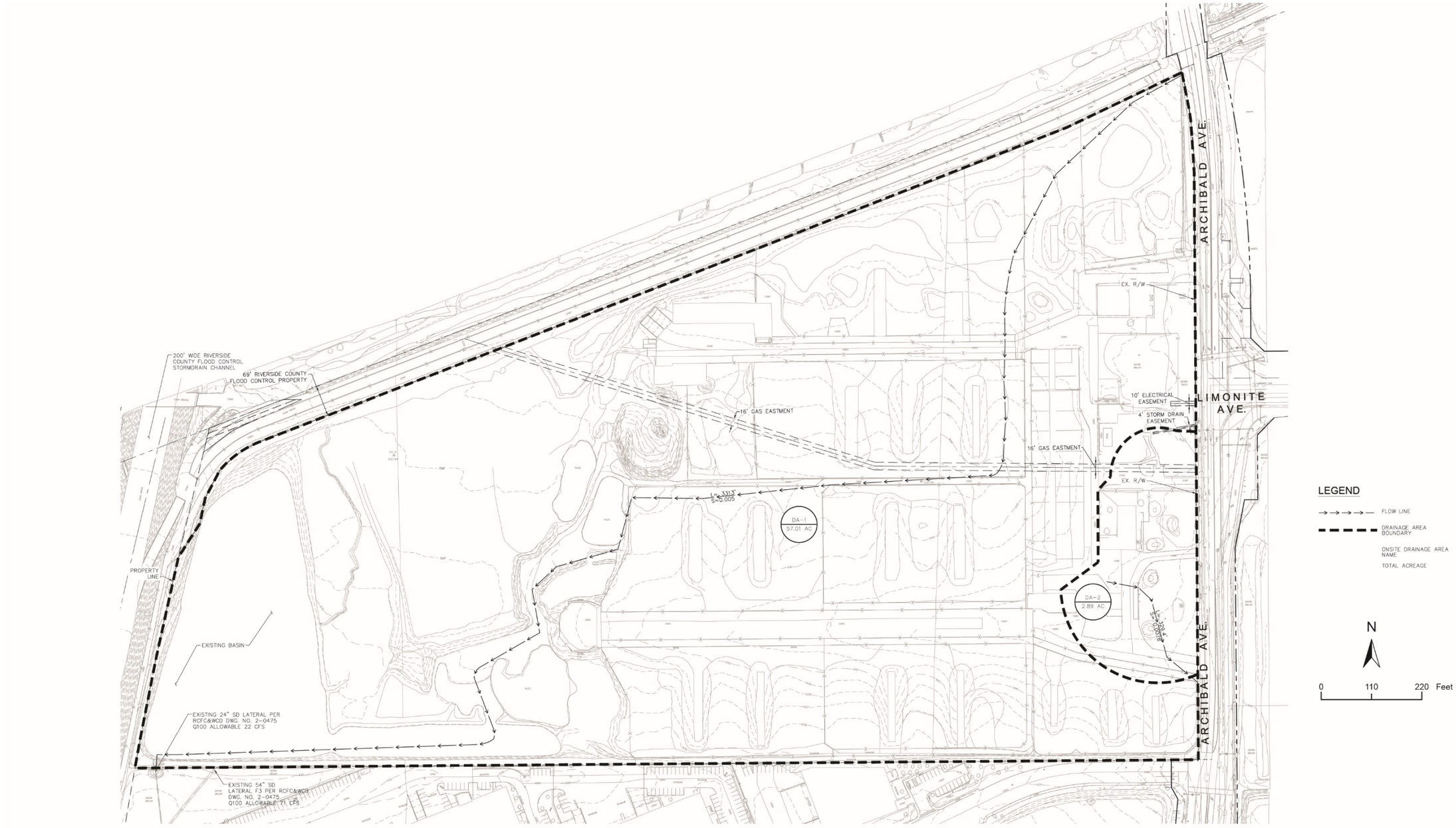
[1]Undetained runoff is all surface runoff from the site without accounting for effect of detention basins proposed as part of the project.

[2]Proposed post-development site runoff accounts for reduction in peak discharge from the site due to use of detention basins proposed as part of the project.

Source: Tables 1, 3, and 4, Preliminary Drainage Report (Appendix 4.7)

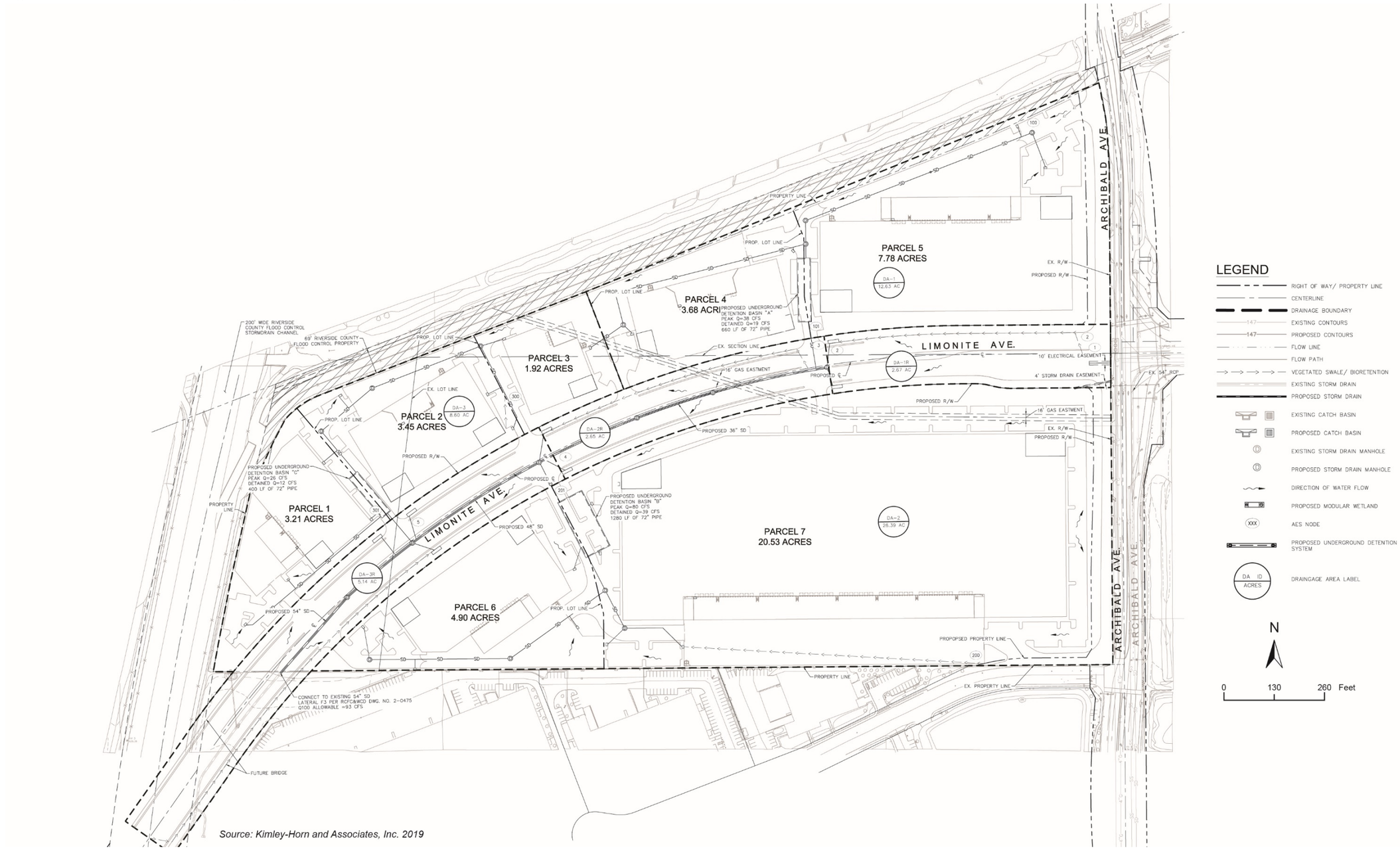
As shown in Table 4.7-5, with incorporation of detention basins proposed as part of the project design, post-development peak discharge from the site would not exceed the capacity of the Lateral F3 storm drain. As such, the project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site or exceed the capacity of existing or planned stormwater systems.

Figure 4.7-3 Existing Hydrology Conditions



Source: Kimley-Horn and Associates, Inc. 2019

Figure 4.7-4 Proposed Hydrology Conditions



Source: Kimley-Horn and Associates, Inc. 2019

As described above, surface runoff would flow to catch basins dispersed throughout the project site, where it would enter MWS Linear biofiltration systems. The proposed biofiltration systems would include pretreatment to remove trash, debris, sediment, hydrocarbons, and suspended solids. Next, stormwater would be filtered through Wetland MEDIA filters for nutrient removal and further filtration of sediment and sediment-bound contaminants. Furthermore, preparation of a WQMP under the Riverside County MS4 permit requires projects to assess whether drainage alterations would create a Hydrologic Condition of Concern (HCOC) due to hydromodification, such as changes in watershed hydrologic processes and runoff that result in increased streamflow and sediment transport.

The project was determined not to result in a HCOC according to the *Preliminary Project -Specific WQMP* (Appendix 4.7). Given that the project would not result in a HCOC and would capture and treat all on-site stormwater runoff, alteration of drainage patterns on the project site would not result in substantial erosion or siltation off-site or provide substantial additional sources of polluted runoff. Impacts would be less than significant.

Mitigation Measures

Mitigation would not be required.

Significance After Mitigation

Impacts associated with substantial erosion or siltation, flooding, exceedance of stormwater system capacity, and polluted runoff due to alteration of drainage patterns would be less than significant without mitigation.

Threshold:	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?
Threshold:	Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Impact HWQ-4 THE PROJECT SITE IS NOT LOCATED IN A FLOOD, SEICHE, OR TSUNAMI ZONE. THEREFORE, THE PROJECT WOULD NOT IMPEDE OR REDIRECT FLOOD FLOWS OR RISK RELEASE OF POLLUTANTS DUE TO PROJECT INUNDATION BY FLOOD, SEICHE, OR TSUNAMI. NO IMPACT WOULD OCCUR.

As discussed in Section 4.7.1, *Setting*, no portion of Eastvale is located in a potential inundation area for seismic or geologic dam failure, and the project site is located in Zone X, an area of minimal flood hazard designated by FEMA (Eastvale 2012; FEMA 2008). The project site is over 30 miles from the Pacific Ocean and is not located near or below reservoirs or other standing bodies of water. Therefore, tsunami and seiche hazard is not a design consideration for the project (Geocon West Inc. 2019). As such, the project would not impede or redirect flood flows, and would not risk release of pollutants due to inundation by flood, tsunami, or seiche. No impact would occur.

Mitigation Measures

Mitigation would not be required.

Significance After Mitigation

The project would result in no impact with respect to flood flows and flood, tsunami, and seiche inundation.

Threshold:	Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact HWQ-5 THE PROPOSED PROJECT WOULD IMPLEMENT WATER QUALITY BEST MANAGEMENT PRACTICES (BMPS) IN ACCORDANCE WITH APPLICABLE LOCAL AND REGIONAL REQUIREMENTS, REDUCING POTENTIAL DOWNSTREAM WATER QUALITY IMPACTS. AS SUCH, THE PROPOSED PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF THE WATER QUALITY CONTROL PLAN FOR THE SANTA ANA REGION. THE PROJECT SITE OVERLIES AN ADJUDICATED GROUNDWATER BASIN AND WOULD NOT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF A SUSTAINABLE GROUNDWATER MANAGEMENT PLAN. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

The SARWQCB's Basin Plan designates beneficial uses for surface waters in the Santa Ana region and associated water quality objectives to fulfill such uses. Table 4.7-2 in Section 4.7.1, *Setting*, lists beneficial uses and water quality impairments for adjacent and downstream water bodies, including Cucamonga Creek, Mill Creek, Chino Creek, and the Santa Ana River. Cucamonga Creek, which receives the majority of the project site's runoff via the Lateral F3 storm drain, is currently listed as impaired for cadmium, copper, lead, and zinc. According to the *Preliminary Project Specific WQMP* prepared for the project, metals—such as cadmium, copper, lead, and zinc—are potential contaminants associated with industrial land uses.

As described in Impact HWQ-1 and Impact HWQ-3 above, the project would implement on-site capture, filtration, and detention of stormwater runoff, as required pursuant to the Riverside County MS4 permit. Stormwater from the site would be treated in MWS Linear biofiltration systems at catch basins throughout the project site, which are intended to reduce concentrations of water quality contaminants, including the nutrients and metals for which Cucamonga Creek is impaired. Once undergoing biofiltration, stormwater would flow through the proposed storm sewer system to one of three detention basins, which would slow the flow of runoff and provide an additional opportunity for sediment and sediment-bound contaminants to settle out prior to discharge.

The requirements of the Riverside County MS4 permit are intended to protect water quality and support attainment of water quality standards in downstream receiving water bodies. With incorporation of the BMPs described above in accordance with the Riverside County MS4 permit, the project would not impair existing or potential beneficial uses of nearby or downstream water bodies and would not conflict with or obstruct implementation of the Basin Plan.

The project site is located in the Chino Subbasin. As an adjudicated basin, the Chino Subbasin is not required to prepare a GSP pursuant to SGMA. As discussed under Impact HWQ-2, the project does not propose any new wells, would not substantially impede recharge in the basin, and would be served by JCSD's existing and planned supplies, which are based on adjudicated groundwater rights monitored and enforced by the Chino Basin Watermaster. Therefore, the project would not conflict with or obstruct implementation of a sustainable groundwater management plan. Impacts would be less than significant.

Mitigation Measures

Mitigation would not be required.

Significance After Mitigation

Impacts with respect to conflicting with or obstructing implementation of an applicable water quality control plan or sustainable groundwater management plan would be less than significant without mitigation.

4.7.2 Cumulative Impacts

Planned and pending development in the vicinity of the project site, as described in Section 3, *Environmental Setting*, includes 18 projects in Ontario, 26 projects in Chino, 22 projects in Eastvale, 7 projects in Chino Hills, and 8 projects in Jurupa Valley. Cumulative development and redevelopment projects in the vicinity of the project site would increase impervious surface area in the Santa Ana watershed, thereby potentially increasing surface water runoff and associated pollutant loading to waterbodies.

All projects exceeding one acre of disturbance area would be subject to requirements of the NPDES Statewide Construction General Permit, including preparation and implementation of a SWPPP to minimize construction-related erosion, sedimentation, and non-point source pollution. All cumulative development projects would also be subject to the requirements of the applicable MS4 permit, which would require BMPs to capture and treat on-site stormwater runoff for new development and significant redevelopment projects. As a result, stormwater detention infrastructure would expand incrementally with the pace of development in the watershed, which would reduce peak flows and minimize the potential for downstream flooding or other hydrologic impacts. Planned and pending projects may be required to implement project-specific flood or HCOC mitigation measures, depending on the significance of these impacts.

Cumulative development could increase the discharge of urban pollutants to surface waters and groundwater. However, all new development would be subject to the water quality requirements of the SARWQCB, the Riverside County or San Bernardino County MS4 permit, and other applicable federal, state, and local regulations. Adherence to such regulations would address any adverse cumulative impacts resulting from individual new developments and reduce cumulative impacts with respect to hydrology and water quality to a less than significant level.

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4.8 Land Use and Planning

This section analyzes the effects of the proposed project on land use and planning. The analysis consists of a description of the regulatory framework specific to land use and planning, existing land use conditions on-site and in the surrounding area, and a discussion of potential impacts the project would have and any mitigation measures required to reduce the impacts.

4.8.1 Setting

a. Land Use Setting

The project is located in the northwestern portion of the City of Eastvale, with the City of Ontario (and San Bernardino County) to the north and City of Chino to the west. The project site is bounded by Archibald Avenue to the east and Hellman/Remington Avenue to the north. Limonite Avenue westward currently terminates at Archibald Avenue and the eastern boundary of the project site.

The project site is currently operated as a dairy, and most of the property is dedicated to barns, milk barn and pens, feed lots, access roads, shade awnings, and other ancillary structures. Agriculture uses are located northwest of the project site. Immediately north of the project site, new industrial is under construction. Northeast of the project site is primarily single-family residential use. East of the project site two developments are planned: north of Limonite Avenue, The Merge—a commercial/retail and industrial center—is under development; and south of Limonite Avenue is the location for the future Eastvale Crossings commercial/retail center. Directly south of the project site is recently constructed industrial use. Uses west of the project site include Cucamonga Creek channel adjacent to the site, industrial, and a nursery located to the southwest. Beyond the project site's immediate surroundings, uses consist predominantly of residential and agriculture, with additional industrial development to the north within San Bernardino County.

Existing land uses for the project site and vicinity are described in Table 4.8-1 below.

Table 4.8-1 Existing Land Use

Location	General Plan Land Use Designation	Zoning Designation	Land Use
Project Site	Light Industrial	Heavy Agriculture (A-2)	Dairy
North	Industrial	Specific Plan (S-P)	Agriculture
South	Light Industrial	Industrial Park (I-P)	Industrial/Agriculture
East	Commercial Retail Light Industrial	General Commercial (C-1/C-P) Industrial Park (I-P)	Commercial/Industrial
West	Light Industrial	Specific Plan (S-P) Industrial Park (I-P)	Industrial, Drainage (Cucamonga Creek)

General Plan Land Use Designations

The project site has a General Plan land use designation of Light Industrial (I-1) (Eastvale 2012). The Light Industrial land use designation allows for a wide variety of industrial and related uses, including assembly and light manufacturing, repair and other service facilities, warehousing, distribution centers, and supporting retail uses. Accessory uses also include day-care, public meeting

rooms, and other community-oriented facilities. The Light Industrial land use designation allows a floor area ratio (FAR) of between 0.25 and 0.60 (see Table 4.8-2).

The land use designations for the properties surrounding the project site include similarly designated Light Industrial to the south and west. To the east, the properties are designated for both Light Industrial and Commercial Retail. The properties to the north are within Ontario, and Ontario's General Plan land use map designates them for both Industrial (0.55 FAR) and Business Park (0.6 FAR) use.

Table 4.8-2 Existing General Plan Land Use Designation

Land Use	FAR/acre	Maximum Population Density	Intent of Land Use Designation
Light Industrial (LI)	0.25-0.60 FAR	N/A	Assembly/Light Manufacturing

FAR=Floor Area Ratio
Source: Eastvale 2012

Project Zoning Regulations

The site is zoned as Heavy Agricultural (A-2) as defined by the Zoning Ordinance (Eastvale 2013). Uses permitted in the A-2 Heavy Agricultural Zone include animal keeping, commercial fertilizer operations, crop production, dairy farm, temporary and permanent farm stand, grazing, kennel, agricultural workers housing, second unit and single-family dwelling, home occupations and mobile home. Other agricultural uses may be established upon approval of a conditional permit. As shown in Table 4.8-1, the project site is the only area within the vicinity that retains an agricultural zoning designation. The surrounding properties are zoned Specific Plan (S-P), Industrial Park (I-P), or General Commercial (C-1/C-P). Table 4.8-3 shows the development standards for the A-2 Heavy Agriculture designation.

Table 4.8-3 Zoning Development Standards

Development Standard		A-2 Heavy Agriculture
Lot Area Minimum		20,000 square feet
Lot Width Minimum		100 feet
Lot Depth Minimum		150 feet
Primary Building Height		40 feet
Primary Building Height (pursuant to Section 5.1)		75 feet
Lot Coverage Maximum		N/A
Setbacks Minimum	Front	20 feet
	Side	10 feet
	Interior Side	10 feet
	Street Side	10 feet
	Rear	10 feet

Source: Eastvale Zoning Code, Chapter 3, 2013

b. Regulatory Setting

Local

Eastvale has various tools to regulate land use and plan for future development. Specific to the project site, the General Plan (2012) and the Zoning Code serve as the primary land use tools for the development of the project site.

City of Eastvale General Plan 2012

The General Plan serves as a guide for land use decision making and the implementation of the community's vision. The 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 General Plan also includes the topics of Design, Economic Development, Healthy Community, and Sustainability.

Southern California Association of Governments (SCAG)

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. In addition, SCAG serves as data clearinghouse and information hub for the region, conducting research and analysis in pursuit of regional planning goals. 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; SCAG 2016). 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.

City of Eastvale Zoning Ordinance

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 tool used 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 Eastvale Zoning Code provides zoning definitions and performance standards for all land use zones. Prior to issuance of building permits, the final project site plans and related documents, would be reviewed for consistency with applicable zoning requirements and performance standards.

Airport Land Use Compatibility Plan

The project site is located within the Chino Airport Influence Area. As the Chino Airport is within the County of San Bernardino, the San Bernardino County Airport Land Use Commission (San Bernardino County ALUC) is responsible for the Chino Airport Land Use Compatibility Plan. However, since the project site is within Riverside County, the Riverside County ALUC is responsible for review of the project with respect to its consistency with the applicable plan.

The Riverside County Airport Land Use Compatibility Plan Policy Document (Riverside County ALUC 2008) establishes policies and compatibility maps for individual airports potentially affecting land use within Riverside County, including Chino Airport. Figure 4.8-1 shows the project site within the context of the Influence Area of the airport, and Compatibility Zones surrounding the airport.

The Compatibility Zones define special land use requirement and development limitations. The entirety of the project site lies within Compatibility Zone C. The San Bernardino Airport Land Use Commission's Land Use Plan for Chino Airport defines Compatibility Zone C as follows:

> The outer boundary of this referral area lies on an arc with a radius of approximately 10,000 feet from the airport. This area is substantially the same as Safety Zone III. The threat of aircraft accidents in this area is below that of the other referral areas, however some do occur, and it is necessary to ensure that some continuing restrictions on land use are imposed when planning within this area. Noise levels vary; however, they could average in the range of 55/60 CNEL, which under some conditions may still be the cause of considerable annoyance to some members of the community. No restrictions are generally placed on residential zoning within this area. Light industrial and manufacturing uses are also acceptable, provided that they do not generate any visual, electronic or physical hazards to aircraft. No above ground hazardous materials are allowed, however underground fuel tanks are acceptable. General business facilities, office buildings, motels, banks and eating and drinking facilities are permitted. In all cases, consideration should be given to some form of shielding, such as the use of trees etc. near buildings. (San Bernardino County ALUC 1991.)

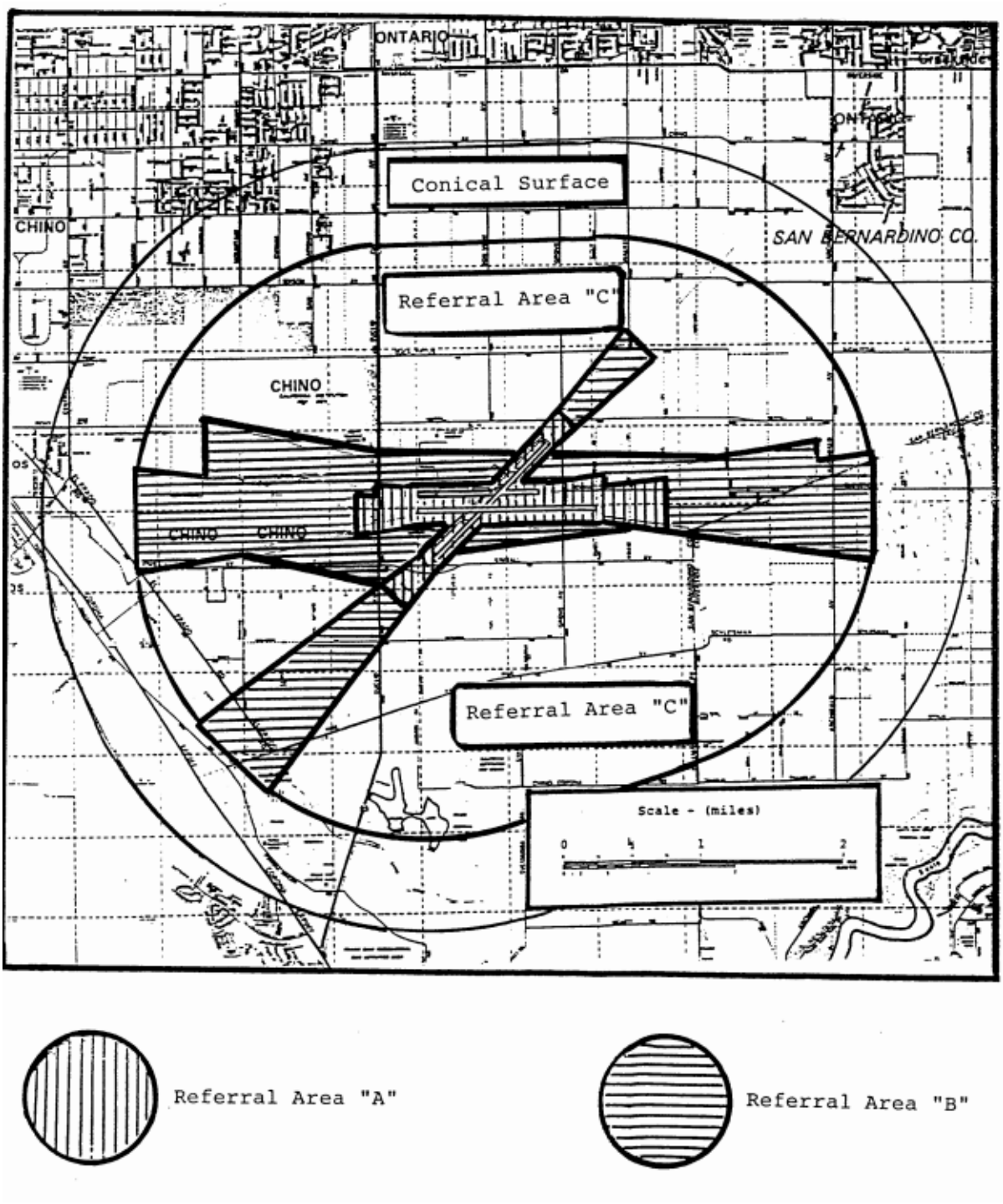
4.8.2 Impact Analysis

a. Methodology and Significance Thresholds

According to Appendix G of the State CEQA Guidelines, the effects of the proposed project on land use are considered to be significant if the proposed project would:

1. Physically divide an established community.
2. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Figure 4.8-1 Chino Airport Land Use Compatibility Zones



Source: San Bernardino County ALUC 1991.

b. Project Impacts and Mitigation Measures

Threshold 1:	Would the project physically divide an existing community?

Impact LU-1 THE PROJECT WOULD NOT DIVIDE AN EXISTING COMMUNITY.

The existing land use supports dairy operations. The General Plan land use designation is light industrial. No established communities exist within the project site, nor does the project propose or require elements or operations that would divide an off-site community. The project would contribute to the completion of the Limonite Avenue east-west corridor envisioned in the General Plan via construction of the road segment within the project limits. Together with the Limonite Avenue Gap Closure project, this corridor would be completed and improve connectivity between areas east and west of Cucamonga Creek Channel.

The proposed project would require the demolition of three single-family residences located along Archibald Avenue. However, the properties are being voluntarily sold and similarly sized housing stock is available in the area. The project would not necessitate replacement housing; nor would the physical arrangement of any neighboring residential communities be modified or divided by the project.

For the reasons stated above, the potential for the project to physically divide an established community is considered less than significant.

Mitigation Measures

No mitigation measures would be required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 2:	Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Impact LU-2 THE PROJECT WOULD BE CONSISTENT WITH THE LAND USE DESIGNATION AND RELATED REQUIREMENTS AND INCONSISTENT WITH THE EXISTING ZONE. A ZONE CHANGE IS PROPOSED TO CONFORM THE ZONING WITH THE LAND USE DESIGNATION AND PROPOSED USE. UPON APPROVAL OF THE PROJECT, THE PROPOSED DEVELOPMENT WOULD COMPLY WITH LAND USE AND ZONING REGULATIONS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The proposed project would require a zone change from Heavy Agriculture (A-2) to Industrial Park (I-P) to comply with the Zoning Ordinance and conform to the General Plan land use designation of Light Industrial.

The project site is within one mile of the Chino Airport and lies within the Chino Airport Influence Area. Therefore, the discussion that follows provides an analysis of the project's compatibility with the Riverside County Airport Land Use Compatibility Plan (Riverside County ALUC 2008).

Consistency with Land Use Regulations

General Plan Land Use

As discussed above in Section 4.8.1, the General Plan land use designation of Light Industrial (LI) allows for a wide variety of industrial and related uses, including assembly and light manufacturing, repair and other service facilities, warehousing, distribution centers, and supporting retail uses. The Light Industrial land use designation allows a floor area ratio (FAR) of between 0.25 and 0.60 (see Table 4.8-2). As shown on the project's site plan, the project was designed to have an overall FAR of 0.60 in order to maximize the building space. The proposed industrial park would, therefore, be consistent with the existing Light Industrial land use designation, allowable FAR, and other requirements such as building size, site circulation, and amenities. Impacts would be less than significant.

Zoning Code Amendment

The site is zoned as Heavy Agricultural (A-2) as defined by the Zoning Ordinance (Eastvale 2013); and the site's current use (dairy farm) is consistent with the existing zoning. However, the current A-2 zoning is inconsistent with the General Plan land use designation of Light Industrial. Further, the proposed industrial uses would be incompatible with the existing zoning. Therefore, the project proposes a zone change from A-2 Heavy Agricultural to Industrial Park (I-P).

Table 4.8-4 details the standard development regulations for the proposed zoning designations and shows how the proposed project would meet those standards.

Table 4.8-4 Proposed Zoning Industrial Park (I-P)

Development Standard	(I-P) Required	Proposed Project
Minimum Lot Size	20,000 square feet	83,617 square feet
Lot Width Minimum	100 feet	252.5 feet
Lot Depth Minimum	100 feet	190 feet
Building Height Maximum[1]	35 feet	75 feet
FAR Maximum	0.60	0.60
Setbacks (Minimum)[2]		
Front (east, along I-215)	25 feet[2]	25 feet
Side (Interior)	10 feet[3]	10 feet
Side (Street)	10 feet[3]	10 feet
Rear	15 feet[3]	15 feet

[1] The building height can be increased to 75 feet if it otherwise meets the requirements of Section 5.1 of the Zoning Code.

[2] The minimum setback for all zones is 25-feet; a minimum 50 foot front setback is required for industrial property abutting a residential or commercially zoned property. The minimum side yard setback shall equal not less than 10 feet for the two side lot areas combined.

The project is adjacent to a site that is currently being developed with industrial uses to the north, and commercial/industrial uses to the east and south. To the west is the Cucamonga Creek channel, industrial uses, along with a nursery. As shown in Table 4.8-3 and Table 4.8-4, the development standards for the existing A-2 Heavy Agricultural zoning and those of the proposed I-P zoning are similar. The A-2 zoning requires 150-foot lot depths, instead of 100 feet as required by the I-P zoning; and requires a smaller front setback, 20 feet versus 25 feet. The A-2 zoning allows building

heights of up to 40 feet, as compared to 35 feet for the I-P zoning. Both the A-2 and I-P zoning designations allow building heights of up to 75 feet pursuant to the requirements of Section 5.1.

The proposed project has been designed to meet the regulations of the proposed zone. Each project parcel would comply with the minimum lot standards for area, width, and depth. The proposed buildings would comply with height, floor-area ratio, and setback regulations. Upon approval of the zone change, the seven proposed industrial-use buildings, with landscaping and parking on seven individual industrial lots would be consistent with the zoning ordinance. Impacts would be less than significant.

Riverside County Airport Land Use Compatibility Plan Consistency

Riverside County Airport Land Use Commission (Riverside County ALUC) review is required when a project is located within the boundaries of an Airport Influence Area and the project proposes a legislative action like a Zone Change, or Zoning Ordinance within Riverside County. Because the project is located within the Chino Airport Influence Area and proposes a Zone Change, review of the project by the Riverside County ALUC is therefore required.

In conjunction with the proposed Zone Change of the project site from heavy Agricultural (A-2) to Industrial Park (I-P), and as required under the Zoning Code, the City Council must make a finding that the project Zone Change is consistent with the most recent adopted version of the Airport Land Use Compatibility Plan (San Bernardino County ALUC 1991). The project Applicant has submitted the project plans to the Riverside County ALUC for that agency's independent review. Prior to approval by Eastvale, the project Applicant would be required to document review of the project by the Riverside County ALUC. Any project revisions or limitations recommended by the Riverside County ALUC, and agreed to by Eastvale, would be included in the conditions of approval imposed on the project prior approval to by Eastvale.

As discussed in the regulatory setting above, the project site is located within the Land Use Plan for Chino Airport, specifically within Compatibility Zone C. Compatibility Zone C states that no restrictions are generally placed on residential zoning; and that light industrial and manufacturing uses are also acceptable, provided that they do not generate any visual, electronic or physical hazards to aircraft. No above ground hazardous materials are allowed, but underground fuel tanks are acceptable. General business facilities, office buildings, motels, banks and eating and drinking facilities are permitted. The project's proposed buildings would fall within the height limits and the proposed industrial uses are consistent with those allowed under Compatibility Zone C. In a preliminary review by the staff at the Riverside County ALUC, the Director had not identified any concerns regarding the project. The project was subsequently reviewed by Riverside County ALUC at its November Commission meeting and found to conform with ALUC requirements. Impacts would be less than significant.

Mitigation Measures

No mitigation measures would be required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

4.8.3 Cumulative Impacts

Cumulative development in Eastvale and the surrounding area would modify existing land use patterns through the development of vacant lots or through redevelopment. Approved projects include: Eastvale Crossings commercial/retail center to the east, industrial use to the north currently in construction, and The Merge project to the east which similarly proposed a rezone from A-2 Heavy Agricultural to Industrial Park (I-P) and General Commercial (C-1/C-P) and is also in construction. The project site is the sole remaining agriculturally zoned property within the vicinity. However, the General Plan designates the site as Light Industrial and the proposed rezoning would make the zoning consistent with the land use designation. Refer to Section 5.0 for additional discussion of impacts to agriculturally zoned properties. Cumulatively, the project does not physically divide an established community or area in Eastvale when considered in conjunction with nearby cumulative projects.

Similar to the proposed project, land use regulations and policy consistency impacts associated with other cumulative projects would be addressed on a case-by-case basis in order to determine their consistency with applicable plans and policies. The proposed project would be consistent with the underlying land use regulations and policies upon approval of the necessary land use entitlements. Therefore, the project would not contribute to a cumulative land use impact.

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4.9 Noise

This section analyzes the noise effects of the proposed project. It considers both the temporary noise impacts related to construction activity and long-term impacts associated with project operations. The analysis is based on data and information from the following project-specific reports prepared by Urban Crossroads: The Homestead Noise Impact Analysis (2019d; Appendix 4.9), and The Homestead Traffic Impact Analysis (2019e; Appendix 4.11).

4.9.1 Setting

Noise is defined as unwanted sound that disturbs human activity. Noise level, or volume, is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels to make the measurement consistent with that of human hearing response, most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz).

Sound pressure level is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dBA, and a sound that is 10 dBA less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dBA greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1 to 2 dBA changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40 to 50 dBA, while arterial streets are in the 50 to 60+ dBA range. Normal conversational levels are in the 60 to 65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations.

Noise levels typically drop off at a rate of 6 dBA per doubling of distance from point sources (such as industrial machinery). Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dB per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dB per doubling of distance. Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. According to the Federal Transit Administration (FTA), sound insulation treatments can reduce transit noise by 5 to 20 dB (FTA 2018).

In addition to the actual instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over time (essentially, the average noise level). Typically, Leq is summed over a one-hour period.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. Two commonly used community noise metrics – the Day-Night average level (Ldn) and the Community Noise Equivalent Level (CNEL) - recognize this fact by weighting hourly Leqs over a 24-hour period. The Ldn is a 24-hour average noise level that adds 10 dB to actual nighttime (10:00 PM to 7:00 AM) noise levels to account for the greater sensitivity to noise during that period. The CNEL is identical to the Ldn,

except it also adds a 5 dB penalty for noise occurring during the evening (7:00 PM to 10:00 PM). Noise levels described by Ldn and CNEL typically do not differ by more than 1 dBA. Therefore, in practice, CNEL and Ldn are often used interchangeably.

Vibration

Vibration means the state of an object moving repetitively back/forward, right/left or up/down and is generally expressed by frequency, displacement, velocity, and acceleration. Frequency means the number of times that a vibrating object generates a repetitive motion in one second. Displacement means the amplitude (distance) between the peaks of vibration. Velocity means the changing rate of displacement to time. Acceleration means the changing rate of velocity to time.

Vibration is a unique form of noise because its energy is carried through buildings, structures, and the ground, whereas noise is simply carried through the air. Thus, vibration is generally felt rather than heard. The rumbling sound caused by the vibration of room surfaces is called ground-borne noise. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors.

Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (rms) velocity or peak particle velocity (PPV). The rms velocity amplitude of a vibrating machine tells us the vibration energy in the machine. The higher the vibration energy, the higher the rms velocity amplitude. The rms is best for characterizing human response to building vibration, and PPV is used to characterize potential for damage.

The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB) in the United States. The background vibration-velocity level in residential areas is generally 50 VdB. The vibration velocity level threshold of perception for people is approximately 65 VdB. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or the slamming of doors. If a roadway is smooth, the ground-borne vibration from traffic is rarely perceptible. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. The vibration from a small bulldozer at 25 feet, for example, can typically be measured at 0.003 PPV (in/sec) or 58 VdB. A vibratory roller at 25 feet can typically be measured at 0.210 PPV or 94 VdB (FTA 2018).

a. Existing Noise Setting

Major sources of noise in Eastvale include traffic on freeways and major roadways, and flight activity associated with local airports. Motor vehicle noise is characterized by the number of vehicles generating engine and tire noise on local roads and freeways, which often creates a higher sustained noise level in proximity to areas sensitive to noise exposure (Eastvale 2012a). The background ambient noise levels in the project study area are dominated by the transportation-related noise associated with the adjacent arterial roadways (Limonite Avenue and Archibald Avenue), overhead aircraft, and background industrial land use activities.

The closest airport to the project site is the publicly operated Chino Airport, approximately 1.3 miles west of the project site. Ontario International Airport is approximately 5.2 miles north of the project site. Aircraft flyovers are audible in Eastvale, as a result of aircraft approaching and departing from Chino Airport and Ontario International Airport. According to the Chino Airport Land Use Compatibility Plan, the project site is located outside of the 65 dBA CNEL noise level contour of

Chino Airport which is considered normally acceptable for the project land uses (San Bernardino County ALUC 1991). Therefore, aircrafts do not substantially contribute to the existing ambient noise conditions on the project site and vicinity.

Sensitive Receivers

Noise exposure standards for different types of land uses reflect the varying noise sensitivities associated with each of these uses. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land.

Noise-sensitive land uses are generally considered to include schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include multi-family dwellings, hotels, motels, dormitories, outpatient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include industrial, manufacturing, utilities, agriculture, natural open space, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals. Receivers are located in outdoor living areas (e.g., backyards) at 10 feet from any existing or proposed barriers or at the building façade, whichever is closer to the project site, based on FHWA guidance, and consistent with additional guidance provided by Caltrans and the FTA (Urban Crossroads 2019d; Appendix 4.9).

Sensitive receptors near the project site include residential uses, Symphony Park, and James C. Huber Park.

Existing Project Area Noise Levels

To characterize ambient noise conditions in the project vicinity, seven 24-hour noise measurements were taken on July 30, 2019.[1] The noise meters were positioned as close to the nearest sensitive receptor locations as practical to best characterize the ambient noise levels at that site. Hourly noise levels were measured during typical weekday conditions, over 24 hours to determine the average daytime and nighttime hourly noise levels, or Leq, and the 24-hour CNEL. Figure 4.9-1 shows the sound-level measurement locations, while Table 4.9-1 details the measured sound level at each location.

[1] Measurements were taken using a Piccolo Type 2 integrating sound level meters and data loggers in accordance with standard protocols.

Table 4.9-1 Ambient Condition 24-Hour Noise Level Measurements

Location	Description of Measurement Location	Adjacent Land Use	Energy Average Noise Level (dBA Leq)[1]		CNEL
			Daytime	Nighttime	
L1	Northeast corner of Remington Avenue and Archibald Avenue	Single-family residential	67.4	65.6	72.6
L2	Southeast corner of Limonite Avenue and Archibald Avenue	Single-family residential, agriculture	64.5	61.9	69.0
L3	Northeast corner of residential development adjacent to Archibald Avenue, south of the project site	Single-family residential	62.8	62.4	69.2
L4	Industrial uses south of project site, near Providence Way and the Cucamonga Creek flood control channel	Industrial	57.6	50.9	59.5
L5	Remington Avenue and Hellman Avenue west of the Cucamonga Creek flood control channel	Industrial	61.3	57.7	64.9
L6	North of project site along Remington Avenue	Agriculture	57.2	57.8	64.2

[1]"Daytime" = 7:00 AM to 10:00 PM; "Nighttime" = 10:00 PM to 7:00 AM.

Source: Urban Crossroads 2019d; Appendix 4.9

b. Regulatory Setting

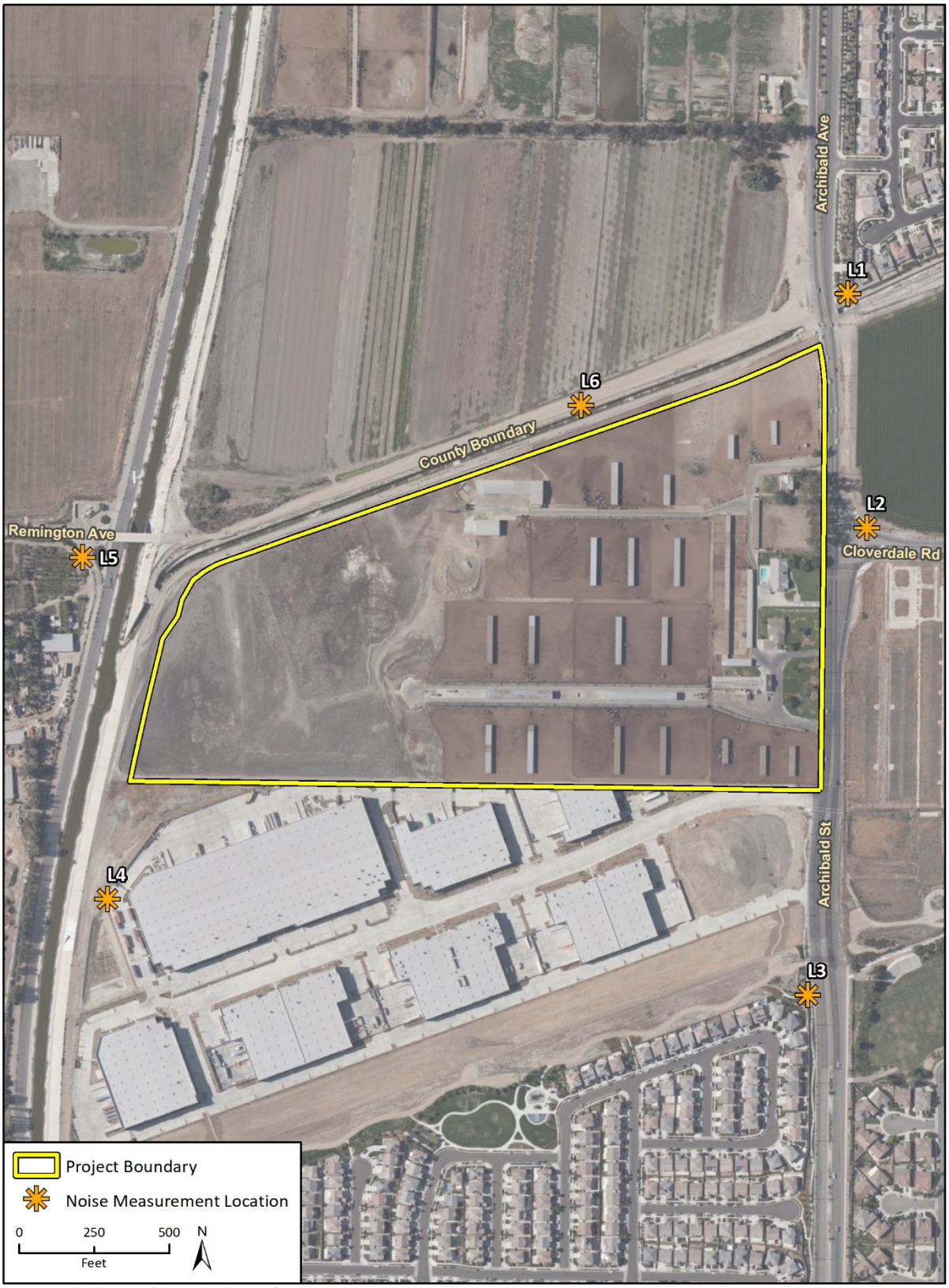
State

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. California law requires each county and city to adopt a General Plan that includes a Noise Element prepared based on guidelines adopted by the Governor's Office of Planning and Research. The purpose of the Noise Element is to limit the exposure of the community to excessive noise levels. The California Environmental Quality Act (CEQA) requires known environmental effects of a project be analyzed, including environmental noise impacts.

California Building Code

The California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, and the California Building Code codify the state noise insulation standards. These noise standards apply to new construction in California to control interior noise levels as they are affected by exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are developed near major transportation noise sources, and where such sources create an exterior noise level of 60 dBA CNEL or higher.

Figure 4.9-1 Noise Measurement Locations



Imagery provided by Microsoft Bing and its licensors © 2019.
Noise measurement data provided by Urban Crossroads, 2019.

Fig 2 Noise Measurement Locations

The 2016 State of California's Green Building Standards Code contains mandatory measures for non-residential building construction in Section 5.507 on Environmental Comfort. These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non- residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within the noise contour of an airport, freeway, or railroad. Acoustical studies that accompany building plans for noise-sensitive land uses must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable levels. Table 4.9-2 specifies the levels for new residential buildings, schools, and hospitals to satisfy the acceptable interior noise limit for new construction of 45 dBA CNEL.

If the development falls within an airport or freeway 65 dBA CNEL noise contour, the combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies must be at least 50. For those developments in areas where noise contours are not readily available, and the noise level exceeds 65 dBA Leq for any hour of operation, a wall and roof-ceiling combined STC rating of 45, and exterior windows with a minimum STC rating of 40 are required (Section 5.507.4.1). Alternatively, if the interior noise levels of non-residential buildings satisfy the performance criteria of 50 dBA Leq (1 hour), then the performance method defined by the California's Green Building Standards can be used.

Table 4.9-2 California Building Code Interior Noise Standards

Land Use Category	Exterior Noise Level where Noise Study is Required (dBA CNEL)	Interior Noise Level Limit (dBA CNEL)
Residential, schools, and hospitals	60	45
Non-residential	65	50

Source: California Building Standards Commission (CBSC) 2017

California General Plan Guidelines

The California General Plan Guidelines, published by the Governor's Office of Planning and Research, indicate acceptable, specific land use types in areas with specific noise exposure. The guidelines also offer adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution. These guidelines are advisory, and local jurisdictions, including Eastvale, have the responsibility to set specific noise standards based on local conditions. Please refer to the discussion below, under *the Eastvale General Plan Noise Element*, for the compatibility guidelines adopted by Eastvale.

Local

Eastvale General Plan

Eastvale has adopted a General Plan Noise Element to control and abate environmental noise, and to protect the citizens of Eastvale from excessive exposure to noise. The Noise Element specifies the maximum allowable unmitigated exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. In addition, the Noise Element identifies goals and polices to protect residents from excessive noise (Eastvale 2012).

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.

Policies that are applicable to the proposed project include the following:

- **N-1:** Protect noise-sensitive land uses from high levels of noise by restricting noise-producing land uses from these areas.
- **N-3:** Consider the following uses to be sensitive to noise and vibration, and discourage these uses in areas where existing or projected future noise levels would be in excess of 65 CNEL and/or vibration would be more than 0.0787 Peak Particle Velocity (inches/second):
    - Schools;
    - Hospitals;
    - Rest Homes;
    - Long Term Care Facilities;
    - Mental Care Facilities;
    - Residential Uses;
    - Libraries;
    - Passive Recreation Uses; and
    - Places of Worship.
- **N-5**: Require that exterior noise forecasts use the appropriate Level of Service for the adjacent roadways, or a 20-year projection of traffic volumes (whichever is greater) for future noise forecasts.
- **N-6**: Mitigate exterior noise to the levels shown in Table N-3 to the extent feasible (information is shown in Table 4.9-3 in this EIR).
- **N-14**: Ensure compatibility between industrial and commercial development and adjacent land uses. To achieve compatibility, industrial and commercial development projects may be required to include noise mitigation measures to avoid or minimize project impacts on adjacent uses.
- **N-15**: Encourage noise-tolerant land uses such as commercial or industrial development, to locate in areas already committed to land uses that are noise-producing.
- **N-16**: Require that parking structures, terminals, and loading docks of commercial or industrial land uses be designed to minimize potential noise impacts on adjacent noise sensitive land uses.
- **N-18**: Natural buffers, setbacks or other noise attenuation shall be established between freeways and urban arterial roadways and adjoining noise-sensitive areas.
- **N-22**: Ensure that construction activities are regulated to establish hours of operation in order to prevent and/or mitigate the generation of excessive or adverse noise impacts on surrounding areas.
- **N-23**: Condition subdivision and other land development approval adjacent to developed or occupied noise-sensitive land uses to require the developer to submit a construction-related noise mitigation plan to the City for review and approval prior to issuance of a grading

permit. The plan must depict the location of construction equipment and specify how the noise from this equipment will be mitigated during construction of this project, through the use of such methods as:

a) Temporary noise attenuation fences;

b) Preferential location of equipment;

c) Length of equipment use and idling time; and,

d) Use of current noise suppression technology and equipment.

- **N-24**: Require that all construction equipment be kept properly tuned and use noise reduction features (e.g. mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.
- **N-25**: Development should use natural barriers such as berms, setbacks and/or dense vegetation to assist in noise reduction.
- **N-26**: Continue to develop effective strategies and mitigation measures for the abatement of noise reflecting effective site design approaches and state-of-the-art building technologies.
- **N-27:** Noise reduction measures shall be included in the design of new development through measures which may include:
  - Separation of noise-sensitive buildings from noise-generating sources;
  - Use of natural topography and intervening structures to shield noise-sensitive land uses; and
  - Adequate sound proofing of noise sources or receptor structures to maintain desired interior noise levels.

TRANSPORTATION NOISE AND LAND USE COMPATIBILITY

The noise criteria identified in the Eastvale General Plan Noise Element are guidelines to evaluate the land use compatibility of transportation related noise. The compatibility criteria, shown in Table 4.9-3, provides Eastvale with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels. Residential land use in the study area, is considered completely compatible with exterior noise levels below 60 dBA CNEL and tentatively compatible with noise levels between 60 to 70 dBA CNEL. Non-residential, or non-noise-sensitive use, is considered completely compatible with exterior noise levels less than 70 dBA CNEL, and tentatively compatible with exterior noise levels approaching 75 dBA CNEL.

Table 4.9-3 Noise Compatibility by Land Use Designation

	Community Noise Equivalent Level (CNEL) or Day-Night Level (Ldn), dBA			
Land Use Category	**Normally Acceptable**	**Conditionally Acceptable**	**Normally Unacceptable**	**Conditionally Unacceptable**
All Residential (Single- and Multi-Family)	<60	60-70	70-75	>75
All Non-Residential (Commercial, Industrial, and Institutional)	<70	70-75	>75	*
Public Parks (Existing or Planned)	<65	65-70	70-75	>75

*To be determined as part of the review process.

Source: Eastvale General Plan Noise Element, Figure N-3

The Eastvale residential exterior noise level criteria for transportation noise sources is generally consistent with the adjacent jurisdictional guidelines of Ontario which identifies exterior noise levels ranging from under 60 dBA CNEL as acceptable for residential uses, and 70-75 dBA CNEL as normally acceptable for industrial or non-noise-sensitive uses (Ontario 2011). However, the Chino General Plan Noise Element does not identify specific exterior transportation noise level standards. As such, this noise study relies on the Eastvale residential exterior noise level criteria for transportation noise sources when evaluating project-related off-site traffic noise level increases at noise-sensitive land uses.

STATIONARY-SOURCE NOISE LEVEL STANDARDS

The 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 applicable 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 idling trucks, delivery truck activities, backup alarms, loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements of the proposed project are evaluated based on the stationary source standards at the nearby residential land uses.

Table N-4 of the Noise Element (shown on Table 4.9-4 below) requires an exterior noise level standard for the nearby noise-sensitive single-family residential uses of 60 dBA Leq between the daytime hours of 7:00 AM and 10:00 PM, and 50 dBA Leq between the nighttime hours of 10:00 PM to 7:00 AM.

Table 4.9-4 Exterior Noise Level Standards for Non-Transportation Noise

Land Use Type	Time Period	Maximum Noise Level (dBA)
Single-Family Homes and Duplexes	10:00 PM to 7:00 AM	50
	7:00 AM to 10:00 PM	60
Multiple Residential (3+ Units per Building)	10:00 PM to 7:00 AM	55
	7:00 AM to 10:00 PM	60

Source: Eastvale General Plan Noise Element, Figure N-4

ONTARIO OPERATIONAL NOISE LEVEL STANDARDS

Although the project site is located within Eastvale, sensitive receivers with the potential to be impacted by project noise are also located in Ontario. Therefore, to accurately describe the potential operational noise levels, this analysis considers the appropriate operational noise standards for each of the noise-sensitive receivers located within Ontario. Section 5-29.04(a) of the Ontario Municipal Code identifies the acceptable daytime and nighttime ambient exterior noise standards for each land use type. For residential land uses (Noise Zone I), exterior noise levels may not exceed 65 dBA Leq during the daytime hours (7:00 AM to 10:00 PM) and may not exceed 45 dBA Leq during the nighttime hours (10:00 PM to 7:00 AM). These standards shall apply for a cumulative period of 15 minutes in any hour, as well as plus 20 dBA for any period of time. The operational noise level limits at off-site land uses in Ontario are identified on Table 4.9-5.

Table 4.9-5 Operational Noise Standards for Eastvale and Ontario

City	Land Use	Time Period	Exterior Noise Levels (dBA)[1]		
			Leq (Energy Average)	L25 (15 Minutes)	Lmax (Anytime)
Eastvale	Residential	7:00 AM to 10:00 PM	60	–	–
		10:00 PM to 7:00 AM	50	–	–
Ontario	Residential	7:00 AM to 10:00 PM	65	65	85
		10:00 PM to 7:00 AM	45	45	65

[1] Leq represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The percent noise level is the level exceeded "n" percent of the time during the measurement period. L25 is the noise level exceeded 25 percent of the time.

Source: Eastvale General Plan Noise Element, Figure N-3; Ontario Municipal Code Section 5-29.04

VIBRATION LEVEL STANDARDS

The Eastvale General Plan Noise Element, Policy N-3, identifies a vibration level standard for sensitive land uses of 0.0787 inches per second (in/sec) PPV. Since Ontario does not identify specific vibration level standards, the Eastvale vibration standards are used to assess potential impacts from project construction equipment. 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 STANDARDS

Eastvale has set restrictions to control noise impacts associated with the construction of the proposed project. According to the Eastvale Municipal Code Section 8.52.020, construction activities are limited to the hours of 6:00 AM to 6:00 PM June through September, and 7:00 AM to 6:00 PM October through May. While Eastvale establishes limits to the hours during which construction activity may take place, neither Eastvale or adjacent Ontario General Plan or Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers.

CHINO AIRPORT OVERLAY ZONE

The Chino Municipal Code, Section 20.09.050, includes the airport overlay district noise compatibility standards for land uses located within the noise level contours of Chino Airport. Table 20.09-2 therein, establishes the Community Noise Compatibility Standards for land uses depending on the exterior noise environment due to Chino Airport aircraft overflight noise levels. The project is located outside of the 65 dBA CNEL noise level contour of Chino Airport which, according to Table 20.09-2 of the Municipal Code, is considered normally acceptable for the project land uses.

This is consistent with the Chino Airport Master Plan, prepared by the County of San Bernardino, identifies noise compatibility policies based on the Chino Airport Comprehensive Land Use Plan (ACLUP; San Bernardino County Airport Land Use Commission 1991). The ACLUP indicates that exterior noise levels below 65 dBA CNEL at commercial and industrial uses, such as the project, are considered normally acceptable.

4.9.2 Impact Analysis

a. Significance Thresholds and Methodology

According to Appendix G of the CEQA Guidelines, significant noise impacts would occur if the proposed project would result in any of the following conditions:

1. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
2. Generation of excessive ground-borne vibration or ground-borne noise levels.
3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

Noise level increases resulting from the project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes that there is no single noise increase that renders the noise impact significant.

Construction Noise Thresholds at Sensitive Receivers

As mentioned above, neither Eastvale or adjacent Ontario General Plan or Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers. 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 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 (NIOSH 1998).

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.

Vibration Thresholds at Sensitive Receivers

Construction-related vibration impacts would be significant if levels exceed the Eastvale acceptable vibration standard of 0.0787 in/sec PPV at sensitive receiver locations.

Operation Noise Thresholds at Sensitive Receivers

In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged. The Federal Interagency Committee on Noise (FICON) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly bothered by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level (Leq).

The approach used in this noise study recognizes that there is no single noise increase that renders the noise impact significant, based on a 2008 California Court of Appeal ruling on *Gray v. County of Madera*. For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, FICON identifies a readily perceptible 5 dBA or greater project-related noise level increase is considered a significant impact when the noise criteria for a given land use is exceeded. In areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA barely perceptible noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. Table 4.9-6 below provides a summary of the potential noise impact significance criteria, based on guidance from FICON.

Table 4.9-6 Significance of Noise Impacts at Noise-Sensitive Receivers

Without Project Noise Level	Potential Significant Impact
<60 dBA	5 dBA or more
60-65 dBA	3 dBA or more
>65 dBA	1.5 dBA or more

Source: Federal Interagency Committee on Noise (FICON) 1992

Non-Noise-Sensitive Receivers

The completely compatible exterior noise level for non-noise-sensitive land use, such as commercial and industrial uses, is 70 dBA CNEL, as previously described in Section 4.9.1. Noise levels greater than 70 dBA CNEL are considered tentatively compatible based on the Land Use Designation criteria of the General Plan. This is consistent with the adjacent jurisdictional guidelines of Ontario, as indicated in *The Ontario Plan Safety Section on Noise Hazards* (Table LU-7), which also identifies 70 dBA CNEL as normally acceptable for industrial uses (Ontario 2009). To determine if project-related traffic noise level increases are significant at off-site non-noise sensitive land uses, a readily perceptible 5 dBA and barely perceptible 3 dBA criteria are used. When the without project noise levels at the non-sensitive land uses are below the normally acceptable 70 dBA CNEL compatibility criteria, a readily perceptible 5 dBA or greater noise level increase is considered a significant impact.

When existing noise levels are greater than the normally acceptable 70 dBA CNEL land use compatibility criteria, a barely perceptible 3 dBA or greater noise level increase is considered a significant impact since the noise level criteria is already exceeded. The noise level increases used to determine significant impacts for non-noise-sensitive land uses is generally consistent with the

FICON noise level increase thresholds for noise-sensitive land uses but instead rely on the 70 dBA CNEL exterior noise level criteria of the Eastvale General Plan Noise Element.

Significance Criteria Summary

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4.9-7 shows the significance criteria summary matrix.

Table 4.9-7 Significance Criteria Summary

			Significance Criteria	
Analysis	**Receiving Land Use**	**Conditions**	**Daytime**	**Nighttime**
Off-Site Traffic Noise[1]	Noise-Sensitive	If ambient is <60 dBA CNEL	≥5 dBA CNEL Project increase	
		If ambient is 60-65 dBA CNEL	≥3 dBA CNEL Project increase	
		If ambient is >65 dBA CNEL	≥1.5 dBA CNEL Project increase	
	Non-Noise-Sensitive[2]	If ambient is <70 dBA CNEL	≥5 dBA CNEL Project increase	
		If ambient is >70 dBA CNEL	≥3 dBA CNEL Project increase	
Operational Noise	Noise-Sensitive	Exterior Noise Level Standards[3]	See Table 4.9-5	
		If ambient is <60 dBA Leq[1]	≥5 dBA Leq Project increase	
		If ambient is 60-65 dBA Leq[1]	≥3 dBA Leq Project increase	
		If ambient is <65 dBA Leq[1]	≥1.5 dBA Leq Project increase	
Construction Noise and Vibration	Noise-Sensitive	Noise Level Threshold[4]	85 dBA Leq	n/a
		Noise Level Increase[5]	12 dBA Leq	n/a
		Vibration Level Threshold[6]	0.0787 PPV	n/a

1 Source: Urban Crossroads 2019d; Appendix 4.9.

2 Sources: Eastvale and Ontario General Plan Noise Element land use compatibility criteria for non-noise-sensitive uses (e.g., commercial, industrial). Chino does not identify specific land use compatibility criteria.

3 Source: Eastvale General Plan Noise Element, Table N-4 and Section 5-29.04 of the Ontario Municipal Code.

4 Source: NIOSH, Criteria for Recommended Standard: Occupational Noise Exposure, June 1998.

5 Source: Caltrans Traffic Noise Analysis Protocol, May 2011.

6 Source: Eastvale General Plan Noise Element, Policy N-3.

"Daytime" = 7:00 AM - 10:00 PM; "Nighttime" = 10:00 PM - 7:00 AM; "n/a" = No nighttime construction activity is permitted and therefore, no nighttime construction noise level threshold is identified; "PPV" = Peak particle velocity.

Vibration Assessment

This analysis focuses on the potential ground-borne vibration associated with vehicular traffic and construction activities. Ground-borne vibration levels from automobile traffic are generally overshadowed by vibration generated by heavy trucks that roll over the same uneven roadway surfaces. However, due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity.

However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are summarized on Table 4.9-8. Based on the representative vibration levels presented

for various construction equipment types, it is possible to estimate the project construction vibration levels using vibration assessment methods defined by the FTA.

Table 4.9-8 Vibration Source Levels for Construction Equipment

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded trucks	0.076
Large bulldozer	0.089

Source: FTA 2018

Traffic Noise Prediction Model

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California, the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period.

Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. This methodology is consistent with the County of Riverside Office of Industrial Hygiene Requirements for Determining and Mitigating Traffic Noise Impacts to Residential Structures, which specifically requires the FHWA RD-77-108 model to be used in analysis within the County's jurisdiction (County of Riverside 2015).

Traffic Noise Contours

Noise contours were used to assess the project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the project study area.

To assess the off-site transportation CNEL noise level impacts associated with the proposed project, noise contours were developed based on the project-specific traffic impact analysis (Urban Crossroads 2019e; Appendix 4.11).

Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway. Noise contours were developed for the following traffic scenarios:

- Existing Conditions Without/With Project: This scenario refers to the existing present-day noise conditions without and with the proposed project.
- Opening Year 2021 Without/With the Project: This scenario refers to Year 2021 noise conditions without and with buildout of the proposed project, including cumulative projects.
- Interim Year 2023 Without/With the Project: This scenario refers to Year 2023 noise conditions without and with the proposed project, including cumulative projects.
- Horizon Year 2040 Without/With Project: This scenario refers to the background noise conditions at future Year 2040 without and with the proposed project, including cumulative projects.

Impacts related to a noise level increase from traffic are considered significant if project-generated traffic would result in exposure of sensitive receptors to an unacceptable increase in noise levels. Additionally, operational and traffic-generated noise levels would have a significant impact on the identified noise-sensitive receptors if the existing ambient noise levels:

- Are less than 60 dBA and the project results in an increase of 5 dBA or greater
- Range from 60 to 65 dBA and the project results in an increase of 3 dBA or greater
- Exceed 65 dBA and the project results in an increase of 1.5 dBA or greater.

Operation Noise Levels

The future tenants of the proposed project are unknown. Therefore, to estimate the project operational noise impacts, reference noise level measurements were collected from activities that are anticipated from operational uses of the proposed project. These uses include those typical to industrial use sites, such as delivery truck activities, backup alarms, loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements. A complete description of the methods and location of each reference measurement is provided in the noise impact analysis (Urban Crossroads 2019d; Appendix 4.9). The analysis uses a uniform reference distance of 50 feet. Table 4.9-9 presents these reference measurements.

Project-related operational noise levels at receiving land uses would have a significant impact if they conflict with and exceed the exterior noise standards established in Eastvale General Plan Noise Element or the Ontario Municipal Code, as detailed in Table 4.9-5.

Table 4.9-9 Operation Reference Noise Level Measurements

Noise Source	Reference Distance (feet)	Hourly Activity (Minutes)[1]	Reference Noise Level at Reference Distance (dBA Leq)	Reference Noise Level at 50 Feet (dBA Leq)
Roof-Top Air Conditioning Unit	5	60	77.2	57.2
Parking Lot Vehicle Movements	10	60	52.2	38.0
Truck Unloading/Docking Activity	30	60	67.2	62.8

[1] Anticipated duration (minutes within the hour) of noise activity during peak hourly conditions expected at the project site.

Source: Urban Crossroads 2019d; Appendix 4.9

Construction Noise Levels

To describe the project construction noise levels, measurements were collected for similar activities at several construction sites. Table 4.9-10 provides a summary of the construction reference noise level measurements. Since the reference noise levels were collected at varying distances of 30 feet and 50 feet, construction noise level measurements have been adjusted for consistency to describe a uniform reference distance of 50 feet.

Project-related construction noise levels at receiving land uses would have a significant impact if they conflict with and exceed the exterior noise standards established in Eastvale General Plan Noise Element or the Ontario Municipal Code, as detailed in Table 4.9-5.

Table 4.9-10 Construction Reference Noise Level Measurements

Noise Source	Reference Distance (feet)	Reference Noise Level at Reference Distance (dBA Leq)	Reference Noise Level at 50 Feet (dBA Leq)
Truck Pass-Bys and Dozer Activity	30	63.6	59.2
Dozer Activity	30	68.6	64.2
Construction Vehicle Maintenance Activities	30	71.9	67.5
Foundation Trenching	30	72.6	68.2
Rough Grading Activities	30	77.9	73.5
Framing	30	66.7	62.3
Concrete Mixer Truck	50	71.2	71.2
Concrete Paver Activities	30	70.0	65.6
Concrete Mixer Pour and Paving Activities	30	70.3	65.9
Concrete Mixer Backup Alarms and Air Brakes	50	71.6	71.6
Concrete Mixer Pour Activities	50	67.7	67.7
Forklift, Jackhammer, and Metal Truck Bed Activities	50	67.9	67.9

Source: Urban Crossroads 2019d; Appendix 4.9

b. Project Impacts and Mitigation Measures

Threshold 1:	Would the proposed generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

IMPACT N-1 CONSTRUCTION OF THE PROJECT WOULD TEMPORARILY INCREASE NOISE LEVELS, INCLUDING AMBIENT NOISE, BUT NOISE LEVELS WOULD NOT EXCEED STANDARDS ESTABLISHED BY NIOSH AND CALTRANS. PROJECT OPERATION WOULD GENERATE NOISE FROM ON-SITE ACTIVITIES AND INCREASED TRAFFIC AND INCREASE AMBIENT NOISE, BUT INCREASES WOULD NOT EXCEED STANDARDS ESTABLISHED BY THE CITIES OF EASTVALE AND ONTARIO AND BY FICON.

To determine if the proposed project would expose persons to or generate noise levels in excess of established standards, or cause a substantial permanent increase in ambient noise levels in the project vicinity, the analysis focused on the following impacts: traffic-related noise, project operation noise, impacts to ambient noise levels, and construction-related noise.

Traffic-Related Noise Impacts

Operation of the project would generate new vehicle trips on area roadways and potentially increase traffic-related noise levels at land uses adjacent to these roadways. Fifteen study area roadway segments were analyzed for the with and without project conditions for each of the analysis timeframes: existing condition, opening year 2021, interim year 2023 and horizon year 2040. Increases in noise due to the project were compared to the significance thresholds presented in Table 4.9-7, and results are presented below.

Existing Conditions Traffic Noise Levels

Table 4.9-11 presents a summary of the exterior traffic noise levels with and without project-related traffic for study area roadway segments under the Existing Conditions scenario.

Table 4.9-11 Existing Conditions Without/with Project Traffic Noise Impacts

Segment	Adjacent Land Use	CNEL at Adjacent Land Use (dBA)[1]			Threshold Exceeded?[2]
		Without Project	With Project	Increase	
Archibald Avenue					
n/o Chino Avenue	Residential	76.0	76.2	0.2	No
s/o Chino Avenue	Residential	75.5	75.8	0.3	No
s/o Schaefer Avenue	Residential	75.2	75.5	0.3	No
s/o Ontario Ranch Road	Residential	75.8	76.0	0.2	No
s/o Eucalyptus Avenue	Residential	75.7	75.9	0.2	No
s/o Merrill Avenue	Residential	75.9	76.2	0.3	No
s/o Limonite Avenue	Residential	74.0	74.1	0.1	No
n/o 65th Street	Residential	74.6	74.6	0.0	No
Kimball Avenue					
w/o Hellman Avenue	Residential	74.3	74.5	0.2	No
Limonite Avenue					
e/o Hellman Avenue	Industrial/Agriculture	n/a	58.9	n/a	No
e/o Archibald Avenue	Commercial/Residential	72.4	72.7	0.3	No
e/o Harrison Avenue	Residential	72.8	73.2	0.4	No
e/o Sumner Avenue	Residential	73.2	73.4	0.2	No
e/o Scholar Way	Residential	73.7	74.0	0.3	No
e/o Hamner Avenue	Commercial	73.2	73.4	0.2	No

[1] The CNEL is calculated at the boundary of the road right-of-way and the property line of the nearest adjacent land use.
[2] Based on significance criteria in Table 4.9-7.

n/o: north of; s/o: south of; w/o: west/of; e/o: east of.

n/a: Indicates the roadway segment does not exist in the given scenario.

Source: Urban Crossroads 2019b; Appendix 4.9

As shown on Table 4.9-11, off-site traffic noise level increases due to the project would range from 0.0 to 0.4 dBA CNEL. This increase would not be discernable and would not exceed the thresholds shown in Table 4.9-7.

Opening Year Conditions Traffic Noise Levels

Table 4.9-12 presents a summary of the exterior traffic noise levels with and without project-related traffic for study area roadway segments under the Opening Year (2021) condition.

Table 4.9-12 Opening Year Conditions Without/With Project Traffic Noise Impacts

Segment	Adjacent Land Use	CNEL at Adjacent Land Use (dBA)[1]			Threshold Exceeded?[2]
		Without Project	With Project	Increase	
Archibald Avenue					
n/o Chino Avenue	Residential	76.4	76.6	0.2	No
s/o Chino Avenue	Residential	76.0	76.2	0.2	No
s/o Schaefer Avenue	Residential	75.7	76.0	0.3	No
s/o Ontario Ranch Road	Residential	76.2	76.4	0.2	No
s/o Eucalyptus Avenue	Residential	76.1	76.3	0.2	No
s/o Merrill Avenue	Residential	76.3	76.5	0.2	No
s/o Limonite Avenue	Residential	74.4	74.5	0.1	No
n/o 65th Street	Residential	74.9	74.9	0.0	No
Kimball Avenue					
w/o Hellman Avenue	Residential	74.6	74.8	0.2	No
Limonite Avenue					
e/o Hellman Avenue	Industrial/Agriculture	56.6	60.9	4.3	No
e/o Archibald Avenue	Commercial/Residential	72.9	73.2	0.3	No
e/o Harrison Avenue	Residential	73.3	73.6	0.3	No
e/o Sumner Avenue	Residential	73.6	73.9	0.3	No
e/o Scholar Way	Residential	74.2	74.4	0.2	No
e/o Hamner Avenue	Commercial	73.6	73.9	0.3	No

[1] The CNEL is calculated at the boundary of the road right-of-way and the property line of the nearest adjacent land use.

[2] Based on significance criteria in Table 4.9-7.

n/o: north of; s/o: south of; w/o: west/of; e/o: east of.

Source: Urban Crossroads 2019b; Appendix 4.9

As shown on Table 4.9-12, the project would generate a noise level increase of up to 4.3 dBA CNEL on the study area roadway segments. However, increased noise levels would not exceed the thresholds shown in Table 4.9-7.

Interim Year Conditions Traffic Noise Levels

Table 4.9-13 presents a summary of the exterior traffic noise levels with and without project-related traffic for study area roadway segments under the Interim Year (2023) conditions.

Table 4.9-13 Interim Year Conditions Without/With Project Traffic Noise Impacts

Segment	Adjacent Land Use	CNEL at Adjacent Land Use (dBA)[1]			Threshold Exceeded?[2]
		Without Project	With Project	Increase	
Archibald Avenue					
n/o Chino Avenue	Residential	76.7	76.9	0.2	No
s/o Chino Avenue	Residential	76.4	76.5	0.1	No
s/o Schaefer Avenue	Residential	76.1	76.3	0.2	No
s/o Ontario Ranch Road	Residential	76.5	76.7	0.2	No
s/o Eucalyptus Avenue	Residential	76.4	76.6	0.2	No
s/o Merrill Avenue	Residential	76.6	76.8	0.2	No
s/o Limonite Avenue	Residential	75.2	75.3	0.1	No
n/o 65th Street	Residential	75.2	75.2	0.0	No
Kimball Avenue					
w/o Hellman Avenue	Residential	74.8	75.0	0.2	No
Limonite Avenue					
e/o Hellman Avenue	Industrial/Agriculture	58.8	61.9	3.1	No
e/o Archibald Avenue	Commercial/Residential	73.3	73.6	0.3	No
e/o Harrison Avenue	Residential	73.7	74.0	0.3	No
e/o Sumner Avenue	Residential	74.0	74.2	0.2	No
e/o Scholar Way	Residential	74.5	74.7	0.2	No
e/o Hamner Avenue	Commercial	73.9	74.1	0.2	No

[1] The CNEL is calculated at the boundary of the road right-of-way and the property line of the nearest adjacent land use.

[2] Based on significance criteria in Table 4.9-7.

n/o: north of; s/o: south of; w/o: west/of; e/o: east of.

Source: Urban Crossroads 2019b; Appendix 4.9

As shown on Table 4.9-13, the project would generate a noise level increase of up to 3.1 dBA CNEL on the study area roadway segments. However, increased noise levels would not exceed the thresholds shown in Table 4.9-7.

Horizon Year Conditions Traffic Noise Levels

Table 4.9-14 presents a summary of the exterior traffic noise levels with and without project-related traffic for study area roadway segments under the Horizon Year (2040) conditions.

Table 4.9-14 Horizon Year Conditions Without/With Project Traffic Noise Impacts

Segment	Adjacent Land Use	CNEL at Adjacent Land Use (dBA)[1]			Threshold Exceeded?[2]
		Without Project	With Project	Increase	
Archibald Avenue					
n/o Chino Avenue	Residential	77.4	77.6	0.2	No
s/o Chino Avenue	Residential	77.1	77.3	0.2	No
s/o Schaefer Avenue	Residential	76.9	77.1	0.2	No
s/o Ontario Ranch Road	Residential	77.8	77.9	0.1	No
s/o Eucalyptus Avenue	Residential	77.7	77.9	0.2	No
s/o Merrill Avenue	Residential	78.0	78.1	0.1	No
s/o Limonite Avenue	Residential	76.4	76.5	0.1	No
n/o 65th Street	Residential	75.5	75.5	0.0	No
Kimball Avenue					
w/o Hellman Avenue	Residential	77.1	77.2	0.1	No
Limonite Avenue					
e/o Hellman Avenue	Industrial/Agriculture	75.2	75.3	0.1	No
e/o Archibald Avenue	Commercial/Residential	77.3	77.4	0.1	No
e/o Harrison Avenue	Residential	77.4	77.5	0.1	No
e/o Sumner Avenue	Residential	76.4	76.5	0.1	No
e/o Scholar Way	Residential	76.3	76.4	0.1	No
e/o Hamner Avenue	Commercial	77.1	77.2	0.1	No

[1] The CNEL is calculated at the boundary of the road right-of-way and the property line of the nearest adjacent land use.

[2] Based on significance criteria in Table 4.9-7.

n/o: north of; s/o: south of; w/o: west/of; e/o: east of.

Source: Urban Crossroads 2019b; Appendix 4.9

As shown on Table 4.9-14, the project would generate a noise level increase of up to 0.2 dBA CNEL on the study area roadway segments. The increase in noise would not be discernable, and increased noise levels would not exceed the thresholds shown in Table 4.9-7.

The project would not result in a substantial permanent increase in ambient noise levels due to traffic-related noise under the existing condition, opening year 2021, interim year 2023 and horizon year 2040.

Project Operational Noise Impacts

Potential noise sources associated with project activities are those typical to industrial use sites, such as delivery truck activities, backup alarms, loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements. Reference measurements related to these activities were used to evaluate potential noise impacts to sensitive receptors. A complete description of the methods and location of each reference measurement is provided in the noise impact analysis (Urban Crossroads 2019d; Appendix 4.9).

The noise study evaluated potential noise impacts at four representative receiver locations identified in Figure 4.9-2:

- R1: existing single-family residences located 716 feet south of the project site.
- R2: existing single-family residences located 238 feet northwest of the project site.
- R3: existing single-family residences located 1,422 feet southeast of the project site.
- R4: existing single-family residences located 1,327 feet south of the project site.

Other sensitive receivers similarly situated would experience a similar noise level, while those more distant would experience lower noise levels since noise levels are reduced with distance from the source. Shielding of intervening structures would also further reduce noise levels experienced by sensitive receivers.

Table 4.9-15 shows the project operational noise levels at the representative receiver locations. These levels were evaluated against exterior noise level thresholds enacted by Eastvale and Ontario; see Table 4.9-5. The noise level calculations account for barrier and berm attenuation provided by existing noise barriers and the project buildings, where applicable, as well as the attenuation of noise due to the distance between the on-site noise sources and the nearby sensitive receivers and assume hard site conditions.

Leq is the approximate energy average, or the median level of sound that is projected to occur during a one-hour time period. L25 represents the noise level exceeded 25 percent of the time during a 15-minute time period, and Lmax is the maximum amount of noise anticipated to occur.

Table 4.9-15 Project-Only Operational Noise Levels

		Project Operational Noise Levels (dBA)			
Receiver[1]	Source/Activity[2]	Leq (E. Average)	L25 (15 minutes)	Lmax (Anytime)	Exceed Threshold?[3]
R1	Roof-Top AC	24.3	23.2	25.3	No
	Truck Unloading/Docking	34.0	34.0	46.8	No
	Parking Lot Vehicle Movements	9.7	7.5	29.4	No
	Combined Noise	**34.5**	**34.4**	**46.9**	**No**
R2	Roof-Top AC	30.7	29.6	31.7	No
	Truck Unloading/Docking	37.3	37.3	50.1	No
	Parking Lot Vehicle Movements	16.1	13.9	35.8	No
	Combined Noise	**39.4**	**38.0**	**50.3**	**No**
R3	Roof-Top AC	21.6	20.4	22.5	No
	Truck Unloading/Docking	26.4	26.4	39.2	No
	Parking Lot Vehicle Movements	3.4	1.2	23.1	No
	Combined Noise	**27.9**	**27.4**	**39.4**	**No**
R4	Roof-Top AC	21.9	20.8	22.9	No
	Truck Unloading/Docking	27.9	27.9	40.7	No
	Parking Lot Vehicle Movements	4.0	1.8	23.7	No
	Combined Noise	**28.9**	**28.7**	**40.9**	**No**

[1] See Figure 4.9-2 for the sensitive receiver locations.

[2] Reference noise sources as shown on Table 9-1 in Appendix 4.9.

[3] Significance Criteria as defined in Table 4.9-5.

Source: Urban Crossroads 2019b; Appendix 4.9

Figure 4.9-2 Sensitive Receiver Locations

Imagery provided by Microsoft Bing and its licensors © 2019.
Receiver data provided by Urban Crossroads, 2019.

Fig 1 Sensitive Receiver Locations

As shown in Table 4.9-15, the project-only operational noise levels would range from 27.9 to 39.4 dBA Leq at the sensitive receiver locations, below the applicable thresholds.

Noise Level Contributions to Existing Ambient Noise

To describe the project operational noise level contributions, the project operational noise levels were combined with the existing ambient noise levels measurements for the nearby receiver locations potentially impacted by project operational noise sources. Since decibels (dB), the units used to measure noise, are logarithmic units, the project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. Instead, they must be logarithmically added. In general, a three dBA change in community noise levels is noticeable, but 1-2 dBA changes are not perceived. Calculation details are included in the noise assessment; see Section 9.4 of Urban Crossroads 2019, in Appendix 4.9. Table 4.9-16 shows the existing ambient noise levels at the nearest sensitive receptors, combined ambient and project-related noise levels, and the project-specific contribution to the noise levels, for daytime and nighttime.

Table 4.9-16 Operational Noise Level Contributions

Receiver ID[1]	Reference Measurement Location[1]	Reference Ambient Noise (dBA Leq)[2]	Project Noise (dBA Leq)[3]	Project and Ambient (dBA Leq)[4]	Project Contribution (dBA Leq)[5]	Threshold[6]	Exceed Threshold?
Daytime							
R1	L3	62.8	34.5	62.8	0.0	3.0	No
R2	L1	67.4	38.2	67.4	0.0	1.5	No
R3	L3	62.8	27.6	62.8	0.0	3.0	No
R4	L4	57.6	28.9	57.6	0.0	5.0	No
Nighttime							
R1	L3	62.4	34.5	62.4	0.0	3.0	No
R2	L1	65.6	38.2	65.6	0.0	1.5	No
R3	L3	62.4	27.6	62.4	0.0	3.0	No
R4	L4	50.9	28.9	50.9	0.0	5.0	No

[1] See Figure 4.9-2 for the sensitive receiver locations. Reference noise level measurement locations as shown in Figure 4.9-2.

[2] Observed daytime ambient noise levels as shown on Table 4.9-1.

[3] From the combined operational noise levels shown in Table 4.9-15.

[4] Represents the combined ambient conditions plus the project activities

[5] The noise level increase expected with the addition of project activities.

[6] Significance Criteria as defined in Table 4.9-7.

Source: Urban Crossroads 2019b; Appendix 4.9

As shown in Table 4.9-16, project operational noise would not contribute to or increase existing daytime and nighttime ambient noise levels at sensitive noise receptor locations R1, R2, R3, and R4. The project's contribution to existing noise levels would not create a perceivable difference in existing noise levels. The increases would not exceed FICON thresholds and impacts would be less than significant.

Project Construction Noise Impacts

Noise generated by the project construction equipment would include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high noise levels. The number and mix of construction equipment would be expected to occur in the following stages, based on the Air Quality Impact Analysis prepared for the project (Urban Crossroad 2019a; Appendix 4.2): demolition/site preparation, grading, building construction, paving, and architectural coating. Table 4.9-17 shows the unmitigated construction noise levels at receiver locations.

Table 4.9-17 Construction Equipment Noise

Receiver ID[1]	Unmitigated Construction Noise Levels (dBA Leq)[2]						
	Demolition and Site Grading	Grading	Building Construction	Paving	Architectural Coating	Highest Construction Noise Levels	Exceed Threshold of 85 dba?
R1	39.5	45.1	39.8	43.2	39.1	45.1	No
R2	48.6	54.2	48.9	52.3	48.2	54.2	No
R3	33.7	39.3	34.0	37.4	33.3	39.3	No
R4	34.3	39.9	34.6	38.0	33.9	39.9	No

[1] See Figure 4.9-2 for the sensitive receiver locations. Reference noise level measurement locations as shown in Figure 4.9-1.

[2] Estimated construction noise levels during peak operating conditions as shown in Tables 10-2 to 10-6 in Appendix 4.9.

NIOSH noise-level threshold.

Source: Urban Crossroads 2019b; Appendix 4.9

As shown in Table 4.9-17, construction-related noise would not exceed the NIOSH noise significance threshold of 85 dBA Leq and would not cause a temporary significant increase in noise.

Noise Level Contributions to Existing Ambient Noise

To describe the temporary project construction noise level contributions to the existing ambient noise environment, the project construction noise levels were combined with the existing ambient noise levels measurements at the sensitive 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 on Table 4.9-18. A temporary noise level increase of 12 dBA Leq is considered a potentially significant impact based on the Caltrans substantial noise level increase criteria which is used to assess the project-construction noise level increases. No nighttime construction activity is permitted in the Eastvale Municipal Code; therefore, nighttime noise level increases were not evaluated. Table 4.9-18 shows the ambient noise levels at the sensitive receptors, combined ambient and construction-related noise levels, and the project-specific contribution to the noise levels.

Table 4.9-18 Construction Equipment Noise Contributions

Receiver ID[1]	Reference Measurement Location[1]	Highest Construction Noises[2]	Reference Ambient Noise[3]	Project and Ambient (dBA Leq)[4]	Project Contribution (dBA Leq)[5]	Threshold[6]	Exceed Threshold?
R1	L3	45.1	62.8	62.9	0.1	12	No
R2	L1	54.2	67.4	67.6	0.2	12	No
R3	L3	39.3	62.8	62.8	0.0	12	No
R4	L4	39.9	57.6	57.7	0.1	12	No

[1] See Figure 4.9-2 for the sensitive receiver locations. Reference noise level measurement locations as shown in Figure 4.9-1.

[2] Estimated construction noise levels during peak operating conditions as shown in Tables 10-2 to 10-6 in Appendix 4.9.

[3] Observed daytime ambient noise levels as shown on Table 4.9-1.

[4] Represents the combined ambient conditions plus the construction activities.

[5] The noise level increase expected with the addition of construction activities.

[6] Temporary increase in dBA; significance criteria as defined in Table 4.9-7.

Source: Urban Crossroads 2019d, Appendix 4.9

As shown in Table 4.9-18, project construction noise would not temporarily contribute to or increase existing daytime ambient noise levels at sensitive noise receptor locations R1, R2, R3, and R4. The project's contribution to existing noise levels would not create a perceivable difference in existing noise levels and increases would not exceed Caltrans thresholds.

Project-Related Noise Impact Conclusion

Construction and operation of the project would not generate noise levels in excess of standards or result in a significant temporary or permanent increase in ambient noise levels. Noise associated with anticipated project-related traffic generation and project-related operational noise would not exceed Eastvale and Ontario General Plan Noise Element land use compatibility criteria or FICON standards. Construction-related noise would not exceed the NIOSH significance threshold and would not contribute to ambient noise levels that would exceed the Caltrans threshold. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 2: Would the proposed project expose persons to or generate excessive ground-borne vibration or ground-borne noise levels?

IMPACT N-2 PROJECT CONSTRUCTION WOULD GENERATE GROUND-BORNE VIBRATION ON AND ADJACENT TO THE SITE. HOWEVER, VIBRATION IMPACTS AT NEARBY SENSITIVE RECEPTORS WOULD BE LESS THAN THE THRESHOLDS ESTABLISHED BY EASTVALE AND THE FTA. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

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 ground-borne vibration from project construction activities would cause only intermittent, localized intrusion. The proposed project's construction activities most likely to cause vibration impacts are:

- **Heavy Construction Equipment.** Although heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to buildings, the vibration is usually short-term and is not of sufficient magnitude to cause building damage.
- **Trucks.** 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.

Construction activities that would have the potential to generate low levels of ground-borne vibration within the project site include grading. Using the vibration source level of construction equipment published by the FTA, it is possible to estimate the project vibration impacts. Table 4.9-19 presents the expected project-related vibration levels at the nearby receiver locations.

Table 4.9-19 Construction Equipment Vibration Levels at Nearby Sensitive Receivers

		Receptor PPV Levels (PPV)[3]					
Receiver Location[1]	Distance to Construction Activity[2] (ft.)	Small Bulldozer	Jackhammer	Loaded Trucks	Large Bulldozer	Highest Vibration Level	Threshold Exceeded[4]
R1	736	0.0000	0.0002	0.0005	0.0006	0.0006	No
R2	258	0.0001	0.0011	0.0023	0.0027	0.0027	No
R3	1,442	0.0000	0.0001	0.0002	0.0002	0.0002	No
R4	1,347	0.0000	0.0001	0.0002	0.0002	0.0002	No

[1]See Figure 4.9-2 for the sensitive receiver locations.

[2] Estimated distance of construction activity to sensitive receivers.

[3]Based on the vibration source levels of construction equipment.

[4]Significance Criteria as defined in Table 4.9-6.

Source: Urban Crossroads 2019d, Appendix 4.9

At distances ranging from 258 to 1,442 feet from project construction activities, construction vibration velocity levels would remain below the Eastvale threshold of 0.0787 PPV at receiver locations, as shown on Table 4.9-19.

Further, the project-related construction vibration levels do not represent levels capable of causing building damage to nearby residential homes. The FTA identifies construction vibration levels capable of building damage ranging from 0.12 to 0.50 in/sec PPV. The peak project construction vibration levels shown on Table 4.9-19 would be less than 0.003 in/sec PPV and are below the FTA vibration levels for building damage at the residential homes near the project site.

Moreover, the vibration impacts at the closest sensitive receivers are unlikely to be sustained during the entire construction period but would occur only during the times that heavy construction equipment is operating near the project site perimeter. Therefore, project-related vibration impacts would be less than significant during the construction activities at the project site.

Mitigation Measures

No mitigation required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 3:	If located within the vicinity of a private airstrip or airport land use plan or, where such a plan has not been adopted but within two miles of a public airport or public use airport, would the proposed project expose people residing or working in the project area to excessive noise levels?

IMPACT N-3 THE PROJECT IS LOCATED WITHIN THE CHINO AIRPORT INFLUENCE AREA. THE PROJECT WOULD BE LOCATED IN THE 55 DBA ZONE FOR THE AIRPORT, BELOW THE 65 DBA CALGREEN CODE THRESHOLD FOR EXTERIOR NOISE. THEREFORE, THE PROJECT WOULD NOT EXPOSE PEOPLE WORKING IN THE PROJECT AREA TO EXCESSIVE NOISE, AND IMPACTS WOULD BE LESS THAN SIGNIFICANT.

As stated in Section 2.0, *Project Description*, the proposed project is located within the Chino Airport influence area and subject to the requirements of the Chino Airport Land Use Compatibility Plan (ALUCP). The project site is located in the 55 dBA CNEL zone for the airport (County of Riverside 2008). The CNEL is a weighted average of noise level over time and is frequently used in regulations of airport noise impact on the surrounding community. As previously stated, the CALGreen Code contains mandatory measures for non-residential building construction in Section 5.507 on Environmental Comfort, including noise standards. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, and other areas where noise contours are not readily available. Since the project site is in a 55 dBA CNEL zone, no further noise studies would be required. The project would not expose people working on the project site to excessive noise levels, and impacts would be less than significant.

Mitigation Measures

No mitigation required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

4.9.3 Cumulative Impacts

As discussed in Section 3, *Environmental Setting*, cumulative development in Eastvale and in surrounding cities and the county would include residential development, warehouses, commercial, office, and public facilities. Each of the proposed developments would generate temporary noise during construction. Construction activities at the related projects and developments in the area would generate similar noise levels as the proposed project. Construction schedules for some proposed developments may align with the proposed project. However, construction noise and vibration are localized and rapidly attenuates within an urban environment. Therefore, the project would not contribute considerably to temporary cumulative construction noise and vibration impacts.

Cumulative development would result in stationary (non-traffic) operational noise increases in the project vicinity, particularly in the area of the proposed project as several sites are currently vacant or have uses that do not generate substantial amounts of noise, such as agriculture. Based on the stationary noise analysis provided in Impact N-1, impacts from the project's operation noise would

not exceed local noise standards. Because noise attenuates with distance from its sources, noise impacts associated with on-site activities and other stationary sources would be limited to the project site and immediate vicinity. Therefore, on-site operation activities at the project site, in combination with other planned and pending development, would not contribute considerably to long-term, cumulative noise and vibration impacts.

Cumulative development in the project area would increase noise levels along local roadways as a result of additional vehicle trips. Planned roadway expansions and improvements will contribute to increased noise levels from additional vehicle trips and traffic. Limonite Avenue will be extended westward through the project site and Archibald Avenue will be widened 152 feet to meet the classification of an Urban Arterial. The traffic noise levels presented in Table 4.9-12 through Table 4.9-14 reflect traffic volumes from cumulative development for opening year 2021, interim year 2023 and horizon year 2040. Noise levels from local roadway traffic would increase slightly over time, both with and without the proposed project. As discussed in Impact N-1, the project's contribution to existing noise levels would not create a perceivable difference in existing noise levels and increases would not exceed Caltrans thresholds.

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4.10 Public Services

This section analyzes impacts related to the provision of public services to accommodate the proposed project. Public services addressed includes fire protection services, police protection services, and schools.

4.10.1 Setting

a. Fire Protection

In cooperation with the California Department of Forestry and Fire Protection (CAL FIRE), the Riverside County Fire Department (RCFD) provides fire and emergency services to residents of unincorporated areas of Riverside County and to 20 partner cities, including Eastvale. It also responds to eight additional cities through mutual and automatic aid agreements. Eastvale has been contracting for fire protection service with RCFD since 2011. Eastvale contains two fire stations operated by RCFD: Station 27 and Station 31. RCFD provides full service, municipal and wildland fire protection, pre-hospital emergency medical response by paramedics and EMTs, technical rescue services, and response to hazardous materials discharges.

RCFD consists of four operational support divisions, including: Conservation Camps, Emergency Command Center, Hemet Ryan Air Attack Base, and Pre-Fire Management. In 2018, RCFD responded to 165,989 calls for service, including 3,175 in Eastvale. An estimated 2,369 of those calls were answered by Jurupa Valley Battalion 14, which is accommodated by seven fire stations, including two stations in Eastvale. Battalion 14 responded to a total of 14,738 calls in its service area in 2018 (RCFD 2018).

The General Plan (2012) states that RCFD has a goal of seven minutes for an average response time throughout urbanized areas, and that RCFD standards hold that urban development should be located no more than three miles from a County fire station. This standard remains the same and has not been updated since 2012 (Reinertson 2019).

Fire Stations

Fire Station 27 is located at 7067 Hamner Avenue, located 3.1 miles southeast from the project site via local roadways.

Fire Station 31 is the station that would provide fire protection for the proposed project. It is located at 14991 Chandler Street, approximately 3.2 miles southwest from the project site via local roadways. It is staffed 24 hours a day, seven days a week, with a three-person crew including providing paramedic service (Reinertson 2019).

b. Police Protection

Eastvale contracts with the Riverside County Sheriff's Department (RCSD) for police protection services. The RCSD has a staff of more than 3,600 people and is the second largest Sheriff's Office in California. It has ten stations and manages five correctional facilities, conducts Coroner-Public Administrator duties, and provides court services. The sworn officers assigned to Eastvale operate out of the Jurupa Valley Station which is located at 7477 Mission Boulevard. The Jurupa Valley Station is commanded by a Captain and consists of a patrol function and an investigative function providing contract police services for the cities of Norco, Eastvale, and Jurupa Valley, as well as the

unincorporated areas of eight cities, including Eastvale (RCSD 2016). The police station is approximately 11.9 miles from the project site via local roadways and SR-60.

Eastvale has contracted with RCSD for law enforcement services under a written contract that sets forth the number of personnel and the number of patrol hours per day. RCSD currently provides 100 patrol hours of service per day. Eastvale has a six-person traffic team that includes two sworn motorcycle deputies, two sworn traffic accident investigation deputies, and two dedicated community service officers. In addition, Eastvale has two dedicated sworn deputies assigned to the Special Enforcement Team (Martin 2019). The contract is funded via the General Fund and various fees (i.e., administrative fees and police officer services fees) (Eastvale 2012b).

Current law enforcement response times in Eastvale are between 7-8 minutes for Priority 1 calls (an immediate threat to life or property). The goal is to reduce this time to under five minutes (Eastvale 2019b).

c. Schools

The project site is located in the Corona-Norco Unified School District (CNUSD), which is the largest school district in Riverside County and the ninth largest school district in California. It had a 2017-18 enrollment of 53,294 students. The enrollment for CNUSD schools serving Eastvale is shown in Table 4.10-1.

Table 4.10-1 2017-2018 Enrollment for Eastvale Schools

School	Address	Enrollment
Clara Barton Elementary School	7437 Corona Valley Avenue	1,052
Eastvale Elementary School	13031 Orange Street	1,321
Harada Elementary School	12884 Oakdale Street	1,332
Ronald Reagan Elementary School	8300 Fieldmaster Street	1,493
Rosa Parks Elementary School	13830 Whispering Hills Drive	1,706
VanderMolen Elementary School	6744 Carnelian, Jurupa Valley[1]	988
Dr. Augustine Ramirez Intermediate School	6905 Harrison Avenue	1,233
River Heights Intermediate School	7227 Scholar Way	1,224
Eleanor Roosevelt High School	7447 Scholar Way	4,398

[1]This school is not within Eastvale; however, this is the home school for many Eastvale children who reside east of Hamner Avenue.
Source: Eastvale 2017

d. Parks

Currently, four percent of land in Eastvale is designated Open Space Recreation, and one percent is designated public facilities (Eastvale 2012a). Eastvale is home to numerous public parks, which are owned and operated by the Jurupa Community Services District (JCSD) and the Jurupa Area Recreation and Park District (JARPD), two independent agencies. JCSD owns and maintains 14 public parks and two community centers in the portion of Eastvale west of Hamner Avenue and JARPD provides four public parks in the portion of Eastvale east of Hamner Avenue and in the neighboring Jurupa Valley (JCSD n.d.; JARPD 2019). Below is a list of recreation facilities in Eastvale.

Eastvale Community Center

Built in 2013, the Eastvale Community Center is a 34,000 square-foot facility for celebrations, business meetings, and other events. Areas that are available for rental include five meeting rooms, a kitchen, and the gymnasium and stage area for larger events such as award ceremonies or recitals/performances. It is operated by the JCSD. The Eastvale Community Center is located at 13820 Schleisman Road, Eastvale (JCSD n.d).

Harada Park Neighborhood Center

The 5,040-square-foot Harada Park Neighborhood Center currently offers Tiny Tots classes, a Teen Room, and meeting rooms. It opened in 2012 and is operated by the JCSD. It is located at 13099 65th Street at Harada Heritage Park (JCSD n.d.).

JARPD Parks

The following parks are maintained by JARPD:

- Cambria Park: 5471 Harmony Drive
- Delaware Greenbelt: 6986 Delaware River Drive
- Harmony Park: 5641 Treasure Drive
- Moon River Park: 6859 Moonriver Street

JCSD Parks

The following parks are maintained by JCSD:

- American Heroes Park: 6608 Hellman Avenue
- Cedar Creek Park: 6709 Cedar Creek Road
- Dairyland Park: 14520 San Remo
- Deer Creek Park: 6785 Iron Horse Lane
- Eastvale Community Park: 12750 Citrus Street
- Half-Moon Park: 14383 Cherry Creek
- Harada Heritage Park: 13099 65th Street
- James C. Huber Park: 6411 Rolling Meadows
- McCune Family Park: 7450 Eastvale Parkway
- Mountainview Park: 14444 Selby Avenue
- Orchard Park: 5900 Festival Way
- Providence Ranch Park: 7250 Cobble Creek
- Riverwalk Park: 7674 Soaring Bird Court
- Symphony Park: 13387 Largo Drive

e. Public Facilities

Eastvale Branch of the Riverside County Library

The 6,200-square-foot Eastvale Public Library, which opened in 2007, is part of the Riverside County Library system and is located on the campus of Eleanor Roosevelt High School at 7447 Scholar Way, Eastvale. Since 1997, the County of Riverside has contracted with Library Systems & Services, LLC (LSSI) to operate its library system. The Riverside County Library System has 35 branches, two bookmobiles, and a museum (LSSI 2019). Eastvale has a population of 64,854 and has 0.096 square feet of library space per capita. Eastvale is committed to invest in a new library in its 2019-2020 budget (Eastvale 2019c).

f. Regulatory Setting

State Policies

2018 California Strategic Fire Plan (Fire Plan)

The Fire Plan is a cooperative effort between the State Board of Forestry and Fire Protection and CAL FIRE (CALFIRE 2018). The 2018 Fire Plan reflects a focus on fire prevention and suppression activities and natural resource management to maintain the State's forests as a resilient carbon sink to meet California's climate change goals and to serve as important habitat for adaptation and mitigation. Major components center on the following goals:

- Improve the availability and use of consistent, shared information on hazard and risk assessment
- Promote the role of local planning processes, including general plans, new development, and existing developments, and recognize individual landowner/homeowner responsibilities
- Foster a shared vision among communities and the multiple fire protection jurisdictions, including county-based plans and community-based plans such as Community Wildfire Protection Plans
- Increase awareness and actions to improve fire resistance of man-made assets at risk and fire resilience of wildland environments through natural resource management
- Integrate implementation of fire and vegetative fuels management practices consistent with the priorities of landowners or managers
- Determine and seek the needed level of resources for fire prevention, natural resource management, fire suppression, and related services
- Implement needed assessments and actions for post-fire protection and recovery

California Fire Code (Title 24, Part 9, California Code of Regulations)

The California Fire Code incorporates the Uniform Fire Code (UFC) with necessary California amendments. This Code prescribes regulations consistent with nationally recognized good practices for the safeguarding, to a reasonable degree, of life and property from the hazards of fire explosion. It also addresses dangerous conditions arising from the storage, handling, and use of hazardous materials and devices; conditions hazardous to life or property in the use or occupancy of buildings or premises; and provisions to assist emergency response personnel.

California Building Code

The 2016 California Building Code (CBC) became effective January 1, 2017, including Part 9 of Title 24, the California Fire Code. Section 701A.3.2 of the CBC requires that new buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, any Local Agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted, comply with all sections of the Chapter.

California Health and Safety Code (Sections 13000 et seq.)

This Code establishes State fire regulations, including regulations for building standards (also set forth in the CBC), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Government Code Section 65995 (California Government Code, Title 7, Chapter 4.9)

California Government Code Section 65995 authorizes school districts to collect impact fees from developers of new residential and commercial/industrial building space. Section 65995 was established under the School Facilities Act of 1986 and refined and amended by the Leroy F. Greene School Facilities Act of 1998 (SB 50) to provide further guidance and restrictions on fee limits and fee types. The maximum fees authorized under SB 50 apply to zone changes, general plan amendments, zoning permits and subdivisions. The payment of school impact fees by developers are deemed to provide full and complete mitigation of school facilities impacts, notwithstanding any contrary provisions in CEQA or other State or local laws. The CNUSD determines fees annually in accordance with California Government Code Section 65995. The most recent developer fees for CNUSD are shown in Table 4.10-2.

Table 4.10-2 CNUSD Fees by Construction Type

Construction Type	Fee per Square Foot
Level 1 – Residential Room Additions 500 Square feet or larger	$3.79
Level 1 – New Residential	$3.79
Residential Room Additions 500 Square feet or less	Exempt – must receive an Exemption Certificate from the school district
Commercial/Industrial	$0.61
Senior Housing	$0.61

Source: CNUSD 2019

Local Policies

Eastvale Development Impact Fees

Eastvale requires the payment of development impact fees that are meant to offset the impacts of new developments on Eastvale facilities. These development impact fees were created in accordance with the Ordinance 2012-02 and implemented through Resolution 12-15. Development impact fees for Eastvale are shown in Table 4.10-3.

Table 4.10-3 Eastvale Development Impact Fees by Land Use Type

Land Use Type	Units	Fee per Unit
Single-Family Residential	Unit	$2,116
Multi-Family Residential	Unit	$1,469
Commercial/Retail	1,000 SF – GFA	$1,966
Light Industrial/Warehousing	1,000 SF – GFA	$645
Office/Business Park	1,000 SF – GFA	$654

Notes: SF = square feet; GFA = gross floor area
Source: Eastvale 2017

Eastvale General Plan

The General Plan Land Use and Safety Elements contains goals and policies related to public services such as police and fire protection. A Safety Element Goal is to provide a safe and healthy environment for all Eastvale residents that includes adequate levels of police and fire protection, safe housing, and safe places to work and play. Policies and associated actions of the Eastvale General Plan that relate to public services and provided in Table 4.10-4.

Table 4.10-4 General Plan Policies Relating to Public Services

General Plan Policy	Description of Policy
Emergency Response/Coordination	
Policy S-14	The City will work with responsible agencies to ensure that all industrial facilities are constructed and operated in accordance with the most current safety and environmental protection standards.
▪ Action S-14.1	The City shall require commercial businesses, utilities, and industrial facilities that handle hazardous materials to: ▪ Install automatic fire and hazardous materials detection, reporting, and shut-off devices; and ▪ Install an alternative communication system in the event power is out or telephone service is saturated following an earthquake.
Policy S-15	The City will coordinate with all appropriate local, county, state, and federal agencies in hazardous materials route planning, notifications, and incident response to ensure appropriate first response to hazardous material incidents.
Policy S-17	The City will participate in regional disaster recovery planning and implementation.
▪ Action S-17.1	Develop plans for short- and long-term post-disaster recovery which complement plans of adjacent jurisdictions, Riverside County, and San Bernardino County.
Police Protection	
Policy S-21	The City shall ensure the safety and protection of Eastvale and its community members by providing appropriate first response to emergencies and ensuring that sufficient resources are available to provide adequate protection as the community grows.
▪ Action S-21.1	The City will maintain and enhance community safety through coordinated regional emergency, law-enforcement, and protective services systems.
▪ Action S-21.2	The City will work with the Police Department through the review of proposed development projects to ensure that public safety issues are considered prior to construction and occupancy.
Policy S-22	The City will seek to maintain and enhance communications between community residents and the police through regular meetings and a visible community policing program.
Fire Protection	
Policy S-10	All proposed construction shall meet minimum standards for fire safety as defined in the City's Building or Fire Codes, based on building type, design, occupancy, and use.
Policy S-11	Development in hazardous fire areas shall include secondary public access, unless determined otherwise by the Fire Chief.
Policy S-20	The City shall work with the Riverside County Fire Department to ensure the safety and protection of Eastvale and its community members.
▪ Action S-20.1	The City will work with the County Fire Department through the review of proposed development projects to ensure that fire safety issues are considered.

General Plan Policy	Description of Policy
Public Facilities and Services	
Policy LU-31	The City will work with other agencies to coordinate development with supporting infrastructure and services, such as water and sewer service, libraries, parks and recreational facilities, transportation systems, and fire/police/medical services.
▪ Action LU-31.1	Monitor the capacities of infrastructure systems and public services in coordination with service providers, utilities, and outside agencies
Policy OS-2	Require the provision of recreation facilities concurrent with the development they serve.
Policy OS-3	Require new development to provide implementation strategies for the funding of both active and passive parks and recreational sites.
▪ Action OS-3.1	The City shall pursue the implementation of funding mechanisms to provide for the long-term maintenance of parks and/or trails in those instances where funding is not available from other sources.
Policy OS-4	The City of Eastvale supports the development, maintenance, and enhancement of parks and trails serving a variety of needs at the neighborhood, community, and citywide level. To accomplish this, the City will work with the Jurupa Community Services District and the Jurupa Area Recreation and Park District to transition responsibility for public parks in Eastvale to the City.
▪ Action OS-4.1	The City shall conduct a "nexus study" to determine the demand for parkland in the city and the reasonable relationship between the demand and the type of development project to support the imposition of parkland dedication and/or fees.
▪ Action OS-4.2	The City shall adopt a comprehensive Parks and Trails Master Plan which provides parks criteria, planned parks, and off-street recreational, walking, equestrian, and multiuse trails. Prior to the adoption of the parks standards and the Parks and Trails Master Plan, the City shall require the provision of parks as part of development projects to implement the City's parkland standards. The size, location, and facilities provided in these parks may be determined on a case-by-case basis.
▪ Action OS-4.3	To the extent consistent with applicable state law, the City shall develop criteria defining the types of parks and trails to be developed, including criteria defining desired: ▪ Park types and sizes ▪ Park facilities by type ▪ Locational criteria ▪ Spacing ▪ Trails and related facilities by type and function ▪ Maintenance requirements
Policy OS-5	Until the City establishes its own parks operation in fulfillment of Policy OS-4, the City will work with the Jurupa Community Services District and the Jurupa Area Recreation and Park District to provide parks, recreation, and trails.
▪ Action OS-5.1	As part of the review of development projects, ensure that public parks and trails are provided which meet the City's criteria and which implement the City's Parks and Trails Master Plan (once it has been adopted).
▪ Action OS-5.2	Coordinate with the JCSD and the JARPD in the review of residential developments requiring parks and recreation facilities.
Policy OS-6	New residential developments may be required to, at a minimum, provide parks consistent with the Quimby Act (California Government Code Section 66477), through land dedication, fees in lieu, or on-site improvements at a standard of 5 acres of land for parks per 1,000 residents. Land dedication and/or payment of in-lieu fees shall be required consistent with state law. Land dedication and/or fees may be required pursuant to other policies in this chapter with or without the use of the authority provided in the Quimby Act, or in combination with the Quimby Act and other legal authority.
▪ Action OS-6.1	The City will adopt standards designating which types of lands shall be considered "parks" for the purpose of implementing Quimby Act requirements.

Source: Eastvale 2012a

4.10.2 Impact Analysis

a. Methodology and Significance Thresholds

In accordance with Appendix G of the CEQA Guidelines, the proposed project would result in potentially significant impacts related to public services if it would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable services ratios, response times or other performance objectives for any of the public services:

a) Fire protection
b) Police protection
c) Schools
d) Parks
e) Other public facilities

Threshold:	**Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, parks, or other public facilities**

Impact PS-1 **THE PROPOSED PROJECT WOULD NOT RESULT IN SUBSTANTIAL PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OR NEED OF NEW OR PHYSICALLY ALTERED FACILITIES, THE CONSTRUCTION OF WHICH WOULD 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.**

The proposed project would not have any residential component and the project service population consists of employees only. Because the tenant of the project's buildings are not yet known, the number of jobs that the project would generate cannot be precisely determined; therefore, for purposes of this analysis, employment estimates were calculated using data and average employment density factors utilized in the County of Riverside General Plan. County factors were used since the current Eastvale General Plan is substantially based on the County General Plan.

The General Plan estimates that Light Industrial (LI) uses would employ one worker for every 1,030 square feet of building area, as noted in Appendix E-2, Table E-5 (Riverside County 2017). Based on this employment generation rate, the project is expected to create approximately 1,049 new recurring jobs in the region. Employees are expected to predominantly be drawn from the existing workforce in the City and the surrounding region.

Fire Protection

As previously discussed, RCFD has a goal of seven minutes for an average response time throughout urbanized areas such as Eastvale. In addition, RCFD standards hold that urban development should be located no more than three miles from a County fire station. The project would be located in the existing service area of RCFD and would not increase its coverage area. Station 31 would be able to

provide fire protection services for the proposed project without the need to expand its facilities to provide services (Reinertson 2019).

By virtue of generating new employment, the proposed project may incrementally increase the service population of the RCFD, as it would be anticipated that employees would mainly reside in the RCFD service area. However, it is unknown how many employees associated with the proposed project would relocate to the RCFD service area from outside its boundaries. The project's incremental contribution to demand for new fire protection services would be offset by payment of proportionate property taxes to the appropriate jurisdiction in the RCFD service area that contracts with RCFD. Additionally, the project developer would be required to contribute development impact fees to Eastvale to support future fire facilities and services.

General Plan Policy LU-30 requires Eastvale to coordinate with agencies such as RCFD on supporting infrastructure and services, including fire services. Potential environmental impacts related to the construction of new or expanded fire protection facilities would be assessed on a project-specific level under CEQA.

The project would not impede the ability of RCFD to provide fire protection services to Eastvale because existing roadways would not be altered in a way that would impede access. Limonite Avenue currently terminates at the project site. The improvements made to Limonite Avenue as part of the proposed project would expand vehicle access, and therefore emergency access, to the project site. Appropriate fire protection measures would be included in the new development in accordance with the CBC and California Fire Code. Additionally, under Policy S-20 of the General Plan, Eastvale will work with RCFD through the review of proposed development projects to ensure that fire safety issues are considered. Therefore, impacts with respect to fire protection facilities would be less than significant.

Police Protection

The project would be located in the existing service area of RCSD and would not increase its coverage area. As previously mentioned, Eastvale is served from the RCSD Jurupa Valley Station. RCSD's current staffing for Eastvale would not need to increase based on the development of the proposed project at this time. Staffing levels are currently acceptable. RCSD continually evaluates staffing levels for each service and recommendations to increase staffing may be made in future years (Martin 2019).

The proposed project may incrementally increase the service population of the RCSD, as it would be anticipated that employees would mainly reside in the RCSD service area, but it is unknown how many employees would relocate to the RCSD service area from outside its boundaries. The project's incremental contribution to demand for new police protection services would be offset by payment of proportionate property taxes to the appropriate jurisdiction in the RCSD service area that contracts with RCSD.

General Plan Policy S-21 provides that Eastvale ensure that sufficient resources are available to expand emergency protection and safety services as the community grows. General Plan Policy LU-30 requires Eastvale to coordinate with agencies such as RCFD on supporting infrastructure and services, including police services. Potential environmental impacts related to the construction of new or expanded police protection facilities would be assessed on a project-specific level under CEQA.

The proposed project includes expansion of Limonite Avenue, which would expand emergency access to the project site. General Plan Policy S-21 requires the Eastvale to coordinate with police

agencies through the review of proposed development projects to ensure that public safety issues are considered prior to construction and occupancy. Given the ability of RCSD to service the project at existing staffing levels and existing Eastvale policies to ensure adequate police protection, impacts with respect to police protection would be less than significant.

Public Schools

The District's school facility capacity is determined in accordance with the Leroy F. Greene School Facilities Act of 1998 as set forth on the SAB Form 50-02 (Existing Building Capacity) as revised on August 31, 2000. According to the 2018 Fee Justification Report prepared by CNUSD, the current enrollment and facility capacity is shown in Table 4.10-5.

Table 4.10-5 CNUSD Enrollment and Capacity

Facility Type	Current Enrollment	Total Capacity	Available Capacity
Elementary (Grades K-6)	27,379	28,185	806
Middle School (Grades 7-8)	8,354	8,612	258
High School (Grades 9-12)	17,540	18,606	1,066
Total K-12	**53,273**	**55,403**	**2,130**

Source: CNUSD 2018

A comparison of current student enrollment to current capacity demonstrates that CNUSD has sufficient facilities to adequately house its current enrollment. Much of this capacity is attributable to the recent construction of schools in Eastvale. These schools primarily serve new housing developments and future housing developments. Based on current and future population estimates prepared by the Southern California Association of Governments (SCAG) and existing housing to population ratios, CNUSD expects that between 2018 and 2040, approximately 8,423 additional residential units are estimated to be constructed within the boundaries of the district (CNUSD 2018).

To establish a nexus between anticipated future residential development and a corresponding need for additional school facilities, the number of future students anticipated to be generated from the new development must be determined. This calculation often results in a student generation rate or factor, which represents the number of students, or portion thereof, expected to attend CNUSD schools. The four-step methodology used to quantify the impact of commercial/industrial development on student enrollment is discussed in this section of the report and is summarized as follows:

1. Determine the number of employees required per square foot for specific types of commercial and industrial development (i.e., new jobs created within the school district).
2. Determine the number of new employees that would both live and work within the school district.
3. Determine the number of occupied housing units that would be associated with new employees.
4. Determine the number of new students generated from these employees utilizing the estimated student generation rates.

Based on the CNUSD Fee Justification Report, industrial parks with no commercial component were determined to generate 0.263 household units in the district per 1,000 square feet of developed space (CNUSD 2018). The proposed project would construct buildings totaling up to 1,080,060 square feet. Using the formula developed by CNUSD, the proposed project would necessitate approximately 284 household units for its employees.

Student generation rates for single-family detached housing units are 0.3650 per dwelling unit for K–6 grades, 0.1136 per dwelling unit for 7–8 grades, and 0.2337 per dwelling unit for 9–12 grades. The rate is lower for single-family attached and multi-family housing units. Taking a highly conservative approach and assuming all housing units necessitated for the project would be new, single-family detached homes, it is estimated that the proposed project would generate approximately 104 K-6 students, 32 7-8 grade students, 66 9-12 grade students, or 202 total new students in the district. Based on the information provided in Table 4.10-5, CNUSD has sufficient capacity for this estimated increase in student enrollment. The number of students generated by the proposed project would likely be lower than this conservative estimate, as project employees would live in a variety of housing types and would not all reside in the CNUSD service area.

A significant number of future dwelling units in the district will be constructed within master-planned communities and other in-fill areas which are considered Mitigated Developments because they have already mitigated their school impacts through the formation of a community facilities district or some other ‘in-lieu-of” consideration. For housing development not considered Mitigated Development, CNUSD would be authorized to collect $1,469 per multi-family housing unit and $2,116 per single-family housing unit developed in the district, in order to mitigate costs associated with the construction of new or expanded district facilities.

Pursuant to Government Code Section 65995(b)(2), CNUSD is authorized to collect $0.61 per square foot of for new commercial/industrial development, which would apply to the proposed project. State law assumes that the developer’s payment of school impact fees to the local school district, in an amount established by the school district, would address school capacity impacts. Additionally, potential environmental impacts related to the construction of new or expanded school facilities would be assessed on a project-specific level. Therefore, impacts to school capacity would be less than significant under CEQA since the Applicant would be required to pay State-mandated school impact fees, and no further mitigation is required.

Parks

Both JCSD and JARPD have established a requirement for dedication of five acres of parkland per 1,000 population (Eastvale 2012b). General Plan Policy OS-6 states that new residential developments may be required to, at a minimum, provide parks consistent with the Quimby Act (CA Govt. Code Section 66477), through land dedication, fees in lieu, or on-site improvements at a standard of five acres of land for parks per 1,000 residents. There are approximately 250 acres of community and neighborhood parks open to the public or in different stages of development. The 2018 population of Eastvale was 64,854, which equates to approximately 3.5 acres per 1,000 residents (SCAG 2019). This means that Eastvale currently experiences a parkland deficit.

Local policy requires developers of projects to contribute to development impact fees to Eastvale, which would be used to fund the development and maintenance of parks and community use facilities, as noted in Table 4.10-3. The proposed project would contribute based on its land use designation of Light Industrial. Future residential development projects, including those that may serve employees of the proposed project, would also be required to pay development impact fees for park facilities on behalf of Eastvale.

The project site is not currently identified as parkland or an anticipated addition to the open space network and, therefore, would not preclude future acquisition to increase parkland. Therefore, the project would not substantially worsen the existing deficiency in meeting the parkland ratio goal. Additionally, potential environmental impacts related to the construction of new or expanded park and recreation facilities would be assessed on a project-specific level. Therefore, impacts to parks would be less than significant, and no mitigation is required.

Other Public Facilities

As previously mentioned in this analysis, the proposed project would provide approximately 1,049 new recurring jobs, which may result in an increase in Eastvale's population and therefore increase the service population of the Eastvale branch of the Riverside County Library. However, it is unknown how many employees would reside in Eastvale, and of those employees, how many would be new residents. Future Eastvale residents would pay proportionate property taxes to Eastvale, which would maintain the Eastvale General Fund and investments in new or expanded library facilities. Potential environmental impacts related to the construction of new or expanded public facilities would be assessed on a project-specific level. Therefore, the proposed project would have no impact to the provision of other new or physically altered public facilities.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts associated with the provision or need for new or physically altered government facilities would be less than significant.

4.10.3 Cumulative Impacts

As previously mentioned in this analysis, the proposed project would provide approximately 1,049 new recurring jobs, which may result in an increase in Eastvale's population and therefore increase the service population of agencies responsible for fire protection, police protection, schools, parks and recreation services, libraries, and other public services. New development in Eastvale, including the projects listed in Table 3-1 in Section 3, *Environmental Setting*, may also contribute to an increase in service population and use of public services, and cumulatively, there may be a need for new or improved facilities to maintain acceptable service ratios, response times, or other applicable goals.

Each project's incremental contribution to demand for new services would be offset by payment of proportionate property taxes and/or development impact fees in accordance with Government Code Section 65995(b)(2) and the Eastvale Municipal Code. Potential environmental impacts related to the construction of new or expanded public facilities would be assessed on a project-specific level. Therefore, the proposed project would not cumulatively contribute to impacts regarding the use of public services or the provision of other new or physically altered public facilities.

4.11 Transportation/Traffic

This section presents existing and future transportation/traffic conditions for the project 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. This section also includes an evaluation of vehicle miles travelled (VMT). The analysis herein is based on *The Homestead Traffic Impact Analysis* (TIA) and *The Homestead Vehicle Miles Travelled (VMT) Assessment*, prepared by Urban Crossroads, Inc. (2019e and 2019f) and included in Appendix 4.11.

4.11.1 Setting

a. Study Area

Study Area Intersections

Study area intersections were selected based on a "50 peak hour trip" criterion used by Eastvale; see Figure 4.11-1 and listed in Table 4.11-1. This criterion is based on the reasonable presumption that 50 peak hour trips generally represent a minimum number of trips at which a typical intersection would have the potential to be substantively impacted by a given development proposal. The "50 peak hour trip" criterion is used by the County of Riverside, and the County of San Bernardino, including the adjacent cities of Ontario and Chino. A total of 20 intersections were identified for study. Eight of the study intersections would be developed in the future – including seven associated with project driveways.

Study Area Roadways

Study area roadway segments are identified on Figure 4.11-1 and include the following segments:

- Archibald Avenue—Limonite Avenue to 65th Street
- Limonite Avenue—
  - Archibald Avenue to Sumner Avenue
  - Sumner Avenue to Hamner Avenue
  - Hamner Avenue to Interstate 15 (I-15) Freeway

Freeway Mainline and Ramp Junction

Study area freeway mainline analysis locations were selected based on Caltrans traffic study guidelines. Freeway facilities associated with the I-15 Freeway and Limonite Avenue interchange are identified in Table 4.11-3.

- Southbound Ramps and Segments: off-ramp at Limonite Avenue, on-ramp at Limonite Avenue, and south of Limonite Avenue
- Northbound Ramps and Segments: north of Limonite Avenue, on-ramp at Limonite Avenue, off-ramp at Limonite Avenue, south of Limonite Avenue

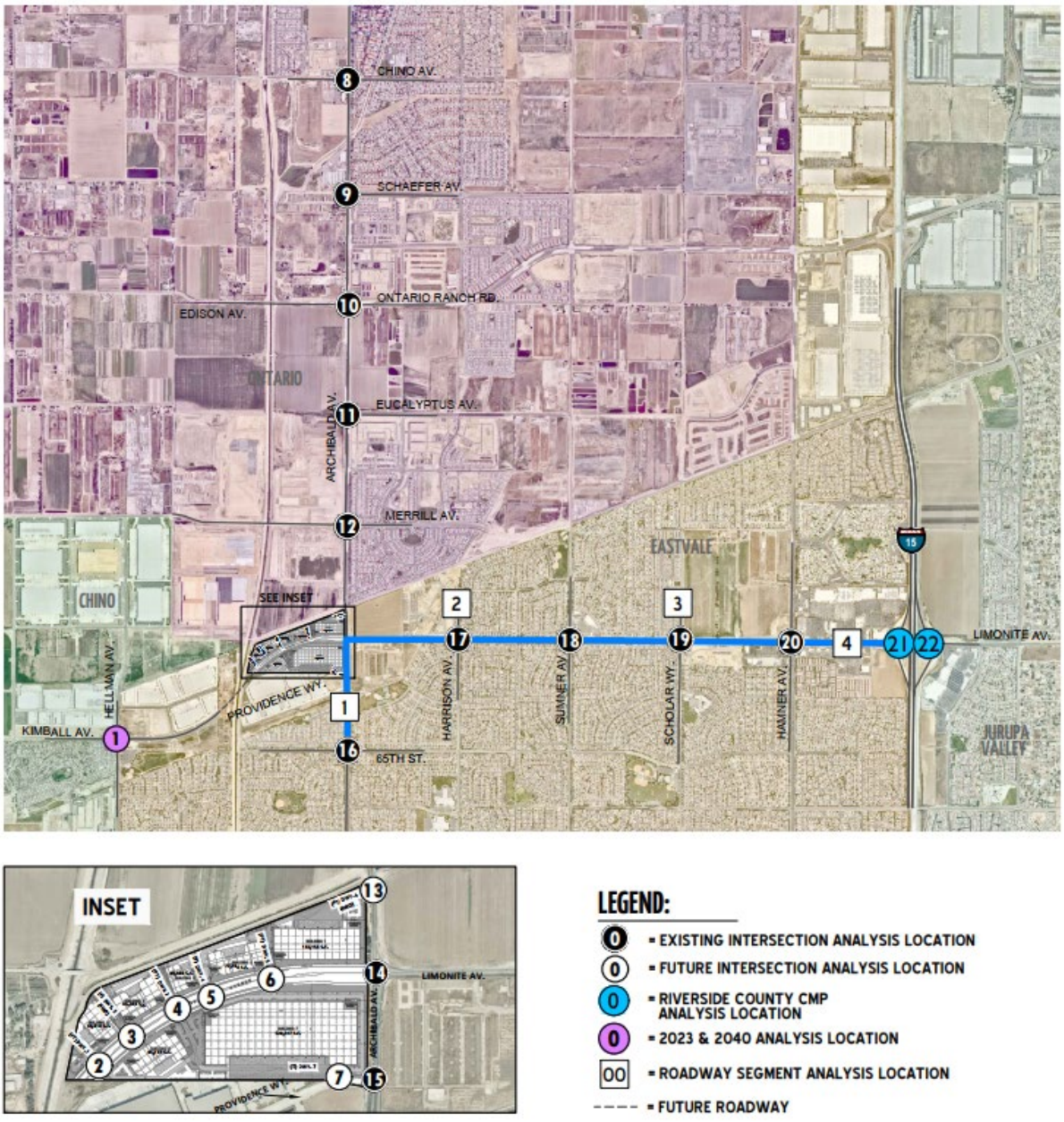
Table 4.11-1 Study Area Intersections

No.	Intersection	Traffic Control	Jurisdiction
1	Hellman Avenue and Kimball Avenue	2023 and 2040 only	Eastvale, Chino
2	Driveway 1 and Limonite Avenue	Future Intersection	Eastvale
3	Driveway 2 and Limonite Avenue	Future Intersection	Eastvale
4	Driveway 3 and Limonite Avenue	Future Intersection	Eastvale
5	Driveway 5 and Providence Way	Future Intersection	Eastvale
6	Archibald Avenue and Chino Avenue	TS	Ontario
7	Archibald Avenue and Schaefer Avenue	TS	Ontario
8	Archibald Avenue and Ontario Ranch Rd.	TS	Ontario
9	Archibald Avenue and Eucalyptus Avenue	TS	Ontario
10	Archibald Avenue and Merrill Avenue	TS	Ontario
11	Archibald Avenue and Driveway 6	Future Intersection	Eastvale
12	Archibald Avenue and Limonite Avenue	TS	Eastvale
13	Archibald Avenue and Providence Way	TS	Eastvale
14	Archibald Avenue and 65th Street	TS	Eastvale
15	Harrison Avenue and Limonite Avenue	TS	Eastvale
16	Sumner Avenue and Limonite Avenue	TS	Eastvale
17	Scholar Way and Limonite Avenue	TS	Eastvale
18	Hamner Avenue and Limonite Avenue	TS	Eastvale
19	I-15 SB Ramps and Limonite Avenue	TS	Caltrans, Eastvale
20	I-15 NB Ramps and Limonite Avenue	TS	Caltrans, Jurupa Valley

CMP=congestion management plan; LOS=level of service; TS=traffic signal

Source: Urban Crossroads 2019e

Figure 4.11-1 Study Area



Congestion Management Program

The intent of a Congestion Management Program (CMP) is to more directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related impacts, and improve air quality. The County of Riverside CMP became effective with the passage of Proposition 111 in 1990 and was updated in 2011. The Riverside County Transportation Commission (RCTC) adopted the 2011 CMP for the County of Riverside in December 2011. CMP intersections include the I-15 southbound and northbound ramps at Limonite Avenue.

Existing Bicycle, Equestrian, and Pedestrian Facilities

Eastvale's current and future trails and bikeway systems include off-street Class I multi-use trails along Cucamonga Creek and the Southern California Edison easement to Remington Avenue/Bellegrave Avenue. On-street Class II bike lanes are proposed along Limonite Avenue and Archibald Avenue near the vicinity of the site. Field observations conducted in May 2019 indicate nominal pedestrian and bicycle activity within the study area.

Existing Transit Service

The Riverside Transit Agency (RTA) serves Eastvale. RTA Routes 3 and 29 currently operate on Limonite Avenue and Hamner Avenue. However, there are no existing bus routes near the project. Transit service is reviewed and updated by RTA periodically to address ridership, budget and community demand needs. The study area within Ontario is served by Omnitrans, a public transit agency serving various jurisdictions within San Bernardino County.

b. Local and Regional Funding Mechanisms

Transportation improvements within the City are funded through a combination of improvements constructed by projects, development impact fee programs or fair share contributions, such as the City Development Impact Fee (DIF) program. Identification and timing of needed improvements is generally determined through local jurisdictions based upon a variety of factors.

Project improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair share contribution toward future improvements or a combination of these approaches. Improvements constructed by development may be eligible for a fee credit or reimbursement through the program where appropriate (to be determined at the City's discretion). When off-site improvements are identified with a minor share of responsibility assigned to proposed development, the approving jurisdiction may elect to collect a fair share contribution or require the development to construct improvements.

City of Eastvale Development Impact Fee Program

Eastvale imposes and collect fees from new residential, commercial and industrial development via its local DIF program for the purpose of funding roadways and intersections necessary to accommodate growth identified in the Eastvale General Plan Circulation and Infrastructure Element.

The timing to use the DIF fees is established through periodic capital improvement programs which are overseen by Eastvale's Public Works Department. The project would be subject to Eastvale's DIF fee program, and would pay the requisite DIF fees at the rates in effect pursuant to Eastvale's ordinance.

Transportation Uniform Mitigation Fee (TUMF) Program

The TUMF is a regional transportation mitigation fee program established to provide a mechanism for development to contribute its fair share funding for construction of facilities needed to maintain the requisite level of service critical to mobility in the region. The program is administered by the Western Riverside Council of Governments (WRCOG) based upon a regional nexus study most recently updated in 2016 to address major changes in right of way acquisition and improvement cost factors. This regional program is imposed and implemented in every jurisdiction in Western Riverside County, and TUMF guidelines empower a local zone committee to prioritize and arbitrate certain projects. The project is located in the Northwest Zone. The zone has developed a 5-year Transportation Improvement Program to prioritize projects and allocate funding for transportation improvements.

Mira Loma Road and Bridge Benefit District (RBBD) Program

Similar to other regions within Riverside County, Eastvale is anticipated to experience substantial growth. Extensive improvements are necessitated by new development within the region. In particular, Riverside County recognized the impact of this growth on the vicinity of the study area when it formed the Mira Loma RBBD. The project site is within Zone D of the Mira Loma RBBD. The project would contribute to RBBD program projects through the development of Limonite Avenue within the project limits, and the improvement of the Archibald Avenue and Limonite Avenue intersection.

c. Existing Conditions

Existing Intersection Operations

An evaluation of the existing intersection operation indicates that all intersections are operating at an acceptable LOS during peak hours (see Table 4.11-2).

Table 4.11-2 Study Area Intersections – Existing Conditions

No.	Intersection	Delay		LOS		LOS Standard	Exceed LOS Standard?	CMP Facility
		AM	PM	AM	PM			
1	Hellman Avenue and Kimball Avenue	2023 and 2040 only				–	–	No
2	Driveway 1 and Limonite Avenue	Future Intersection				–	–	No
3	Driveway 2 and Limonite Avenue	Future Intersection				–	–	No
4	Driveway 3 and Limonite Avenue	Future Intersection				–	–	No
5	Driveway 5 and Providence Way	Future Intersection				–	–	No
6	Archibald Avenue and Chino Avenue	19.4	20.8	B	C	E	No	No
7	Archibald Avenue and Schaefer Avenue	11.1	7.0	B	A	E	No	No
8	Archibald Avenue and Ontario Ranch Road	28.7	29.4	C	C	E	No	No
9	Archibald Avenue and Eucalyptus Avenue	5.2	3.8	A	A	E	No	No
10	Archibald Avenue and Merrill Avenue	31.8	31.9	C	C	E	No	No
11	Archibald Avenue and Driveway 6	Future Intersection				–	–	No
12	Archibald Avenue and Limonite Avenue	23.4	23.8	C	C	D	No	No
13	Archibald Avenue and Providence Way	5.5	8.1	A	A	D	No	No
14	Archibald Avenue and 65th Street	23.2	23.7	C	C	D	No	No
15	Harrison Avenue and Limonite Avenue	17.8	17.5	B	B	D	No	No
16	Sumner Avenue and Limonite Avenue	18.6	18.6	B	B	D	No	No
17	Scholar Way and Limonite Avenue	15.9	15.5	B	B	D	No	No
18	Hamner Avenue and Limonite Avenue	24.6	30.3	C	C	D	No	No
19	I-15 SB Ramps and Limonite Avenue	5.9	6.5	A	A	D	No	No
20	I-15 NB Ramps and Limonite Avenue	6.3	11.9	F	F	D	No	No

CMP=congestion management plan; LOS=level of service; TS=traffic signal

Source: Urban Crossroads 2019e

Existing (2019) Conditions Roadway Segment Capacity

As shown in Table 4.11-3, the study area roadway segments are currently operating at an acceptable LOS based on the City's planning level daily roadway capacity thresholds.

Table 4.11-3 Study Area Roadway Segments – Existing Conditions

No	Segment	Roadway Section	V/C	LOS	Meet LOS Standard?
Archibald Avenue					
1	Limonite Avenue to 65th Street	4D	0.78	C	Yes
Limonite Avenue					
2	Archibald Avenue to Sumner Avenue	4D	0.57	A	Yes
3	Sumner Avenue to Hamner Avenue	4D	0.67	B	Yes
4	Hamner Avenue to I-15 Freeway	6D	0.56	A	Yes

LOS=level of service; V/C=volume to capacity ratio

Acceptable LOS is D for all segments.

Source: Urban Crossroads 2019e

Existing (2019) Off-Ramp Queuing Analysis

A queuing analysis was performed for the off-ramps at the I-15 Freeway and Limonite Avenue interchange to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially "spill back" onto the I-15 Freeway mainline. The analysis indicates that queuing conditions are currently sufficient during peak traffic flows, and no queues were observed spilling onto the I-15 Freeway mainline.

Existing (2019) Freeway Facility Analysis

As shown in Table 4.11-4, all study area freeway ramps and segments are operating at an acceptable LOS (i.e., LOS D or better) during the peak hours for Existing (2019) traffic conditions.

Table 4.11-4 Interstate 15 at Limonite Avenue - Existing (2019) Conditions

Ramp or Segment	LOS		Acceptable LOS?
	AM	PM	
Southbound			
North of Limonite	C	C	Yes
Off-Ramp	C	C	Yes
Loop On-Ramp	C	C	Yes
On-Ramp	C	C	Yes
South of Limonite Avenue	C	C	Yes
Northbound			
North of Limonite Avenue	C	C	Yes
On-Ramp	B	B	Yes
Loop On-Ramp	C	B	Yes
Off-Ramp	C	D	Yes
South of Limonite Avenue	C	C	Yes

LOS=level of service
Source: Urban Crossroads 2019e

4.11.2 Impact Analysis

Impacts related to transportation and circulation would be potentially significant if development facilitated by the proposed project would:

1. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
2. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
4. Result in inadequate emergency access?

With respect to whether the project would conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b), CEQA Section 15064.3 provides guidance on determining the significance of impacts relative to VMT and lists factors that might indicate whether the amount of a project's VMT may be significant or not. Notably, projects that locate within one half mile of transit should be considered to have a less than significant transportation impact.

The passage states that jurisdictions will have approximately two years to switch to VMT if they so choose. Eastvale is currently in the process of developing thresholds for VMT, but this project is not subject to them as they have not yet been adopted. As a result, this topic will not be further discussed herein. However, a VMT analysis was prepared by the traffic consultant and is included in Appendix 4.11 for informational purposes.

Scenarios Evaluated

The TIA assessed potential impacts to traffic and circulation for each of the following conditions:

- **Existing Plus Project Conditions**. The Existing Plus Project analysis determines circulation system deficiencies that would occur on the existing roadway system in the scenario of the project

being placed upon Existing conditions. The Existing Plus Project analysis is intended to identify the project-specific traffic impacts associated solely with the development of the proposed project based on a comparison of the Existing Plus Project traffic conditions to Existing (2019) conditions.

- **Opening Year (2021) Cumulative Conditions**. The Opening Year Cumulative traffic conditions analysis determines the potential near-term cumulative circulation system deficiencies. To account for background traffic growth, traffic associated with other known cumulative development projects in conjunction with an ambient growth factor from Existing conditions of 3.23 percent (for 2021 conditions – 1.6 percent per year compounded over 2 years) are included for Opening Year Cumulative traffic conditions. This comprehensive list was compiled from information provided by the City of Eastvale and other nearby agencies (such as the City of Ontario).
- **Interim Year (2023) Conditions**. The Interim Year traffic conditions analysis determines the potential near-term cumulative circulation system deficiencies and assumes the completion of the Limonite Avenue extension over the Cucamonga Creek. Pursuant to discussions with City staff, the extension of Limonite Avenue to the west over the Cucamonga Creek is anticipated to occur by Year 2023. To account for background traffic growth, traffic associated with other known cumulative development projects in conjunction with an ambient growth factor from Existing conditions of 6.56 percent (for 2023 conditions – 1.6 percent per year compounded over four years) are included for Interim Year traffic conditions.
- **Horizon Year (2040) Conditions**. The Horizon Year conditions analysis was utilized in order to determine if improvements funded through regional transportation mitigation fee programs, such as the WRCOG TUMF, City of Eastvale DIF programs, or other approved funding mechanism (e.g., Mira Loma RBBD, etc.) can accommodate the long-range cumulative traffic at the target LOS identified in the City of Eastvale (lead agency) General Plan. Other improvements needed beyond the "funded" improvements (such as localized improvements to non-TUMF, non-DIF, or non-RBBD facilities) are identified as such.

Methodologies

Level of Service

Traffic operations of roadway facilities are described using the term LOS, 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.

Intersection Capacity Analysis

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The Highway Capacity Manual (HCM) methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control.

SIGNALIZED INTERSECTIONS

Eastvale, Ontario, Jurupa Valley, and Chino require signalized intersection operations analysis based on the methodology described in the HCM. Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections LOS is directly related to the average delay per vehicle and is correlated to a LOS designation as described in Table 4.11-5.

Table 4.11-5 Thresholds for Signalized Intersections

Description	Delay (seconds) for <V/C	LOS for V/C <1.0	LOS for V/C >1
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with very low delay occurring with good progression and/or short cycle length.	10.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F	F

v/c=volume to capacity ratio

Source: Urban Crossroads 2019e

UNSIGNALIZED INTERSECTIONS

Eastvale, Ontario, Jurupa Valley, and Chino require the operations of unsignalized intersections be evaluated using the methodology described in the HCM. The LOS rating is based on the weighted average delay expressed in seconds per vehicle (see Table 4.11-6). At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For all-way stop controlled intersections, LOS is computed for the intersection as a whole.

Table 4.11-6 Thresholds for Unsignalized Intersections

Description	Delay (seconds) for <V/C	LOS for V/C <1.0	LOS for V/C >1
Little or no delays	0 to 10.00	A	F
Short traffic delays	10.01 to 20.00	B	F
Average traffic delays	20.01 to 35.00	C	F
Long traffic delays	35.01 to 55.00	D	F
Very long traffic delays	55.01 to 80.00	E	F
Extreme traffic delays with intersection capacity exceeded.	80.01 and up	F	F

v/c=volume to capacity ratio
Source: Urban Crossroads 2019e

For the study area intersections that lie within Eastvale, project related significant impacts will be identified by comparing the Without Project condition to the With Project condition based on the following criteria:

- If the LOS deteriorates from acceptable LOS (LOS D or better) to unacceptable LOS (LOS E or F); or
- If the intersection is already operating at an unacceptable LOS (LOS E or F) in Without Project conditions and the addition of project traffic increases the delay by more than 2.5 seconds.

To determine whether the addition of project traffic at a study intersection that lies outside Eastvale would result in a direct project-specific traffic impact, the following will be utilized:

- When the pre-project condition is at or better than LOS D (or LOS E for intersections located in Ontario) (i.e., acceptable LOS), and project-generated traffic, as measured by 50 or more peak hour trips, causes deterioration below LOS D/LOS E (i.e., unacceptable LOS), a deficiency is deemed to occur.

When the pre-project condition is already below LOS D (i.e., unacceptable LOS), the project will be responsible for mitigating its impact to a LOS equal to or better than it was under pre-project traffic conditions for intersections that receive 50 or more project-related peak hour trips. This is a standard protocol in many urban jurisdictions since requiring a project to mitigate to LOS D or better would in effect force the project to mitigate beyond its proportional share, which is prohibited under CEQA. Thus, for intersections currently operating at unacceptable LOS during either the AM and/or PM peak hour under Without Project traffic conditions, improvements have been identified to mitigate the project's impact to an intersection LOS that is equal to or better than pre-project conditions.

Cumulative traffic impacts are created as a result of a combination of the proposed project together with other future developments contributing to the overall traffic impacts requiring additional improvements to maintain acceptable LOS operations with or without the project. A project's contribution to a significant cumulative impact can be reduced to less than significant if the project is required to implement or fund its fair share of improvements designed to alleviate its contribution to the impact. An impact has been deemed cumulatively considerable if the project contributes 50 or more peak hour trips. In the event that an intersection is operating at or is

forecast to operate at a deficient LOS, the CMP guidelines have defined a series of steps to be completed to determine the project's contribution to the deficiency of intersections, which has been applied to both CMP and non-CMP study area intersections. The steps are as follows:

- Determine the mitigation measures necessary to achieve an acceptable service level,
- Calculate the project's share in the future traffic volume projections for the peak hours,
- Estimate the cost to implement recommended mitigation measures, and
- Calculate the project's fair-share contribution to mitigate the project's traffic impacts.

Roadway Segment Capacity Analysis

Roadway segment operations have been evaluated using the daily roadway segment capacities for each type of roadway based on the number of through lanes. These roadway capacities 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. As such, where the average daily volume (ADT) based roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis and progression analysis are undertaken. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. Therefore, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes; see Table 4.11-7.

Project related significant impacts will be identified by comparing the Without Project condition to the With Project condition based on the following criteria:

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

Table 4.11-7 Thresholds for Roadway Segments

Description	Delay (seconds) for <V/C	LOS for V/C <1.0
A	Free-flow operations in which vehicles are relatively unimpeded in their ability to maneuver within the traffic stream. Effects of incidents are easily absorbed.	0 to 11.0
B	Relative free-flow operations in which vehicle maneuvers within the traffic stream are slightly restricted. Effects of minor incidents are easily absorbed.	11.1 to 18.0
C	Travel is still at relative free-flow speeds, but freedom to maneuver within the traffic stream is noticeably restricted. Minor incidents may be absorbed, but local deterioration in service will be substantial. Queues begin to form behind significant blockages.	18.1 to 26.0
D	Speeds begin to decline slightly and flows, and densities begin to increase more quickly. Freedom to maneuver is noticeably limited. Minor incidents can be expected to create queuing as the traffic stream has little space to absorb disruptions.	26.1 to 35.0
E	Operation at capacity. Vehicles are closely spaced with little room to maneuver. Any disruption in the traffic stream can establish a disruption wave that propagates throughout the upstream traffic flow. Any incident can be expected to produce a serious disruption in traffic flow and extensive queuing.	35.1 to 45.0
F	Extreme traffic delays with intersection capacity exceeded.	>45.0

v/c=volume to capacity ratio

Source: Urban Crossroads 2019e

Caltrans Facilities

To determine whether the addition of project traffic to State Highway System (SHS) freeway segments would result in a deficiency, the following will be utilized:

- The traffic study finds that the LOS of a segment will degrade from D or better to E or F.
- The traffic study finds that the project will exacerbate an already deficient condition by contributing 50 or more one-way peak hour trips. A segment that is operating at or near capacity is deemed to be deficient.

FREEWAY OFF-RAMP QUEUING ANALYSIS

Consistent with Caltrans requirements, the 95th percentile queuing of vehicles was assessed at the off-ramps to determine potential queuing deficiencies at the freeway ramp intersections at the I-15 and Limonite Avenue interchange. Specifically, the TIA utilized the queuing analysis to identify any potential queuing and “spill back” onto I-15 from the off-ramps.

FREEWAY MAINLINE SEGMENT ANALYSIS METHODOLOGY

Consistent with recent Caltrans guidance, the TIA evaluated all freeway segments where the project is anticipated to contribute 50 or more peak hour one-way trips, in an effort to conduct a conservative analysis and overstate as opposed to understate potential deficiencies. The freeway system in the study area has been broken into segments defined by the freeway-to arterial interchange locations. The freeway segments have been evaluated in the TIA based upon peak hour directional volumes. The freeway segment analysis is based on the methodology described in the HCM. The performance measure preferred by Caltrans to calculate LOS is density. Density is

expressed in terms of passenger cars per mile per lane. Table 4.11-8 illustrates the freeway segment LOS descriptions for each density range.

Table 4.11-8 Description of Freeway Mainline LOS

Description	Delay (seconds) for <V/C	Density Range
A	Free-flow operations in which vehicles are relatively unimpeded in their ability to maneuver within the traffic stream. Effects of incidents are easily absorbed.	0.0 to 11.0
B	Relative free-flow operations in which vehicle maneuvers within the traffic stream are slightly restricted. Effects of minor incidents are easily absorbed.	11.1 to 18.0
C	Travel is still at relative free-flow speeds, but freedom to maneuver within the traffic stream is noticeably restricted. Minor incidents may be absorbed, but local deterioration in service will be substantial. Queues begin to form behind significant blockages.	18.1 to 26.0
D	Speeds begin to decline slightly and flows, and densities begin to increase more quickly. Freedom to maneuver is noticeably limited. Minor incidents can be expected to create queuing as the traffic stream has little space to absorb disruptions.	26.1 to 35.0
E	Operation at capacity. Vehicles are closely spaced with little room to maneuver. Any disruption in the traffic stream can establish a disruption wave that propagates throughout the upstream traffic flow. Any incident can be expected to produce a serious disruption in traffic flow and extensive queuing.	35.1 to 45.0
F	Breakdown in vehicle flow.	> 45.0

Density range is in passenger cars per mile per lane

Source: Urban Crossroads 2019e

FREEWAY MERGE/DIVERGE RAMP JUNCTION ANALYSIS

The freeway system in the study area has been broken into segments defined by freeway-to-arterial interchange locations where the project is anticipated to contribute 50 or more peak hour trips (see Table 4.11-4). The measure of effectiveness (reported in passenger car/mile/lane) are calculated based on the existing number of travel lanes, number of lanes at the on and off-ramps both at the analysis junction and at upstream and downstream locations (if applicable) and acceleration/deceleration lengths at each merge/diverge point.

Minimum Acceptable Levels of Service (LOS) And Intersection Deficiency Criteria

Minimum acceptable LOS and associated definitions of intersection deficiencies have been obtained from each of the applicable surrounding jurisdictions.

- **City of Eastvale.** The City of Eastvale General Plan Circulation and Infrastructure Element Policy C-10 sets a standard of LOS C with LOS D as acceptable in commercial and employment areas and at intersections of any combination of major highways, urban arterials, secondary highways, or freeway ramps. Based on this criterion, where feasible, LOS D is the minimum acceptable LOS at each of the study intersections within the City of Eastvale. LOS D has been utilized as the minimum LOS for all roadway segments.
- **City of Ontario.** According to the City of Ontario General Plan, LOS E is the minimum acceptable condition that should be maintained during the peak commute hours. Therefore, any intersection or roadway segment operating at LOS F is considered deficient.
- **City of Jurupa Valley.** The City of Jurupa Valley utilizes a minimum acceptable LOS of LOS D.

- **City of Chino.** According to the City of Chino's General Plan Objective TRA-1.2/Policy P1, LOS D is the minimum acceptable condition that should be maintained during the peak commute hours, where feasible.
- **Congestion Management Plan.** The CMP definition of deficiency is based on maintaining a LOS standard of LOS E or better, except where an existing LOS F condition is identified in the CMP document. However, in an effort to overstate as opposed to understate potential impacts, LOS D has been utilized for the CMP intersections for the purposes of this analysis.
- **Caltrans.** Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on SHS 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 LOS should be maintained. In general, the region-wide goal for an acceptable LOS on all freeways, roadway segments, and intersections is LOS D. As such, LOS D will be used as the target LOS for freeway ramps, freeway segments, and freeway merge/diverge ramp junctions.

Trip Generation

Trip generation represents the amount of traffic which is both attracted to and produced by a development. The trip generation rates used by the traffic analysis are based on 560,291 square feet of warehousing use for Buildings 1 through 6, and 520,317 square feet of high-cube fulfillment center use for Building 7, as defined in the Institute of Transportation Engineers *Trip Generation Manual*, 10th Edition (2017).[1] A summary of the project's trip generation is shown in Table 4.11-9, which indicates the project would generate a total of 2,102 daily trips for all 7 buildings, including 158 AM and 194 PM peak hour trips.

[1] The current site plan shows 541,756 square feet of warehousing use and 507,631 square feet of high-cube fulfillment center warehouse use. These updated site plan building square footages are less intensive, and as such the number of trips would decrease. However, the traffic analysis uses the higher square footage (and therefore higher trip generation) to provide a conservative analysis and overstate as opposed to understate potential traffic impacts.

Table 4.11-9 Trip Generation Summary – Peak Hour and Daily Trips

Land Use	Quantity	AM	PM	Daily
Building 1	182.156			
Passenger Cars		25	28	254
Truck Trips		6	7	66
Total		**31**	**35**	**320**
Building 2	77.704			
Passenger Cars		11	12	108
Truck Trips		3	3	30
Total		**14**	**15**	**138**
Building 3	49.540			
Passenger Cars		7	8	70
Truck Trips		1	1	20
Total		**8**	**9**	**90**
Building 4	86.384			
Passenger Cars		11	13	122
Truck Trips		2	4	32
Total		**13**	**17**	**152**
Building 5	69.310			
Passenger Cars		9	11	96
Truck Trips		2	4	26
Total		**11**	15	122
Building 6	95.197			
Passenger Cars		13	14	134
Truck Trips		4	3	36
Total		**17**	**17**	**170**
Building 7	520.317			
Passenger Cars		54	75	912
Truck Trips		10	11	198
Total		**64**	**86**	**1,110**
Total	**–**	**158**	**194**	**2,102**

v/c=volume to capacity ratio

Source: Urban Crossroads 2019e

Project Trip Distribution

Limonite Avenue westward currently terminates at Archibald Avenue. The proposed project would complete the segment of Limonite Avenue through the project limits (estimated late 2021/early 2022), and the City would complete the Limonite Avenue extension over the Cucamonga Creek in 2023. This extension will connect Kimball Avenue and Limonite Avenue from Hellman Avenue to Archibald Avenue. As a result, the Existing Plus Project and Opening Year Cumulative distribution patterns utilize the existing roadway system, while the Interim Year and Horizon Year trip distribution patterns assume completion of the Limonite Avenue extension and other future

roadway connections. The extension of Schaefer Avenue at Archibald Avenue and the Merrill Avenue extension to Bellegrave Avenue is assumed for Horizon Year 2040 conditions only.

Project Trip Assignment

The assignment of traffic from the project area to the adjoining roadway system is based upon the project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the project.

In addition, Table 4.11-10 details improvements assumed for each condition evaluated.

Table 4.11-10 Timing of Future Improvements

Conditions	Improvements in Place
Existing (2019) plus project Opening Year Cumulative (2021) Opening Year Cumulative (2021) plus project Interim Year (2023) Horizon Year (2040)	Project driveways and those facilities assumed to be constructed by the project to provide site access are also assumed to be in place for Existing Plus Project conditions only (e.g., intersection and roadway improvements at the project's frontage and driveways).
Opening Year Cumulative (2021) Opening Year Cumulative (2021) plus project Interim Year (2023) Horizon Year (2040)	Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for Opening Year Cumulative conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages and driveways such as the eastern extension of Providence Way).
Interim Year (2023) Horizon Year (2040)	The Limonite Avenue extension over the Cucamonga Creek is assumed to be completed.
Horizon Year (2040)	Other parallel facilities, that although not evaluated for the purposes of this analysis, are anticipated to be in place for Horizon Year traffic conditions and would affect the travel patterns within the study area (e.g., new future roadways within the New Model Colony area such as Schaefer Avenue east of Archibald Avenue, Eucalyptus Avenue east of Archibald Avenue, Merrill Avenue east of Archibald Avenue, etc.).

Source: Urban Crossroads 2019e; Appendix 4.11

Threshold: Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Impact T-1 UNDER EXISTING PLUS PROJECT CONDITIONS, THE PROPOSED PROJECT IMPACTS TO INTERSECTION OPERATION, ROADWAY SEGMENTS AND FREEWAY FACILITIES WOULD BE LESS THAN SIGNIFICANT.

This section discusses the traffic forecasts for Existing Plus Project conditions and the resulting intersection operations, roadway segment capacity, and freeway facility operations analyses.

Intersection Operations Analysis

The intersection analysis results for the Existing and Existing Plus Project conditions are summarized in Table 4.11-11, which indicates that all study area intersections would operate at an acceptable LOS in the Existing Plus Project condition.

Table 4.11-11 Intersection Analysis for Existing plus Project Conditions

		Existing				Existing plus Project					
		Delay		LOS		Delay		LOS		LOS	Significant
No.	Intersection	AM	PM	AM	PM	AM	PM	AM	PM	Standard	Impact?
1	Hellman Avenue/ Kimball Avenue	Future Intersection								–	–
2	Driveway 1/Limonite Avenue	Future Intersection				8.6	8.6	A	A	D	No
3	Driveway 2/Limonite Avenue	Future Intersection				2.9	2.9	A	A	D	No
4	Driveway 3/Limonite Avenue	Future Intersection				8.7	8.8	A	A	D	No
5	Driveway 5/Providence Way	Future Intersection				8.8	9.0	A	A	D	No
6	Archibald Avenue/ Chino Avenue	19.4	20.8	B	C	19.5	20.9	B	C	E	No
7	Archibald Avenue/ Schaefer Avenue	11.1	7.0	B	A	11.1	7.0	B	A	E	No
8	Archibald Avenue/ Ontario Ranch Road	28.7	29.4	C	C	29.0	29.9	C	C	E	No
9	Archibald Avenue/ Eucalyptus Avenue	5.2	3.8	A	A	5.2	3.8	A	A	E	No
10	Archibald Avenue/ Merrill Avenue	31.8	31.9	C	C	32.9	35.3	C	D	E	No
11	Archibald Avenue/Driveway 6	Future Intersection				10.9	15.1	B	C	D	No
12	Archibald Avenue/ Limonite Avenue	23.4	23.8	C	C	38.0	44.4	D	D	D	No
13	Archibald Avenue/ Providence Way	5.5	8.1	A	A	5.8	9.0	A	A	D	No
14	Archibald Avenue/65th Street	23.2	23.7	C	C	23.4	24.8	C	C	D	No
15	Harrison Avenue/ Limonite Avenue	17.8	17.5	B	B	18.0	17.7	B	B	D	No
16	Sumner Avenue/ Limonite Avenue	18.6	18.6	B	B	18.9	18.9	B	B	D	No
17	Scholar Way/Limonite Avenue	15.9	15.5	B	B	15.9	15.6	B	B	D	No
18	Hamner Avenue/ Limonite Avenue	24.6	30.3	C	C	24.8	31.0	C	C	D	No
19	I-15 SB Ramps/ Limonite Avenue	5.9	6.5	A	A	6.2	6.5	A	A	D	No
20	I-15 NB Ramps/ Limonite Avenue	6.3	11.9	A	B	6.6	11.9	A	B	D	No

CMP=congestion management plan; LOS=level of service; TS=traffic signal

Source: Urban Crossroads 2019e

Roadway Segment Capacity Analysis

Roadway segment capacities are approximate and are used at the General Plan level to assist in determining the anticipated roadway functional classification (number of through lanes) needed to meet future traffic demand. Table 4.11-12 provides a summary of the Existing and the Existing Plus Project conditions roadway segment capacity analysis based on the City's segment capacity thresholds (Table 4.11-7). The study area roadway segments are anticipated to continue to operate

at an acceptable LOS based on the City's thresholds with the addition of project traffic. Impacts would be less than significant.

Table 4.11-12 Study Area Roadway Segments – Existing plus Project Conditions

No.	Segment	Roadway Section	Existing		Existing plus Project		Meet LOS Standard?
			V/C	LOS	V/C	LOS	
Archibald Avenue							
1	Limonite Avenue to 65th Street	4D	0.78	C	0.79	C	Yes
Limonite Avenue							
2	Archibald Avenue to Sumner Avenue	4D	0.57	A	0.60	A	Yes
3	Sumner Avenue to Hamner Avenue	4D	0.67	B	0.70	B	Yes
4	Hamner Avenue to I-15	6D	0.56	A	0.57	A	Yes

LOS=level of service; V/C=volume to capacity ratio

Source: Urban Crossroads 2019e

Off-Ramp Queuing Analysis

As indicated in Table 4.11-13, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak traffic flows with the addition of project traffic. Impacts would be less than significant.

Table 4.11-13 I-15 Off-Ramp Queuing for the 95th Percentile – Existing plus Project Conditions

Movement	Available Stacking Distance (feet)	Existing Queue (feet)		Existing plus Project Queue (feet)		Acceptable?
		AM	PM	AM	PM	
Southbound Ramps at Limonite Avenue						
Left	1765	61	96	61	96	Yes
Left/thru/right	1765	61	97	61	97	Yes
Right	425	43	47	43	52	Yes
Northbound Ramps at Limonite Avenue						
Left	1765	74	140	80	141	Yes
Left/thru/right	1765	74	142	81	144	Yes
Right	475	32	189	32	190	Yes

Source: Urban Crossroads 2019e

Freeway Facility Analysis

As shown in Table 4.11-14 all study area freeway mainline segments and merge/diverge ramp junctions are anticipated to continue to operate at an acceptable LOS (i.e., LOS D or better) during the peak hours for Existing Plus Project traffic conditions. Impacts would be less than significant.

Table 4.11-14 Interstate 15 at Limonite Avenue – Existing plus Project Conditions

	Existing				Existing plus Project			
	AM		PM		AM		PM	
Ramp or Segment	Density	LOS	Density	LOS	Density	LOS	Density	LOS
Southbound								
North of Limonite	21.8	C	18.6	C	22.1	C	18.6	C
Off-Ramp	25.3	C	22.6	C	25.6	C	22.6	C
Loop On-Ramp	23.2	C	17.5	B	23.2	C	17.5	B
On-Ramp	24.5	C	19.0	B	24.5	C	19.1	B
South of Limonite Avenue	26.1	C	19.7	C	26.1	C	19.8	C
Northbound								
North of Limonite Avenue	21.7	C	21.1	C	21.8	C	21.4	C
On-Ramp	19.0	B	18.2	B	19.1	B	18.3	B
Loop On-Ramp	20.4	C	19.8	B	20.5	C	20.0	B
Off-Ramp	24.6	C	30.2	D	24.7	C	30.2	D
South of Limonite Avenue	20.4	C	26.0	C	20.5	C	26.0	C

LOS=level of service

Source: Urban Crossroads 2019e

Mitigation Measures

All study area roadway segments, off-ramp queues, and freeway facilities would operate at an acceptable level under the Existing Plus Project condition. Therefore, impacts would be less than significant. No mitigation is required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Impact T-2 UNDER OPENING YEAR 2021 CONDITIONS, PROJECT IMPACTS TO THE ARCHIBALD AVENUE AND LIMONITE AVENUE INTERSECTION WOULD BE SIGNIFICANT IN THE PM PEAK HOUR, BUT REDUCED TO LESS THAN SIGNIFICANT WITH MITIGATION; PROJECT IMPACTS TO ROADWAY SEGMENTS AND FREEWAY FACILITIES WOULD BE LESS THAN SIGNIFICANT.

This scenario includes existing traffic volumes plus an ambient growth factor of 3.23 percent, plus traffic from pending and approved projects in the area.

Intersection Operations Analysis

As shown in Table 4.11-15, the study area intersections are anticipated to operate at an acceptable LOS under Opening Year Cumulative (2021) Without project traffic conditions. With the addition of project traffic, the following study area intersection is anticipated to operate at an unacceptable LOS during the peak hours:

- Archibald Avenue and Limonite Avenue – LOS E AM and PM peak hours

This impact would be significant but mitigable with the addition of a southbound left-turn lane.

Table 4.11-15 Intersection Analysis for Opening Year (2021) Conditions

No.	Intersection	2021 Delay AM	2021 Delay PM	2021 LOS AM	2021 LOS PM	2021 plus Project Delay AM	2021 plus Project Delay PM	2021 plus Project LOS AM	2021 plus Project LOS PM	LOS Standard	Significant Impact?
1	Hellman Avenue/ Kimball Avenue	Future Intersection								–	–
2	Driveway 1/Limonite Avenue	Future Intersection				8.6	8.6	A	A	D	No
3	Driveway 2/Limonite Avenue	Future Intersection				2.9	2.9	A	A	D	No
4	Driveway 3/Limonite Avenue	Future Intersection				8.7	8.8	A	A	D	No
5	Driveway 5/Providence Way	Future Intersection				9.1	9.4	A	A	D	No
6	Archibald Avenue/ Chino Avenue	20.6	22.1	C	C	20.8	22.3	C	C	E	No
7	Archibald Avenue/ Schaefer Avenue	11.1	7.1	B	A	11.1	7.1	B	A	E	No
8	Archibald Avenue/ Ontario Ranch Road	33.3	33.6	C	C	33.7	34.2	C	C	E	No
9	Archibald Avenue/ Eucalyptus Avenue	5.5	4.0	A	A	5.5	4.0	A	A	E	No
10	Archibald Avenue/ Merrill Avenue	41.8	47.5	D	D	43.8	52.0	D	D	E	No
11	Archibald Avenue/Driveway 6	Future Intersection				11.1	16.0	B	C	D	No
12	Archibald Avenue/ Limonite Avenue	32.8	38.7	C	D	**55.2**	**65.1**	**E**	**E**	D	**Yes**
13	Archibald Avenue/ Providence Way	16.3	18.4	B	B	16.4	19.4	B	B	D	No
14	Archibald Avenue/65th Street	24.1	24.3	C	C	24.4	25.4	C	C	D	No
15	Harrison Avenue/ Limonite Avenue	18.3	17.8	B	B	18.4	18.0	B	B	D	No
16	Sumner Avenue/ Limonite Avenue	19.4	19.5	B	B	19.7	19.9	B	B	D	No
17	Scholar Way/Limonite Avenue	16.3	16.4	B	B	16.4	16.6	B	B	D	No
18	Hamner Avenue/ Limonite Avenue	26.0	32.9	C	C	26.2	33.5	C	C	D	No
19	I-15 SB Ramps/ Limonite Avenue	6.2	6.9	A	A	6.5	7.0	A	A	D	No
20	I-15 NB Ramps/ Limonite Avenue	7.1	12.2	A	B	7.4	12.2	A	B	D	No

LOS=level of service

Bold text indicates an unacceptable condition.

Source: Urban Crossroads 2019e

Roadway Segment Capacity Analysis

As shown in Table 4.11-16, with the addition of project traffic, all study area roadway segments are anticipated to continue operate at an acceptable LOS (based on daily roadway segment capacities) under Opening Year Cumulative (2021) project. Impacts would be less than significant.

Table 4.11-16 Study Area Roadway Segments – Opening Year (2021) Conditions

No.	Segment	Roadway Section	2021		2021 plus Project		Meet LOS Standard?
			V/C	LOS	V/C	LOS	
Archibald Avenue							
1	Limonite Avenue to 65th Street	4D	0.84	D	0.85	D	Yes
Limonite Avenue							
2	Archibald Avenue to Sumner Avenue	4D	0.64	B	0.67	B	Yes
3	Sumner Avenue to Hamner Avenue	4D	0.75	C	0.77	C	Yes
4	Hamner Avenue to I-15	6D	0.62	B	0.63	B	Yes

LOS=level of service; V/C=volume to capacity ratio

Source: Urban Crossroads 2019e

Off-Ramp Queuing Analysis

As indicated in Table 4.11-17, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak traffic flows for Opening Year (2021) conditions. Impacts would be less than significant.

Table 4.11-17 I-15 Off-Ramp Queuing for the 95th Percentile – Opening Year (2021) Conditions

Movement	Available Stacking Distance (feet)	Existing Queue (feet)		Existing plus Project Queue (feet)		Acceptable?
		AM	PM	AM	PM	
Southbound Ramps at Limonite Avenue						
Left	1765	62	98	62	98	Yes
Left/thru/right	1765	63	100	63	100	Yes
Right	425	44	83	44	89	Yes
Northbound Ramps at Limonite Avenue						
Left	1765	90	152	96	154	Yes
Left/thru/right	1765	91	153	96	155	Yes
Right	475	32	207	32	209	Yes

Source: Urban Crossroads 2019e

Freeway Facility Analysis

As shown in Table 4.11-18, all study area freeway mainline segments and merge/diverge ramp junctions are anticipated to continue to operate at an acceptable LOS (i.e., LOS D or better) during the peak hours for both Opening Year Cumulative (2021) Without Project and With Project traffic conditions. Impacts would be less than significant.

Table 4.11-18 Interstate 15 at Limonite Avenue – Opening Year (2021) Conditions

	2021				2021 plus Project			
	AM		PM		AM		PM	
Ramp or Segment	Density	LOS	Density	LOS	Density	LOS	Density	LOS
Southbound								
North of Limonite Avenue	22.7	C	19.3	C	23.0	C	19.3	C
Off-Ramp	26.0	C	23.4	C	26.3	C	23.4	C
Loop On-Ramp	23.9	C	18.1	B	23.9	C	18.1	B
On-Ramp	25.5	C	20.0	B	25.5	C	20.1	C
South of Limonite Avenue	27.4	D	20.7	C	27.4	D	20.7	C
Northbound								
North of Limonite Avenue	22.7	C	22.0	C	22.7	C	22.3	C
On-Ramp	19.9	B	19.0	B	19.9	B	19.0	B
Loop On-Ramp	21.3	C	20.6	C	21.4	C	20.8	C
Off-Ramp	25.6	C	31.2	D	25.7	C	31.4	D
South of Limonite Avenue	21.4	C	27.3	D	21.4	C	27.7	D

LOS=level of service

Source: Urban Crossroads 2019e

Mitigation Measures

The following measure is required to reduce the peak hour delay and improve the associated LOS at intersection No. 14:

T-2 The Applicant shall construct the following improvements prior to operation:

Archibald Avenue and Limonite Avenue intersection (No.12). Add a second southbound left-turn lane.

No mitigation is required for roadway segments, or freeway facilities for Opening Year (2021) With Project conditions.

Significance After Mitigation

Table 4.11-19 shows the results of improvements to the Archibald Avenue and Limonite Avenue intersection under Mitigation Measure T-2. With the improvement, the intersection delay would be reduced, and the LOS would be improved from LOS E to an acceptable LOS D. Impacts would be less than significant with mitigation.

Table 4.11-19 Effectiveness of Intersection Improvements for Opening Year (2021)

	Delay		LOS	
Condition	**AM**	**PM**	**AM**	**PM**
Archibald Avenue and Limonite Avenue (No. 12)				
2021 Conditions	32.8	38.7	C	D
2021 with Project	55.2	65.1	E	E
2021 with Project and Improvements	53.2	39.7	D	D

LOS=level of service

Source: Urban Crossroads 2019e

Impact T-3 UNDER INTERIM YEAR 2023 CONDITIONS, PROJECT IMPACTS TO TWO STUDY INTERSECTIONS WOULD BE SIGNIFICANT IN THE AM AND PM PEAK HOURS BUT REDUCED TO LESS THAN SIGNIFICANT WITH MITIGATION; PROJECT IMPACTS TO ROADWAY SEGMENTS AND FREEWAY FACILITIES WOULD BE LESS THAN SIGNIFICANT.

This scenario includes existing traffic volumes plus an ambient growth factor of 6.56 percent, plus traffic from pending and approved but not yet constructed known development projects in the area, and the traffic generated by the proposed project. The Limonite Avenue extension is assumed to be completed. As such, the Interim Year (2023) traffic forecasts reflect the change in travel patterns.

Intersection Operations Analysis

As shown in Table 4.11-20, the following study area intersections are anticipated to operate at an unacceptable LOS under Interim Year (2023) Without project traffic conditions:

- Hellman Avenue and Kimball Avenue (No. 1) – LOS F AM and M peak hours
- Archibald Avenue and Limonite Avenue (No. 12) – LOS F AM and PM peak hours

The project would contribute 50 or more peak hour trips or increase the delay by 2.5 seconds or more. Therefore, the same two intersections would be considered cumulatively impacted with the addition of project traffic.

Table 4.11-20 Intersection Analysis for Interim Year (2023) Conditions

No	Intersection	2023 Delay AM	2023 Delay PM	2023 LOS AM	2023 LOS PM	2023 plus Project Delay AM	2023 plus Project Delay PM	2023 plus Project LOS AM	2023 plus Project LOS PM	LOS Standard	Significant Impact?
1	Hellman Avenue/ Kimball Avenue	**106.8**	**>200**	**F**	**F**	**111.4**	**>200**	**F**	**F**	**D**	**Yes**
2	Driveway 1/ Limonite Avenue	Future Intersection				12.2	12.6	B	B	D	No
3	Driveway 2/ Limonite Avenue	Future Intersection				6.3	6.5	A	A	D	No
4	Driveway 3/ Limonite Avenue	Future Intersection				12.5	13.2	B	B	D	No
5	Driveway 5/ Providence Way	Future Intersection				9.3	9.6	A	A	D	No
6	Archibald Avenue/ Chino Avenue	22.1	22.5	C	C	22.5	22.6	C	C	E	No
7	Archibald Avenue/ Schaefer Avenue	11.1	7.1	B	A	11.1	7.1	B	A	E	No
8	Archibald Avenue/ Ontario Ranch Road	39.9	38.2	D	D	40.9	38.9	D	D	E	No
9	Archibald Avenue/ Eucalyptus Avenue	5.8	4.1	A	A	5.9	4.2	A	A	E	No
10	Archibald Avenue/ Merrill Avenue	31.8	44.5	C	D	35.1	47.3	D	D	E	No
11	Archibald Avenue/ Driveway 6	Future Intersection				13.0	18.7	B	C	D	No
12	Archibald Avenue/ Limonite Avenue	**82.3**	**173.7**	**F**	**F**	**88.2**	**177.8**	**F**	**F**	D	Yes
13	Archibald Avenue/ Providence Way	19.8	22.8	B	C	20.2	23.2	C	C	D	No
14	Archibald Avenue/ 65th Street	26.0	25.2	C	C	26.2	26.4	C	C	D	No
15	Harrison Avenue/ Limonite Avenue	18.7	18.2	B	B	18.9	18.3	B	B	D	No
16	Sumner Avenue/ Limonite Avenue	20.2	20.4	C	C	20.5	20.7	C	C	D	No
17	Scholar Way/ Limonite Avenue	16.7	17.3	B	B	16.8	17.6	B	B	D	No
18	Hamner Avenue/ Limonite Avenue	27.2	35.1	C	D	27.4	35.8	C	D	D	No
19	I-15 SB Ramps/ Limonite Avenue	6.4	7.3	A	A	6.8	7.4	A	A	D	No
20	I-15 NB Ramps/ Limonite Avenue	7.7	12.5	A	B	7.9	12.5	A	B	D	No

LOS=level of service

Bold text indicates an unacceptable condition.

Source: Urban Crossroads 2019e

Roadway Segment Capacity Analysis

As shown in Table 4.11-21, the following roadway segment is anticipated to operate at an unacceptable LOS (based on daily roadway segment capacities) under Interim Year (2023) Without Project traffic condition:

- Archibald Avenue, Limonite Avenue to 65th Street (No. 1) – LOS E

A peak hour assessment of intersections located on either side of a deficient roadway segment was conducted to determine if peak hour traffic flows (with project traffic) can be accommodated by the potentially deficient roadway segment. Accordingly, the TIA determined that peak traffic flows can be accommodated at the City's stated LOS thresholds, with implementation of the mitigation measures required for intersections No. 1 and No. 12. As such, roadway segment widening along Archibald Avenue from Limonite Ave to 65th Street is not required. Impacts would be less than significant.

Table 4.11-21 Study Area Roadway Segments – Interim Year (2023) Conditions

No.	Segment	Roadway Section	2023		2023 plus Project		Meet LOS Standard?
			V/C	LOS	V/C	LOS	
Archibald Avenue							
1	Limonite Avenue to 65th Street	4D	**0.93**	**E**	**0.94**	**E**	**No**
Limonite Avenue							
2	Archibald Avenue to Sumner Avenue	4D	0.69	B	0.72	C	Yes
3	Sumner Avenue to Hamner Avenue	4D	0.81	D	0.83	D	Yes
4	Hamner Avenue to I-15	6D	0.66	B	0.67	B	Yes

LOS=level of service; V/C=volume to capacity ratio

Bold text indicates an unacceptable condition.

Source: Urban Crossroads 2019e

Off-Ramp Queuing Analysis

As indicated in Table 4.11-22, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak traffic flows for Interim Year (2023) conditions. Impacts would be less than significant.

Table 4.11-22 I-15 Off-Ramp Queuing for the 95th Percentile – Interim Year (2023) Conditions

Movement	Available Stacking Distance (feet)	Existing Queue (feet)		Existing plus Project Queue (feet)		Acceptable?
		AM	PM	AM	PM	
Southbound Ramps at Limonite Avenue						
Left	1765	64	101	63	101	Yes
Left/thru/right	1765	64	103	63	103	Yes
Right	425	44	111	45	117	Yes
Northbound Ramps at Limonite Avenue						
Left	1765	102	161	108	164	Yes
Left/thru/right	1765	103	164	108	166	Yes
Right	475	32	224	32	225	Yes

Source: Urban Crossroads 2019e

Freeway Facility Analysis

As shown in Table 4.11-23, all study area freeway mainline segments and merge/diverge ramp junctions are anticipated to continue to operate at an acceptable LOS (i.e., LOS D or better) during the peak hours for both Interim Year (2023) Without Project and With Project traffic conditions.

Table 4.11-23 Interstate 15 at Limonite Avenue – Interim Year (2023) Conditions

	2023				2023 plus Project			
	AM		PM		AM		PM	
Ramp or Segment	Density	LOS	Density	LOS	Density	LOS	Density	LOS
Southbound								
North of Limonite Avenue	23.6	C	20.1	C	23.9	C	20.1	C
Off-Ramp	26.8	C	24.1	C	27.1	C	24.2	C
Loop On-Ramp	24.7	C	18.7	B	24.7	C	18.7	B
On-Ramp	26.4	C	20.9	C	26.5	C	21.0	C
South of Limonite Avenue	28.7	D	21.5	C	28.7	D	21.7	C
Northbound								
North of Limonite Avenue	23.6	C	22.9	C	23.6	C	23.2	C
On-Ramp	20.7	C	19.7	B	20.7	C	19.8	B
Loop On-Ramp	22.1	C	21.4	C	22.2	C	21.6	C
Off-Ramp	26.4	C	32.2	C	26.5	C	32.3	D
South of Limonite Avenue	22.3	C	29.0	D	22.4	C	29.0	D

LOS=level of service

Source: Urban Crossroads 2019e

Mitigation Measures

The following measure is required to reduce the peak hour delay and improve the associated LOS at intersection No. 1 and No. 12:

T-3 The Applicant shall construct the following improvements prior to the opening of the Limonite Avenue bridge, which is located west of the Project site:

Hellman Avenue and Kimball Avenue (No. 1). Add a second northbound left turn lane.

Archibald Avenue and Limonite Avenue intersection (No. 12). Add a second southbound left turn lane.

No mitigation is required for roadway segments, or freeway facilities for Interim Year (2023) With Project conditions.

Significance After Mitigation

Table 4.11-24 shows the results of intersection improvements under Mitigation Measure T-3. In all cases, the improvements would reduce impacts to predevelopment conditions, though intersections

would continue to experience poor LOS. Impacts to intersections would be less than significant with mitigation.

Table 4.11-24 Effectiveness of Intersection Improvements for Interim Year (2023)

	Delay		LOS	
Condition	**AM**	**PM**	**AM**	**PM**
Hellman Avenue and Kimball Avenue (No. 1)				
2023 Conditions	**106.8**	**>200**	**F**	**F**
2023 with Project	**111.4**	**>200**	**F**	**F**
2023 with Project and Improvements	38.8	**105.9**	**D**	**F**
Archibald Avenue and Limonite Avenue (No. 12)				
2023 Conditions	**82.3**	**173.7**	**F**	**F**
2023 with Project	**88.2**	**177.8**	**F**	**F**
2023 with Project and Improvements	**62.8**	**67.6**	**E**	**F**

LOS=level of service
Bold text indicates an unacceptable condition.
Source: Urban Crossroads 2019e

No mitigation is required for off-ramp queues or freeway facilities for Interim Year (2023) With Project conditions. Impacts would be less than significant without mitigation.

Impact T-4 UNDER HORIZON YEAR 2040 CONDITIONS, PROJECT IMPACTS TO STUDY INTERSECTIONS AND ROADWAY SEGMENTS WOULD BE SIGNIFICANT AND UNAVOIDABLE, AND PROJECT IMPACTS TO ROADWAY FREEWAY FACILITIES WOULD BE LESS THAN SIGNIFICANT.

This section discusses the methods used to develop Horizon Year (2040) without and with project traffic forecasts, and the resulting intersection operations, roadway segment capacity, freeway facility operations analyses. This scenario includes volumes obtained from the RivTAM and SBTAM (see Section 4.7 *Horizon Year Volume Development* of the TIA for a detailed discussion on the post-processing methodology) and represents the General Plan buildout of Eastvale.

Intersection Operations Analysis

As shown in Table 4.11-25, the following study area intersections are anticipated to operate at an unacceptable LOS under Horizon Year Without Project traffic conditions:

- Hellman Avenue and Kimball Avenue (No. 1) – LOS F AM and PM peak hours
- Archibald Avenue and Schaefer Avenue (No. 7) – LOS F PM peak hour only
- Archibald Avenue and Ontario Ranch Road (No. 8) – LOS F AM and PM peak hours
- Archibald Avenue and Eucalyptus Avenue (No. 9) – LOS F PM peak hour only
- Archibald Avenue and Merrill Avenue (No. 10) – LOS F AM and PM peak hours
- Archibald Avenue and Limonite Avenue (No. 12) – LOS F AM and PM peak hours
- Archibald Avenue and Providence Way (No. 13) – LOS F PM peak hour only
- Archibald Avenue and 65th Street (No. 14) – LOS E AM and PM peak hours

Table 4.11-25 Intersection Analysis for Horizon Year (2040) Conditions

No.	Intersection	2040 Delay AM	2040 Delay PM	2040 LOS AM	2040 LOS PM	2040 plus Project Delay AM	2040 plus Project Delay PM	2040 plus Project LOS AM	2040 plus Project LOS PM	LOS Standard	Significant Impact?
1	Hellman Avenue/ Kimball Avenue	144.4	>200	F	F	**151.1**	**>200**	**F**	**F**	D	**Yes**
2	Driveway 1/Limonite Avenue	Future Intersection				14.2	16.2	B	C	D	No
3	Driveway 2/Limonite Avenue	Future Intersection				8.0	8.7	A	A	D	No
4	Driveway 3/Limonite Avenue	Future Intersection				15.0	17.0	C	C	D	No
5	Driveway 5/ Providence Way	Future Intersection				9.5	11.2	A	b	D	No
6	Archibald Avenue/ Chino Avenue	42.9	32.7	D	C	43.1	33.2	D	C	E	No
7	Archibald Avenue/ Schaefer Avenue	42.2	152.5	D	**F**	43.3	**152.1**	D	**F**	E	**Yes**
8	Archibald Avenue/ Ontario Ranch Road	**>200**	**>200**	**F**	**F**	**>200**	**>200**	**F**	**F**	E	**Yes**
9	Archibald Avenue/ Eucalyptus Avenue	48.3	106.1	D	**F**	49.9	**106.2**	D	**F**	E	**Yes**
10	Archibald Avenue/ Merrill Avenue	**>200**	**>200**	**F**	**F**	**>200**	**>200**	**F**	**F**	E	**Yes**
11	Archibald Avenue/ Driveway 6	Future Intersection				20.3	34.4	C	D	D	No
12	Archibald Avenue/ Limonite Avenue	**>200**	**>200**	**F**	**F**	**>200**	**>200**	**F**	**F**	D	**Yes**
13	Archibald Avenue/ Providence Way	34.3	**115.3**	C	**F**	35.6	**117.4**	D	**F**	D	No
14	Archibald Avenue/65th Street	**71.2**	**79.0**	**E**	**E**	**73.1**	**80.6**	**E**	**F**	D	No
15	Harrison Avenue/ Limonite Avenue	37.9	45.5	D	D	38.3	46.2	D	D	D	No
16	Sumner Avenue/ Limonite Avenue	36.7	53.3	D	D	37.5	54.6	D	D	D	No
17	Scholar Way/ Limonite Avenue	27.6	53.0	C	D	28.3	54.7	C	D	D	No
18	Hamner Avenue/ Limonite Avenue	48.9	53.0	D	D	49.3	53.9	D	D	D	No
19	I-15 SB Ramps/ Limonite Avenue	13.5	15.2	B	B	13.7	15.9	B	B	D	No
20	I-15 NB Ramps/ Limonite Avenue	17.1	17.6	B	B	17.8	18.5	B	B	D	No

LOS=level of service

Bold text indicates an unacceptable condition.

Source: Urban Crossroads 2019e

As shown in Table 4.11-25, the same eight intersections would have an unacceptable LOS with the addition of project traffic. However, the increase in delay would be less than 2 seconds for intersections No. 13 and No. 14. Therefore, the following six intersections would result in significant impacts requiring mitigation in the Horizon Year (2040) Condition:

- Hellman Avenue and Kimball Avenue (No. 1) – LOS F AM and PM peak hours
- Archibald Avenue and Schaefer Avenue (No. 7) – LOS F PM peak hour only
- Archibald Avenue and Ontario Ranch Road (No. 8) – LOS F AM and PM peak hours
- Archibald Avenue and Eucalyptus Avenue (No. 9) – LOS F PM peak hour only
- Archibald Avenue and Merrill Avenue (No. 10) – LOS F AM and PM peak hours
- Archibald Avenue and Limonite Avenue (No. 12) – LOS F AM and PM peak hours

Impacts to these six intersections would be significant.

Roadway Segment Capacity Analysis

As shown in Table 4.11-26, all the study area roadway segments are anticipated to operate at an unacceptable LOS (based on daily roadway segment capacities).

A peak hour assessment of intersections located on either side of a deficient roadway segment was conducted to determine if peak hour traffic flows (with project traffic) can be accommodated by the potentially deficient roadway segment. Peak hour traffic flows can be accommodated at an acceptable LOS, with implementation of the mitigation measures required for intersections No. 7 through No. 12. As such, roadway segment widening along Archibald Avenue (from Limonite Ave to 65th Street) is not required.

Table 4.11-26 Study Area Roadway Segments – Horizon Year (2040) Conditions

No.	Segment	Roadway Section	2040 V/C	2040 LOS	2040 plus Project V/C	2040 plus Project LOS	Meet LOS Standard?
Archibald Avenue							
1	Limonite Avenue to 65th Street	4D	1.24	F	**1.25**	**F**	**No**
Limonite Avenue							
2	Archibald Avenue to Sumner Avenue	4D	1.55	F	**1.58**	**F**	**No**
3	Sumner Avenue to Hamner Avenue	4D	1.35	F	**1.38**	**F**	**No**
4	Hamner Avenue to I-15	6D	1.37	F	**1.38**	**F**	**No**

LOS=level of service; V/C=volume to capacity ratio

Bold text indicates an unacceptable condition.

Source: Urban Crossroads 2019e

The study area roadway segments along Limonite Avenue are anticipated to continue to operate at an unacceptable LOS, however, additional roadway segment widening does not appear necessary to address the deficiencies at the identified roadway segments based on the peak hour intersection operations analysis shown in Table 4.11-25, because the intersections (choke points along the roadway segment) are anticipated to process peak hour traffic flows with implementation of the

required mitigation for intersections. As such, no additional roadway widening is recommended. Furthermore, additional roadway widening would not be consistent with the City's Circulation and Infrastructure Element. Impacts would be less than significant.

Off-Ramp Queuing Analysis

As indicated in Table 4.11-27, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak traffic flows for Horizon Year (2040) conditions. Impacts would be less than significant.

Table 4.11-27 I-15 Off-Ramp Queuing for the 95th Percentile – Horizon Year 2040 Conditions

Movement	Available Stacking Distance (feet)	Existing Queue (feet)		Existing plus Project Queue (feet)		Acceptable?
		AM	PM	AM	PM	
Southbound Ramps at Limonite Avenue						
Left	1,765	229	194	238	194	Yes
Left/thru/right	1,765	231	197	230	197	Yes
Right	425	203	346	214	350	Yes
Northbound Ramps at Limonite Avenue						
Left	1,765	338	298	345	300	Yes
Left/thru/right	1,765	340	298	346	303	Yes
Right	475	179	334	178	334	Yes

Source: Urban Crossroads 2019e

Freeway Facility Analysis

As shown in Table 4.11-28, the following freeway segments or merge/diverge ramp junctions analyzed for this study are anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) during the peak hours for Horizon Year Without Project traffic conditions:

- I-15 Southbound, North of Limonite Avenue – LOS E AM peak hour only
- I-15 Southbound, Off-Ramp – LOS F AM peak hour only
- I-15 Southbound, Loop On-Ramp– LOS F AM peak hour only
- I-15 Southbound, On-Ramp – LOS F AM peak hour only
- I-15 Southbound, South of Limonite Avenue – LOS F AM peak hour only
- I-15 Northbound, Off-Ramp – LOS E AM peak hour only

Table 4.11-28 Interstate 15 at Limonite Avenue – Horizon Year (2040) Conditions

	2040				2040 plus Project			
	AM		PM		AM		PM	
Ramp or Segment	Density	LOS	Density	LOS	Density	LOS	Density	LOS
Southbound								
North of Limonite Avenue	**40.1**	**E**	26.8	D	**40.3**	**E**	26.8	D
Off-Ramp	**35.5**	**F**	30.2	D	**35.6**	**F**	30.2	D
Loop On-Ramp	**34.8**	**F**	25.6	C	**34.8**	**F**	25.6	C
On-Ramp	**40.5**	**F**	31.5	D	**40.5**	**F**	31.6	D
South of Limonite Avenue	**38.2**	**F**	34.6	D	**38.2**	**F**	34.7	D
Northbound								
North of Limonite Avenue	29.6	D	24.0	C	29.7	D	24.1	C
On-Ramp	25.4	C	21.5	C	25.4	C	21.5	C
Loop On-Ramp	25.8	C	20.7	C	25.9	C	20.9	C
Off-Ramp	**35.1**	**E**	34.8	D	**35.2**	**E**	34.8	D
South of Limonite Avenue	34.1	D	31.6	D	34.2	D	31.7	D

LOS=level of service

Source: Urban Crossroads 2019e

As shown on Table 4.11-28, there are no additional study area freeway segments or merge/diverge ramp junctions anticipated to operate at an unacceptable LOS with the addition of project traffic. Further, there are no segments where the project would either add 50 or more trips to an impacted segment or cause a LOS D to worsen to LOS E or F. Therefore, impacts would be less than significant.

Mitigation Measures

Mitigation is required for the six intersections where the project would increase the delay by more than 2.5 seconds or where the project contributes 50 or more peak hour trips. Recommended improvements to address Horizon Year 2040 conditions are identified in Table 4.11-29 below and the effectiveness of these improvements is shown in Table 4.11-30.

Table 4.11-29 Recommended Improvements for Horizon Year (2040) Conditions

Improvements	Project Responsibility
Hellman Avenue and Kimball Avenue (No. 1)	
▪ Add a second northbound left-turn lane	Contribution of fair-share fees
Archibald Avenue and Schaefer Avenue (No. 7)	
▪ Add a third southbound through lane ▪ Add an eastbound left turn lane	Contribution of fair-share fees
Archibald Avenue and Ontario Ranch Road (No. 8)	
▪ Add a second northbound left-turn lane ▪ Add a third northbound through lane ▪ Add a second southbound left-turn lane ▪ Add a third southbound through lane ▪ Add a third eastbound through lane	Contribution of fair-share fees

Improvements	Project Responsibility
▪ Add a fourth eastbound through lane ▪ Add a second westbound through lane ▪ Add a third westbound through lane ▪ Add a fourth westbound through lane ▪ Modify the traffic signal to implement overlap phasing for the southbound right-turn lane	
Archibald Avenue and Eucalyptus Avenue (No. 9)	
▪ Add a northbound left turn lane ▪ Add a third northbound through lane ▪ Add a third southbound through lane ▪ Add an eastbound left-turn lane ▪ Add an eastbound shared through/right-turn lane ▪ Restripe the westbound approach to provide two left-turn lanes, one through lane, and one right-turn lane	Contribution of fair-share fees
Archibald Avenue and Merrill Avenue (No. 10)	
▪ Add a third northbound through lane ▪ Add a third southbound through lane ▪ Stripe the southbound right-turn ▪ Add a second eastbound left-turn lane ▪ Add a free eastbound right-turn lane ▪ Modify the traffic signal to implement overlap phasing for the southbound right-turn lane	Contribution of fair-share fees
Archibald Avenue and Limonite Avenue (No. 12)	
▪ Add a northbound left-turn lane (needed for site access). ▪ Add second and third northbound through lanes ▪ Add a second southbound left-turn lane ▪ Add a second southbound through lanes (site adjacent roadway improvement) ▪ Add a third southbound through lane. ▪ Add dual eastbound left-turn lanes (needed for site access). ▪ Add first and second eastbound through lanes (for site access/adjacent road improvements). ▪ Add an eastbound right-turn lane (site access/adjacent road improvements) ▪ Add first and second westbound through lanes (one lane needed for site access)	Contribution of fair-share fees

Source: Urban Crossroads 2019e

Mitigation Measure T-4 requires the project Applicant to contribute to improvement of study area intersections consistent with applicable transportation funding programs or based on the project's proportional fair-share. The improvements for intersection No. 14 have been identified as being included as part of a pre-existing fee program (e.g., Eastvale's DIF, the regional TUMF, or the Mira Loma RBBD). The project would contribute funding for the other improvements based proportionally on the project's traffic contribution to those facilities.

T-4 **Contribute Funding for Transportation Program and Fair-Share Improvements** - The project Applicant shall participate in the funding of off-site improvements through the payment of City of Eastvale Development Impact Fees (if the improvements are included in the Development Impact Fees program), Western Riverside Council of Governments Transportation Uniform Mitigation Fee, Mira Loma Road and Bridge Benefit District

Program, or on a fair share basis for those improvements that are not included in a pre-existing fee program. These fees shall be collected by the City of Eastvale, with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases.

Significance After Mitigation

As indicated in Table 4.11-30, proposed improvements would improve operations to pre-development conditions; however, intersection Nos. 1 and 14 would continue to operate at an unacceptable LOS under Horizon Year 2040 conditions.

Table 4.11-30 Effectiveness of Intersection Improvements for Horizon Year (2040)

	Delay		LOS	
Condition	**AM**	**PM**	**AM**	**PM**
Hellman Avenue and Kimball Avenue (No. 1)				
2040 Conditions	**144.4**	**>200**	**F**	**F**
2040 with Project	**151.1**	**>200**	**F**	**F**
2040 with Project and Improvements	51.4	**179.2**	**D**	**F**
Archibald Avenue and Schaefer Avenue (No. 7)				
2040 Conditions	**42.2**	**152.5**	**D**	**F**
2040 with Project	**43.3**	**152.1**	**D**	**F**
2040 with Project and Improvements	29.1	**46.8**	**C**	**D**
Archibald Avenue and Ontario Ranch Road (No. 8)				
2040 Conditions	**>200**	**>200**	**F**	**F**
2040 with Project	**>200**	**>200**	**F**	**F**
2040 with Project and Improvements	62.8	**71.5**	**E**	**E**
Archibald Avenue and Eucalyptus Avenue (No. 9)				
2040 Conditions	**48.3**	**106.1**	**F**	**F**
2040 with Project	**49.9**	**106.2**	**D**	**F**
2040 with Project and Improvements	32.5	**67.4**	**C**	**E**
Archibald Avenue and Merrill Avenue (No. 10)				
2040 Conditions	**>200**	**>200**	**F**	**F**
2040 with Project	**>200**	**>200**	**F**	**F**
2040 with Project and Improvements	77.7	**71.0**	**E**	**E**
Archibald Avenue and Limonite Avenue (No. 12)				
2023 Conditions	**>200**	**>200**	**F**	**F**
2023 with Project	**>200**	**>200**	**F**	**F**
2023 with Project and Improvements	**65.7**	**101.5**	**E**	**F**

LOS=level of service

Bold text indicates an unacceptable condition.

Source: Urban Crossroads 2019e

With respect to roadway segments, with the implementation of the intersection improvements identified in Table 4.11-29, peak traffic flows for roadway segments would operate with an acceptable LOS. As such, no additional roadway widening is recommended. Furthermore, additional roadway widening would not be consistent with the City's Circulation and Infrastructure Element.

Improvements dependent on fair-share funding (as opposed to a specified transportation program) are not yet scheduled and only partially funded by the project. As a result, the schedule for implementation of improvements is speculative, and may not be in place in time to avoid significant project traffic impacts to study area intersections and roadway segments under Horizon Year 2040 traffic conditions. Therefore, impacts to intersections and roadway segments would be significant and unavoidable.

No mitigation is required for off-ramp queues or freeway facilities; impacts to these facilities would be less than significant without mitigation.

Impact T-5 THE PROJECT WOULD NOT CONFLICT WITH A PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING TRANSIT, BICYCLE, OR PEDESTRIAN FACILITIES.

Project consistency with alternative transportation is discussed as follows:

- **Pedestrian Access.** The applicant would construct Limonite Avenue within project limits. The improvements would include curb, gutter, and sidewalk improvements consistent with Eastvale requirements.
- **Bicycle Access.** The Eastvale trails and bikeway systems exhibit plans off-street Class I multi-use trails along Cucamonga Creek Trail and the Southern California Edison easement to Remington Avenue/Bellegrave Avenue. On-street Class II bike lanes are also planned along Limonite Avenue and Archibald Avenue near the project site. The project would not conflict with these planned bike routes and the applicant would coordinate final project designs for consistency with any existing or future planned bikeways or multi-purpose trail facilities.
- **Transit Service**. As discussed in Section 4.11.1.2 above, Eastvale does not provide designated transit routes. The nearest existing transit routes to the project site are RTA Routes 3 and 29 which currently operate on Limonite Avenue and Hamner Avenue. There are no existing bus routes near the project site. A bus stop is planned approximately one tenth of a mile to the east of the project site, opposite The Merge project (SCH No. 2018061065). As such, it is recommended that the applicant work in conjunction with RTA to potentially provide additional bus service to the project site.

Based on the preceding discussion, impacts associated with alternative transportation would be less than significant.

Mitigation Measures

Impacts would be less than significant without mitigation.

Threshold:	Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? Would the project result in inadequate emergency access?

Impact T-6 THE PROJECT WOULD NOT SUBSTANTIALLY INCREASE HAZARDS DUE TO A DESIGN FEATURE (E.G. SHARP CURVES OR DANGEROUS INTERSECTIONS) OR INCOMPATIBLE USES (E.G. FARM EQUIPMENT); NOR WOULD IT RESULT IN INADEQUATE EMERGENCY ACCESS.

Due to the typical wide turning radius of large trucks, a truck turning template has been overlaid on the site plan at each applicable project driveway anticipated to be utilized by heavy trucks in order to determine appropriate curb radii and to verify that trucks will have sufficient space to execute turning maneuvers.

A WB-50 truck (42.5-foot trailer) was been utilized for the north leg of Driveway 1, north leg of Driveway 3, Driveway 4, Driveway 5, and Driveway 6. A WB-67 (53-foot trailer) was utilized for the south leg of Driveway 1, the south leg of Driveway 3, Driveway 6, and Driveway 7. This is based on the types of trucks that would likely be attributable to the proposed buildings based on their size.

The project TIA used these analyses to recommend specific improvements at the seven driveways which are proposed to allow access to the seven lots that make up the project site. Implementation of the improvements listed in the TIA and which were incorporated as part of the site design would preclude significant impacts with respect to project access, truck access, emergency access, and the potential for design-related hazards such as sharp curves or dangerous intersections.

Additionally, wherever necessary, 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 and Infrastructure Element. On-site traffic signing and striping would be implemented in conjunction with detailed construction plans for the project site.

With implementation of the TIA recommended configuration of the driveways and frontage improvements as part of the project design, impacts related to hazards associated with design features, emergency access, or incompatible uses would be less than significant.

Mitigation Measures

Impacts would be less than significant without mitigation.

4.11.3 Cumulative Impacts

The cumulative impact area for traffic impacts is defined by the study area utilized in the traffic impact analysis (Urban Crossroads 2019e); see Figure 4.11-1 herein. The study area includes potentially affected facilities under the jurisdiction of Eastvale, Chino, Ontario, and Jurupa Valley. Potentially affected Caltrans and CMP facilities are also included in the study area.

The analysis previously presented herein under discussion for Impacts T-2, T-3 and T-4 comprehensively reflect anticipated cumulative traffic increases affecting the study area and addresses related potential cumulative traffic impacts for the Opening Year (2021), Interim Year (2023), and Horizon Year 2040. Future year traffic forecasts reflect general background (ambient) growth at 1.6 percent per year, approximating regional traffic growth. The assumed 1.6 percent ambient traffic growth rate is consistent with the projected ambient traffic growth for Riverside County and conforms with Eastvale growth rates reflected in the Southern California Association of

Governments (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS); SCAG 2016.

To establish the basis for likely near-term (Opening Year) cumulative traffic impacts, ambient background traffic growth, and traffic generated by the development of known or probable related projects were added to existing daily and peak hour traffic volumes on study area roadways. 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 2021. Nonetheless, the TIA conservatively assumes that all cumulative related projects would be complete, fully occupied, and generating traffic by the project Opening Year.

Cumulatively significant study area transportation/traffic impacts are summarized above under Impacts T-2, T-3, and T-4. The project would construct, or pay required fees toward, completion of Eastvale transportation/traffic system improvements. On this basis, Mitigation Measures identified above, and on Table 4.11-29 would reduce impacts to less than cumulatively significant for the Opening Year 2021 and Interim Year 2023 condition. However, because of the speculative timing of improvements, impacts under the 2040 Horizon Year would be significant and unavoidable.

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4.12 Tribal Cultural Resources

This section analyzes the effects of the proposed industrial project on tribal cultural resources. Additionally, the discussion and analysis contained herein is informed by comments received during the NOP public review period.

4.12.1 Setting

a. Regulatory Setting

Federal

Native American Involvement

Several federal and state laws address Native American involvement in the development review process. The most notable of these are the federal Native American Graves Protection and Repatriation Act (1990) and the California Native American Graves Protection and Repatriation Act (2001). These acts ensure that Native American human remains and cultural items be treated with respect and dignity.

State

Senate Bill 18

Enacted on March 1, 2005, Senate Bill (SB) 18 (California Government Code Sections 65352.3 and 65352.4) requires cities and counties to notify and consult with California Native American tribal groups and individuals regarding proposed local land use planning decisions for the purpose of protecting traditional tribal cultural places (sacred sites), prior to adopting or amending a General Plan or designating land as open space. Tribal groups or individuals have 90 days to request consultation following the initial contact.

Assembly Bill 52

California Assembly Bill (AB) 52 of 2014 was enacted in 2015, expanding the California Environmental Quality Act (CEQA) by defining a new resource category: "tribal cultural resources." AB 52 establishes that "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (Public Resource Code [PRC] Section 21084.2). It further states the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3). PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and that are either:

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

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 PRC Section 5024.1.

In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

In recognition of California Native American tribal sovereignty and the unique relationship of California local governments and public agencies with California Native American tribal governments, and to respect the interests and roles of project proponents, it is the intent AB 52 to:

1. Recognize that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities.
2. Establish a new category of resources in CEQA called "tribal cultural resources" that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation.
3. Establish examples of mitigation measures for tribal cultural resources that uphold the existing mitigation preference for historical and archaeological resources of preservation in place, if feasible.
4. Recognize that California Native American tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated. Because CEQA calls for a sufficient degree of analysis, tribal knowledge about the land and tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources.
5. In recognition of their governmental status, establish a meaningful consultation process between California Native American tribal governments and lead agencies, respecting the interests and roles of all California Native American tribes and project proponents, and the level of required confidentiality concerning tribal cultural resources, at the earliest possible point in CEQA environmental review process, so that tribal cultural resources can be identified, and culturally appropriate mitigation and mitigation monitoring programs can be considered by the decision making body of the lead agency.
6. Recognize the unique history of California Native American tribes and uphold existing rights of all California Native American tribes to participate in, and contribute their knowledge to, the environmental review process pursuant to CEQA.
7. Ensure that local and tribal governments, public agencies, and project proponents have information available, early in CEQA environmental review process, for purposes of identifying and addressing potential adverse impacts to tribal cultural resources and to reduce the potential for delay and conflicts in the environmental review process.
8. Enable California Native American tribes to manage and accept conveyances of, and act as caretakers of, tribal cultural resources.
9. Establish that a substantial adverse change to a tribal cultural resource has a significant effect on the environment.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. AB 52 requires lead agencies to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

4.12.2 Impact Analysis

a. Methodology and Significance Thresholds

Potential impacts on tribal cultural resources are analyzed based on the potential for the project to impact any tribal cultural resources during construction or operation. The significance of a tribal cultural resource and subsequent significance of any impact is determined by, among other things, consideration of whether or not that resource has heritage value to California Native Americans. This impact analysis is based on consultations with the interested tribal representatives.

In August 2018, the City of Eastvale distributed SB 18 and AB 52 consultation letters for the proposed project, including project information and a map, to Native American tribes on its applicable consultation list. The Agua Caliente Band of Cahuilla Indians responded that the project area is not within its Traditional Use Area and would therefore defer any further consultation to other tribes. The Soboba Band of Mission Indians (Soboba) was the only tribe that requested government-to-government consultation. Tribal consultation with Soboba is ongoing.

The discussion of tribal cultural resources is based on consultations with interested Native American tribal representatives and lead by the City of Eastvale.

In accordance with Appendix G of the CEQA Guidelines, an impact to Tribal Cultural Resources from the proposed project would be significant if the project would:

1. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
    a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)
    b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe

Grading and ground-disturbing activity could impact currently unknown subsurface cultural resources of tribal or Native American importance. Therefore, impacts associated with the thresholds above are analyzed below.

b. Project Impacts and Mitigation Measures

Threshold 1: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

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

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

Impact TCR-1 AN INITIAL INVESTIGATION DID NOT IDENTIFY ANY POTENTIAL LIKELIHOOD FOR THE SITE TO SUPPORT EITHER ARCHAEOLOGICAL SITES OR HUMAN REMAINS. HOWEVER, CONSTRUCTION OF THE PROJECT WOULD INVOLVE GROUND-DISTURBING ACTIVITIES SUCH AS GRADING AND SURFACE EXCAVATION, WITH THE POTENTIAL TO UNEARTH OR ADVERSELY IMPACT PREVIOUSLY UNIDENTIFIED TRIBAL CULTURAL RESOURCES. PROJECT IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

No known significant tribal cultural resources are located on the project site based on the findings of the Cultural Resources Assessment prepared for the project site by BCR Consulting LLC (2019; Appendix 5.2). However, grading and ground-disturbing activities during project construction could impact currently unknown subsurface cultural resources of tribal or Native American importance.

The City of Eastvale and the consulting tribe agreed that, in the event of the discovery of previously unknown cultural resources of tribal or Native American importance during construction activities, appropriate mitigation measures would be followed.

Mitigation Measures

Avoidance or preservation in place of a previously unknown tribal cultural resource would be preferred in the event that such a resource is discovered on the project site during ground disturbing activities. However, if avoidance or preservation in place of the resource is not feasible and/or recommended by the qualified archaeologist or Native Tribal American monitor(s), Mitigation Measures CR-1 and CR-2, as defined in Section 5.2, *Cultural Resources,* would be implemented to reduce potential project impacts and ensure proper handling of the discovered resource. Additionally, Mitigation Measures TCR-1A, TCR-1B and TCR-1C support tribal monitoring for the project, provides for the respectful treatment and disposition of any tribal cultural resources discovered during project development.

TCR-1A Tribal Monitoring

Prior to the issuance of a grading permit, the Project Applicant shall contact the consulting tribe(s) with notification of the proposed grading and shall make a good-faith effort, as determined by the City's Development Director, to enter into a Tribal Cultural Resources Treatment and Monitoring Agreement that determines its tribal cultural resources may be present on the site. The agreement

shall include, but not be limited to, outlining provisions and requirements for addressing the handling of tribal cultural resources; Project grading and development scheduling; terms of compensation for the Tribal monitors; treatment and final disposition of any tribal cultural resources, including but not limited to sacred sites, burial goods and human remains, discovered on the site; and establishing on-site monitoring provisions and/or requirements for professional Tribal monitors during all ground-disturbing activities. The terms of the agreement shall not conflict with any of these mitigation measures. A copy of the agreement shall be provided to the City of Eastvale Planning Department prior to the issuance of a grading permit.

TCR-1B Tribal Cultural Resources – Archaeological Monitoring

At least 30 days prior to application for a grading permit and before any grading, excavation and/or ground disturbing activities on the site take place, the Project Applicant shall retain a Secretary of Interior Standards-qualified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources. Ground-disturbing activities may include, but are not limited to, pavement removal, pot-holing or auguring, grubbing, weed abatement, boring, grading, excavation, drilling, and trenching. The on-site monitoring would end when the project site grading and excavation activities are completed, or when the monitor has indicated that the site has a low potential for archeological resources. The Project Archaeologist, in consultation with interested Tribes identified in Mitigation Measure TCR-1A, and the Project Applicant, shall develop an Archaeological Monitoring Plan to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. Details in the Plan shall include:

1. Project grading and development scheduling.
2. The development of a rotating or simultaneous schedule in coordination with the Project Applicant and the Project Archeologist for designated Native American Tribal Monitors from the consulting Tribes during grading, excavation and ground-disturbing activities on the site.
3. 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.
4. The protocols and stipulations that the Project Applicant, Tribes and Project Archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.

TCR-1C Treatment and Disposition of Tribal Cultural Resources

If tribal cultural resources are inadvertently discovered during ground-disturbing actives for this project. The following procedures will be carried out for treatment and disposition of the discoveries:

1. **Temporary Curation and Storage.** During the course of construction, all discovered resources shall be temporarily curated in a secure location on-site or at the offices of the Project Archaeologist. The removal of any artifacts from the project site will need to be thoroughly inventoried by the Project Archeologist with tribal monitor oversite of the process.
2. **Treatment and Final Disposition.** The Project Applicant shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts and

non-human remains as part of the required mitigation for impacts to cultural resources. The Project Applicant shall relinquish the artifacts through one or more of the following methods and provide the City of Eastvale Planning Department with documentation of same:

a. Reburial on-site. Accommodate the process for on-site reburial of the discovered items with the consulting Tribes. This shall include measures and provisions to protect the future reburial area from any future impacts. Reburial shall not occur until all cataloguing and basic recordation have been completed.
b. Curation. A curation agreement with an appropriate qualified repository within Riverside County that meets federal standards pursuant to 36 CFR Part 79, and therefore, would be professionally curated and made available to other archaeologists or researchers for further study. The collections and associated records shall be transferred, including title, to an appropriate curation facility within Riverside County, to be accompanied by payment of the fees necessary for permanent curation.
c. Disposition Dispute. If more than one Tribe is involved with the project and cannot come to a consensus as to the disposition of cultural materials, they shall be curated at the Western Science Center.
d. Final Report. At the completion of grading, excavation and ground-disturbing activities on the site, a Phase IV Monitoring Report shall be submitted to the City documenting monitoring activities conducted by the Project Archaeologist and Tribal Monitors within 60 days of completion of grading. This report shall:
    i. Document the impacts to the known resources on the property;
    ii. Describe how each mitigation measure was fulfilled;
    iii. Document the type of cultural resources recovered and the disposition of such resources;
    iv. Provide evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting;
    v. In a confidential appendix, include the daily/weekly monitoring notes from the archaeologist; and
    vi. All reports produced will be submitted to the City of Eastvale, Eastern Information Center and consulting tribes.

Significance After Mitigation

Implementation of mitigation measures CR-1, CR-2, TCR-1A, TCR-1B and TCR 1C would reduce potential impacts to tribal cultural resources to less than significant.

4.12.3 Cumulative Impacts

The proposed project, in conjunction with other development in the City and surrounding areas as listed in Table 3.1 in Section 3, Environmental Setting, would cumulatively increase the potential to encounter sensitive tribal cultural resources. However, as discussed above, potential impacts to tribal cultural resources are site-specific and impacts would be reduced due to implementation of mitigation measures that would protect tribal cultural resources. In the event that tribal cultural resources are discovered, each individual project would be required to comply with the applicable regulatory requirements and the consultation requirements of AB 52 to determine and mitigate any

potential impacts to tribal cultural resources. Therefore, cumulative impacts to tribal cultural resources would be less than significant and would not be cumulatively considerable.

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4.13 Utilities and Service Systems

This section analyzes the effects of the proposed project on utilities and service systems. It considers potential impacts with respect to water supply and infrastructure, wastewater conveyance and treatment facilities, stormwater and drainage facilities, solid waste disposal, and electricity, natural gas, and telecommunications facilities. The analysis is based on data and information in the following reports: the *Homestead Greenhouse Gas Analysis* (Urban Crossroads 2019b; Appendix 4.5), the *Homestead Preliminary Drainage Report* (Kimley-Horn and Associates, Inc. 2019a; Appendix 4.7), the *Preliminary Project Specific Water Quality Management Plan (WQMP)* (Kimley-Horn and Associates, Inc. 2019b; Appendix 4.7), and the *Preliminary Geotechnical Investigation and Percolation Testing for the Homestead Industrial Business Park* (Geocon West, Inc. 2019, Appendix 5.3).

4.13.1 Setting

a. Existing Setting

The following section describes the existing setting with respect to wastewater treatment providers, water suppliers, stormwater drainage facilities, solid waste facilities, electricity and natural gas providers, and telecommunications facilities serving the project site.

Water Supply

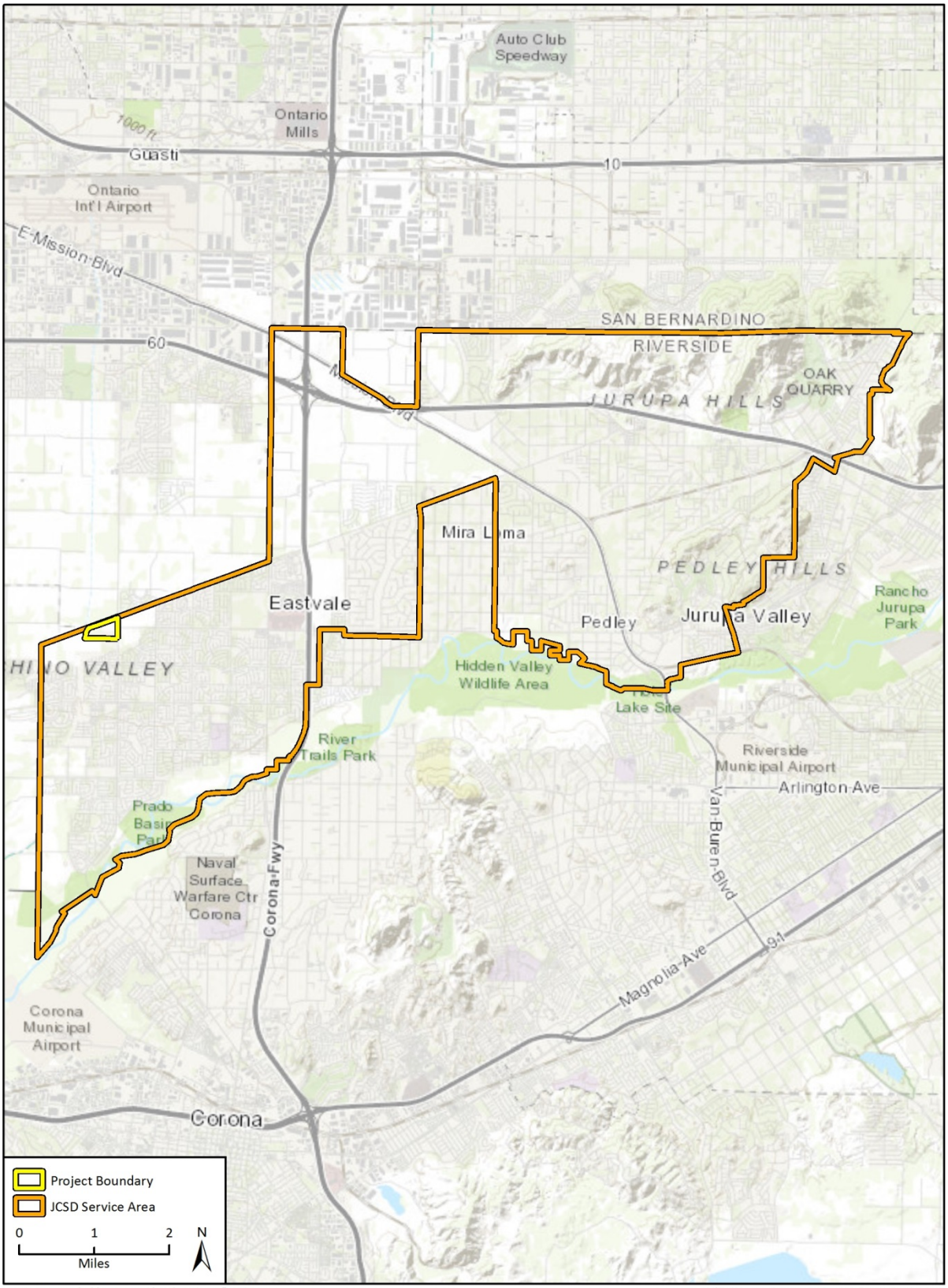
The Jurupa Community Services District (JCSD) provides water service to an approximately 40.5-square mile service area covering the entirety of Eastvale and a majority of Jurupa Valley in western Riverside County. In 2015, JCSD delivered water to approximately 30,000 municipal service connections and over 119,000 people (JCSD 2016). Figure 4.13-1 shows JCSD's service area. Potable water is delivered to the project site vicinity via an existing 24-inch water main within the Archibald Avenue right-of-way.

JCSD's water supply is sourced entirely from groundwater production from the adjudicated Chino and Riverside-Arlington Groundwater Basins. In 2015, JCSD obtained approximately 42 percent of its total water supply from 18 potable and six non-potable wells in the Chino Basin and an additional two percent of its supply from two non-potable wells in the Riverside-Arlington Basin. Figure 4.13-2 shows the boundaries of groundwater basins from which JCSD extracts water. JCSD has extraction rights from the adjudicated Chino Basin under the 1978 *Chino Basin Municipal Water District v. City of Chino et al.* judgement (1978 Judgment) (JCSD 2016). Similarly, the portion of the Riverside-Arlington Basin underlying JCSD's service area is adjudicated under the 1969 Western-San Bernardino Judgment. In addition to water pumped directly from District-owned wells, JCSD receives nearly half of its water supply from groundwater purchased from the Chino Desalter Authority (CDA) and Rubidoux Community Services District (RCSD), pumped from the Chino and Riverside-Arlington Basins, respectively (JCSD 2016).

While not presently part of its supply portfolio, JCSD is pursuing opportunities to supply recycled water from the Western Riverside County Regional Wastewater Authority (WRCRWA) plant for irrigation and other non-potable uses in its service area. Up to 500 acre-feet per year (AFY) of recycled water supplies are anticipated to be available to JCSD as early as 2020 (JCSD 2016).

Table 4.13-1 summarizes JCSD's current and projected water supplies.

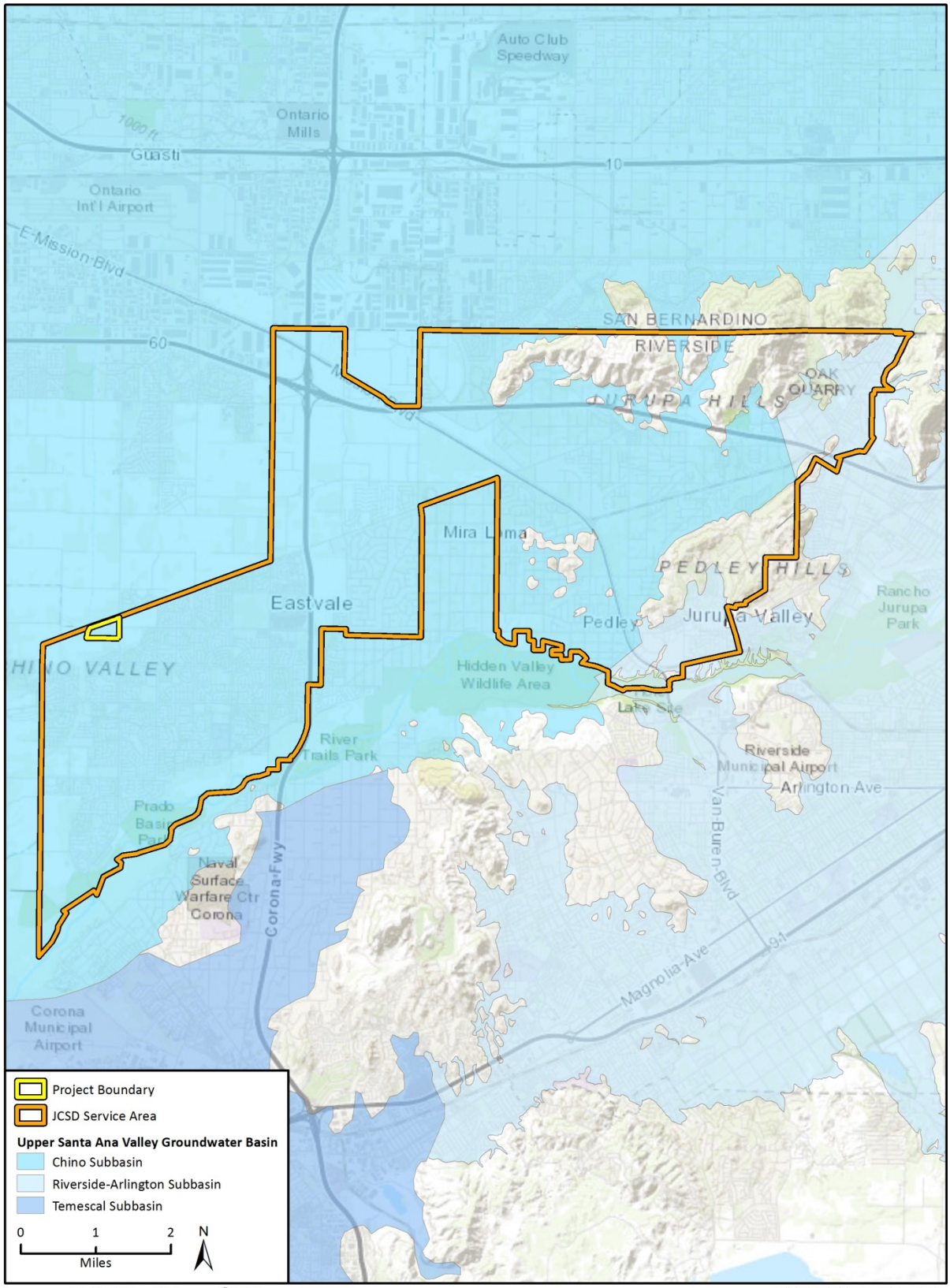
Figure 4.13-1 Jurupa Community Services District Service Area



Imagery provided by ESRI and its licensors © 2019.
Additional data provided by Riverside County; California Department of Water Resources 2018.

UtilFig X Jurupa Community Services District Service Area

Figure 4.13-2 Groundwater Basins



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Additional data provided by Riverside County; California Department of Water Resources 2018.

UtilFig X Underlying Groundwater Basins

Table 4.13-1 JCSD Water Supplies – Current and Projected

Water Supplies (AFY)	2015[1]	2020	2025	2030	2035	2040
Potable						
Chino Basin – Potable Wells[2]	8,993	10,000	12,000	14,000	14,000	14,000
Purchased Groundwater – Chino Desalter Authority (Chino Basin)	8,616	11,733	11,733	11,733	11,733	11,733
Purchased Groundwater – Rubidoux Community Services District (Riverside-Arlington Basin)	2,250	2,000	2,000	2,000	2,000	2,000
Purchased Water – Western Municipal Water District[3]	0	5,000	7,500	10,000	10,000	10,000
Conjunctive Use Agreement with Ontario[4]	1,677	2,000	2,000	2,000	2,000	2,000
Potable Sources Total	**21,536**	**30,733**	**35,233**	**39,733**	**39,733**	**39,733**
Non-Potable						
Chino Basin – Non-Potable Wells	266	310	310	310	310	310
Chino Basin – Van Leeuwen Well[5]	115	0	0	0	0	0
Riverside-Arlington Basin – Non-Potable Wells	464	450	450	450	450	450
Recycled Water (Western Riverside County Regional Wastewater Authority Plant)[6]	0	500	500	500	500	500
Non-Potable Sources Total	**845**	**1,260**	**1,260**	**1,260**	**1,260**	**1,260**
Supply Total	**22,381**	**31,993**	**36,493**	**40,993**	**40,993**	**40,993**

[1]Actual supplies in 2015.

[2]Includes anticipated supply from Well No. 29 and Well No. 30, which have already been authorized by the JCSD Board of Directors and are anticipated to begin pumping by 2020. Once fully operational, Wells No. 29 and 30 are expected to provide an additional 5,000 AFY (total) of potable supply from the Chino Basin.

[3]The 2015 Urban Water Management Plan indicates that JCSD intends to partner with local wholesale supplier Western Municipal Water District (WMWD) to purchase imported water supplies via connections to the La Sierra and/or Mills Pipeline projects.

[4]JCSD participates in the Dry Year Yield Storage Program, a conjunctive use effort between Metropolitan Water District of Southern California (Metropolitan), Inland Empire Utilities Agency, Chino Basin Watermaster, Three Valleys Municipal Water District, and Chino Basin groundwater producers. Pursuant to an agreement under this program, Ontario increases its imported water supply deliveries from Metropolitan during wet years and sells a portion of its Chino Desalter Authority water to JCSD.

[5]The Van Leeuwen Well is a JCSD well in a non-adjudicated portion of the Chino Basin. The well supplies non-potable water for irrigation at the Eastvale Community Park and is expected to cease operations once recycled water is available for irrigation at the park.

[6]While not currently available, JCSD is pursuing State funding to supply recycled water from the Western Riverside County Regional Wastewater Authority plant for irrigation and other non-potable uses in the service area. Recycled water supply is anticipated to be available as early as 2020.

AFY = acre feet per year; JCSD = Jurupa Community Services District

Source: JCSD 2016 (adapted from Tables 6-8 and 6-9)

Water Demand

The JCSD 2015 Urban Water Management Plan (UWMP) details water demand from 2011 to 2015 by sector, including single-family residential, multi-family residential, commercial/institutional, industrial, and landscape irrigation (JCSD 2016). After peaking at 27,508 acre-feet (AF) in 2013, water demand declined to 21,106 AF in 2015, the lowest demand in the five-year period. This demand reduction is attributed primarily to conservation measures instituted during the multi-year drought and new meter installations across the JCSD service area, which reduced system losses substantially.

The 2015 UWMP projects future water demand through 2040 based on a water and sewer capacity rate study prepared in 2016. The capacity rate study used information from the JCSD Development Status Map, which identifies active and inactive residential and non-residential development, and applied annual water demand factors from JCSD's draft Summary Master Water Plan for future land uses in the JCSD service area. The analysis produced an annual growth in water use across all sectors of approximately two percent. Table 4.13-2 shows JCSD's projected demands by sector, as stated in the 2015 UWMP.

Table 4.13-2 JCSD's Projected Demands for Potable and Raw Water

Use Type	2020	2025	2030	2035	2040
Single Family	15,700	17,341	19,153	21,154	23,364
Multi-Family	1,359	1,501	1,657	1,830	2,022
Commercial/Institutional and Industrial	3,119	3,444	3,804	4,202	4,641
Landscape – Potable	2,353	2,599	2,870	3,170	3,502
Landscape – Non-Potable	592	654	722	797	881
Hydrant/Construction Water	665	735	811	896	990
Losses[1]	1,189	1,314	1,451	1,602	1,770
Recycled Water	500	500	500	500	500
Demand Total	**25,477**	**28,088**	**30,968**	**34,151**	**37,670**

Units in acre feet per year (AFY)
Note: Demand projections assume a two percent annual growth.
[1]Losses are equal to five percent of annual demand.
Source: JCSD 2016 (adapted from Tables 4-2 and 4-3)

Dry Year Projections

JCSD estimates future water supply availability under single- and multiple-dry year scenarios. Given the adjudication of the groundwater basins upon which it depends, JCSD assumes 100 percent of its supplies would remain available during both single and multiple-dry year scenarios. JCSD projects multiple-dry year demand based on measured water use data from the multi-year drought extending from 2012-2015. JCSD assumes the first dry year would result in no change in demand, followed by a 5 percent reduction in demand in the second dry year, a ten percent reduction in the third dry year, and a 20 percent reduction in the fourth dry year as increasingly stringent conservation measures are implemented. Table 4.13-3 summarizes JCSD's multiple-dry year supply

and demand through 2040. Under all scenarios for all years, demand remains below anticipated supply.

Table 4.13-3 Supply and Demand in Multiple Dry Years

Year-Type	2020	2025	2030	2035	2040
First Dry Year					
First Dry Year Supply	31,993	36,493	40,993	40,993	40,993
First Dry Year Demand	25,477	28,088	30,968	34,151	37,670
Excess Supply	6,516	8,405	10,025	6,842	3,323
Second Dry Year					
Second Dry Year Supply	31,993	36,493	40,993	40,993	40,993
Second Dry Year Demand	24,203	26,684	29,420	32,443	35,787
Excess Supply	7,790	9,809	11,573	8,550	5,206
Third Dry Year					
Third Dry Year Supply	31,993	36,493	40,993	40,993	40,993
Third Dry Year Demand	22,929	25,279	27,871	30,736	3,903
Excess Supply	9,064	11,214	13,122	10,257	7,090
Fourth Dry Year					
Fourth Dry Year Supply	31,993	36,493	40,993	40,993	40,993
Fourth Dry Year Demand	20,382	22,470	24,771	27,321	30,136
Excess Supply	11,611	14,023	16,222	13,672	10,857

Units in acre feet per year (AFY)
Source: JCSD 2016 (adapted from Table 7-4)

Wastewater

JCSD provides sewer service in its service area, including Eastvale, via a collection system consisting of over 387 miles of collection pipelines, nine active lift stations, and two standby lift stations (JCSD 2016; JCSD 2019). Wastewater collected within the JCSD service area is treated at three wastewater treatment plants: City of Riverside Regional Water Quality Control Plant, the Orange County Sanitation District Fountain Valley Plant via the Inland Empire Brine Line, and the WRCRWA plant. The project site is in the WRCRWA treatment zone.

An existing 18-inch sewer main along Archibald Avenue conveys flows from the project site vicinity toward the WRCRWA plant, located approximately three miles south (JCSD 2019). The WRCRWA plant was originally constructed in 1998 and recently completed an expansion to nearly double treatment capacity to 14 million gallons per day (MGD). The facility treats influent to tertiary standards, meeting all Title 22 requirements for recycled water. Currently, treatment plant effluent is discharged to the Santa Ana River (WRCRWA n.d.; JCSD 2016).

Stormwater Drainage Facilities

Currently, stormwater on the project site flows from higher elevations in the northeast corner of the project site (approximately 654 feet above mean sea level) to lower elevations in the southern and

western portions of the project site (ranging from approximately 636-641 feet above mean sea level). The majority of the project site drains to a shallow pond in the southwestern portion of the site before discharging to a 54-inch Riverside County Flood Control and Water Conservation District (RCFCWCD) storm drain (Lateral F3) via an existing spillway. Lateral F3 was designed to accept 93 cubic feet per second (cfs) in the 100-year storm event from the project site. Lateral F3 then conveys runoff from the site to Cucamonga Creek channel, which runs to the west of the project site. An approximately three-acre portion of the project site, generally including the existing single-family homes south of Limonite Avenue, drains to Archibald Avenue and surface drains to an existing Eastvale detention basin at Schleisman Road (approximately 0.9 mile south). Additionally, San Bernardino County Flood Control District's County Line Channel flows immediately north of the project site and discharges to Cucamonga Creek channel near the site's northwest corner (Kimley-Horn 2019a).

Stormwater conveyance facilities in Eastvale are maintained by Eastvale and RCFCWCD. The County Line Channel north of the project site is maintained by San Bernardino County Flood Control District, and Cucamonga Creek channel is under the jurisdiction of the U.S. Army Corps of Engineers (USACE).

Solid Waste Facilities

Waste hauling services in Eastvale are provided by Waste Management of the Inland Empire and Burrtec (Eastvale N.d.). No landfills are located in Eastvale; instead, municipal solid waste is disposed of at the El Sobrante Landfill near Corona (approximately 14 miles southeast of the project site). El Sobrante Landfill is privately-owned and operated by USA Waste Services of California, Inc. and accepts construction/demolition, contaminated soil, mixed municipal, and tire waste (California Department of Resources and Recycling and Recovery [CalRecycle] 2019a). Additional landfills in western Riverside County that may receive waste generated in Eastvale include the Badlands Sanitary Landfill near Moreno Valley (approximately 27 miles east of the project site), and the Lamb Canyon Sanitary Landfill near Beaumont (approximately 35 miles east of the project site). Badlands Sanitary Landfill and Lamb Canyon Sanitary Landfill are both owned and operated by the Riverside County Department of Waste Resources. Both landfills accept agricultural, asbestos, ash, construction/demolition, contaminated soil, green materials, industrial, liquid waste, metals, mixed municipal, sludge (biosolids), tires, and wood wastes (CalRecycle 2019b, 2019c).

Electricity and Natural Gas Providers

In 2018, California used 285,488 gigawatt-hours (GWh) of electricity, of which approximately 31 percent were from renewable resources (California Energy Commission [CEC] 2019). California also consumed approximately 12,600 million U.S. therms (MMthm) of natural gas in 2018 (CEC 2018a, 2018b).

As discussed in Section 4.4, *Energy*, Southern California Edison (SCE) provides electricity to Eastvale, including the project site. SCE maintains substations and distribution lines in the region, including the Kimball substation approximately one mile west of the project site in Chino and the Archibald substation approximately 1.4 miles north of the project site in Ontario. Additionally, as discussed in Section 2, *Project Description*, SCE transmission lines are located within the project site along Archibald Avenue.

Southern California Gas (SCG) provides natural gas service to approximately six million residential and business customers across 20,000 square miles of southern California, including Eastvale (SCG 2019). The project site is located in SCG' Southern Zone. An existing 36-inch, high-pressure, natural gas transmission line owned and operated by SCG extends approximately 1,600 feet from the

project site's eastern to northwestern boundaries. The transmission line is located below ground within a 16-foot wide SCG easement.

For additional information on electricity and natural gas service and consumption, refer to Section 4.4, *Energy*.

Telecommunications

Numerous private local, wireless, and cellular phone service providers serve the Eastvale area (Eastvale 2018). As discussed in Section 2, *Project Description*, AT&T telecommunications lines are collocated along existing SCE electrical transmission lines within the project site along Archibald Avenue.

b. Regulatory Setting

Water Regulatory Setting

This regulatory setting discussion is specific to the assessment of water supply availability and reliability. Regulations and policies pertaining to water quality and potable drinking water standards are also discussed in Section 4.7, *Hydrology and Water Quality*.

Federal

CLEAN WATER ACT

The federal Clean Water Act (CWA), enacted by Congress in 1972 and amended several times since, is the primary federal law regulating water quality in the United States and forms the basis for several State and local laws throughout the country. The CWA established the basic structure for regulating discharges of pollutants into the waters of the United States. The CWA gave the U.S. Environmental Protection Agency (USEPA) the authority to implement federal pollution control programs, such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry contaminants in surface water, establishing wastewater and effluent discharge limits for various industry categories, and imposing requirements for controlling nonpoint-source pollution. At the federal level, the CWA is administered by the USEPA and USACE. At the State and regional levels in California, the act is administered and enforced by the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs).

SAFE DRINKING WATER ACT

The Safe Drinking Water Act (SDWA) regulates public water systems that supply drinking water (42 USC Section 300(f) et seq.; 40 CFR Section 141 et seq). The principle objective of the federal SDWA is to ensure that water from the tap is potable (safe and satisfactory for drinking, cooking, and hygiene). The main components of the federal SDWA are to:

- Ensure that water from the tap is potable
- Prevent contamination of groundwater aquifers that are the main source of drinking water for a community
- Regulate the discharge of wastes into underground injection wells pursuant to the Underground Injection Control program (see 40 CFR Section 144)
- Regulate distribution systems

State

SENATE BILL 610

Senate Bill 610 (SB 610) amended the California Water Code to require detailed analysis of water supply availability for certain types of development projects. The primary purpose of SB 610 is to improve the linkage between water and land use planning by encouraging greater communication between water providers and local planning agencies and ensuring that land use decisions for certain large development projects are fully informed as to whether sufficient water supplies are available to meet project demands. SB 610 requires the preparation of a Water Supply Assessment (WSA) for certain large development projects unless there is an urban water management plan ("UWMP") that accounts for the demand associated with the project.

Thresholds requiring the preparation of a WSA include residential developments of more than 500 dwelling units; shopping centers or business establishments employing more than 1,000 persons or having more than 500,000 square feet of floor space; commercial office buildings employing more than 1,000 persons or having more than 250,000 square feet of floor space; industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area; and projects that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

The project would involve the construction of more than 650,000 square feet of industrial space and, therefore, may require preparation of a WSA by JCSD. For the purposes of environmental review under CEQA, an analysis of water supply sufficiency is included below in Section 4.13.3, *Impact Analysis*.

CALIFORNIA SAFE DRINKING WATER ACT

The California SDWA (Health & Safety Code Section 116270 et seq.; 22 Cal. Code Regs. Section 64400 et seq.) regulates drinking water more rigorously than the federal law. Like the federal SDWA, California requires that primary and secondary maximum contaminant levels (MCLs) be established for pollutants in drinking water; however, some California MCLs are more protective of health. The act also requires the SWRCB to issue domestic water supply permits to public water systems.

The SWRCB enforces the federal and State SDWAs and regulates more than 7,500 public water systems. (Implementation of the federal SDWA is delegated to California). The SWRCB's Division of Drinking Water oversees the State's comprehensive Drinking Water Program (DWP). The DWP is authorized to issue public water system permits.

SUSTAINABLE GROUNDWATER MANAGEMENT ACT

In September 2014, the governor signed legislation requiring that California's critical groundwater resources be sustainably managed by local agencies. The Sustainable Groundwater Management Act (SGMA) gives local agencies the power to sustainably manage groundwater and requires groundwater sustainability plans to be developed for medium- and high-priority groundwater basins, as defined by the Department of Water Resources (DWR).

The project site overlies the Chino Subbasin. As an adjudicated groundwater basin, the Chino Subbasin is not required to prepare a groundwater sustainability plan pursuant to the requirements of SGMA.

CALIFORNIA PLUMBING CODE

The California Plumbing Code is codified in Title 24, California Code of Regulations, Part 5. The Plumbing Code contains regulations including, but not limited to, plumbing materials, fixtures, water heaters, water supply and distribution, ventilation, and drainage. More specifically, Part 5, Chapter 4, contains provisions requiring the installation of low flow fixtures and toilets. Existing development will also be required to reduce its wastewater generation by retrofitting existing structures with water efficient fixtures (SB 407 [2009] Civil Code Sections 1101.1 et seq.).

THE WATER CONSERVATION ACT OF 2009 (SENATE BILL X7-7)

California adopted SB X7-7, or the Water Conservation Act of 2009, in November 2009. The legislation requires urban water retailers to set urban water use targets to achieve a 20 percent reduction in per capita urban water use by December 31, 2020. Additionally, the law requires agricultural water suppliers to prepare, adopt, and regularly update agricultural water management plans. Agricultural and urban water providers are ineligible for certain State grants and loans if they do not adhere to water conservation requirements outlined in the law.

REGIONAL WATER MANAGEMENT PLANNING ACT

Adopted by the State legislature in 2002, the Regional Water Management Planning Act, or SB 1672, authorizes preparation of integrated regional water management plans. Such plans are developed by regional water management groups, defined as three or more local public agencies, at least two of which have statutory authority over water supply. Integrated regional water management plans address qualified programs and projects relating to water supply, water quality, flood protection, or other water-related topics undertaken by the participating public agencies. Qualified projects, as detailed in the legislation, include but are not limited to groundwater, urban, and agricultural water management planning efforts, levee or flood control infrastructure maintenance or construction, water recycling projects, and water conservation programs.

Regional

UPDATED INTEGRATED REGIONAL WATER MANAGEMENT PLAN REPORT

Western Municipal Water District (WMWD) published the Updated Integrated Regional Water Management Plan Report (IRWMP) in May 2008 and includes JCSD as a designated stakeholder. While the IRWMP focuses on long-range water planning needs in WMWD's service area, the document includes a regional-scale assessment of water planning efforts, infrastructure, and pending studies and projects. The IRWMP also discusses regional water management efforts in the context of other applicable water and environmental regional plans, such as the Santa Ana Watershed Project Authority's One Water-One Watershed Program and the Multi-Species Habitat Conservation Plan (WMWD 2008).

JURUPA COMMUNITY SERVICES DISTRICT 2015 URBAN WATER MANAGEMENT PLAN

The California Water Code, Division 6, Part 2.6, Section 10610 et. seq. (California Urban Water Management Planning Act) requires any municipal water supplier serving over 3,000 connections or 3,000 AFY to prepare a UWMP. JCSD's 2015 UWMP characterizes historical water supplies and use, projects future demand and supply through 2040, and identifies supply augmentation projects and programs, cumulative water demand projections, and water shortage contingency plans. Supply and

demand projections are included for normal, single-dry, and multiple-dry year scenarios (JCSD 2016).

JURUPA COMMUNITY SERVICES DISTRICT WATER CONSERVATION PLAN

The JCSD Water Conservation Plan was adopted by the JCSD Board of Directors via Ordinance No. 389 in May 2015. The Water Conservation Plan establishes a five-level water shortage contingency plan, under which JCSD may require increasingly stringent water conservation measures depending on the severity of the water shortage. Each level of water shortage is accompanied by a reduction target and conservation measures, as follows:

- **Level 1, Drought Watch:** Level 1 is implemented when supply is reduced by ten percent. Under Level 1 conditions, all water users are asked to voluntarily reduce water consumption by up to ten percent. JCSD increases public education and outreach efforts to implement voluntary conservation measures.
- **Level 2, Drought Caution:** Level 2 is implemented when supply is reduced by 20 percent and is accompanied by mandatory conservation measures requiring users to reduce consumption by 10 to 20 percent. Mandatory conservation measures include not using water to wash down paved surfaces, irrigating all landscapes before dawn, and limiting all outdoor irrigation to four days per week.
- **Level 3, Drought Alert:** This level is implemented when supply is reduced by 30 percent and is accompanied by mandatory conservation measures requiring users to reduce consumption by 20 to 30 percent. Mandatory conservation measures include those required under Level 2 conditions, as well requiring developers to submit a Water Conservation Plan prior to using water for dust control and grading at construction sites and limiting outdoor irrigation to three days per week.
- **Level 4, Drought Critical:** This level is implemented when supply is reduced by 40 percent and is accompanied by mandatory conservation measures requiring users to reduce consumption by 30 to 40 percent. Mandatory conservation measures include those required under Level 3 conditions, as well requiring that vehicles only be washed at commercial carwashes and limiting outdoor irrigation to two days per week.
- **Level 5, Drought Emergency:** This level is implemented when supply is reduced by more than 40 percent and is accompanied by a moratorium on new service connections regardless of approved water availability letters. Mandatory conservation measures include those required under Level 4 conditions and include a target reduction of 40 percent or more.

According to the JCSD 2015 UWMP, JCSD operates under Level 1 conditions and prohibits the wasteful use of water at all times.

Local

CITY OF EASTVALE GENERAL PLAN

Chapter 7 of the General Plan, *Air Quality and Conservation*, provides the policy context for Eastvale to achieve its vision for air quality, greenhouse gas reduction, and conservation (Eastvale 2012). The chapter identifies regional sources of water supply in Eastvale, and various goals and policies intended to protect water supply and water quality. General Plan policies relevant to the proposed project include the following (Eastvale 2012):

Water Supply and Water Quality

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.

Policy AQ-23: The City encourages native, drought-resistant landscape planting.

Policy AQ-24: Support and engage in educational outreach programs with other agencies that promote water conservation and widespread use of water-saving technologies.

Policy AQ-25: Minimize pollutant discharge into storm drainage systems, natural drainages, and aquifers.

Additionally, Chapter 4 of the City's General Plan, *Circulation and Infrastructure*, includes the following policies related to the provision of water and other utility services:

Major Utility Corridor

Policy C-28: Promote and encourage efficient provisions of utilities such as water, wastewater, natural gas, and electricity that support the Land Use Map.

Policy C-29: Locate new and relocated utilities underground when possible. All remaining utilities shall be located or screened in a manner that minimizes their visibility by the public.

Finally, Chapter 3 of the City's General Plan, *Land Use*, includes Policy LU-32, which states that adequate and available circulation facilities, water supplies, and sewer facilities should be available to meet service demands as development occurs.

EASTVALE MUNICIPAL CODE

Chapter 14.24 of the Eastvale Municipal Code contains the water efficient landscape regulations. The regulations establish water management and water waste prevention provisions to be incorporated in landscape planning for new developments in Eastvale. Specifically, the regulations establish planting standards requiring the use of low water use plant species, water budget calculations outlining maximum applied water allowances, and irrigation system design requirements.

Wastewater Regulatory Setting

Federal Clean Water Act

The federal CWA is described in Section 4.13.2.1, *Water Regulatory Setting*.

State and Regional

Standards for wastewater treatment plant effluent are established using State and federal water quality regulations. After treatment, wastewater effluent is either disposed of or reused as recycled water. The RWQCBs set the specific requirements for community and individual wastewater treatment and disposal and reuse facilities through the issuance of Waste Discharge Requirements, required for wastewater treatment facilities under the California Water Code Section 13260.

The treated wastewater discharged from the WRCRWA plant is regulated by the Santa Ana RWQCB under the *Waste Discharge Requirements and Master Reclamation Permit for the Western Riverside*

County Regional Wastewater Authority, Western Riverside County Regional Wastewater Treatment Plant, Riverside County (Order No. R8-2015-0013, NPDES Permit No. CA8000316). The Waste Discharge Requirement authorizes discharge of tertiary treated wastewater effluent to the Santa Ana River, Reach 3 and establishes water quality standards for effluent discharged from the plant.

The California Code of Regulations Title 22, Division 4, Chapter 3, Sections 60301 through 60355 are used to regulate recycled wastewater and are administered by the RWQCBs. Title 22 contains effluent requirements for four levels of wastewater treatment, from un-disinfected secondary recycled water to disinfected tertiary recycled water. Higher levels of treatment have higher effluent standards, allowing for a greater number of uses under Title 22, including irrigation of freeway landscaping, pasture for milk animals, parks and playgrounds, and vineyards and orchards for disinfected tertiary recycled water. Tertiary treated effluent from the WRCRWA plant meets all Title 22 requirements for recycled water (JCSD 2016).

Local

CITY OF EASTVALE GENERAL PLAN

As described above in Section 4.13.2.1, *Water Regulatory Setting*, the General Plan contains policies relevant to the provision of all utility services. Specifically, Policy C-28 encourages the efficient provision of wastewater utilities that support the Land Use Map and Policy LU-32 states that adequate and available sewer facilities should be available to meet service demands as development occurs.

Solid Waste Regulatory Setting

Federal

TITLE 40 OF THE CODE OF FEDERAL REGULATIONS

Title 40 of the Code of Federal Regulations (CFR), Part 258 (Resource Conservation and Recovery Act, Subtitle D), contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria.

State

ASSEMBLY BILL 341 AND SENATE BILL 1383

The purpose of Assembly Bill (AB) 341 of 2011 (Chapter 476, Statutes of 2011) is to reduce greenhouse gas emissions by diverting commercial solid waste to recycling efforts and to expand the opportunity for additional recycling services and recycling manufacturing facilities in California. In addition to Mandatory Commercial Recycling, AB 341 sets a statewide goal for 75 percent disposal reduction by the year 2020.

In addition, SB 1383 of 2016 (Chapter 395, Statutes of 2016) established the following goals: a 50-percent reduction in the level of the statewide disposal of organic waste from 2014 levels by 2020, and a 75 percent reduction in the level of the statewide disposal of organic waste from 2014 levels by 2025. This bill also authorized CalRecycle to adopt regulations, to take effect on or after January 1, 2022, to achieve these targets.

ASSEMBLY BILL 939

AB 939 (Public Resources Code 41780) requires cities and counties to prepare integrated waste management plans and to divert 50 percent of solid waste from landfills beginning in calendar year 2000 and each year thereafter. AB 939 also requires cities and counties to prepare source reduction and recycling elements as part of the integrated waste management plans. These elements are designed to develop recycling services to achieve diversion goals, stimulate local recycling in manufacturing, and stimulate the purchase of recycled products.

ASSEMBLY BILL 1826

AB 1826 of 2014 (Chapter 727, Statutes of 2014) requires businesses that generate a specified amount of organic waste per week to arrange for recycling services for that waste, and for jurisdictions to implement a recycling program to divert organic waste from businesses subject to the law, as well as report to CalRecycle on their progress in implementing an organic waste recycling program. As of January 1, 2017, businesses that generate four cubic yards or more of organic waste per week shall arrange for organic waste recycling services.

SENATE BILL 1016

SB 1016 of 2007 (Chapter 343, Statutes of 2007) requires that the 50 percent solid waste diversion requirement established by AB 939 be expressed in pounds per person per day. SB 1016 changed the CalRecycle review process for each municipality's integrated waste management plan. After an initial determination of diversion requirements in 2006 and establishing diversion rates for subsequent calendar years, CalRecycle reviews a jurisdiction's diversion rate compliance in accordance with a specified schedule. As of January 1, 2018, CalRecycle is required to review a jurisdiction's source reduction and recycling element and hazardous waste element once every two years.

Local

CITY OF EASTVALE GENERAL PLAN

Chapter 7 of the General Plan, *Air Quality and Conservation*, includes Policy AQ-32, which promotes the use of source reduction, recycling, and other appropriate measures to reduce the amount of solid waste disposed of in landfills (Eastvale 2012).

EASTVALE MUNICIPAL CODE

Chapter 16.05 of the Eastvale Municipal Code contains the solid waste collection and disposal regulations. The regulations establish standards for solid waste storage and accumulation and protocols for collection, transportation, and disposal. Additionally, Section 110.01.010 of the Eastvale Municipal Code regulates accumulation of solid waste on construction sites by requiring all construction sites and surrounding areas be kept clear of rubbish and debris that result from the construction activities.

Stormwater Drainage Regulatory Setting

Regulations and policies pertaining to stormwater drainage are discussed in Section 4.7, *Hydrology and Water Quality*.

Electric Power and Natural Gas Regulatory Setting

Regulations and policies pertaining to electric power and natural gas are discussed in Section 4.4, *Energy*.

Telecommunication Regulatory Setting

The California Public Utilities Commission (CPUC) develops and implements policies for the telecommunication industry. The Communications Division is responsible for licensing, registration and the processing tariffs of local exchange carriers, competitive local carriers, and non-dominant interexchange carriers. It is also responsible for registration of wireless service providers and franchising of video service providers. The Division tracks compliance with commission decisions and monitors consumer protection and service issues and Commission reliability standards for safe and adequate service (CPUC 2019).

4.13.2 Impact Analysis

a. Methodology and Significance Thresholds

Project water demand and wastewater generation were estimated using land use-based demand factors contained in JCSD's Standards Manual (JCSD 2011). These factors are used by JCSD for initial planning purposes to estimate maximum daily demand and, therefore, provide a conservative estimate of annual water demand and wastewater generation. Stormwater infrastructure impacts were analyzed based on the project-specific drainage report and preliminary WQMP. Solid waste generation associated with the project was estimated based on anticipated demolition debris, soil export, and operational waste generation as reported in the California Emissions Estimator Model (CalEEMod). CalEEMod calculates annual waste generation based on land use-based waste disposal rates reported by CalRecycle (California Air Pollution Control Officers Association [CAPCOA] 2017). Electricity, natural gas, and telecommunications infrastructure impacts were evaluated based on the project's utilities site plan. Other publicly available resources consulted as part of this analysis include the General Plan and the JCSD 2015 UWMP.

For the purposes of this EIR and in accordance with the environmental checklist contained in Appendix G of the CEQA Guidelines, a utilities and service systems impact is considered significant if the project would:

1. Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects;
2. Not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple-dry years;
3. Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
4. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or
5. Not comply with federal, State, and local management and reduction statutes and regulations related to solid waste.

b. Project Impacts and Mitigation Measures

Threshold:	Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?

Impact U-1 THE PROJECT WOULD INVOLVE THE RELOCATION OF ELECTRICAL AND TELECOMMUNICATIONS FACILITIES AND CONSTRUCTION OF NEW OR EXPANDED WATER, WASTEWATER TREATMENT, AND STORMWATER DRAINAGE FACILITIES ON THE PROJECT SITE. HOWEVER, SUCH RELOCATION AND CONSTRUCTION WOULD NOT CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Water

According to the project's utility site plan, the project site vicinity is served by existing JCSD potable water facilities, including a 24-inch potable water main within the Archibald Avenue right-of-way immediately east of the project site. The project includes construction of a potable water main within the proposed Limonite Avenue right-of-way through project site, connecting to the existing JCSD water main near the intersection of Limonite Avenue and Archibald Avenue and terminating near the southwestern corner of the project site. Additionally, the project would include installation of approximately six water service lateral connections extending from the proposed main within Limonite Avenue to the proposed buildings, and approximately 24 hydrants. Hydrants would be served by fire water laterals extending from the proposed Limonite Avenue water main or separate fire water lines extending generally along the northern and southern boundaries of the project site.

The proposed water main, laterals, fire water lines, and hydrants would be installed during project construction and within the disturbance area of the project; therefore, the construction of these infrastructure improvements would not substantially increase the project's disturbance area, associated emissions, or otherwise cause significant environmental effects beyond those identified throughout this document. As described in Impact U-2, below, the project would be served by existing and planned JCSD supplies, which are not anticipated to require major JCSD treatment or distribution facility improvements. Therefore, impacts with respect to new or expanded water facilities would be less than significant.

Wastewater Treatment

The project site vicinity is served by an existing JCSD 18-inch sewer main within the Archibald Avenue right-of-way, which conveys wastewater to the WRCRWA plant approximately three miles south of the project site. The project would involve installation of a ten-inch sewer main line within the proposed Limonite Avenue right-of-way through the project site, originating near the project site's southwestern corner and connecting to the existing sewer main near the Limonite Avenue and Archibald Avenue intersection. Approximately seven sewer manholes would be installed along the proposed main. The proposed sewer main would serve the future buildings via approximately 11 sanitary sewer lateral connections. As with water facilities, sewer line extensions necessary to serve the proposed future buildings would be installed in conjunction with the project within the proposed Limonite Avenue right-of-way, which would already be disturbed in order to construct the roadway through the project site. As such, construction of these wastewater treatment facilities

would not result in potentially significant environment impacts beyond those identified throughout this document.

The project would result in an increase in wastewater generation relative to existing site conditions. Wastewater generated at the project site would be treated at the WRCRWA plant. According to JCSD's Standards Manual, commercial and industrial land uses are assumed to generate 2,000 gallons per day (gpd) of wastewater for planning purposes (JCSD 2011). The project would involve construction of up to 1,080,060 square feet of industrial facilities, or 24.8 gross acres. Therefore, the project would be expected to generate approximately 49,600 gpd of wastewater, or approximately 0.05 MGD. Table 4.13-4 summarizes the available capacity at the WRCRWA plant and the percentage used by anticipated project wastewater generation.

Table 4.13-4 Wastewater Treatment Plant Capacity

	Western Riverside County Regional Wastewater Authority Plant
Average Inflow	6 MGD[1]
Capacity	14 MGD[2]
Available Capacity	8 MGD
Project Wastewater Generation[3]	0.05 MGD
Percent of Available Capacity Used by Project	0.63%

MGD = million gallons per day

[1]Based on current volume treated from all sources, as reported in Jurupa Community Services Department's 2015 Urban Water Management Plan (JCSD 2016).

[2]Based on new plant capacity following recently completed plant upgrades.

[3]Based on wastewater generation rates contained in the JCSD Standards Manual (JCSD 2011).

Sources: JCSD 2016, WRCRWA N.d., JCSD 2011

As shown in Table 4.13-4, wastewater treatment facilities serving the project have sufficient capacity to process additional wastewater generated by the project. The project would be responsible for constructing on-site wastewater treatment conveyance systems and paying standard sewer connection fees. Consequently, impacts with respect to wastewater treatment facilities would be less than significant.

Stormwater Drainage

According to the preliminary WQMP prepared for the project (Kimley-Horn and Associates, Inc. 2019b), the project site contains approximately 142,000 square feet (sf) of impervious surface area. The project would add approximately 2,048,000 sf of impervious surface over the project site due to construction of the proposed industrial buildings, Limonite Avenue, and parking and circulation area. Consequently, the project would reduce infiltration potential and increase surface runoff on the project site. Post-development conditions would generally preserve existing drainage patterns, with approximately two acres on the eastern portion of the project site draining toward Archibald Avenue and the remainder draining to the southwest toward RCFCWCD's Lateral F3 storm drain (Kimley-Horn and Associates, Inc. 2019b).

As discussed in the preliminary drainage report prepared for the project (Kimley-Horn and Associates, Inc. 2019a), the Lateral F3 storm drain was designed to accept a flow rate of 93 cfs from

the project site during the 100-year storm event. The project would involve construction of a storm drain system, including a main line within the proposed Limonite Avenue right-of-way. The main line would originate approximately 600 feet west of the project site's eastern border, beginning as a 36-inch diameter reinforced concrete pipe (RCP) and expanding to a 54-inch diameter RCP near the project site's southwestern corner prior to discharging to Lateral F3. Under the proposed drainage condition, a series of biofiltration/catchment basins would collect drainage from throughout the project site. Water collected in the biofiltration/catchment basins would flow through a network of smaller storm drains to one of three proposed detention basins. The basins would detain flow to the storm drain mainline within the Limonite Avenue right-of-way. Based on modeling in the preliminary drainage report discussed in detail in Section 4.7, *Hydrology and Water Quality*, post-development drainage from the project site would not exceed the 93 cfs capacity of Lateral F3 during the 100-year storm event. As a result, upgrades to Lateral F3 or other off-site, downstream drainage facilities are not anticipated.

As with water and wastewater facilities, proposed storm drain infrastructure would be constructed within the disturbance area of the project and would not result in substantial additional environmental impacts. Given that the project would capture and retain on-site runoff from the 100-year storm event, off-site improvements to the storm drain network would not be necessary. As such, impacts related to new or expanded stormwater facilities would be less than significant.

For additional discussion of the project's drainage and stormwater impacts, refer to Section 4.7, *Hydrology and Water Quality*.

Electric Power and Natural Gas

SCE transmission lines and four transmission poles are located along the eastern border of the project site along Archibald Avenue. These facilities would be relocated underground to accommodate the widening of Archibald Avenue. As such, the relocation of these facilities would occur in conjunction with the project and within the disturbance area of proposed roadway improvements along Archibald Avenue and Limonite Avenue. Substantial additional ground disturbance, grading, or use of heavy equipment beyond that necessary for the roadway improvements would not be anticipated. Additionally, the existing 36-inch diameter high-pressure natural gas line extending through the project site would remain protected in place.

As discussed in Section 4.4, *Energy*, the project would increase electricity and natural gas demand on the project site. However, such increased demand would account for a minimal fraction of SCE's and SCG' total demand in the region. The nominal increase in energy demand is not anticipated to require additional electricity substations or natural gas storage/transmission facilities beyond those currently serving the Eastvale area. Impacts with respect to new or expanded electric power or natural gas facilities would be less than significant.

For additional discussion of the project's electricity and natural gas demand, refer to Section 4.4, *Energy*.

Telecommunications

AT&T telecommunications lines are collocated with SCE transmission lines along Archibald Avenue. As with the SCE lines discussed above, these telecommunications facilities would be relocated underground to accommodate the widening of Archibald Avenue. The relocation of these facilities would occur in conjunction with the project and within the disturbance area of proposed roadway improvements along Archibald Avenue and Limonite Avenue. Substantial additional ground

disturbance, grading, or use of heavy equipment beyond that necessary for the proposed roadway improvements would not be anticipated. No additional telecommunications improvements are proposed as part of the project. Consequently, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts related to the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities would be less than significant.

Threshold:	Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Impact U-2 THE PROJECT WOULD DEMAND APPROXIMATELY 225 AFY OF WATER, WHICH WOULD REPRESENT LESS THAN 7 PERCENT OF JCSD'S PROJECTED EXCESS WATER SUPPLY FOR ALL NORMAL, SINGLE-DRY, AND MULTIPLE-DRY YEAR SCENARIOS THROUGH 2040. BASED ON JCSD'S WATER SUPPLY AND DEMAND PROJECTIONS, PROJECTED WATER SUPPLIES ARE SUFFICIENT TO MEET THE ANTICIPATED WATER DEMAND OF THE PROJECT AND REASONABLY FORESEEABLE FUTURE DEVELOPMENT DURING NORMAL, DRY, AND MULTIPLE DRY YEARS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The project would generate both construction-related and operational water demand. Discussions of both sources of water demand follow.

Construction Demand

Water would be required for temporary construction activities on the project site, including dust suppression, grading and grubbing, compaction, construction equipment wheel washing, and concrete mixing and casting. Water consumption by construction workers and cleaning of portable toilets on the project site may also account for a small portion of overall construction water demand.

Watering for dust suppression would demand the most water during construction. Pursuant to the requirements of South Coast Air Quality Management District (SCAQMD) Rule 403 as described in Section 4.2, *Air Quality*, all disturbed unpaved roads and disturbed areas within the project site would be watered approximately three times per day to reduce fugitive dust generation from construction activities. As discussed in the air quality analysis, the project's demolition phase would disturb up to one acre per day, site preparation would disturb up to 1.5 acres per day, and grading would disturb up to three acres per day. The demolition, site preparation and grading phases would last approximately 50, 30, and 75 days, respectively. Water demand for dust suppression is highly dependent on a number of site-specific variables, including soil properties, antecedent moisture conditions, and other climatic factors. In other arid and semi-arid portions of southern California, water demand for construction dust control has been estimated at roughly 3,300 to 4,000 gallons per acre per day (County of San Diego 2013; Murphy 2015). Conservatively assuming an application rate of 4,000 gallons per acre per day, dust control during the demolition, site preparation, and grading phases would require approximately 1.3 million gallons of water, or approximately 3.9 AF in

total. This temporary demand would amount to less than two percent of the project's annual operational water demand.

Construction water demand would be temporary and, therefore, would not result in a long-term strain on water supplies. As discussed in the regulatory setting above, JCSD's five-level Water Shortage Contingency Plan allows the JCSD Board of Supervisors to declare drought emergencies. During Level 3, Level 4, and Level 5 drought emergencies, developers would be required to submit a water conservation plan prior to using water for dust control and grading at construction sites. Given the temporary and minimal nature of construction water demand as compared to operational water consumption, as well as the fact that JCSD would be able to restrict or require conservation measures for water intensive construction activities through a Level 3, Level 4, or Level 5 drought declaration if it lacked adequate water supply, impacts related to construction water consumption would be less than significant.

Operational Demand

The project would introduce a new industrial development containing seven industrial use buildings covering a total of approximately 1,080,060 sf. Table 4.13-5 summarizes the projected water demand of the project based on recommended maximum demand factors for commercial and industrial development contained in the JCSD Standards Manual (JCSD 2011).

Table 4.13-5 Estimated Project Water Demand

Land Use Type	Size	Demand Factor	Projected Total Water Demand (GPD)	Projected Total Water Demand (AFY)[1]
Industrial	1,080,060 sf (24.8 gross acres)	8,100 gallons per day/gross acre	200,880	225.0

GPD = gallons per day, AFY = acre-feet per year, sf = square feet

[1] Based on 365 days per year

Source: JCSD 2011

Project water use would consist of indoor and outdoor water use. Indoor water use would include that associated with building plumbing and industrial processes occurring in proposed facilities. The project would comply with all requirements of the California Green Building Code, as adopted by Eastvale in Section 110.06.010 of the Municipal Code, pertaining to maximum flow rates for plumbing fixtures, such as toilets, showerheads, and faucets in non-residential buildings.

Outdoor water use would consist of landscape irrigation. As discussed in Section 2, *Project Description*, the project's landscape plan features drought-tolerant plants in compliance with Eastvale Municipal Code Section 120.05.040, including low water use trees, shrubs, and ground cover. Landscaping would be maintained via a low flow irrigation system.

Water Supply

As discussed in Section 4.13.1, *Setting*, JCSD estimates water supply availability for normal, single-dry, and multiple-dry year scenarios from 2020 through 2040 in its 2015 UWMP. For all years and all scenarios, anticipated supply exceeds anticipated demand. Table 4.13-6 summarizes supply, demand, and the project's anticipated share of excess supply for the normal and single-dry year

scenario[1]. Anticipated project demand would account for approximately 2.2 to 6.8 percent of JCSD's excess supply during normal and single-dry year scenarios.

Table 4.13-6 Project Share of JCSD Normal and Single-Dry Year Supply and Demand

	2020	2025	2030	2035	2040
Supply[1]	31,993	36,493	40,993	40,993	40,993
Demand[2]	25,477	28,088	30,968	34,151	37,670
Excess Supply[3]	6,516	8,405	10,025	6,842	3,323
Project Percent of Excess Supply (%)[4]	3.5	2.7	2.2	3.3	6.8

Units in acre-feet per year (AFY).

[1] Includes potable and non-potable water supplies. Full supply breakdown is provided in Table 4.13-1 in Section 4.13.1, *Setting.*

[2] Includes potable and non-potable water demand. Full demand breakdown is provided in Table 4.13-2 in Section 4.13.1, *Setting.*

[3] Equal to total supply minus total demand.

[4] Assumes total project demand of 225.0 AFY, as estimated in based on demand factors provided in JCSD Standards Manual (2011).

Source: JCSD 2016

Additionally, JCSD's 2015 UWMP estimates future water supply availability for multiple-dry year scenarios. As discussed in Section 4.13.1, *Setting*, JCSD anticipates no distinction between normal and single-dry year scenarios, and demand reductions in the second through fourth multiple-dry years as increasingly stringent conservation measures are implemented. Table 4.13-7 summarizes supply, demand, and the project's percentage of excess supply during the second through fourth multiple-dry years. Anticipated project demand would account for less than 5 percent of excess supply during all multiple-dry year scenarios.

[1] As discussed in Section 4.13.1, *Setting*, JCSD does not anticipate any distinction between supply and demand between normal and single-dry year scenarios.

Table 4.13-7 Project Share of JCSD Multiple-Dry Year Supply and Demand

Year-Type	2020	2025	2030	2035	2040
Second Dry Year					
Second Dry Year Supply	31,993	36,493	40,993	40,993	40,993
Second Dry Year Demand	24,203	26,684	29,420	32,443	35,787
Excess Supply	7,790	9,809	11,573	8,550	5,206
Project Percent of Excess Supply (%)	2.9	2.3	1.9	2.6	4.3
Third Dry Year					
Third Dry Year Supply	31,993	36,493	40,993	40,993	40,993
Third Dry Year Demand	22,929	25,279	27,871	30,736	3,903
Excess Supply	9,064	11,214	13,122	10,257	7,090
Project Percent of Excess Supply (%)	2.5	2.0	1.7	2.2	3.2
Fourth Dry Year					
Fourth Dry Year Supply	31,993	36,493	40,993	40,993	40,993
Fourth Dry Year Demand	20,382	22,470	24,771	27,321	30,136
Excess Supply	11,611	14,023	16,222	13,672	10,857
Project Percent of Excess Supply (%)	1.9	1.6	1.4	1.6	2.1

Units in acre feet per year (AFY)
Source: JCSD 2016

The water supply availability analysis incorporates a number of conservative assumptions. Firstly, the analysis above considers all project-generated demand to be new demand and does not account for existing water use on the project site associated with the dairy operation and single-family homes. Secondly, the analysis conservatively assumes that project-generated water demand would not be reduced in single- or multiple-dry year scenarios as a result of conservation measures. Finally, the analysis compares the project's anticipated water demand to excess JCSD supply in future years. The project site was identified as undeveloped non-residential land in the JCSD Development Status map included in the 2015 UWMP, and at least a portion of the project's anticipated water demand would be captured in the demand projections included in the 2015 UWMP. Nevertheless, despite these conservative assumptions outlined above, the project would account for less than seven percent of JCSD's projected excess supply during all normal, single-dry, and multiple-dry year scenarios through 2040. Therefore, based on the water demand projections, projected local water supplies are sufficient to serve the project during normal, single-dry, and multiple-dry years. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts related to the availability of sufficient water supplies would be less than significant.

Threshold:	Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Impact U-3 PROJECT-GENERATED WASTEWATER WOULD BE TREATED AT THE WESTERN RIVERSIDE COUNTY REGIONAL WASTEWATER AUTHORITY (WRCRWA) PLANT. THE PLANT WOULD HAVE ADEQUATE CAPACITY TO SERVE THE PROJECT'S PROJECTED WASTEWATER GENERATION IN ADDITION TO ITS EXISTING WASTEWATER TREATMENT COMMITMENTS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

As discussed under Impact U-1, project-generated wastewater would be adequately served by available capacity at the WRCRWA plant. Wastewater generated by the project would account for less than one percent of the remaining available capacity at the plant, which was recently expanded to accommodate a maximum capacity of 14 MGD. As such, the project would not result in a determination by the wastewater treatment provider that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts related to wastewater capacity would be less than significant.

Threshold:	Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?
Threshold:	Would the project fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Impact U-4 THE PROJECT WOULD NOT GENERATE SOLID WASTE IN EXCESS OF STATE OR LOCAL STANDARDS, OR IN EXCESS OF THE CAPACITY OF LOCAL INFRASTRUCTURE, INCLUDING THE EL SOBRANTE LANDFILL. THE PROJECT WOULD NOT IMPAIR THE ATTAINMENT OF SOLID WASTE REDUCTION GOALS AND WOULD COMPLY WITH FEDERAL, STATE, AND LOCAL STATUTES AND REGULATIONS RELATED TO SOLID WASTE. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

As described in Section 4.13.1, *Setting*, Waste Management of the Inland Empire and Burrtec provide solid waste collection services for Eastvale. Solid waste generated in Eastvale may be disposed of at various landfills throughout Riverside County based largely on proximity. However, waste is generally disposed of at the El Sobrante Landfill, which accepts construction/demolition debris, contaminated soil, mixed municipal, and tire waste (CalRecycle 2019a).

El Sobrante Landfill is located approximately 14 miles southeast of the project site at 10910 Dawson Canyon Road. According to the CalRecycle Solid Waste Information System (SWIS), El Sobrante Landfill has a maximum permitted capacity of 209,910,000 cubic yards (cy) and a remaining capacity of approximately 143,977,170 cy as of April 2018 (CalRecycle 2019a). The landfill has a maximum permitted throughput of 16,054 tons per day and an anticipated closure date of 2051.

Construction

The project site currently consists of three single-family homes and a dairy. According to *The Homestead Air Quality Impact Analysis* prepared for the project, the site consists of six building structures, 23 sheds, and asphalt (Appendix 4.2). In total, existing buildings and asphalt cover approximately 49,819 sf of the site. CalEEMod, which was used to determine emissions from all project construction activities including demolition, employs a conversion factor of 0.046 tons per square foot for building demolition debris, based on an analysis of commercial brick, concrete, and steel building demolition (CAPCOA 2017). Using the same conversion factor, demolition would generate approximately 2,292 tons of debris for off-site disposal, or approximately 46 tons per day when spread over the estimated 50-day demolition phase duration as estimated in CalEEMod. Consequently, demolition debris would account for approximately 0.3 percent of the permitted daily throughput at the El Sobrante Landfill, and the facility would have adequate capacity to serve this phase of project construction.

Project grading would also result in approximately 94,000 cy of cut and 61,000 cy of fill material. The Air Quality Impact Analysis assumes the remaining 33,000 cy of cut soil not used on-site as fill material would be exported and disposed of off-site (Appendix 4.2). According to the soils report prepared for the project site (Appendix 5), surface soils (down to ten feet below ground surface) on the site have a dry density of 90.7 to 123.1 pounds per cubic foot (pcf) and moisture contents ranging from 9.0 to 27.6 percent. As such, the wet weight[2] of soils on the project site may be as high as approximately 141 pcf, or approximately 1.9 tons per cy. Based on the CalEEMod run prepared for the project, grading would be expected to occur over approximately 75 days, resulting in the average export of approximately 440 cy (or 836 tons) of soil per day. As such, daily export of soil during the grading period would not exceed the 16,054 tons per day permitted throughput of the El Sobrante Landfill.

As discussed in Section 4.6, *Hazards and Hazardous Materials*, soils on the project site may be contaminated due to the site's historic and ongoing agricultural use. Therefore, soils exported from the project site may require disposal at other area landfills that accept contaminated soil, such as Badlands Sanitary Landfill or Lamb Canyon Sanitary Landfill. The anticipated daily export of soil during the grading phase would account for approximately 17.4 percent of the 4,800-ton daily permitted throughput at Badlands Sanitary Landfill and approximately 16.7 percent of the 5,000-ton daily permitted throughput at Lamb Canyon Sanitary Landfill (CalRecycle 2019b, 2019c). Furthermore, exported soil could be transported to other area landfills that accept soil and construction debris in nearby San Bernardino and Los Angeles counties to further reduce impacts at any single solid waste disposal facility. Therefore, disposal of soils from grading of the project site would not exceed the capacity of local solid waste disposal facilities.

The handling of all debris and waste generated during construction of the project would be subject to 2016 CALGreen requirements and the California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939) requirements for salvaging, recycling, and reuse of materials from construction activity on the project site. Furthermore, pursuant to Section 100.01.030 of the Eastvale Municipal Code, the project would be required to keep the construction site and surrounding area clear of construction-related trash and debris and place all construction waste in appropriate containers or an authorized disposal area. Therefore, impacts related to solid waste generated during construction would be less than significant.

[2] Wet weight calculated assuming Dry Density = [Wet Weight/(Moisture Content Percentage + 100)] x 100 (South Carolina Department of Transportation n.d.). Soil of 123.1 pcf and 14.6 percent moisture content generated the highest wet weight.

Operation

According to CalEEMod outputs, the project would generate approximately 1,015.8 tons of solid waste annually, or approximately 2.8 tons per day. Based on this information, the project's anticipated solid waste generation would account for approximately 0.02 percent of El Sobrante Landfill's daily permitted throughput of 16,054 tons per day. Given this small proportion of permitted throughput and the existing surplus capacity at El Sobrante Landfill, the solid waste generated by operation of the project would be adequately accommodated by existing landfills.

For operational waste, AB 939 requires all cities and counties to divert a minimum of 50 percent of all solid waste from landfills. Additionally, the project would comply with the Solid Waste Collection and Disposal Ordinance, codified in Chapter 16.05 of the Municipal Code, which regulates waste storage, collection, transfer, and disposal. The project would be required to comply with federal, State, and local statutes and regulations related to solid waste. Therefore, because the project would be served by landfills with sufficient capacity and would comply with applicable regulations related to solid waste, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts related to solid waste reduction goals, statutes and regulations would be less than significant.

4.13.3 Cumulative Impacts

A project's environmental impacts are "cumulatively considerable" if the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (CEQA Guidelines Section 15065(a)(3)).

a. Water

The geographic scope for cumulative water supply impacts is the JCSD service area, depicted in Figure 4.13-1. This geographic scope is appropriate because, as the local water purveyor, JCSD is responsible for supplying potable water to all residential, commercial, industrial, and fire protection uses within its service area, including the project site. Development that is considered part of the cumulative analysis includes construction of 22 projects in Eastvale and eight projects in Jurupa Valley that would be served by JCSD. Land uses include single-family detached residences, multi-family apartments, condominiums/townhouses, commercial retail, restaurants, industrial warehouses, carwashes, and a church.

Cumulative development in the JCSD service area would continue to increase demands on water supplies. By 2040, JCSD anticipates a total normal year demand of 37,670 AFY, an increase of 12,193 AFY from the anticipated 2020 demands (JCSD 2016). This anticipated increase in demand is based on planned and pending future development as identified on the JCSD Development Status Map included in the 2015 UWMP, including development of currently undeveloped properties in Eastvale and Jurupa Valley. A substantial portion of the cumulative projects included in this analysis, as well as the project site, are also identified in JCSD's Development Status Map and, therefore, at

least a portion of the cumulative water demand associated with these projects would be accounted for in JCSD's demand projections in the 2015 UWMP.

As demonstrated in Impact U-2, above, the project would account for less than seven percent of JCSD's excess water supply during all normal, single-dry, and multiple-dry year scenarios through 2040. This excess supply represents the supply available to JCSD after fulfilling future demand associated with buildout of planned, pending, and reasonably foreseeable future projects in the JCSD service area. Furthermore, future projects would be required to obtain service commitments from JCSD prior to construction, and those meeting the definition of a project pursuant to SB 610 would be required to prepare project-specific WSAs. As such, cumulative impacts related to water would be less than significant.

b. Wastewater

The geographic scope for cumulative wastewater facilities impacts is the service area for the WRCRWA plant, which includes portions of the cities of Norco, Corona, and portions of the JCSD, Home Gardens Sanitary District, and WMWD service areas (WRCRWA n.d.). This geographic scope is appropriate because the WRCRWA plant would receive wastewater flows from the project and, consequently, the project would not contribute to capacity constraints at any other wastewater treatment facilities. Impacts would be cumulatively significant if cumulative development in the service area would exceed the capacity of the WRCRWA plant.

As described in Impact U-1, the WRCRWA currently treats approximately 6 MGD of wastewater and was recently expanded to treat up to 14 MGD, resulting in an excess capacity of approximately eight MGD.

Planned, pending, and reasonably foreseeable development would continue to increase demands on the existing wastewater treatment and conveyance facilities in the WRCRWA plant service area. However, the project would account for less than 0.7 percent of the remaining capacity at the WRCRWA. Furthermore, future projects would be required to obtain commitments from JCSD to provide wastewater treatment services prior to construction, which would be dependent on remaining treatment capacity at the WRCRWA plant. Given that the project would use a nominal fraction of remaining capacity at the WRCRWA plant and the facility's recent expansion to accommodate up to 14 MGD of wastewater, cumulative impacts associated with wastewater services would be less than significant.

c. Stormwater

Cumulative impacts to stormwater/drainage facilities are discussed in Section 4.7, *Hydrology and Water Quality*. Individual projects would be subject to the stormwater capture and treatment requirements of the applicable MS4 Permit, reducing potential impacts to stormwater drainage facilities. Therefore, cumulative impacts to stormwater/drainage facilities would be less than significant.

d. Solid Waste

The geographic scope for cumulative solid waste impacts encompasses all areas in the region that contribute solid waste to the El Sobrante Landfill. This geographic scope is appropriate because, as discussed in Section 4.13.1, *Setting*, the El Sobrante Landfill would receive project-generated solid waste and, consequently, the project would not substantially contribute to capacity constraints at other solid waste disposal facilities.

Planned, pending, and reasonably foreseeable future development in the El Sobrante Landfill wasteshed would result in increased solid waste generation. As discussed in detail under Impact U-4, the El Sobrante Landfill is anticipated to reach its maximum permitted capacity in 2051 (CalRecycle 2019a) and has a maximum permitted daily throughput of 16,054 tons per day. This equates to an annual maximum throughput of approximately 5,859,710 tons per year. Once operational, the project would account for less than 0.02 percent of this annual throughput. In addition, compliance with applicable solid waste regulations and, for projects in Eastvale, General Plan policies such as Policy AQ-32, would maintain or improve upon solid waste diversion rates. Other cities in the region are also subject to solid waste diversion requirements and implementation of waste diversion programs and policies in order to meet State-mandated solid waste diversion rates. For example, AB 939 requires cities to divert 50 percent of solid waste from landfills. Given the nominal fraction of annual throughput accounted for by the project and local, regional, and statewide efforts to improve solid waste diversion rates, cumulative impacts to solid waste facilities would be less than significant.

e. Electric Power and Natural Gas Facilities

Cumulative impacts with respect to electric power and natural gas facilities are discussed in Section 4.4, *Energy*. Cumulative development projects would be subject to applicable local, regional, State, and federal policies regarding energy efficiency, in turn reducing the need for new or expanded electrical and natural gas facilities. As such, cumulative impacts would be less than significant.

f. Telecommunication

The geographic scope for cumulative telecommunications impacts is Eastvale. This geographic scope is appropriate because local providers are responsible for providing adequate telecommunication infrastructure to all land uses within Eastvale, including the project site.

As discussed above under Impact U-1, the project would involve undergrounding of telecommunications lines, which are collocated with SCE electricity lines along Archibald Avenue. Such infrastructure improvements would occur within the disturbance area of the project and would not result in significant environmental impacts. Cumulative development would increase demand for telecommunications infrastructure in Eastvale. Furthermore, consistent with General Plan Policy C-29—which encourages the undergrounding of all utilities when possible—telecommunications infrastructure may continue to be relocated underground throughout Eastvale in conjunction with other planned, pending, and reasonably foreseeable future development projects. However, cumulative projects would each be required to provide adequate telecommunications infrastructure upgrades on a project-by-project basis and would be subject to the appropriate level of project-specific environmental review. As with the project, such upgrades would typically be expected to occur within the development footprints of other cumulative projects. Therefore, cumulative impacts related to telecommunications infrastructure would be less than significant.

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5 Effects Found Not to be Significant

This section summarizes the analysis of issue areas for which no significant adverse impacts were identified and, therefore, are not discussed in detail in the EIR, consistent with CEQA Guidelines Section 15143. The items listed below are contained in the City's environmental checklist form as well as Appendix G of the CEQA Guidelines. Items not addressed in this section have been addressed in Section 4.0, *Environmental Impact Analysis*, of this EIR. Section 4.0 also includes an expanded discussion of the settings under each environmental issue area discussed therein.

5.1 Agriculture and Forestry

Would the project:

1. Convert Prime Farmland, Unique Farmland, 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?
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract?
3. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?
4. Result in the loss of forest land or conversion of forest land to non-forest use?
5. 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?

The project site is considered *Farmland of Local Importance* by the California Department of Conservation (2016).

The project site has a General Plan land use designation of Light Industrial (I-1) (Eastvale 2012), and the site is zoned Heavy Agricultural (A-2) (Eastvale 2013). The project site currently operates as a dairy farm with related structures and three single-family homes along the Archibald Avenue frontage. Uses permitted in the A-2 Heavy Agricultural zone include animal keeping, commercial fertilizer operations, crop production, dairy farm, temporary and permanent farm stand, grazing, kennel, agricultural workers housing, second unit and single-family dwelling, home occupations and mobile home. A zone change from Heavy Agriculture (A-2) to Industrial Park (I-P) is proposed to comply with the City's Zoning Ordinance and conform to the General Plan land use designation.

The City had previously determined via General Plan technical studies, the General Plan EIR, and public input, that long-term use of the property should be dedicated to non-agricultural uses. The City has been changing zoning to align with the General Plan in conjunction with State law and consideration of new projects. Land Use Policy LU-3 in the General Plan states the following:

> "Zoning in the city limits shall be consistent with the General Plan Land Use Map."

Recent development in the City of Eastvale has reflected economic and land use changes, centered on the conversion of agricultural operations to industrial, commercial, or residential uses. Chapter 7 of the General Plan, Air Quality & Conservation, describes the progression of land use conversion:

> "Eastvale's agricultural history came not primarily from the productivity of local soils but from the area's proximity to the Chino Dairy Preserve. The expansion of dairy operations into the Chino area in the mid-20th century was caused by the migration of the dairies from the then-developing Los Angeles area (the City of Cerritos was once known as Dairy Valley), a pattern that would repeat itself when the Chino area's dairies themselves began moving out in the 1990s. Today, only a handful of dairies remain in Eastvale. The area has been largely converted into homes, parks, and shopping centers."

The project site is surrounded by former agricultural land that has or is in the process of converting to urban use, including industrial, commercial, and housing, as envisioned in the General Plan. The property is not under a Williamson Act contract. Furthermore, there are no plans to reinstate agricultural or dairy operations on the project site. Impacts to agriculture would be less than significant.

The project site is not currently designated forest land or timberland and would not result in the loss of forest land or conversion of forest land. Therefore, the project would not result in impacts to forestry.

5.2 Cultural Resources

Would the project:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5 of the CEQA Guidelines?
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5 of the CEQA Guidelines?
3. Disturb any human remains including those interred outside of formal cemeteries?

This section focuses on the project's potential to impact cultural resources. Also see Section 4.12, *Tribal Cultural Resources*. This analysis is based on the Cultural Resources Assessment prepared for the project site by BCR Consulting LLC (2019; Appendix 5.2). The cultural investigation included a records search, review of historical aerial maps, and a field survey.

The project site has been in agricultural use since at least 1938 when an orchard, house and related buildings were established. By the 1970s, the orchard buildings were demolished, with only the primary residence remaining. A modern dairy and related structures were developed. The property remains in operation as a dairy with most of the site dedicated to this use. The dairy features shade awnings, barns, milk barn and pen, feed lots/pasture, drainage ponds, access roads and aisles. The easternmost property adjacent to Archibald Avenue features three single-family homes with associated driveways, lawns/landscaping and yards.

CEQA requires a lead agency to determine whether a project may have a significant impact on historical resources (Public Resources Code, Section 21084.1). The significance of cultural resources and impacts to those resources is determined by whether or not those resources can increase our collective knowledge of the past. The primary determining factors are site content and degree of

preservation. *CEQA Guidelines* Section 15064.5 states the term "historical resources" shall include the following:

> "A resource listed in or determined to be eligible by the State Historical Resources Commission, for listing in, the California Register of Historical Resources (CRHR) (PRC Section 5024.1, Title 14 California Code of Regulations [CCR], Section 4850 et. seq.).
>
> A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in an historical resource survey meeting the requirements of PRC Section 5024.1(g), shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
>
> Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the CRHR (PRC Section 5024.1, Title 14 CCR, Section 4852) as follows:
>
> - Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
> - Is associated with the lives of persons important in our past
> - Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
> - Has yielded, or may be likely to yield, information important in prehistory or history (State CEQA Guidelines Section 15064.5) "

Properties listed on the National Register of Historic Properties are automatically listed on the CRHR, along with State Landmarks and Points of Interest. The CRHR can also include properties designated under local ordinances or identified through local historical resource surveys.

Pursuant to PRC Section 21084.1, a project that may cause a substantial adverse change in the significance of a historical resource may have a significant impact on the environment. A "substantial adverse change" in the significance of a historical resource is defined as "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired." *CEQA Guidelines* Section 15064.5(b) states the significance of an historical resource is "materially impaired" when a project does any of the following:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in the CRHR
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources or its identification in an historical resources survey, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant
- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA

In addition, if it can be demonstrated that a project would cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a], [b]).

PRC Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information
- Has a special and particular quality such as being the oldest of its type or the best available example of its type
- Is directly associated with a scientifically-recognized important prehistoric or historic event or person

The proposed project would include demolition of the existing structures on-site, as well as grading and excavation to prepare the project site for development. Therefore, the project has the potential to adversely impact cultural resources, if present on the project site.

The records search identified three cultural resources within one mile of the project site, but did not identify any cultural resources associated with the project site.

A single-family residence occupies a property along Archibald Avenue (6207 Archibald Avenue) that is historic in age (above 45 years old) and was evaluated for significance. The residence is a two-story wood frame house that retains a portion of shake shingles and original window. The architecture of the residence suggests early 20th century construction, however, severe alterations have made the architectural style unrecognizable. The residence is not eligible for the California Registry because: it is not associated with important events related to the founding and/or development of an industry (Criterion 1); it is not linked to individuals who have been notable in local, state, or national history (Criterion 2); it does not embody any distinctive architectural characteristics (Criterion 3), and it is not likely to yield information import in prehistory or history (Criterion 4).

The investigation did not identify any potential likelihood for the site to support either archaeological sites or human remains. Nonetheless, the following Mitigation Measures are required as a precaution in the event that cultural resources or human remains are discovered during project development, and provide further guidance for the developer during construction consistent with state requirements.

CUL-1 Unanticipated Discovery of Cultural Resources

If cultural resources are encountered during ground-disturbing activities, work in the immediate area shall be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology (National Park Service 1983) shall be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work such as data recovery excavation and Native American consultation and archaeological monitoring may be warranted to mitigate any significant impacts to cultural resources.

CUL-2 Unanticipated Discovery of Human Remains

If human remains are found, existing regulations outlined in the State of California Health and Safety Code Section 7050.5 state that 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. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric or Native American in origin, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of being granted access and provide recommendations as to the treatment of the remains to the landowner.

Additionally, Mitigation Measures TCR-1A, TCR-1B, and TCR-1C, identified in Section 4.12, *Tribal Cultural Resources*, would apply and would further reduce potential impacts by supporting Native American monitoring, and providing for the respectful treatment and disposition in the event that tribal cultural are found during ground -disturbing activities.

Impacts would be less than significant with implementation of Mitigation Measures CUL-1 and CUL-2.

5.3 Geology and Soils

Would the project:

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
    ii. Seismic-related ground failure?
    iii. Strong seismic ground shaking?
    iv. Landslides?
2. Result in substantial soil erosion or the loss of topsoil?
3. 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?
4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

This evaluation is based, in part, on the *Preliminary Geotechnical Investigation* prepared for the project by Geocon West, Inc. (2019; Appendix 5.3). The scope of the investigation included a review of available historic aerial photographs, subsurface exploration, percolation testing, laboratory testing, and engineering analyses. The report concluded that there were no soil or geologic conditions encountered during the investigation that would preclude the development of the project, so long as the recommendations are implemented in conjunction with design and construction.

5.3.1 Seismic Fault Rupture and Ground Shaking

The site is not within a currently established State of California Alquist-Priolo Earthquake Fault Zone or a Riverside County Fault Hazard Zone for surface fault rupture hazards. No active or potentially active faults with the potential for surface fault rupture are known to pass beneath the project site. Therefore, the potential for surface rupture due to faulting occurring beneath the site is considered low. However, the site is in the seismically active southern California region, and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active southern California faults.

The project would construct multiple structures, all of which would be required to comply with applicable California Building Code (CBC) Title 24 regulations, including engineering standards appropriate for seismic ground shaking hazards. Therefore, compliance with CBC Title 24 regulations would result in a less than significant impact including the risk of loss, injury, or death associated with seismic fault rupture and ground shaking.

5.3.2 Seismic-Related Ground Failure, Landslides, and Expansive Soils

The site is within an area mapped as having very high liquefaction potential in Riverside County. However, based on the medium dense to dense consistency of the granular alluvial soils and the relatively cohesive nature of the fine-grained alluvial deposits, the potential for liquefaction and seismic settlement at the site is negligible and not a design consideration. Laboratory testing results also indicated that soils exhibit very low expansion potential.

Slopes associated with the project site and vicinity are gentle to, at-most, moderately sloping, and steep slopes are generally absent. The project site was found not to be at risk of a landslide or rock fall, and graded slopes constructed on the project site are not considered to be a potential risk. The geotechnical investigation recommends that slopes steeper than 2:1 (horizontal:vertical) or steeper than 10 feet in height should have additional evaluation. Any slopes of concern would be further evaluated in conjunction with a final geotechnical investigation.

Therefore, impacts including the risk of loss, injury, or death involving associated with liquefaction and seismic-related ground failure, expansive soils, and landslides would be less than significant.

5.3.3 Soil Erosion or the Loss of Topsoil

Construction activities may result in temporary erosion of topsoil during grading activities. However, the project would be required to obtain coverage under the State Construction General Permit for stormwater and implement a Storm Water Pollution Protection Plan (SWPPP) to protect water quality during construction. The SWPPP would include best management practices to control erosion during construction. Also see Section 4.7, *Hydrology and Water Quality,* for additional discussion regarding the SWPPP, and water quality.

Upon project completion, the project site would be stabilized and would not contain any loose or exposed topsoil, and conditions that would cause long-term erosion would not be present. Therefore, Impacts related to soil erosion or loss of topsoil would be less than significant.

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

The project site would be served by the municipal sewer system, the construction of septic tanks is not required, and there would be no impacts.

6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

A Vertebrate Paleontology Resources Report for the project site was prepared by Dr. Samuel McLeod of the Los Angeles County Natural History Museum (McLeod, Samuel 2019; attachment to the Cultural Resources Report included in Appendix 5.2). A records search indicated there are no vertebrate fossil localities in the project vicinity, and shallow excavations are unlikely to uncover significant fossil vertebrate remains. Nonetheless, the following mitigation measure is required as a precaution in the event that fossil remains are discovered during project development.

PALEO-1 Unanticipated Discovery of Fossils

Excavations exceeding five feet in depth shall be monitored to identify any fossil remains. If fossil remains are discovered, the contractor shall cease ground disturbing activities within 50 feet of the find until it can be assessed by the qualified paleontologist. If the find is determined to be not significant by the paleontologist, excavation activities can continue. If the find is determined to be significant or potentially significant by the qualified paleontologist, the ground disturbing activities within 50 feet of the find shall continue to cease until the sampling and data recovery of resource is completed. After recovering the resource, the paleontologist shall follow the Society of Vertebrate Paleontology standard guidelines for analyzing the fossil specimens, store the specimens at a museum depository that is capable to provide access for future research, prepare a final report documenting the find(s), and submit the document to the City of Eastvale and any other requesting party.

Impacts would be less than significant with implementation of Mitigation Measure PALEO-1.

5.4 Mineral Resources

Would the project:

1. Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?
2. Result in the loss of availability of a locally important mineral resource recovery site delineated in a local general plan, specific plan, or other land use plan?

The project site is classified as MRZ-1, which is indicative of areas where there is adequate information to indicate that no significant mineral deposits are present (California Division of Mines and Geology 1981). The project site has no history of use as a mineral resource recovery operation. Additionally, the City does not acknowledge the presence of critical mineral resources within their General Plan. The proposed project would not result in the loss of availability of any locally important mineral resources or mineral resource recovery sites. There would be no impact.

5.5 Population and Housing

Would the project:

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

The proposed project involves the development of a new light industrial complex and does not include the construction of new homes. Eastvale is largely built-out and includes a high percentage of recent new-home construction. Although the project will likely result in the employment of some Eastvale residents, the development of the project is not likely to add to population growth as the existing regional workforce is anticipated to adequately supply the needed employees. Therefore, the project would not directly induce population growth in the area through the introduction of new residents.

The project would generate temporary construction and long-term operational employment. Projected employment densities for various land uses vary widely, depending on the location and actual business activities. The Southern California Association of Governments (SCAG) reports that the total population for the City of Eastvale in 2018 was 64,854 or 2.7 percent of Riverside County's total population of 2,415,954 (SCAG 2019). Additionally, SCAG reports that between 2007 and 2017, the number of manufacturing jobs in the city increased by 4.5 percent, making manufacturing and distribution a rising employment sector within the city. The unemployment rate in Riverside County as of August 2019 was estimated at 4.4 percent (EDD 2019). Thus, it is expected that the project would largely absorb workers from the regional labor force and would not generally attract new workers into the region. Direct impacts to population and housing would be less than significant.

The project would complete a segment of Limonite Avenue westward, and contribute to the City's completion of this east-west corridor bridging the circulation gap between a portion of the City west of the Cucamonga Creek channel. There are other east-west corridors currently providing circulation and access to these areas, which are substantially developed. As a result, there would be no indirect impacts to population and housing.

2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The proposed project would require the demolition of three single-family residences located along Archibald Avenue. However, the properties are being voluntarily sold and the residents of the properties would be compensated at fair market value. Therefore, the residents would have the resources to relocate residences. The project would not necessitate replacement housing. Project impacts would be less than significant.

5.6 Recreation

Would the project:

1. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
2. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

As discussed in Section 4.10, *Public Services*, four percent of land use in Eastvale is designated Open Space Recreation, and one percent is designated public facilities (Eastvale 2012). Eastvale is home to numerous public parks, which are owned and operated by Jurupa Community Services District and Jurupa Area Recreation and Park District, two independent agencies. Future residential development projects, including those that may serve employees of the proposed project, would be required to pay development impact fees for park facilities on behalf of the City of Eastvale in order to fund the development and maintenance of parks and community use facilities to the extent such is needed as a result of new development.

The project does not include recreational facilities. The project site is not currently identified as parkland or an anticipated addition to the open space network and, therefore, would not preclude future acquisition of these additions to increase parkland in the City. As discussed in Section 5.5, *Population and Housing*, the project would not substantially increase population. As new employees are expected to come from the existing area workforce, the project would not increase the demand on recreation facilities. Impacts would be less than significant.

5.7 Wildfire

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

1. Substantially impair an adopted emergency response plan or emergency evacuation plan?
2. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
3. Require the installation or maintenance or associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project site is not located in or near a state responsibility area or lands classified as very high fire hazard severity zone, as designated by CalFIRE (2007). The nearest very high fire hazard severity zone is located on and around Mount Rubidoux, approximately 4.2 miles from the project site. As discussed in Section 4.6, *Hazards and Hazardous Materials*, the project would not substantially impair an adopted emergency response plan or emergency evacuation plan and would not impair abilities of emergency response services, including response to wildfire. Therefore, project impacts related to wildfire risks would be less than significant.

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6 Other CEQA Required Discussions

This section discusses growth-inducing impacts and irreversible environmental impacts that may be caused by the proposed project.

6.1 Growth Inducement

Section 15126.2(e) of the CEQA Guidelines requires a discussion of a proposed project's potential to foster economic or population growth, including ways in which a project could remove an obstacle to growth. Growth does not necessarily create significant physical changes to the environment. However, depending upon the type, magnitude, and location of growth, it can result in significant adverse environmental effects. The proposed project's growth inducing potential is therefore considered significant if project-induced growth could result in significant physical effects in one or more environmental issue areas.

6.1.1 Population Growth

As discussed in Section 5, *Effects Found Not to be Significant*, the proposed project would not directly generate population growth because it does not include residential uses. However, the proposed industrial development would generate long-term operational employment. As discussed in Section 4.10, *Public Services*, and the following subsection, *Economic Growth*, the proposed project would generate approximately 1,049 jobs based on employment density factors for Light Industrial land uses utilized in the County of Riverside General Plan (Riverside County 2017). As discussed in Section 5, *Effects Found Not to be Significant*, it is expected that the project would largely absorb workers from the regional labor force and would not generally attract new workers to the region due to the current unemployment rate in Riverside County. A small proportion of new workers attracted to the area as a result of project employment are likely to settle within Eastvale or one of the adjacent cities of Ontario, Chino, Corona, Jurupa Valley, or Norco. Table 6-1 summarizes potential population growth in Eastvale and surrounding communities based on the project's employment generation, each city's average household size, and an assumption that up to 15 percent of project-generated employees (157 employees) and their families would move into any single community.

Table 6-1 Potential Project-Generated Growth in Eastvale and Surrounding Cities

City	2019 Population	2040 Population Forecast	Potential Project-Generated Population Growth[1]	Project Percentage of Anticipated Population Growth (%)[2]
Eastvale	66,078	65,400	655	--[3]
Ontario	178,268	258,600	590	0.7
Chino	89,829	120,400	554	1.8
Corona	168,101	172,300	562	13.4
Jurupa Valley	106,318	114,500	626	7.7
Norco	26,386	32,100	537	9.4

[1] Potential project-generated population growth based on up to 15 percent of project-generated employees relocating to each city and each city's respective average household size (California Department of Finance 2019).

[2] Project percentage of anticipated population growth based on potential project-generated growth and anticipated growth between 2019 population and 2040 population forecast.

[3] Eastvale's 2019 population currently exceeds its 2040 growth projection. Therefore, the project's potential percentage of forecast population growth for Eastvale cannot be calculated.

Source: California Department of Finance 2019; Southern California Association of Governments (SCAG) 2016.

As shown in Table 6-1, potential project-generated population growth would generally be within growth forecasts for nearby cities. As determined by Southern California Association of Governments (SCAG), the population growth forecast for Eastvale is 65,400 in 2040 (SCAG 2016). However, according to the California Department of Finance, Eastvale's population in 2019 was 66,078 (California Department of Finance 2019). Eastvale currently exceeds its 2040 population forecast and would continue to exceed its forecast following development of the proposed project. As of 2019, Eastvale had a housing vacancy rate of approximately 5.9 percent, or 1,000 units (California Department of Finance 2019). Therefore, if employees generated by the project were to relocate to Eastvale as new residents, it is anticipated the majority of these employees and their families would be accommodated by existing housing stock in Eastvale. As a result, this would not require construction of substantial additional housing that could result in significant physical effects on the environment.

The project would involve extension of roads and utility infrastructure westward due to the extension of Limonite Avenue through the project site. This extension would assist in closing the existing circulation gap between largely urbanized and developed areas of Eastvale, consistent with the City's General Plan Circulation Element. Other east-west corridors currently provide indirect access and circulation in these areas. Therefore, the extension of Limonite Avenue is not anticipated to result in indirect population growth.

Moreover, as discussed in Section 4.10, *Public Services*, and Section 4.13, *Utilities and Service Systems*, development and operation of the project would not result in significant impacts to police or fire protection services, schools, parks, water or wastewater treatment service providers, solid waste disposal, or other utility systems due to excessive population growth. As a result, population growth resulting from the project would not result in significant physical impacts on the environment.

6.1.2 Economic Growth

The proposed project would generate temporary employment opportunities during construction. Because construction workers would be expected to be drawn from the existing regional work force, construction of the project would not be growth-inducing from a temporary employment standpoint. However, the proposed project would also add long-term employment opportunities associated with operation of the industrial development. As described in Section 4.10, *Public Services*, and the preceding subsection, *Population Growth*, the project would generate approximately 1,049 jobs based on employment density factors contained in the County of Riverside General Plan (Riverside County 2017). SCAG forecasts that 5,500 jobs will be added in Eastvale between 2012 and 2040 (SCAG 2016). The 1,049 jobs anticipated by the proposed commercial office development would be approximately 19 percent of job growth between 2012 and 2040 and, therefore, would be well within employment forecasts.

The proposed project would not be expected to induce substantial economic expansion to the extent that direct physical environmental effects would result. Moreover, the environmental effects associated with any future development in or around Eastvale would be addressed as part of the CEQA environmental review for such development projects.

6.1.3 Removal of Obstacles to Growth

The proposed project is located on an existing dairy in a largely urbanized area that is well served by existing infrastructure. As discussed in Section 4.13, *Utilities and Service Systems*, and Section 4.11, *Transportation* of this EIR, existing infrastructure in Eastvale would generally be adequate to serve the project. On-site improvements to water, wastewater, stormwater, electricity, and natural gas connection infrastructure are anticipated, but would be sized to serve the proposed project. Mitigation Measures T-1 through T-3 would involve improvements to existing intersections in the vicinity of the project site. Such improvements would serve to improve traffic flow and would not create new access to presently undeveloped areas. Finally, the expansion of Limonite Avenue through the project site would assist in closing the circulation gap, as planned for in the City's General Plan Circulation Element. Existing east-west corridors in the vicinity of the project site provide access from Archibald Avenue across Cucamonga Creek, such as Schleisman Road to the south and Merrill Avenue to the north. Extensive residential, commercial, and industrial development is present both east of the project site along Limonite Avenue and west of the project site west of Cucamonga Creek. Therefore, while the project would involve improvements to and expansion of existing infrastructure, it would not result in substantially improved access to presently undeveloped or inaccessible areas, and project implementation would not remove an obstacle to growth.

6.2 Irreversible Environmental Effects

The CEQA Guidelines require that EIRs contain a discussion of significant irreversible environmental changes. This section addresses non-renewable resources, the commitment of future generations to the proposed uses, and irreversible impacts associated with the proposed project.

The proposed project involves construction and operation of an industrial development on a currently operational dairy in Eastvale. Construction and operation of the project would involve an irreversible commitment of construction materials and non-renewable energy resources. The project would involve the use of building materials and energy, some of which are non-renewable

resources, to construct the seven proposed industrial buildings totaling 1,080,060 square feet, Limonite Avenue extension, parking areas, and utility/drainage improvements. Consumption of these resources would occur with any development in the region, and are not unique to the proposed project.

The proposed project would also irreversibly increase local demand for non-renewable energy resources such as petroleum products and natural gas. Demand for such resources is discussed in detail in Section 4.4, *Energy*. However, increasingly efficient building design would offset this demand to some degree by reducing energy demands of the project. As discussed in Section 2, *Project Description*, the proposed project's design features include construction of solar-ready buildings and parking spaces dedicated for electric vehicle charging. Both of these features would reduce demand for non-renewable energy resources. Furthermore, the project would comply with the most recent iterations of the California Energy Code (Title 24, Part 6, of the California Code of Regulations, *California's Energy Efficiency Standards for Residential and Nonresidential Buildings*) and the California Green Building Standards Code (Title 24, Part 11 of the California Code of Regulations). The California Energy Code provides energy conservation standards for all new and renovated commercial and residential buildings constructed in California, and the Green Building Standards Code requires solar access, natural ventilation, and stormwater capture. Consequently, the project would not use unusual amounts of energy or construction materials and impacts related to consumption of non-renewable and slowly renewable resources would be less than significant. Again, consumption of these resources would occur with any development in the region, and is not unique to the proposed project.

The project would also require a commitment of law enforcement, fire protection, water supply, wastewater treatment, and solid waste disposal services. However, as discussed in Section 4.10, *Public Services*, and Section 4.13, *Utilities and Service Systems*, impacts to these service systems would not be significant.

CEQA requires decision makers to balance the benefits of a proposed project against its unavoidable environmental risks in determining whether to approve a project. The analysis contained in this EIR concludes that the proposed project would result in significant and unavoidable impacts to air quality, greenhouse gas (GHG) emissions, and traffic. The proposed project involves generation of substantial vehicle trips, including truck trips, which would result in emissions of criteria air quality pollutants and GHG emissions. As discussed in Section 4.2, *Air Quality*, the project would exceed the NO_x emissions threshold established by the South Coast Air Quality Management District and, therefore, would obstruct implementation of the applicable air quality management plan and result in a cumulatively considerable net increase of this criteria pollutant. The project's significant and unavoidable emissions of NO_x could contribute to irreversible environmental effects throughout the South Coast Air Basin. Furthermore, the project would exceed the industrial land use threshold for GHG emissions and, consequently, may contribute to irreversible environmental effects resulting from global climate change. As discussed in Section 4.11, *Traffic and Circulation*, the project would result in significant and unavoidable impacts to specific intersections and roadway segments under 2040 horizon year conditions. These affects are mitigable with specific roadway improvements; however, since some improvements are not currently programmed, the timing is speculative. The potential for temporary significant and unavoidable impacts is assumed until the applicable improvements are scheduled and authorized.

7 Alternatives

7.1 Introduction

Section 15126.6(a) of the California Environmental Quality Act (CEQA) Guidelines requires that an environmental impact report (EIR) describe a range of reasonable alternatives to the project, or a range of reasonable alternatives to the location of the project, that could feasibly attain the project's basic objectives. An EIR does not need to consider every conceivable alternative, but it does have to consider a range of potentially feasible alternatives that will facilitate informed decision making and public participation.

According to CEQA Guidelines Section 15126.6(a), the discussion of alternatives must include several different issues. The discussion of alternatives must focus on alternatives to the project, or to the project location, which would avoid or substantially reduce any significant effects of the project, even if the alternatives would be costlier or hinder to some degree the attainment of the project objectives. The "No Project" alternative must also be evaluated. The "No Project" analysis must discuss the existing conditions and what would reasonably be expected to occur in the foreseeable future if the project was not approved. The range of alternatives required is governed by a "rule of reason." Therefore, the EIR must only evaluate those alternatives necessary to permit a reasoned choice. The alternatives must be limited to only ones that would avoid or substantially lessen any of the significant effects of the project.

Additionally, an EIR should not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative. The CEQA Guidelines also require an EIR to state why an alternative is being rejected. If the City ultimately rejects any or all alternatives, the rationale for rejection will be presented in the findings that are required prior to the certification of the EIR and action is taken on the project. According to CEQA Guidelines Section 15126.6(f)(1), among the factors that may be considered when addressing the feasibility of alternatives are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the applicant could reasonably acquire, control, or otherwise have access to the alternate site.

The project alternatives are evaluated to determine the extent to which they attain the basic project objectives, while significantly reducing or avoiding any significant effects of the project. As discussed in Section 2.0, *Project Description*, the objectives for the proposed project, are as follows:

1. Provide light industrial uses that serve the local market area and beyond; and that attract new customers and businesses to Eastvale.
2. Improve and maximize economic viability of the site through the establishment of light industrial uses.
3. Maximize and broaden the City's sales tax base by providing local and regional tax-generating uses and by increasing property tax revenues.
4. Create additional employment-generating opportunities for the residents of Eastvale and surrounding communities.

5. Contribute to the development of the City's General Plan circulation system through the development of a new segment of Limonite Avenue, and reconstruction of the Limonite Avenue and Archibald Avenue intersection to its ultimate configuration.

The purpose of an alternatives analysis is to allow the decisionmakers to determine whether there is an environmentally superior alternative that would meet most of the project's objectives. An alternatives analysis need not consider every conceivable alternative to the project but rather those alternatives necessary to permit a reasoned choice. CEQA establishes no categorical legal imperative as to the scope of alternatives to be analyzed in an EIR. Each case must be evaluated on its facts, which in turn must be reviewed in light of CEQA's statutory purpose.

The proposed project would have significant impacts to air quality (NO_x emissions) and GHG emissions related to operational truck trips. The potential environmental impacts of each alternative are analyzed in Section 7.2 below. Alternatives considered but eliminated from evaluation are discussed in Section 7.3. The environmentally superior alternative is discussed in Section 7.4.

7.2 Alternatives to the Proposed Project

Included in this analysis are alternatives, including the CEQA-required "No Project" alternative, and the reduced intensity alternative that involve changes to the project that may reduce the project -related environmental impacts as identified in this EIR. Alternatives have been developed to provide a reasonable range of options to consider that would help decision makers and the public understand the general implications of revising or eliminating certain components of the proposed project.

The following alternatives are evaluated in this EIR and summarized in Table 7-1:

- Alternative 1: No Project/No Build Alternative
- Alternative 2: Reduced Intensity Industrial Alternative

Detailed descriptions of the alternatives are included herein, along with an evaluation of the environmental impacts for each alternative.

Table 7-1 Comparison of Project Alternatives' Buildout Characteristics

Feature	Proposed Project	Alternative 1: No Project/No Build	Alternative 2: Reduced Intensity Industrial
Lot Area	56 acres	56 acres	56 acres
Use	Industrial	Dairy farm, residences	Industrial
Size	**1,080,060 sf**	3 du	756,042 sf

du=dwelling units, sf=square feet

7.2.1 Alternative 1: No Project/No Build Alternative

Description

The No Project Alternative assumes that the proposed project would not be developed, and the project site would continue to operate as a dairy farm. The three existing residences along Archibald

Avenue would remain. The new industrial buildings would not be developed. In addition, Limonite Avenue would not be extended westward through the project site.

The No Project Alternative would not fulfill any project objectives because the existing dairy farm would not provide light industrial uses, increase property tax revenues, or generate employment opportunities. In addition, the No Project Alternative would not contribute to the development of the City's General Plan circulation system and the westward extension of Limonite Avenue.

Impact Analysis

Aesthetics, Light, and Glare

VISUAL RESOURCES

Under Alternative 1, the project site would continue to be characterized by facilities typically associated with southern California dairy farms. The site is dominated by a mix of permeable and impermeable surfaces, with barren, muddy, or grassy landscapes interspersed with feed lots, manure piles, and a series of drainage and wastewater ponds. The site also features trees and houses along the Archibald Avenue frontage. The rural visual setting of the site is in stark contrast to the developing nature of the area, which is currently developing or planned for development. Nonetheless, public views of the project site are substantially limited to those along the Archibald Avenue frontage. These views are dominated by deep grass frontages with residences and the milk house structure set further back, and a dense eucalyptus windrow at the terminus of Limonite Avenue. Views of the feedlots and other structures are minimal and limited to the northernmost and southernmost corners of the property. The result is generally appealing and impacts to visual resources would be less than significant, and the impacts would be less compared to the proposed project.

LIGHT AND GLARE

Current light and glare sources on the project site are minimal, consistent with a typical dairy farm, and the project site does not represent a significant source of light or glare. Impacts would be less than significant, and less than those for the proposed project which would have more visible sources of light and glare.

Air Quality

Alternative 1 would avoid the significant NO_x emissions associated with operation of the proposed project but would produce other air quality emissions. Dairy farms produce air quality emissions typical of industrial and agricultural uses: particular matter, volatile organic compounds, and air toxics. They also produce greenhouse gasses: carbon dioxide, and NO_x. Emissions more particular to dairy farms include: ammonia, hydrogen sulfide, methane and nitrous oxide (both greenhouse gasses). Sources of emissions include barns, feedlot surfaces, manure storage, silage piles, and composting areas.

Although the specific emissions metrics for the existing dairy are speculative, it is generally understood to operate with approximately 1,200 milking cows per day. Gross emissions were

calculated based on the *Guidelines for Calculating Emissions from Dairy and Poultry Operations* (SCAQMD 2019) and are presented in the Table 7-2 below.[1]

Table 7-2 Estimated Operational Emissions for Alternative 1 (pounds per day)

Source	PM_{10}	NH_3	VOCs
Alternative 1	11.70	243.29[1]	42.08
Proposed Project	0.55	1.0	32.75
SCAQMD Thresholds	150	NA	55
Threshold Exceeded?	No	–	No

PM=particulate matter, NH_3=methane, VOCs=volatile organic compounds, NA=not applicable

[1]Provided for context in discussion of odors below.

As indicated in Table 7-2, Alternative 1 would result in 11.70 pounds per day of PM_{10}, which is below the SCAQMD thresholds.

In addition, although Alternative 1 is a potentially large source of VOCs, daily emissions remain below SCQAMD thresholds.

As indicated in Table 7-2, Alternative 1 would result in substantial methane emissions estimated at more than 240 pounds per day, a substantial source of odors. Other odors result from emissions of hydrogen sulfide and ammonia. The resulting odors are considered significant and unavoidable impacts. Thus, continued operation of the dairy farm under Alternative 1 would be expected to result in significant emissions resulting in odors.

Given the significant and unavoidable impacts due to NO_x emissions from the proposed project, overall air quality impacts under Alternative 1 would be less compared to the proposed project.

Biological Resources

The project site contains land cover types that would be classified as bare ground, disturbed, and developed; there are no native plant communities or natural communities of special concern present on or adjacent to the project site. As a result, the site does not contain any sensitive plant or wildlife species. The project site does not have any regulated waters, or support any wildlife corridors or movement.

Under Alternative 1, the project site would continue to be subject to frequent disturbance from cows on the site, topsoil with a high concentration of cow manure, disking activities, and manure stockpile activities. This would result in predominantly bare ground or growth of early successional and ruderal/weedy plant species. Any nesting birds, including burrowing owls, would be disturbed by ongoing dairy farm activities. However, given the general lack of biological resources associated with the project site, impacts under Alternative 1 would be less than significant which is the same degree of impacts as the proposed project.

[1] The gross estimate does not account for emission control factors, or the number of non-milking cows onsite.

Energy

Under Alternative 1 energy use from construction activities associated with the proposed project would not occur. Representative energy use associated with dairy farm operation includes the following:

- **Diesel fuel:** to operate onsite equipment (trucks, tractors, to move feed, manure) and trucks to transport feed, milk and manure.
- **Electricity or natural gas for the following:** vacuum pumps for milking, cooling of milk, lighting, ventilation, water and space heating, and water pump operation.

The existing dairy would use comparatively less energy compared to the proposed project even though the proposed project would be constructed to current energy standards that would not be employed for the existing dairy. Electricity consumption under Alternative 1 is estimated at 1,560,000 kW hours per year[2], while the proposed project would consume approximately 2,053,152 kW hours per year.

Therefore, impacts under Alternative 1 would be less than those for the proposed project and at a level of less than significant.

Greenhouse Gas

As previously indicated in Table 7-2, milking cows would be a source of approximately 243 pounds per day of methane, representing approximately 1,007 MT CO_2e of GHG emissions annually. Combined with other GHG sources (energy, mobile sources, etc.), Alternative 1 is estimated to generate up to 5,000 MT CO_2e of GHG emissions annually; see Table 7-3 below.

Table 7-3 Estimated Greenhouse Gas Emissions for Alternative 1

Scenario	Emissions (MT CO_2e per year)	Threshold	Exceeded?
Proposed Project	11,848	10,000	Yes
Alternative 1	5,000	10,000	No
Difference	6,848	10,000	–

MT=metric tons, CO_2e=carbon monoxide gas equivalents

The resulting emissions are below the SCAQMD threshold and half the amount of GHG emissions that would result from the proposed project. Thus, impacts related to GHG under Alternative 1 would be less than significant and result in reduced impacts compared to the proposed project.

Hazards and Hazardous Materials

Under Alternative 1, the existing dairy farm would continue operation and potentially contribute nitrogen to the soil and groundwater due to the release of manure and wastewater to the land. The existing structures would not be demolished or disturbed. Thus, any asbestos containing materials (ACM), if present, in the historic age home, would similarly not be disturbed. The existing low levels of organochlorine pesticides detected throughout the site would remain onsite, instead of being removed as under the proposed project. Therefore, unlike the proposed project, Alternative 1

[2] Based on rate of 1,200 kW hours per year and 1,300 cows. (New York State Energy Research and Development Authority. 2003. Dairy Farm Energy Audit Summary. July).

would not eliminate the release of nitrogen, abate any ACM if present, and remove organochlorine pesticides as recommended by the Phase II ESA. The existing pesticide levels are lower than commercial screening levels, limited in distribution and thus considered a *de minimis* condition.

Impacts under Alternative 1 would be less than significant, but greater than under the proposed project which would eliminate the release of nitrogen, abate any ACM if present, and remove organochlorine pesticides as recommended by the Phase II ESA.

Hydrology and Water Quality

Under Alternative 1, the existing dairy farm would continue operation, and in the event of a large storm, excess stormwater would have the potential to overtop wastewater ponds via flood spillways and discharge to Cucamonga Creek. Stormwater released from the dairy farm would be likely to carry dissolved and nitrogenous solids and soil into receiving waters, and thereby affect downstream water quality. Continued operation of the dairy farm also has the potential to release additional nitrogen into the soil, and ultimately groundwater.

Impacts to water quality under Alternative 1 would be potentially significant, and greater than those for the proposed project, which would remove the potential for release of nitrogenous materials downstream and would treat stormwater prior to discharge into Cucamonga Creek.

Land Use and Planning

Under Alternative 1, there would be no zone change from Heavy Agriculture (A-2) to Industrial Park (I-P) and the zoning would continue to conflict with the General Plan land use designation of Light Industrial. Site use would continue to conform to the Airport Land Use Compatibility Plan for the Chino Airport.

Limonite Avenue would not be extended westward through the project site as envisioned in the General Plan Circulation Element. Thus, Alternative 1 would impede future eastwest circulation and community connectivity that would be provided by the extension of a major arterial road within the City of Eastvale, and with the neighboring community to the west.

Impacts associated with land use and planning under Alternative 1 would be less than significant, but greater than those compared to the proposed project.

Noise

Under Alternative 1, the existing dairy farm would continue to operate. Construction noise impacts associated with the proposed project would be avoided. No new noise-generating sources would be introduced to the project site, and no new traffic would be introduced to area roads as a result of site development.

Noise impacts would be less than significant, and impacts would be less than those for the proposed project.

Public Services

Under Alternative 1, there would be no increase in the need for public services, as there would be no development, and no resulting employment or population increase associated with the project site. In addition, Alternative 1 would impede the westward extension of Limonite Avenue, a major east-west arterial that would facilitate improved circulation, including emergency response, and

pedestrian/recreation facilities in the form of bike lanes, sidewalks, and trails. In comparison, the proposed project would increase the need for public services.

Therefore, under Alternative 1 there would be no impact to public services but Alternative 1 would also not include improvements that would benefit emergency response and recreation. In contrast, the proposed project would increase the need for public services, and include improvements that would would benefit emergency response and recreation. Impacts to public services would be greater under the proposed project.

Transportation and Traffic

Under Alternative 1 there would be no increase in site-related traffic, though area roads would become more congested over time due to area growth. Limonite Avenue would not be extended westward through the project site as envisioned in the General Plan Circulation Element. Alternative 1 would impede future east-west circulation and community connectivity that would be provided by the extension of a major arterial road within Eastvale, and with the neighboring community to the west. Without the extension of Limonite Avenue parallel routes would become more congested over time.

In addition, Alternative 1 would not implement any circulation improvements, or contribute funding to transportation improvements through payments to transportation programs, development impact fees or fair-share contributions.

Impacts under Alternative 1 would be less than significant and impacts would be less compared to the proposed project. However, Alternative 1 would also not contribute to circulation system improvements.

Utilities and Service Systems

Water use under Alternative 1 is estimated at over 200 acre-feet per year and is comparable to the water use anticipated for the proposed project. Under Alternative 1, there would be no increase in the need for utilities, as there would be no development, and no resulting employment or population associated with the project site. In addition, Alternative 1 would impede the westward extension of Limonite Avenue, a major east-west arterial that would facilitate utility placement along this corridor. Under Alternative 1, there would be no relocation of utilities along Archibald Avenue.

Impacts would be less than significant, and reduced compared to the proposed project.

7.2.2 Alternative 2: Reduced Intensity Industrial Alternative

Description

The purpose of Alternative 2 is to evaluate the effects of the proposed project at a lower density to reduce truck trips and related significant impacts of the proposed project on air quality (NO_x emissions) and GHG emissions.

Similar to the proposed project, Alternative 2 would replace the existing dairy farm and three residences with a light industrial business park, but at a lower square-footage and intensity of development. Alternative 2 would involve an approximately 30 percent reduction in square-footage compared to the proposed project for a total of 756,000 square feet. Alternative 2 would also include similar road improvements to the proposed project, including the development of Limonite

Avenue westward within the project limits, and thereby facilitate the westward extension of Limonite Avenue.

Alternative 2 would meet all the project objectives to a degree, but would meet objectives one through four related to the provision of light industrial uses, tax generation, and employment, to a lesser extent than the proposed project.

Impact Analysis

Aesthetics, Light, and Glare

VISUAL RESOURCES

Similar to the proposed project, Alternative 2 would convert the current dairy and residential use to a developed industrial center with paved ground cover and multiple buildings, allow for the widening of Archibald Avenue, and facilitate the extension of Limonite Avenue westward. The overall quality of views of scenic vistas from publicly accessible vantage points would not substantially change. Similar to the proposed project, under Alternative 2, the buildings' massing, height, and site design would be similar to the existing industrial development immediately south of the project site, and the buildings would include vertical and horizontal elements and features to break up the massing of the structures and provide visual interest. These factors combine to make the property visually attractive and would not degrade the existing visual quality of the site. Landscaping along the site perimeter and building façades would soften views of the site and further enhance the visual character. Alternative 2 would change the visual quality of the site and its surroundings, the change would not constitute a degradation. Alternative 2 would visually match recent development projects in the vicinity of the project site and be consistent with the City's vision for growth and design polices. Therefore, impacts to the area's visual character would be less than significant under Alternative 2, and less than those for the proposed project due to the reduction in density and massing.

LIGHT AND GLARE

Similar to the proposed project, Alternative 2 would create new light sources from interior and exterior illumination associated with the buildings and security lighting in parking areas, as well as headlights of cars entering and leaving the site. Exterior building materials, including windows, would be non-reflective, thus reducing light reflection and glare. Car windows could potentially produce glare when cars entering or exiting the project site. Exterior and interior lighting to fit industrial warehouse needs would conform to CAL Green and Eastvale Municipal Code requirements, and would limit backlight, uplight, and glare impacts from interior and exterior sources to off-site areas. With adherence to state and local standards and regulations impacts under Alternative 2 would be less than significant, and impacts would be the same as those for the proposed project.

Air Quality

Implementation of Alternative 2 would result in similar construction impacts to the proposed project. Because Alternative 2 would be approximately 30 percent smaller than the proposed project, it would produce proportionally less air pollutant emissions. As discussed in Section 4.2, *Air Quality*, the proposed project would result in significant and avoidable NO_x emissions, primarily

from truck trips. Table 7-4 provides a comparison of NO_x emissions and indicates that both the proposed project and Alternative 2 would result in significant NO_x emissions.

Table 7-4 Comparison of Operational NO_x Emissions (pounds per day)

	NO_x Trucks	NO_x Other Sources	Total NO_x	Threshold	Exceeded?
Proposed Project	104.39	10.45	114.84	55	Yes
Alternative 2	73.07	7.32	80.39	55	Yes
Difference	31.32	3.14	34.45	–	–

NO_x=nitrogen oxides

Impacts under Alternative 2 would be significant and unavoidable, similar to the proposed project. Overall, air quality impacts under Alternative 2 would be less than the proposed project; however, impacts would still exceed air quality thresholds for NO_x by approximately 25 pounds per day.

Biological Resources

Construction impacts under Alternative 2 would be the same as the proposed project since the same development footprint would be impacted. Impacts to nesting birds and burrowing owl would be avoided by implementing the same mitigation measures as required for the proposed project.

Therefore, under Alternative 2 and the proposed project, impacts would be less than significant with mitigation, and impacts would be the same for Alternative 2 compared to the proposed project.

Energy

Construction impacts under Alternative 2 would be similar to the proposed project because the same development footprint, materials and construction approach would be employed. Overall energy use during construction would be slightly reduced in conjunction with the reduction in square-footage and reduced building construction timeframe.

Operational impacts under Alternative 2 would also be similar to the proposed project because the use and function would be similar. Alternative 2 would have slightly reduced energy use associated with the reduction in square-footage, and a similar decrease in trip related energy use.

Overall impacts under Alternative 2 would be less than significant, and less than those for the proposed project.

Greenhouse Gas

Construction impacts under Alternative 2 would be similar to the proposed project because the same development footprint, materials and construction approach would be employed. Overall GHG emissions during construction would be slightly reduced in conjunction with the reduction in square-footage and reduced building construction timeframe.

Operational impacts under Alternative 2 would also be similar in nature to the proposed project because the use and function would be similar. However, Alternative 2 would be expected to have a 30 percent reduction in GHG emissions associated with the reduction in square-footage, and a similar decrease in trip related GHG emissions.

As indicated in Table 7-5, Alternative 2 would reduce GHG emissions to below SCAQMD thresholds. Therefore, impacts under Alternative 2 would be less than significant, and less than those for the proposed project, which would have significant and unavoidable impacts.

Table 7-5 Estimated GHG Emissions without Mitigation (MT CO2e per year)

Emission Source	Alternative 2	Proposed Project
Construction		
Amortized over 30 years	114.07	126.73
Operational (Excluding Mobile)		
All sources	1,844.4	2,635.06
Mobile		
Passenger Cars	819	2,730.03
Trucks	4,449.6	6,356.57
Total GHG Emissions	7,227.07	11,848.90
SCAQMD Threshold	10,000	10,000
Project Exceeds Threshold?	No	**Yes**

MT=metric tons, CO_2e=carbon monoxide gas equivalents

Hazards and Hazardous Materials

Impacts under Alternative 2, would be the same as the proposed project. Alternative 2 would eliminate the release of nitrogen through the elimination of the dairy farm, abate any ACM if present in structures to be demolished, and remove organochlorine pesticides as recommended by the Phase II ESA.

Impacts under Alternative 2 would be less than significant, and impacts would be the same compared to the proposed project.

Hydrology and Water Quality

Construction impacts under Alternative 2 would be the same as the proposed project since the same development footprint would be impacted. Alternative 2 would have a slightly reduced impervious footprint, associated with a reduction in square footage, and thus a slightly reduced stormwater discharge volume. Alternative 2 would be subject to the same regulatory controls to protect water quality during both construction and operation as the proposed project.

Impacts under Alternative 2 would be less than significant, and the same compared to the proposed project.

Land Use and Planning

Impacts to land use and planning under Alternative 2 would be the same as those for the proposed project, which would facilitate a change in zone for consistency with the General Plan land use designation, which would develop Limonite Avenue within the project limits, and thereby facilitate the extension of Limonite Avenue eastwards consistent with the Circulation Element, and generally promote connectivity between areas on each side of Cucamonga Creek.

Impacts under Alternative 2 would be less than significant, and the same as for the proposed project.

Noise

Construction impacts under Alternative 2 would be similar to the proposed project because the development footprint would be the same, and similar materials and construction approach would be employed. Overall construction duration would be slightly reduced in conjunction with the reduction in square footage.

Operational impacts under Alternative 2 would also be similar because the use and function would be the same as the proposed project. However, Alternative 2 would have a reduced trip generation and therefore contribute to less traffic noise than the proposed project.

Overall impacts under Alternative 2 would be less than significant, and less compared to the proposed project.

Public Services

Impacts to public services under Alternative 2, would be the same as for the proposed project because the use and function would be similar. However, the employment would be slightly reduced due to the decreased square-footage, and may result in an incremental reduced need for services. Both Alternative 2 and the proposed project would facilitate the westward extension of Limonite Avenue, a major east-west arterial that would improve circulation, including emergency response, and pedestrian/recreation facilities in the form of bike lanes, sidewalks, and trails.

Under Alternative 2, impacts would be less than significant, and the same as those for the proposed project.

Transportation and Traffic

Impacts to public services under Alternative 2, would be the same as for the proposed project because the use and function would be similar. However, Alternative 2 would reduce trips by approximately 30 percent corresponding to the reduced square-footage. Limonite Avenue would be extended westward through the project site as envisioned in the General Plan Circulation Element. Thus, Alternative 2 would facilitate east-west circulation and community connectivity that would be provided by the extension of a major arterial road within Eastvale, and with the neighboring community to the west. In addition, Alternative 2 would implement the same circulation improvements as the proposed project. Alternative 2 would have a reduced contribution of funding to transportation improvements through payments to transportation programs, development impact fees or fair-share contributions, compared to the proposed project.

Both Alternative 2 and the proposed project would result in significant unavoidable impacts to traffic facilities in future years – and depending on the timing and funding available for fair-share improvements. Impacts under Alternative 2 would be slightly reduced compared to the proposed project.

Utilities and Service Systems

Impacts to utilities under Alternative 2, would be the same as for the proposed project because the use and function would be similar. However, the utility demand would be slightly reduced due to the decreased square-footage. Both Alternative 2 and the proposed project would facilitate involve the relocation of utilities along Archibald Avenue, and the extension of utilities along the Limonite Avenue corridor.

Under Alternative 2, impacts would be less than significant, and the same as those for the proposed project.

7.3 Alternatives Considered but Rejected

Other alternatives considered include a No Project- General Plan alternative, and an Alternative Project Site.

7.3.1 No Project - General Plan Alternative

The purpose of a No Project - General Plan alternative is to evaluate the impacts of the reasonably foreseeable future use of the project site, if developed under the existing General Plan land use designation. In this case, the project site has a General Plan land use designation of Light Industrial like the proposed project. Therefore, the evaluation of a No Project - General Plan alternative is already addressed via the evaluation of the proposed project in this EIR, and is not evaluated further.

7.3.2 Alternative Project Site

CEQA Guidelines Section 15126.6(f)(2) sets forth considerations to be used in evaluating an alternative location. The section states that the "key question" is whether any of the significant effects of the project would be avoided or substantially lessened by relocating the project. The CEQA Guidelines identify the following factors that may be taken into account when addressing the feasibility of an alternative location: site suitability, economic viability, availability of infrastructure, General Plan consistency, other plans or regulatory limitations, jurisdictional boundaries, whether the project applicant can reasonably acquire, control, or otherwise have access to the alternative site.

The CEQA Guidelines establish that only locations that would accomplish this objective should be considered alternative locations for the proposed project. In this case, the significant impacts associated with the proposed project are NO_x and GHG emissions predominantly generated by mobile sources. The project would produce the same number of trips, and result in the same amount of emissions regardless of the location. Therefore, no undeveloped existing sites within the City would be feasible to site the proposed project.

7.4 Environmentally Superior Alternative

An alternatives analysis is intended to facilitate consideration of whether environmentally superior alternative could meet most project objectives. Therefore, key to selection of the range of alternatives is to identify alternatives that meet most of the project's objectives but have reduced level of environmental impacts.

Table 7-6 indicates whether each alternative's environmental impact is greater than, less than, or similar to that of the proposed project for each of the issue areas studied. Based on the alternatives analysis, Alternative 2 would be the environmentally superior alternative.

Alternative 1 (No Project/No Build Alternative) assumes that the proposed project would not be developed, and the project site would continue to operate as a dairy farm. The three existing residences along Archibald Avenue would remain. The new industrial buildings would not be developed. In addition, Limonite Avenue would not be extended westward through the project site.

The No Project Alternative would not fulfill any project objectives because the existing dairy farm would not provide light industrial uses, increase property tax revenues, or generate employment opportunities. In addition, the No Project Alternative would not contribute to the development of the City's General Plan circulation system and the westward extension of Limonite Avenue. Alternative 1 would avoid significant impacts associated with proposed project traffic: air quality (NO_x emissions), GHG emissions, and traffic impacts. However, Alternative 1 would result in increased impacts to air quality (odors), hydrology, land use and planning, water quality, and hazardous materials compared to the proposed project.

Alternative 2 (Reduced Intensity Industrial Alternative) would replace the existing dairy farm and three residences with a light industrial business park, at a lower square-footage and intensity of development. Alternative 2 would involve an approximately 30 percent reduction in square-footage compared to the proposed project for a total of 756,000 square feet. Alternative 2 would also include similar road improvements to the proposed project, including the development of Limonite Avenue westward within the project limits, and thereby facilitate the westward extension of Limonite Avenue. Alternative 2 would meet all the project objectives to some degree, but would meet objectives one through four related to the provision of light industrial uses, tax generation, and employment, to a lesser extent than the proposed project.

Alternative 2 would reduce operational air pollutant emissions, including significant NO_x emissions, by approximately 30 percent compared to the proposed project, from 115 pound per day to 80 pounds per day. However, NO_x emissions would still exceed SCAQMD thresholds of 55 pounds per day by 30 pounds.

Alternative 2 would reduce the significant GHG impacts associated with proposed project to less than significant levels. Traffic impacts on the circulation system would be reduced in conjunction with a reduced trip generation volume, and thus require a reduced level of mitigation (fair share impact fees, etc.). However, traffic impacts would likely remain significant and unavoidable, similar to the proposed project, due to the speculative timing of unprogrammed improvements needed.

The reduced building footprint would also reduce construction-related impacts, energy use and the rate and volume of stormwater discharge. Alternative 2 is considered the environmentally superior alternative because it would generally reduce the impacts associated with the proposed project, and not result in any increase in impacts in other areas.

Table 7-6 Impact Comparison of Alternatives

Topic	Proposed Project	Alternative 1: No Project/No Build	Alternative 2: Reduced Intensity Industrial
Aesthetics, light, and glare	Less than significant	<	=
Air quality	Significant and unavoidable	<	<
Biological resources	Less than significant with mitigation	=	=
Energy	Less than significant	<	<
Greenhouse gas	Significant and unavoidable	<	<
Hazards and hazardous materials	Less than significant	>	=
Hydrology and water quality	Less than significant	>	<
Land use and planning	Less than significant	>	=
Noise	Less than significant	<	<
Public services	Less than significant	<	=
Transportation and traffic	Significant and unavoidable	<	<
Utilities and service systems	Less than significant	<	=

> Impacts would be greater compared to the proposed project (increased level of impact)

< Impacts would be less compared to the proposed project (reduced level of impact)

= Similar level of impact to the proposed project

8 References

8.1 Bibliography

American Lung Association. 2018. *State of the Air Southern California Regional Summary*. Available at: https://www.lung.org/local-content/california/documents/state-of-the-air/2018/sota2018_southernca-fact.pdf.

Bay Area Air Quality Management District (BAAQMD). 2017. *CEQA Air Quality Guidelines*. May 2017.

BRC Consulting, LLC. 2019. *Cultural Resources Assessment: Eastvale 54-Acre Project*.

California, State of (California). 2018. *California's Fourth Climate Change Assessment Statewide Summary Report*. August. Available at: http://www.climateassessment.ca.gov/state/ (accessed October 2019).

California Air Pollution Control Officers Association (CAPCOA). 2008. *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA)*.

____. 2017. *California Emissions Estimator Model User Guide: Version 2016.3.2*. Prepared by BREEZE Software, A Division of Trinity Consultants in collaboration with South Coast Air Quality Management District and the California Air Districts. Available at: http://www.aqmd.gov/docs/default-source/caleemod/user's-guide---october-2017.pdf?sfvrsn=6 (accessed October 2019).

California Air Resources Board (CARB). 2008. *Climate Change Scoping Plan*. December. Available at: https://ww3.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf.

____. 2011. *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Public Hearing to Consider the "LEV III" Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards and Test Procedures and to the On-Board Diagnostic System Requirements for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, and to the Evaporative Emission Requirements for Heavy-Duty Vehicles*. December. Available at: http://www.arb.ca.gov/regact/2012/leviiighg2012/levisor.pdf.

____. 2013. *The California Almanac of Emissions and Air Quality*. Available: https://ww3.arb.ca.gov/aqd/almanac/almanac.htm.

____. 2014. *AB 32 Scoping Plan Website*. Updated June 2014. Available at: http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm (accessed September 2014).

____. 2016. *Ambient Air Quality Standards*. May 4, 2016. Available at: https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf.

____. 2017a. *Area Designations Maps/State*. Updated November 2017.

____. 2017b. *California's 2017 Climate Change Scoping Plan*. December. Available at: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

____. 2018a. *Area Designations Maps/National*. Updated October 2018.

_____. 2018b. *Criteria Pollutants*. Top 4 Summary: Select Pollutant, Years, & Area. [dataset] Available at: https://www.arb.ca.gov/adam/topfour/topfour1.php (accessed September 2019).

_____. 2018c. *Advanced Clean Cars Overview*. Available at: https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program (accessed October 2019).

_____. 2018d. *California Greenhouse Gas Emissions for 2000-2017*. Available at: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf (accessed October 2019).

_____. 2018e. *2020 Business-as-Usual (BAU) Emissions Projection* – 2014 Edition. Modified: June 2018. Available at: http://www.arb.ca.gov/cc/inventory/data/bau.htm (accessed October 2019).

_____. 2018f. *CA-GREET 3.0 Supplemental Document and Tables of Changes.* Fuel Specifications, Table 22. September 2015. Available at: https://ww3.arb.ca.gov/fuels/lcfs/ca-greet/cagreet_supp_doc_clean.pdf (accessed October 2019).

_____. 2019. *Summary: Diesel Particulate Matter Health Impacts*. Available at: https://ww2.arb.ca.gov/resources/summary-diesel-particulate-matter-health-impacts (accessed September 2019).

California Building Standards Commission (CBSC). 2017. *2016 California Building Code*, Part 2. Available at: https://codes.iccsafe.org/content/chapter/10004/.

California Climate Change Center (CCCC). 2006. *Climate Scenarios for California*.

California Code of Regulations. *Title 24: California Fire Code*. Available at: https://www.dgs.ca.gov/BSC/Codes.

California Department of Conservation (DOC). 2016. *California Important Farmland Finder*. Available at: https://maps.conservation.ca.gov/DLRP/CIFF/ (accessed October 2019).

California Department of Finance (California DOF). 2016. *E-5 Population and Housing Estimates for Cities, Counties, and the State 2011-2016*. Available at: http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php (accessed October 2019).

_____. 2019. *E-5 Population and Housing Estimates for Cities, Counties, and the State 2011-2019 with 2010 Census Benchmark*. Available at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/ (accessed December 2019).

California Department of Fish and Wildlife (CDFW). 2010. *List of Vegetation Alliances and Associations (Natural Communities List*. Available at: https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities/List (accessed March 2019).

_____. 2018. *California Natural Diversity Database, Rarefind V. 3.1.0.* Data Base report on threatened, endangered, rare or otherwise sensitive species and communities for the Corona North 7.5-minute USGS quadrangle. (Accessed March 2019).

_____. 2019. *Special Vascular Plants, Bryophytes, and Lichens List*. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline (accessed March 2019).

California Department of Food and Agriculture. 2018. *California Agricultural Production Statistics*. Modified: August 2018. Available at: https://www.cdfa.ca.gov/statistics/ (accessed October 2019).

California Department of Forestry and Fire Protection (CAL FIRE). 2007. *Los Angeles County Fire Hazard Severity Zone Maps – State Responsibility Area: Western Riverside County*. Available at: https://osfm.fire.ca.gov/divisions/wildfire-prevention-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/.

____. 2018. *Strategic Fire Plan for California*. Available at: https://osfm.fire.ca.gov/media/5590/2018-strategic-fire-plan-approved-08_22_18.pdf.

California Department of Industrial Relations. 2012. Guide to the California Hazard Communication Regulation. Available at: https://www.dir.ca.gov/dosh/dosh_publications/hazcom.pdf.

California Department of Resources Recycling and Recovery (CalRecycle). 2019a. *Solid Waste Information System Facility Detail, El Sobrante Landfill (33-AA-0217).* Available at: https://www2.calrecycle.ca.gov/swfacilities/Directory/33-AA-0217/ (accessed October 2019).

____. 2019b. *Solid Waste Information System Facility Detail, Badlands Sanitary Landfill (33-AA-0006).* Available at: https://www2.calrecycle.ca.gov/swfacilities/Directory/33-AA-0006/ (accessed October 2019).

____. 2019c. *Solid Waste Information System Facility Detail, Lamb Canyon Sanitary Landfill (33-AA-0007).* Available at: https://www2.calrecycle.ca.gov/swfacilities/Directory/33-AA-0007/ (accessed October 2019).

California Department of Transportation (Caltrans). 2011. *Traffic Noise Analysis Protocol.* Available at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/traffic-noise-protocol-may2011-a11y.pdf.

____. 2019. *Scenic Highways - Frequently Asked Questions*. Available at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways/lap-liv-i-scenic-highways-faq2 (accessed November 2019).

California Department of Water Resources (DWR). 2006. *Upper Santa Ana Valley Groundwater Basin, Chino Subbasin. California's Groundwater Bulletin 118*. Sacramento, CA. January 20, 2006. Available at: https://water.ca.gov/LegacyFiles/pubs/groundwater/bulletin_118/basindescriptions/8-2.01.pdf (accessed November 2019).

____. 2008. *Managing an Uncertain Future: Climate Change Adaption Strategies for California's Water*. October 2008. Available at: http://www.water.ca.gov/climatechange/docs/ClimateChangeWhitePaper.pdf.

____. 2016. *Bulletin 118 – California's Groundwater. Interim Update Fact Sheet. Sustainable Groundwater Management Program*. Sacramento, CA.

____. 2018. Eastvale, CA. *Water Data Library*. [dataset] Last modified August 21, 2018. Available at: http://wdl.water.ca.gov/waterdatalibrary/ (accessed November 2019).

California Division of Mines and Geology. 1981. *Mineral Classification of the Greater Los Angeles Area*.

California Employment Development Department (EDD). 2019. *Local Area Unemployment Statistics*. Available at: https://data.edd.ca.gov/Labor-Force-and-Unemployment-Rates/Local-Area-Unemployment-Statistics-LAUS-/e6gw-gvii/data (accessed October 2019).

California Energy Commission (CEC). 2006. *California Commercial End-Use Survey*. Available at: https://ww2.energy.ca.gov/2006publications/CEC-400-2006-005/CEC-400-2006-005.PDF (accessed November 2019).

____. 2016a. *Utility Annual Power Labels*. Available at: http://www.energy.ca.gov/pcl/labels/2014_labels/all_labels/Southern_California_Edison_(SCE).pdf (accessed October 2016).

____. 2016b. *Total Electricity System Power*. Available at:: http://www.energy.ca.gov/almanac/electricity_data/total_system_power.html (accessed October 2016).

____. 2016c. *Supply and Demand of Natural Gas in California*. Available at: http://www.energy.ca.gov/almanac/naturalgas_data/overview.html (accessed October 2016).

____. 2016d. *2015 Integrated Energy Policy Report*. Available at: http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-01/TN212017_20160629T154354_2015_Integrated_Energy_Policy_Report_Small_File_Size.pdf (accessed October 2016).

____. 2018a. *Revised Transportation Energy Demand Forecast 2018-2030*. Available at: https://efiling.energy.ca.gov/getdocument.aspx?tn=221893 (accessed June 2019).

____. 2018b. *2019 Building Energy Efficiency Standards*. Available at: https://ww2.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf.

____. 2019a. *Electricity Consumption by Entity*. Available at: https://ww2.energy.ca.gov/almanac/electricity_data/total_system_power.html (aaccessed September 19, 2019).

____. 2019b. *Gas Consumption by Entity*. Available at: http://ecdms.energy.ca.gov/gasbyutil.aspx. (accessed September 19, 2019).

____. 2019c. *Toward A Clean Energy Future, 2018 Integrated Energy Policy Report Update Volume II*.

____. 2019d. *California Retail Fuel Outlet Annual Reporting (CEC-A15) Results*. Available at: https://ww2.energy.ca.gov/almanac/transportation_data/gasoline/piira_retail_survey.html (accessed August 2019).

____. 2019d. *Total System Electric Generation*. Available at: https://ww2.energy.ca.gov/almanac/electricity_data/total_system_power.html (accessed October 2019).

California Gas and Electric Utilities. 2018. *California Gas Report*. Decision D.95.01-039. Los Angeles, CA.

California Government Code. 2016. *Title 7: Planning and Land Use*. Available at: https://leginfo.legislature.ca.gov/faces/codesTOCSelected.xhtml?tocCode=GOV.

California Native Plan Survey (CNPS). 2018. *Inventory of Rare and Endangered Plants (online edition, v8-02*). Rare Plant Program. California Native Plant Society. Sacramento, CA. Available at: http://www.cnps.org/inventory (accessed March 2019).

California Natural Resources Agency. 2009. *2009 California Climate Adaptation Strategy*. March 2009. Available at: http://resources.ca.gov/docs/climate/Statewide_Adaptation_Strategy.pdf (accessed October 2018).

California Public Utilities Commission (CPUC). 2019. *Communications: Telecommunications and Broadband.* Available at: http://www.cpuc.ca.gov/Communications/ (accessed October 2019).

California State Water Resources Control Board (SWRCB). 2019. *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*. Available at: https://www.waterboards.ca.gov/water_issues/programs/cwa401/wrapp.html#officialdocuments.

CalGreen Energy Systems. 2019. *A Comprehensive List of All Changes to the 2019 California CalGreen Code*. Available at: https://calgreenenergyservices.com/wp/wp-content/uploads/2019-CalGreen-Code-Changes.pdf.

Chino Basin Watermaster. 2019. *Overview*. Available at: http://www.cbwm.org/overview.htm (accessed November 2019).

Corona-Norco Unified School. 2018. *Fee Justification Report for Residential and Commercial/Industrial Development*. Available at: https://www.cnusd.k12.ca.us/common/pages/DisplayFile.aspx?itemId=13104976.

Eastvale, City of (Eastvale). 2012. *General Plan*. June. Available at: https://www.eastvaleca.gov/home/showdocument?id=2360 (accessed var. 2019).

____. 2012b. *General Plan EIR*.

____. 2013. *Eastvale Zoning Code*. December.

____. 2017. *Development Impact Fee Schedule*. Available at: https://www.eastvaleca.gov/home/showdocument?id=9407.

____. 2018a. *The Merge Project Draft Environmental Impact Report*. September 2018. Available at: https://www.eastvaleca.gov/home/showdocument?id=12781.

____. 2018b. *Emergency Operations Plan*. Available at: https://www.eastvaleca.gov/home/showdocument?id=9602.

____. 2018c. *Local Hazard Mitigation Plan*. Available at: https://www.eastvaleca.gov/home/showdocument?id=12085.

____. 2019. *Municipal Code*. September.

____. 2019b. *Eastvale City Council Considers Creating A Police Department.* Available at: https://www.eastvaleca.gov/Home/Components/News/News/8825/29.

____. 2019c. *Adopted Budget 2019-2020 Capital Improvement Plan*. Available at: https://www.eastvaleca.gov/home/showdocument?id=12699.

____. N.d. *Helpful Links and Phone Numbers*. Available online: https://www.eastvaleca.gov/our-city/about-eastvale/helpful-links-phone-numbers (accessed October2019).

Education Data Partnership. 2019. *District Summary: Corona-Norco Unified*. Available at: http://www.ed-data.org/district/Riverside/Corona--Norco-Unified.

ELMT Consulting. 2019. *Habitat Assessment and Riverside County Multiple Species Habitat Conservation Plan Consistency Analysis.*

Federal Emergency Management Agency (FEMA). 2008. *National Flood Hazard Layer FIRMette: 06065C0676G* effective August 28, 2008. Available at: https://msc.fema.gov/portal/home (accessed November 2019).

Federal Interagency Committee on Noise (FICON). 1992. *Federal Agency Review of Selected Airport Noise Analysis Issues. Available at:* https://www.gsweventcenter.com/GSW_RTC_References/1992_0801_FICON.pdf.

Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.

Geocon West, Inc. 2019. *Preliminary Geotechnical Investigation and Percolation Testing*, The Homestead Industrial Business Park West of Limonite Avenue and Archibald Avenue, Eastvale, California.

Google, Inc. 2013. *Google Earth Pro version 7.1.2.2041,* build date October 7, 2013. Historical aerial imagery from 1994 to 2018.

Hickman, J.C., ed. 2012. *The Jepson Manual: Higher Plants of California*. University of California Press.

Holland, R. F. 1986. *Preliminary descriptions of the Terrestrial Natural Communities of California*. Calif. Dept. of Fish and Game, Sacramento, CA.

HPA Architecture. 2019a. *Building Elevations Limonite Ave. and Archibald Ave. Phase II.* June 26.

____. 2019b. *Master Site Plan for the Homestead.* December.

Intergovernmental Panel on Climate Change (IPCC). 2007. S*ummary for Policymakers. In: Climate Change 2007: The Physical Science Basis*. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.

____. 2014. *Climate Change 2014: Mitigation of Climate Change*. Summary for Policymakers - Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

____. 2018. *Summary for Policymakers*. In: Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. Available at: https://www.ipcc.ch/sr15/ (accessed October 2019).

Jurupa Area Recreation and Park District (JARPD). 2019. *About Us*. Available at: https://www.jarpd.org/about-us.

Jurupa Community Services District (JCSD). 2011. *Standards Manual*. June 6, 2011. Available at: https://www.jcsd.us/Home/ShowDocument?id=2895.

____. 2016. *2015 Urban Water Management Plan*. Adopted June 27, 2016. Available at: https://www.jcsd.us/home/showdocument?id=2843.

____. 2019. *Sewer System Management Plan*. June 2019. Available at: https://www.jcsd.us/home/showdocument?id=4563.

____. N.d. *Parks and Services Department*. Available at: https://www.jcsd.us/services/parks-and-recreation.

Kimley Horn and Associates. 2019a. *The Homestead Preliminary Drainage Report*. June.

____. 2019b. *The Homestead Preliminary Project Specific Water Quality Management Plan*. June.

Library Systems & Services, Inc. 2019. *Riverside County Library System*. Available at: http://www.lsslibraries.com/our-libraries.

Martin, Timothy. *Riverside Sheriff's Department Response re: Staffing Goals for Environmental Impact Report*. Personal communication, 1 October.

McLeod, Samuel. 2019. *Paleontological resources for the Vertebrate Paleontology Records Search* for the proposed Archibald and Limonite 54-Acre Project, in the City of Eastvale, Riverside County, project area. (Provided as attachment to the Cultural Resources Assessment for Eastvale 54-Acre Project; see Appendix 5.2.)

Munz, P.A. 1974. *A Flora of Southern California*. University of California Press, Berkeley, California

Murphy, Rosalie. 2015. *Why builders spray water on construction sites*. The Desert Sun. September 1, 2015. Available at: https://www.desertsun.com/story/money/real-estate/2015/09/01/builders-spray-water-construction-sites/71519806/ (accessed November 2019).

National Institute for Occupational Safety and Health (NIOSH). 1998. *Criteria for Recommended Standard: Occupational Noise Exposure.* Available at: https://www.cdc.gov/niosh/docs/98-126/pdfs/98-126.pdf.

Natural Resources Conservation Service. 2019. Riverside, California. [GIS dataset]. *Web Soil Survey*. United States Department of Agriculture. Available at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed November 2019).

Ontario, City of (Ontario). 2009. *The Ontario Plan: Noise Level Exposure and Land Use Compatibility Guidelines*. Available at: http://www.ontarioplan.org/wp-content/uploads/sites/4/2015/05/noise-level.pdf.

____. 2010. *City Land Use Map*. July.

____. 2011. *LA/Ontario International Airport Land Use Compatibility Plan.* Available at: http://www.ontarioplan.org/wp-content/uploads/sites/4/pdfs/ALUCP_FULL.pdf.

____. 2019. *City Zoning Map*. March.

Parmesan, C. August 2006. *Ecological and Evolutionary Responses to Recent Climate Change*.

Reinertson, Adria. 2019. *Riverside County - Office of the Fire Marshal Response re: Eastvale Dyt Dairy site*. Personal communication, 26 September.

Riverside, County of. 2003. *Final Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).* Riverside, CA. June.

____. 2006. *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area*. Available at: http://rctlma.org/Portals/1/EPD/consultant/burrowing_owl_survey_instructions.pdf.

Riverside, County of. 2015. *Determining and Mitigating Traffic Noise Impacts to Residential Structures*. Available at: https://rctlma.org/Portals/0/genplan/content/appendix/appendixi.html#List_Memo_2.

____. 2017. *Riverside County General Plan*. Available at: https://planning.rctlma.org/Zoning-Information/General-Plan.

____. 2017a. *Riverside County Drainage Area Management Plan – Santa Ana Region*. Riverside, CA. June 30, 2017.

____. 2017b. *Watershed Action Plan Santa Ana Region*. Riverside, CA. January 18. Available at: http://rcflood.org/downloads/NPDES/Documents/SA_WAP/WatershedActionPlan.pdf.

Riverside County Airport Land Use Commission. 2008. *Riverside County Airport Land Use Compatibility Plan Policy Document*. Available at: http://www.rcaluc.org/Portals/13/PDFGeneral/plan/newplan/09-%20Vol.%201%20Chino.pdf.

Riverside County Fire Department (RCFD). 2018. *2018 Annual Report*. Available at: http://www.rvcfire.org/Pages/PIO%20Pages/2018-Annual-Report.aspx.

Riverside Downtown Partnership. 2017. *Downtown Riverside Historic Walking Guide,* Riverside, California. December.

San Bernardino County Airport Land Use Commission. 2008. *Comprehensive Land Use Plan, Chino Airport*. November.

San Diego, County of. 2013. *Project Description for the Desert Green Solar Farm. Borrego Springs, San Diego County, California. Modification to Major Use Permit 3300-09-012 (P09-012); ER No. 09-05-001A.* San Diego, CA. February 22.

Santa Ana Regional Water Quality Control Board (SARWQCB). 2017. *Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions; Requirements for Phase I Municipal Separate Storm Sewer System (MS4) Co-Permittees within the Jurisdiction of the Santa Ana Regional Water Quality Control Board*. Letter to Michele Nissen, City Manager, City of Eastvale. June 2.

____. 2019. *Santa Ana Region Basin Plan*. Riverside, CA. June 2019.

Scott Peterson Landscape Architect, Inc. 2019. *Conceptual Landscape Plan, Limonite Ave. and Archibald Ave. Phase II*. June 26.

Sibley, D.A. 2014. *The Sibley Guide to Birds, Second Edition*. Alfred A. Knopf, Inc., New York, New York.

South Carolina Department of Transportation (SCDOT). N.d. *Standard Method Test for Field Determination of Density and Moisture Content of Soils and Aggregate Bases by Use of the Troxler Model 3430 Nuclear Gauge*. SCDOT Designation SC-T-30. Available at: https://www.scdot.org/business/pdf/materials-research/testProcedure/soils/SCT30.pdf (accessed October 2019).

South Coast Air Quality Management District (SCAQMD). 2003. *Health Risk Assessment for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*. August 2003.

____. 2015. *SCAQMD Air Quality Significance Thresholds*. San Dimas, CA. March 2015.

____. 2016. *Final Air Quality Management Plan. March 2017*. Available at: https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15.

Southern California Association of Governments (SCAG). 2001. *Employee Density Study Report*. Prepared by The Natelson Company. Los Angeles, CA. October 31, 2001.

____. 2008. *Final 2008 Regional Comprehensive Plan*.

Southern California Association of Governments (SCAG). *2016. 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy*.

____. 2016. *Final Growth Forecast Appendix: Regional Transportation Plan 2016-2040 Sustainable Communities Strategy: Towards a Sustainable Future*. Available at: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_DemographicsGrowthForecast.pdf.

____. 2019. *Profile of the City of Eastvale*. Available at: https://www.scag.ca.gov/Documents/Eastvale.pdf.

Southern California Edison. 2019a. *Rebates, Incentives, and Saving Tips*. Available at: https://www.sce.com/residential/rebates-savings (accessed September 20, 2019).

____. 2019b. *The Clean Power and Electrification Pathway*. Available at: https://www.edison.com/home/our-perspective/clean-power-and-electrification-pathway.html (accessed September 20, 2019).

Southern California Gas (SCG). 2019a. *Rebates and Incentives*. Available at: https://www.socalgas.com/save-money-and-energy/rebates-and-incentives (accessed October 3, 2019).

____. 2019b. *Natural Gas Transmission*. Available at: https://www.socalgas.com/stay-safe/pipeline-and-storage-safety/natural-gas-transmission (accessed November 1, 2019).

Stantec Consulting Services. 2019a. *50-Acre Dairy, Phase I Environmental Site Assessment*. March 28.

____. 2019b. *Phase II Environmental Site Assessment, 6207 Archibald Avenue, Eastvale, California 92880*. Stantec Project No. 185804-343. October.

State Water Resources Control Board (SWRCB). 2019. *Final 2014/2016 California Integrated Report (Clean Water Act Section 303(d) List/305(b) Report)*. Available at: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml?wbid=CAL8012700019991013173136 (accessed November 2019).

Stebbins, R.C. 2003. *A Field Guide to Western Reptiles and Amphibians, Third Edition*. Houghton Mifflin Company, New York, New York.

U.S. Census Bureau. 2019. *QuickFacts: Riverside County*. Available at: https://www.census.gov/quickfacts/fact/table/riversidecountycalifornia,US/PST045218 (accessed September 23, 2019).

U.S. Department of Agriculture, Natural Resources Conservation Service. 2018. *Web Soil Survey*. Available at: http://websoilsurvey.nrcs.usda.gov/app/.

U.S. Department of Energy (DOE). 2019. *Alternative Fuels Data Center*. Available at: https://afdc.energy.gov/stations/#/find/nearest (accessed October 2019).

____. 2018. *Alternative Fuels Data Center: Average Fuel Economy of Major Vehicle Categories*. Available at: https://afdc.energy.gov/data/10310.

U.S. Department of the Interior, Geological Survey (USGS). 1980. 7.5-minute topographic map for the *Corona North* quadrangle.

U.S. Department of Transportation (DOT). 2018. *National Transportation Statistics*. Available at: https://www.bts.gov/sites/bts.dot.gov/files/docs/browse-statistical-products-and-data/national-transportation-statistics/223001/ntsentire2018q4.pdf (accessed August 2019).

U.S. Energy Information Administration (USEIA). 2018a. Ca*lifornia Energy Production Estimates 2017*. Available at: https://www.eia.gov/state/?sid=CA#tabs-2 (accessed September 2019).

____. 2018b. *Rankings: Total Energy Consumed per Capita, 2017*. Available at: https://www.eia.gov/state/rankings/?sid=CA#series/12.

____. 2018c. *State Energy Data System (SEDS): 2017, Total petroleum consumption*. Available at: https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_use/tx/use_tx_CA.html&sid=CA (accessed September 2019).

____. 2018d. *Natural Gas Fuel Basics*. Updated May 22, 2018. Available at: https://www.afdc.energy.gov/fuels/natural_gas_basics.html (accessed November 2018).

____. 2019. *Monthly Energy Review, Table 1.8 Motor Vehicle Mileage, Fuel Consumption, and Fuel Economy*. Washington, DC. August 2019.

U.S. Environmental Protection Agency (USEPA). 2014. P*olicy Assessment for the Review of the Lead National Ambient Air Quality Standards*. Research Triangle Park, NC. May 2014.

____. 2018a*. Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES2014b*. July 2018. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100UXEN.pdf (accessed August 2019).

____. 2018b. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016. U. S. EPA #430-R-18-003*. April 2018. Available at: https://www.epa.gov/sites/production/files/2018-01/documents/2018_complete_report.pdf.

____. 2018c. *Basic Information about Nonpoint Source (NPS) Pollution*. Available at: https://www.epa.gov/nps/what-nonpoint-source (accessed November 2019).

U.S. Fish and Wildlife Service (USFWS). 2018a. *Federal Endangered and Threatened Species that occur in or may be Affected by Projects in the Counties*. Last updated December 18, 2018. Available at: https://www.fws.gov/endangered/?s8fid=112761032793&s8fid=112762573903&countyName=Riverside (accessed March 2019).

____. 2018b. *Threatened & Endangered Species Active Critical Habitat Report*. Available at: https://ecos.fws.gov/ecp/report/table/critical-habitat.html.

United States Geological Survey (USGS). 2019. *National Hydrography Dataset - via the National Map*. Available at: https://nationalmap.gov/ (accessed November 2019).

Urban Crossroads. 2019a. *The Homestead Air Quality Impact Analysis.* December. (Appendix 4.2)

____. 2019b. *The Homestead Greenhouse Gas Analysis*. December. (Appendix 4.5)

____. 2019c. *The Homestead Mobile Source Health Risk Assessment.* December. (Appendix 4.2)

____. 2019d. *The Homestead Noise Impact Analysis*. December. (Appendix 4.9)

____. 2019e. *The Homestead Traffic Impact Analysis*. December. (Appendix 4.11)

Western Municipal Water District (WMWD). 2008. *2008 Integrated Regional Water Management Plan (IRWMP).* Available at: https://www.wmwd.com/214/Integrated-Regional-Water-Management-Plan (accessed October 2019).

Western Region Council of Governments (WRCOG). 2014. *Subregional Climate Action Plan*. September 2014.

____. *2018. CAPtivate: A Healthy Western Riverside County*.

____. n.d. *Energy*. Available at: http://www.wrcog.cog.ca.us/165/Energy (accessed September 20, 2019).

Western Riverside County Regional Wastewater Authority (WRCRWA). N.d. *Treatment Plant Overview*. Available at: https://www.wrcrwa.org/152/Treatment-Plant-Overview.

World Meteorological Organization (WMO). 2013. *A summary of current and climate change findings and figures: a WMO information note*. March 2013. Available at: https://library.wmo.int/opac/index.php?lvl=notice_display&id=15892#.Wt9-Z8gvzIU (accessed October 2018).

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