Limonite Gap Closure Project

Initial Study – Mitigated Negative Declaration

prepared for

City of Eastvale
12363 Limonite Ave #910
Eastvale, California 91752
Contact: Mark Thomas

Prepared by

Rincon Consultants, Inc.
301 9th Street, Suite 109
Redlands, California 92374

May 2020

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

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Contact: Mark Thomas

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Rincon Consultants, Inc.
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Table of Contents

Tables

Figures

Appendices

Initial Study

1. Project Title

Limonite Gap Closure Project

2. Lead Agency Name and Address

City of Eastvale
12363 Limonite Ave #910
Eastvale, California 91752
Contact: Mark Thomas

3. Contact Person and Phone Number

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

4. Project Location

The proposed project is located in Riverside County, specifically within the northwest area of the city of Eastvale (City) adjacent to the Cucamonga Creek Channel. The project site is located within the United States Geological Survey (USGS) *Corona North* 7.5-minute topographic quadrangle. The project involves constructing a new segment of the Limonite Avenue corridor connecting the existing Kimball Avenue west of the Hellman Avenue intersection to the existing Limonite Avenue east of Archibald Avenue. Additionally, the project limits extend along the Cucamonga Creek Channel from the existing Schleisman Road bridge to the south to the existing Remington Avenue bridge to the north. The approximately 35.62-acre project site is located within the following Assessor's Parcel Numbers (APNs):

- 144010023
- 144010020
- 144010015
- 144010010
- 144010009
- 144010073
- 144010075
- 144010060
- 144010072
- 144010041
- 144020011
- 144020009
- 144020010

5. Project Sponsor's Name and Address

The City of Eastvale
12363 Limonite Avenue, Suite 910
Eastvale, California 91753

6. General Plan Designation

The project site has a General Plan land use designation of Light Industrial (L-1).

7. Zoning

The site is zoned as Heavy Agricultural (A-2) as defined by the City's Zoning Ordinance.

8. Description of Project

Limonite Avenue is an east-west Urban Arterial that currently ends at Archibald Avenue. In order to improve the service and vehicular capacity of Limonite Avenue and improve connections between the neighboring City of Chino to the west and Interstate 15 (I-15) to the east, the project would construct an approximately 6,180 feet (1.17 mile) long new segment of Limonite Avenue between Kimball Avenue and the existing Limonite Avenue east of Archibald Avenue across the Cucamonga Creek Channel.

Improvements are divided into three segments, described from west to east:

1. **Limonite Avenue from Hellman Avenue to the CCC.** Approximately 2,450 feet of the existing segment of Limonite Avenue west of the CCC would be improved with Class I/Class II bike lanes including signage and pavement delineation. Improvements to a portion of this segment (from 900 feet east of the intersection with Taylor Way) would have reconstruction and realignment of the existing raised median, left turn lanes, and lane striping. Construction of a new road would occur at the current terminus of Limonite Avenue, including the curb/gutter, raised median, sidewalk improvements, landscaped parkway, and Class I/Class II bike lanes.
2. **Cucamonga Creek Channel (CCC) Bridge.** The CCC Bridge, approximately 330 feet long by 82 to 88 feet wide, would span across the CCC to allow continuation of Limonite Avenue. The CCC Bridge would be a 3-span precast concrete girder bridge supported by pier walls at the intermediate supports and located within the CCC. The CCC Bridge would include two lanes in each direction and a Class I Bike Lane/Multi-Use Trail with Raised Median Buffer. A 180-foot long, 12 to 16-foot wide pedestrian/bicycle bridge would be constructed approximately 1,000 feet south of the CCC Bridge to close the gap of an existing multi-use trail located within the Southern California Edison (SCE) easement/transmission line area.
3. **Limonite Avenue east of the CCC Bridge to Archibald Avenue.** This segment would be constructed in conjunction with the proposed Homestead industrial development, including a multi-lane roundabout, curb and gutter, two thru lanes in each direction, a raised median, and a combination of meandering raised Class I bike lanes/multi-use trails and/or Class II bike lanes on both sides. Improvement widths throughout this section would vary between 108 and 124 feet. Roadway improvements at the intersection would include the construction of new curb ramps, installation and/or modification of the traffic signal, signing, pavement delineation, and streetlights.

Construction within this area would also involve the demolition/removals of multiple steel overhang feeding structures and a single-family residential building that is in conflict with the proposed roadway alignment located within the existing dairy property just west of Archibald Avenue. All removals will include the abatement of hazardous materials such as lead and asbestos containing

materials per State and Federal rules and regulations. Additionally, multiple utility facilities may require relocation including, but not limited to, a high-pressure gas facility located within the dairy and overhead electrical distribution/transmission facilities located act the proposed Limonite Avenue / Archibald Avenue intersection. The City will coordinate directly with the owners of the utility facilities in conflict for them to relocate their facilities prior to construction of the proposed roadway improvements.

Additionally, new catch basins and inlet structures would be constructed as necessary within the roadway limits with storm drain laterals to convey upstream and project-generated drainage. Domestic/reclaimed water and sewer mainline facilities will be installed connecting existing Jurupa Community Services District facilities located along the existing section of Limonite Avenue west of the CCC to facilities located at the Archibald Avenue/Limonite Avenue intersection. Landscape planting and hardscapes improvements would be installed in parkway areas adjacent to existing and proposed meandering sidewalk/Class I bike facilities/multi-use trails and in the raised medians. Street lighting would be installed along the corridor on both sides of Limonite Avenue.

Project construction would occur over approximately 12 months. Construction would involve grading and excavation for roadway improvements, bridge construction, paving activities, and architectural coating and pavement striping.

West of Cucamonga Creek Channel

The proposed street configuration between Hellman Avenue and Taylor Way would maintain the existing two travel lanes in each direction, raised median/left turn lanes, right turn lanes, and sidewalk configuration. The project would add Class II bike lanes with striped buffers (varying from eight to ten feet in total width for each bike lane) within the existing pavement section in each direction of travel. Traffic control devices including signage and pavement delineation would be installed to accommodate the proposed bike lanes.

9. Surrounding Land Uses and Setting

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. The project site includes Cucamonga Creek channel adjacent to the site, industrial uses, and a nursery. Beyond the project site's immediate surroundings, uses consist predominantly of residential and agriculture, with additional industrial use north within San Bernardino County.

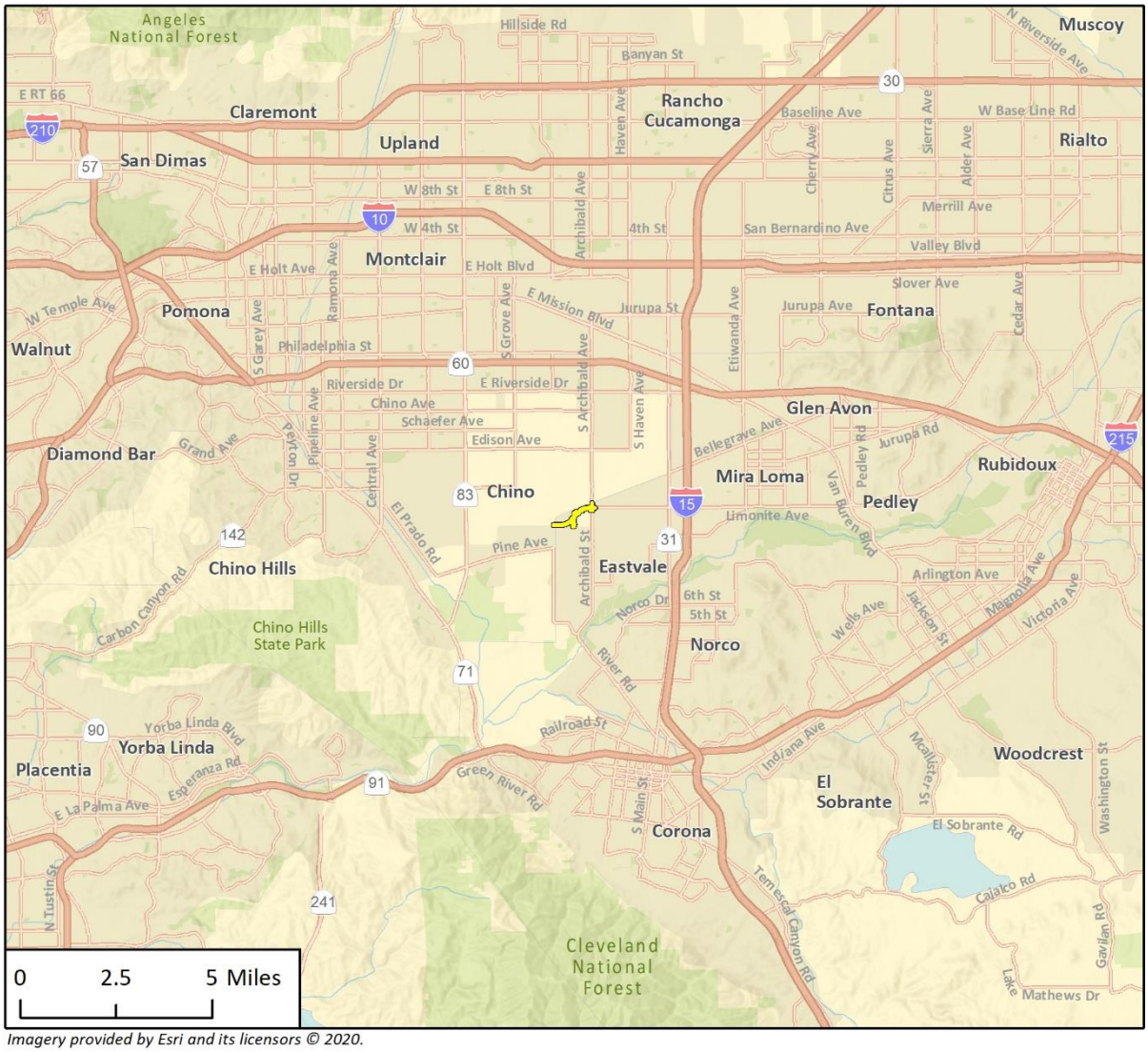
10. Other Public Agencies Whose Approval is Required

California Department of Transportation, District 8

11. Have California Native American Tribes Traditionally and Culturally Affiliated with the Project Area Requested Consultation Pursuant to Public Resources Code Section 21080.3.1?

Rincon Consultants mailed consultation letters to twenty-nine Native American tribes requesting consultation under the provisions of Assembly Bill 52 (AB 52). Rincon Consultants received a request for consultation from one Tribe, the Soboba Band of Luiseño Indians. The Tribe requested to act as a consulting entity for this project and work with the project proponents and the lead agency to ensure that proper procedures are taken. The Tribe further requested that there be a Native American Monitor(s) from the Soboba Band of Luiseño Indians Cultural Resource Department during ground disturbing proceedings and archaeological testing.

Figure 1 Project Location



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Project Location

N

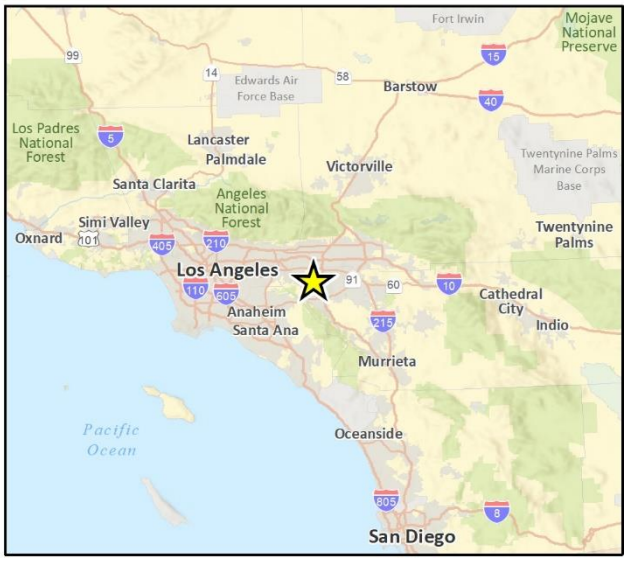

Figure 2 Project Site

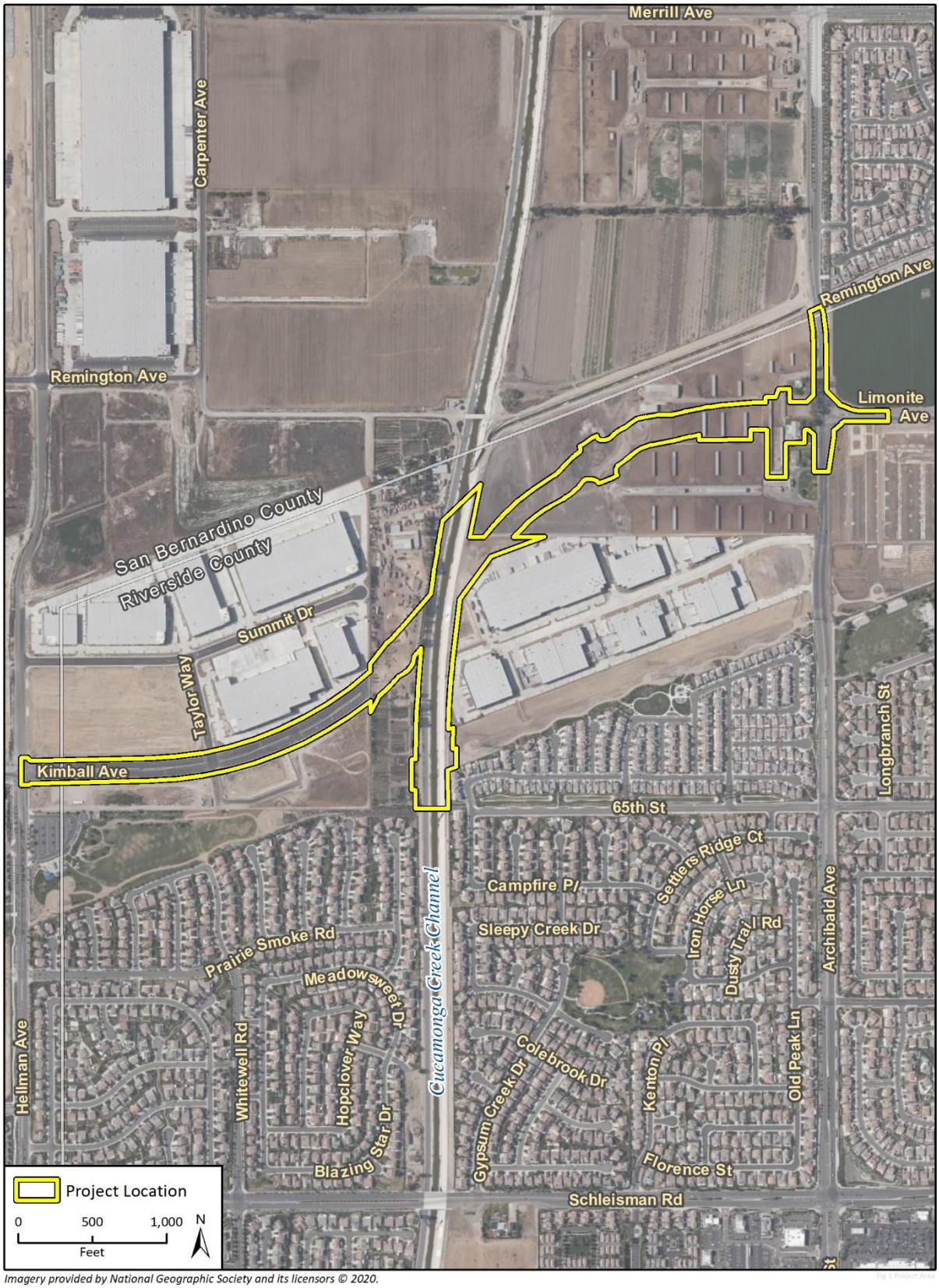

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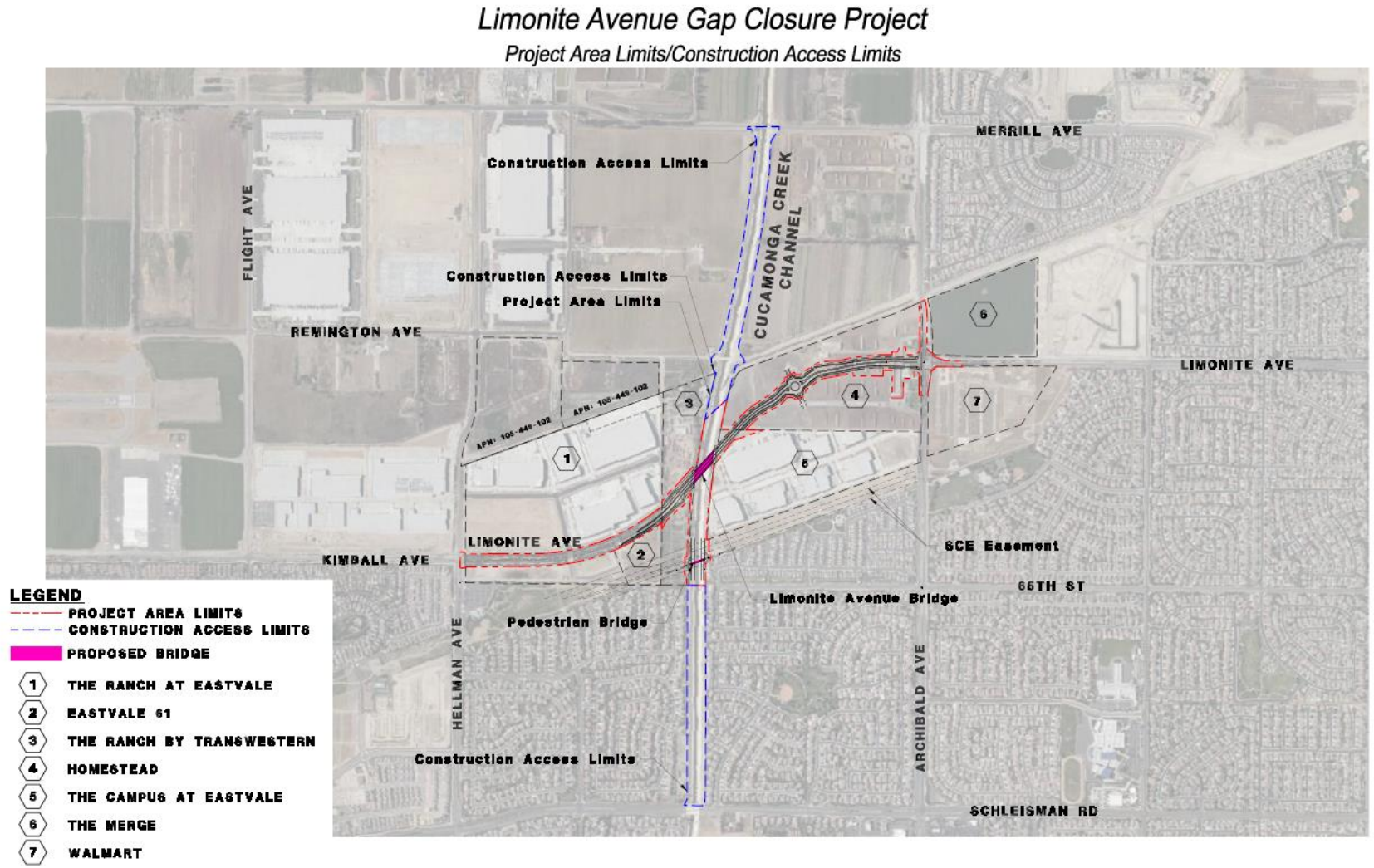
Figure 3 Site Plan



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Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

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

Determination

Based on this initial evaluation:

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

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

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

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

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

Signature	Date
Printed Name	Title

Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	■	☐
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	■
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from 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?	☐	☐	■	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	■	☐

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. 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.

a. Would the project have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. 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 proposed project would not involve the construction of a structure that would substantially degrade the public view of Chino Hills and the San Gabriel Mountains. project would extend Limonite Avenue, 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.

LESS THAN SIGNIFICANT IMPACT

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

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. 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.

NO IMPACT

c. Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from 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?

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 proposed project would not alter the existing character of the site and 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.

LESS THAN SIGNIFICANT IMPACT

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

The proposed project would introduce new sources of light and glare to the project site typical of roadway 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.

LESS THAN SIGNIFICANT IMPACT

2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	■	☐
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	■	☐
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	■	☐
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	■	☐
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	■	☐

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b. Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

c. Would the project 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))?

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

e. Would the project 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?

Less Than Significant Impact. 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. 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.

LESS THAN SIGNIFICANT IMPACT

3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	■	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	■	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	■	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	■	☐

Local Climate and Meteorology

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

Air pollutant emissions in the SCAB are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point 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 widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, 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.

The predominant wind direction in the vicinity of project site is from the west and the average wind speed is 4.6 miles per hour (Iowa Environmental Mesonet 2020). The maximum average temperature in the project area is 92.3 degrees Fahrenheit (°F), and the minimum average

temperature is 39.7°F. Total precipitation in the project area averages approximately 12.71 inches annually (WRCC 2020).

Criteria Pollutants

Characteristics of ozone, CO, NO_2, and PM are described below.

Ozone

Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_X) and reactive organic gases[1] (ROG). NO_X are formed during the combustion of fuels, while ROG are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it usually occurs in substantial concentrations between the months of April and October. Ozone 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 sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide

CO is a local pollutant produced in the incomplete combustion of carbon-containing fuels, such as gasoline, natural gas, oil, coal, and wood. The primary source of CO, a colorless, odorless, poisonous gas, is automobile traffic. Therefore, elevated concentrations are usually found near areas of high traffic volumes. The health effects from CO are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulty in people with chronic diseases, reduced lung capacity, and impaired mental abilities.

Nitrogen Dioxide

NO_2 is a byproduct of fuel combustion, with the primary sources being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen dioxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. NO_2 is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. NO_2 absorbs blue light, gives a reddish-brown cast to the atmosphere, and reduces visibility. It can also contribute to the formation of ozone/smog and acid rain.

Suspended Particulates

Atmospheric particulate matter is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. The particulates that are of concern include PM_{10} (small particulate matter which measures no more than 10 microns in diameter) and $PM_{2.5}$ (fine particulate matter which measures no more than 2.5 microns in diameter). The characteristics, sources, and potential health effects associated with PM_{10} and $PM_{2.5}$ can be different. Major man-made sources of PM_{10} are agricultural operations, industrial processes, combustion of fossil fuels, construction, demolition operations, and entrainment of road dust into the atmosphere. Natural sources include windblown

1 Organic compound precursors of ozone are routinely described by several 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 various acronyms, such as TOG (total organic gases), ROG (reactive organic gases), ROC (reactive organic compounds), and VOC (volatile organic compounds). While most of these differ in some significant way from a chemical perspective, two groups are important from an air quality perspective: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (ROG and VOC). SCAQMD uses the term VOC to denote organic precursors.

dust, wildfire smoke, and sea spray salt. The finer $PM_{2.5}$ particulates are generally associated with combustion processes as well as formation in the atmosphere as a secondary pollutant through chemical reactions. $PM_{2.5}$ is more likely to penetrate deeply into the lungs and poses a serious 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 that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

Significance Thresholds

To determine whether a project would result in a significant impact to air quality, Appendix G of the *CEQA Guidelines* requires consideration of whether a 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

Regional Significance Thresholds

The SCAQMD recommends quantitative regional significance thresholds for temporary construction activities and long-term project operation in the SCAB, shown in Table 1.

Table 1 SCAQMD Regional 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 $PM_{2.5}$

Source: SCAQMD 2019

Localized Significance Thresholds

In addition to the above regional thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the *CEQA Air Quality Handbook* (1993). LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities and have been developed for NO_X, CO, PM_{10}, and $PM_{2.5}$. 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), distance to the sensitive receptor, and project size. LSTs have been developed for emissions within construction areas up to five acres in size. However, LSTs only apply to emissions in a fixed stationary location and are not applicable to mobile sources, such as cars on a roadway (SCAQMD 2008). As such, LSTs

are typically applied only to construction emissions because most operational emissions are associated with project-generated vehicle trips.

The SCAQMD provides LST lookup tables for project sites that measure one, two, or five acres. If a site is greater than five acres, SCAQMD recommends a dispersion analysis be performed. Project construction would disturb an area of approximately 10 acres; therefore, this analysis utilizes the five-acre LSTs. LSTs are provided for receptors at 82 to 1,640 feet from the project disturbance boundary to the sensitive receptors. Construction activity would occur approximately 80 feet northwest of the closest sensitive receptor, which is are single-family residential properties. According to Appendix C of the SCAQMD's publication, *Final LST Methodology*, receptor distance from site boundary is measured in increments of 25, 50, 100, 200 and 500 meters. Therefore, the analysis below uses the LST values for 200 meters. In addition, the project is in SRA-30 (West Riverside County). LSTs for construction in SRA-22 on a 5-acre site with a receptor 25 meters away are shown in Table 2.

Table 2 SCAQMD LSTs for Construction (SRA 22)

Pollutant	Allowable Emissions for a 5-acre Site in SRA 22 for a Receptor 82 Feet Away (lbs/day)
Gradual conversion of NO_X to NO_2	270
CO	1,700
PM_{10}	12
$PM_{2.5}$	8

Source: SCAQMD 2009

Health Risk Thresholds

SCAQMD has developed significance thresholds for the emissions of TACs based on health risks associated with elevated exposure to such compounds. For carcinogenic compounds, cancer risk is assessed in terms of incremental excess cancer risk. A project would result in a potentially significant impact if it would generate an incremental excess cancer risk of 10 in 1 million (1×10^{-6}) or a cancer burden of 0.5 excess cancer cases in areas exceeding 1 in 1 million risk. Additionally, non-carcinogenic health risks are assessed in terms of a hazard index. A project would result in a potentially significant impact if it would result in a chronic and acute hazard index greater than 1.0 (SCAQMD 2015).

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. A project may be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding forecasts used in the development of the AQMP. The 2016 AQMP, the most recent AQMP adopted by the SCAQMD, incorporates local city general plans and the SCAG's 2016 RTP/SCS socioeconomic forecast projections of regional population, housing, and employment growth. The project is to construct a segment of roadway that completes a planned link within the regional transportation network. The project would not develop any residential, commercial or industrial land uses. The project would result in temporary employment during construction but would not result in any population growth or long-term employment. Since the project would not result in long-term employment or population growth, the project would be consistent with the AQMP.

LESS THAN SIGNIFICANT IMPACT

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

Less Than Significant Impact. In accordance with CEQA Guidelines Section 15064(h)(3), the SCAQMD's approach for assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and State Clean Air Acts. If the project's mass regional emissions do not exceed the applicable SCAQMD, then the project's criteria pollutant emissions would not be cumulatively considerable.

Additionally, the project was included in the SCAG 2019 Federal Transportation Improvement Program (FTIP) and the SCAG 2016 RTP/SCS as project ID RIV180116. The RTP/SCS and FTIP are required to include all transportation projects in the region regardless of who funds or constructs it in an air quality analysis to ensure any federal actions in the region would not cause the region to exceed ambient air quality standards. The project was included in this analysis and the changes in vehicle emission associated with the project were determined to result in less than significant impacts on regional air quality.

Construction

Table 3 summarizes the estimated maximum daily emissions (lbs) of pollutants associated with construction of the proposed project. As shown below, ROG, NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$ emissions would not exceed SCAQMD regional thresholds or LSTs. Because the project would not exceed SCAQMD's regional construction thresholds or LSTs, project construction would not result in a cumulatively considerable net increase of a criteria pollutant, and impacts would be less than significant.

Table 3 Project Construction Emissions

	Maximum Emissions (lbs/day)					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Construction Year 2020	5.3	58.9	41.8	0.1	52.5	12.6
SCAQMD Regional Thresholds	75	100	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Maximum On-site Emissions	5.0	37.0	38.2	< 0.1	2.2	2.0
SCAQMD Localized Significance Thresholds (LSTs)	N/A	270	1700	N/A	12	8
Threshold Exceeded?	**N/A**	**No**	**No**	**N/A**	**No**	**No**

Notes: See Appendix A for modeling results. Some numbers may not add up precisely due to rounding considerations. Maximum on-site emissions are the highest emissions that would occur on the project site from on-site sources, such as heavy construction equipment and architectural coatings, and excludes off-site emissions from sources such as construction worker vehicle trips and haul truck trips.

Operational

The project would not result in the development of any land uses that would generate traffic. Therefore, the project would not result in the generation of operational air quality emissions. The changes in traffic due to the construction of the project has been assessed in as part of the SCAG FTIP and RTP/SCS and was determined to be consistent with the regional plan to meet ambient air quality standards.

LESS THAN SIGNIFICANT IMPACT

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

CO Hot Spots

Less Than Significant Impact. A carbon monoxide (CO) hotspot is a localized concentration of CO that is above a CO ambient air quality standard. 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 such that the local CO concentration exceeds the federal one-hour standard of 35.0 ppm or the federal and state eight-hour standard of 9.0 ppm (CARB 2016).

A detailed CO analysis was conducted during the preparation of SCAQMD's 2003 AQMP. The locations selected for microscale modeling in the 2003 AQMP included high average daily traffic (ADT) intersections in the SCAB, those which would be expected to experience the highest CO concentrations. The highest CO concentration observed was at the intersection of Wilshire Boulevard and Veteran Avenue on the west side of Los Angeles near the I-405 Freeway. The concentration of CO at this intersection was 4.6 ppm, which is well below the state and federal standards. The Wilshire Boulevard/Veteran Avenue intersection has an ADT of approximately 100,000 vehicles per day.

The total ADT for the intersection of Hellman Avenue and Limonite Avenue/Kimball Avenue intersection is predicted to be 64,200 vehicles in 2042 (Fehr Peers 2019), which is less than the 100,000-vehicle count at the Wilshire Boulevard and Veteran Avenue intersection that was well below the ambient air quality standards. Furthermore, due to stricter vehicle emissions standards in newer cars and new technology that increases fuel economy, CO emission factors under future conditions would be lower than those conditions when the 2003 AQMP was prepared. Thus, even though there would be more vehicle trips through this intersection under the proposed project than under existing conditions, project-generated local mobile-source CO emissions would not result in or substantially contribute to concentrations that exceed the one-hour or eight-hour CO standard.

Toxic Air Contaminants

Operation

The project does would not develop any land use that would generate TAC emissions.

CONSTRUCTION

Construction-related activities would result in temporary project-generated emissions of DPM exhaust emissions from off-road, heavy-duty diesel equipment for site preparation, grading, building construction, and other construction activities. DPM was identified as a TAC by CARB in 1998. The potential cancer risk from the inhalation of DPM (discussed in the following paragraphs) outweighs the potential non-cancer health impacts (CARB 2017b).

Generation of DPM from construction projects typically occurs in a single area for a short period. Construction of the proposed project would occur over approximately 7 months. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the OEHHA, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project. Thus, the duration of proposed construction activities (i.e., 7 months) is approximately 2 percent of the total exposure period used for 30-year health risk calculations. Current models and methodologies for conducting health-risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities, resulting in difficulties in producing accurate estimates of health risk (Bay Area Air Quality Management District [BAAQMD] 2017).

The maximum PM_{10} and $PM_{2.5}$ emissions would occur during site preparation and grading activities. These activities would last for approximately twelve months. PM emissions would decrease for the remaining construction period because construction activities such as building construction and architectural coating would require less construction equipment. While the maximum DPM emissions associated with site preparation and grading activities would only occur for a portion of the overall construction period, these activities represent the worst-case condition for the total construction period. This would represent approximately 3 percent of the total exposure period for health risk calculation. Given the aforementioned, DPM generated by project construction would not create conditions where the probability is greater than one in one million of contracting cancer for the Maximally Exposed Individual or to generate ground-level concentrations of non-carcinogenic TACs that exceed a Hazard Index greater than one for the Maximally Exposed Individual.

LESS THAN SIGNIFICANT IMPACT

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

Less Than Significant Impact. For construction activities, odors would be short-term in nature and are subject to SCAQMD Rule 402 *Nuisance* (CARB 2018a). Construction activities would be temporary and transitory and associated odors would cease upon construction completion. Accordingly, the proposed project would not create objectionable odors affecting a substantial number of people during construction, and short-term impacts would be less than significant.

Common sources of operational odor complaints include sewage treatment plants, landfills, recycling facilities, and agricultural uses. The proposed project, a roadway gap closure, would not include any of these uses. The traffic would emit odors during operation in the form of exhaust from vehicles. The increase in odor emissions, however, would be minimal, as vehicle exhaust is already prevalent due to the high levels of vehicle traffic on the surrounding roadway network.

LESS THAN SIGNIFICANT IMPACT

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4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	■	☐	☐	☐
b. 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?	☐	☐	■	☐
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	■	☐
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	■	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	■	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	■	☐	☐	☐

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.

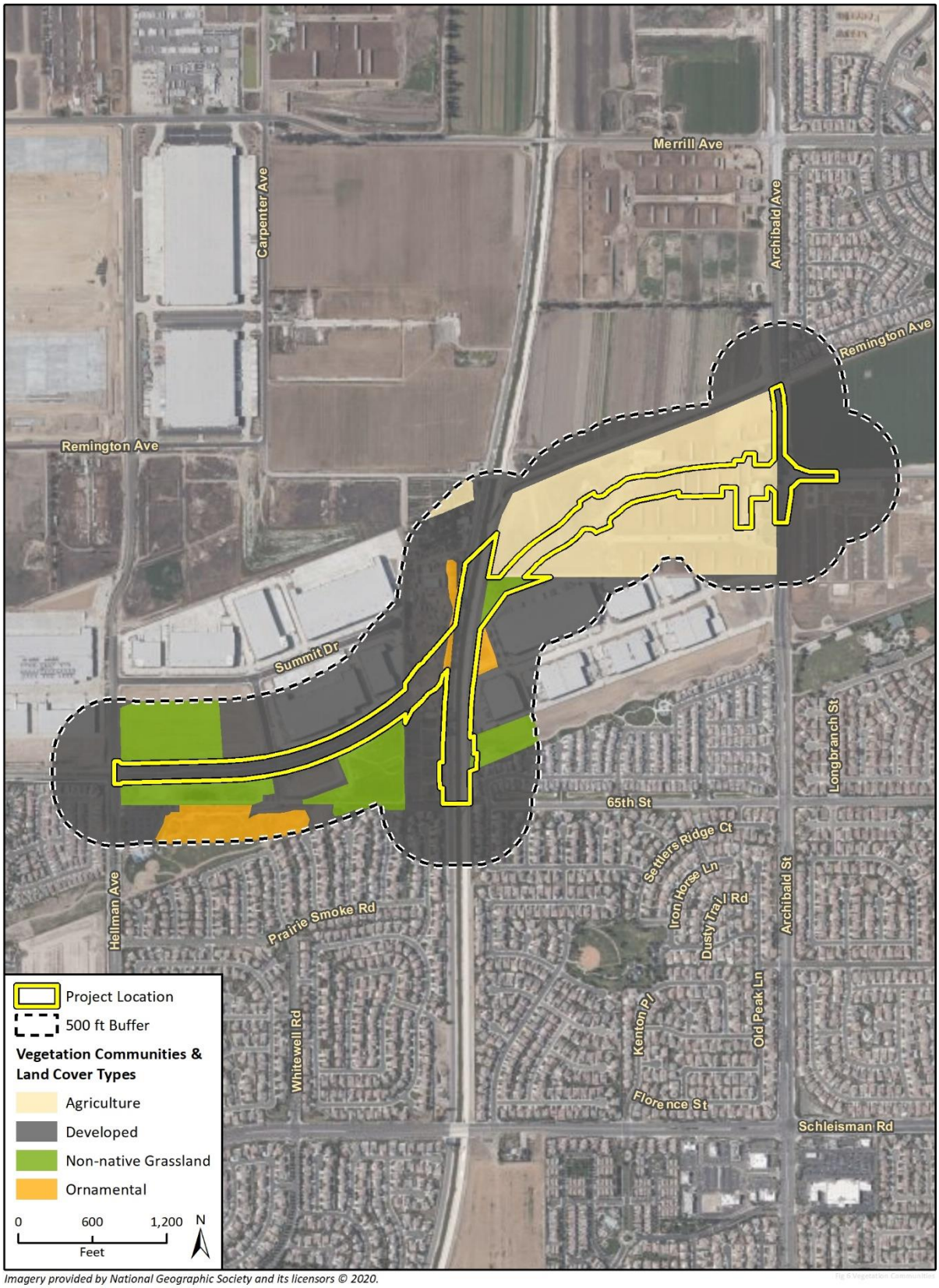
Birds

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.

Figure 4 Vegetation Communities Map



Imagery provided by National Geographic Society and its licensors © 2020.

Figure 5 USDA Soils Map

Imagery provided by Esri and its licensors © 2020.
Additional data provided by USDA, 2017.

Fig 3 USDA Soils Map_50ftbuff

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

Less Than Significant With Mitigation Incorporated. The project site is located in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) survey area for burrowing owl (Athene cunicularia: BUOW); therefore, a habitat assessment was conducted by a qualified biologist. The survey area consisted of the area within the proposed limits of work (35.62-acre project site) and an additional 500-foot buffer. The County of Riverside Regional Conservation Authority (RCA) MSHCP information tool was queried using the parcel information for the project site to determine potential MSHCP sensitive species survey and conservation requirements for the project. The proposed project does not occur within a survey area for amphibians, mammals, Narrow Endemic Plant Species, and Criteria Area Plant Species. The project area does contain potentially suitable nesting habitat for BUOW. A single observation of BUOW sign was documented during the survey. Due to the presence of suitable BUOW habitat and the single observation within the study area, the proposed project would be required to comply with the standard conditions under the MSHCP, requiring a focused BUOW survey. Mitigation in the form of a BUOW is required to bring this impact to a less than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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

Less than Significant Impact. The Cucamonga Creek channel is the only drainage feature on the project site. The Cucamonga Creek Channel is a cement-lined storm flow drainage that runs north to south and traverses through the center of the site. It contains no hydrophytic vegetation and is partially lined with non-native grass habitat. Three potentially jurisdictional ponds were identified and delineated within the project site. Total potential United States Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) jurisdiction for the Cucamonga Creek Channel and ponds is 2.57 acres, and total potential California Department of Fish and Wildlife (CDFW) jurisdiction is 12.09 acres. The MSHCP Consistency Analysis includes assessments for riparian/riverine habitat, riparian/riverine species and vernal pool/fairy shrimp habitat as well as the urban/wildlands interface. These features do not meet the MSHCP definition of riparian/riverine habitat. Riparian habitats or other sensitive natural communities defined by local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service are not identified in this project area.

LESS THAN SIGNIFICANT IMPACT

c. 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?

Less Than Significant Impact. As mentioned above under Response 4b, the project site contains one drainage, the Cucamonga Creek Channel. Areas of the Cucamonga Creek Channel and ponds within

the project site under the jurisdiction of the California Department of Fish and Game or the U.S. Fish and Wildlife Service do not meet the criteria for a riparian/riverine or vernal pool/fairy shrimp habitat per MSHCP guidelines and would not be affected by project activities. The proposed project will not facilitate the removal, filling, or hydrological interruption of the Cucamonga Creek Channel, which is not identified as a state or federally protected wetland.

LESS THAN SIGNIFICANT IMPACT

d. 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?

Less than Significant Impact. The project would be subject to the MSHCP and would be consistent with the Eastvale General Plan. Using the County of Riverside Conservation Authority (RCA) MSHCP information tool, it was determined that the project does not occur within a survey area for amphibians, mammals, Narrow Endemic Plant Species, and Criteria Area Plant Species. This project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or the establishment of native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

LESS THAN SIGNIFICANT IMPACT

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant Impact. Implementation of the proposed project would be subject to all applicable Federal, State, and Local policies and regulations related to the protection of biological resources, including tree preservation. The project would be required to comply with RMC Section 16.72.040 establishing the MSHCP mitigation fee and Section 16.40.040 establishing the threatened and Endangered Species Fees. The project site is partially developed and consists of existing paved roadways, agricultural uses (i.e., a plant nursery and an active dairy), and disturbed vacant land dominated by nonnative grasslands. The proposed project could potentially remove street trees located along Kimball Avenue. Street trees are protected by the City of Eastvale. Therefore, a tree removal permit may be required from the City if street trees are proposed for removal to accommodate the construction of the project along Kimball Avenue. Section 6.1.4 of the MSHCP contains Urban/Wildlands Interface Guidelines. According to Section 6.1.4 of the MSHCP, the Urban/Wildlands Interface Guidelines are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area. The project site is not adjacent to a conservation area and the Urban/wildlife Interface Guidelines are not applicable. The Habitat Assessment completed for the project concluded that there are no biological resources protected by local policies and ordinances in the project area.

LESS THAN SIGNIFICANT IMPACT

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

Less Than Significant with Mitigation Incorporated. Due to the proposed development on the site which contains potential protected species, the project may conflict with guidelines of the MSHCP and related policies in the Eastvale General Plan. Therefore, as the project has the potential to be

inconsistent with the MSHCP and/or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan, this impact is potentially significant. Mitigation in the form of a BUOW is required to bring this impact to a less than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

BIO-1 Nesting Bird Surveys

Nesting bird surveys shall be conducted by a qualified biologist prior to any construction activities during bird breeding season from January 1 through August 31. If no nesting birds are detected during these surveys, then construction-related activities may proceed. Active nests within and adjacent to the construction zone shall be avoided and provided a minimum buffer as determined by the qualified biologist (CDFW recommends a 300 foot nest avoidance buffer or 500 feet for all active raptor nests) or in consultation with U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife prior to the commencement of construction.

5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	■	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	■	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	■	☐	☐

CEQA requires a lead agency to determine whether a project may have a significant impact on historical resources (Public Resources Code [PRC], 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. State CEQA Guidelines Section 15064.5 states the term "historical resources" shall include the following:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in, the California Register of Historical Resources PRC Section 5024.1, Title 14 California Code of Regulations [CCR], Section 4850 et. seq.).
2. 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.
3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the California Register of Historical Resources [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." State 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:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type
3. Is directly associated with a scientifically-recognized important prehistoric or historic event or person

Rincon Consultants, Inc. prepared a Cultural Resources Study to evaluate project impacts to historical and archaeological resources. The Cultural Resources Study includes a cultural resources records search at the South Central Coastal Information Center, historical imagery review, archival research, and a field survey of the property, setting and surroundings.

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

c. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Less Than Significant Impact with Mitigation Incorporated. The current study included a cultural resources records search, Native American outreach, and field survey. The current study also relied on the results of the Homestead project completed under the City's jurisdiction for a separate project, but encompassing many parcels (APNs 144-010-015, 144-010-018, 144-010-020, 144-010-023, and 144-010-032) falling within the current project site. The current study resulted in the recordation and evaluation of historic-era property 9301 Remington Avenue. Although this property was previously recorded in 2012, it was not evaluated at that time to determine if it qualified as a historical resource under CEQA. Additional research completed under the current study concluded the property does not possess significant architectural or historical associations and is not eligible for listing in the NRHP or CRHR; as such it is not a historical resource and its demolition would not result in a significant adverse impact under CEQA. The background research and field survey concluded there are no known archaeological resources within the project site. Based on the results of the cultural resources assessment, Rincon recommends a finding of less than significant impact to historical and archaeological resources with mitigation incorporated under CEQA. No further cultural resources work is recommended for the project.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

Rincon presents the following recommendation in case of unanticipated discovery of cultural resources during project development. The project is also required to adhere to regulations regarding the unanticipated discovery of human remains, detailed below.

CR-1 Unanticipated Discovery of Cultural Resources

If cultural resources are encountered during ground-disturbing activities, work in the immediate area must halt and an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology (National Park Service 1983) should be contacted immediately to evaluate the find. If the discovery proves to be significant under the NHPA and/or CEQA, additional work such as data recovery excavation and Native American consultation may be warranted to mitigate any significant impacts/adverse effects.

CR-2 Human Remains

The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states 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, the Coroner would notify the Native American Heritage Commission, which would determine and notify a most likely descendant (MLD). The MLD has 48 hours from being granted site access to make recommendations for the disposition of the remains. If the MLD

does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from subsequent disturbance.

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6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	■	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	■

Electricity and Natural Gas

In 2017, California used 292,039 gigawatt-hours (GWh) of electricity, of which 29 percent were from renewable resources (CEC 2018b). California also consumed approximately 12,500 million U.S. therms (MMthm) of natural gas in 2017 (CEC 2017a). The project site would be provided electricity by Southern California Edison (SCE) and natural gas by Southern California Gas Company (SCG). Table 4 and Table 5 show the electricity and natural gas consumption by sector and total for SCE and SCG. In 2017, SCE provided approximately 28.9 percent of the total electricity used in California and SCG provided approximately 41.1 percent of the total natural gas usage in California.

Table 4 Electricity Consumption in the SCE Service Area in 2017

Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Streetlight	Total Usage
2,975.4	31,925.3	4,283.3	13,094	2,410.6	28,975.0	627.9	84,291.6

Notes: All usage expressed in GWh

Source: CEC 2017a

Table 5 Natural Gas Consumption in SCG Service Area in 2017

Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Total Usage
69.4	895.9	72.1	1,716.6	229.7	2,158.1	5,141.8

Notes: All usage expressed in MMThm

Source: CEC 2017b

Petroleum

In 2016, approximately 40 percent of the state's energy consumption was used for transportation activities (EIA 2018). Californians presently consume over 19 billion gallons of motor vehicle fuels per year (CEC 2018c). 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 percent to 22 percent reduction. This decline comes in response to both increasing vehicle electrification and higher fuel economy for new gasoline vehicles (CEC 2018c).

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

Less Than Significant Impact. The project would consume electricity, natural gas, and fuel during construction. 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.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. The project would not conflict with or obstruct state regulations or the Eastvale General Plan. 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.

NO IMPACT

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7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. 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?	☐	☐	■	☐
2. Strong seismic ground shaking?	☐	☐	■	☐
3. Seismic-related ground failure, including liquefaction?	☐	☐	■	☐
4. Landslides?	☐	☐	■	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	■	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	■	☐
d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	■	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	■	☐
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	■	☐	☐

a.1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

a.2. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

a.3. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

a.4. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Less Than Significant Impact. 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.

LESS THAN SIGNIFICANT IMPACT

b. Would the project result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. 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. 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.

LESS THAN SIGNIFICANT IMPACT

c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

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

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Less Than Significant Impact. The project site is not on a potentially unstable geologic unit or expansive soils and would not feature septic tanks. Potential impacts to erosion are addressed via compliance with applicable regulations.

LESS THAN SIGNIFICANT IMPACT

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

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. Impact would be less than significant with implementation of Mitigation Measure PALEO-1.

NO IMPACT

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.

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8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	■	☐
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	■

Greenhouse Gas Overview

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 byproducts of fossil fuel combustion, whereas CH_4 largely 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 (U.S. EPA 2018). However, because the project is a non-industrial development, the quantity of fluorinated gases would not be significant since fluorinated gases are primarily associated with industrial processes; therefore, fluorinated gases are not analyzed further in this document.

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, 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). N_2O has a GWP of 298 (IPCC 2007).

Greenhouse Gas Emissions Inventory

Global

Worldwide anthropogenic emissions of GHGs were approximately 46,000 million metric tons (MMT or gigatonnes) 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 6 percent and 2 percent respectively (IPCC 2014).

Federal

Total U.S. GHG emissions were 6,511.3 million metric tons (MMT or gigatonnes) CO_2e in 2016 (U.S. EPA 2018). Total U.S. emissions have increased by 2.4 percent since 1990; emissions decreased by 1.9 percent from 2015 to 2016 (U.S. EPA 2018). The decrease from 2015 to 2016 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 (U.S. EPA 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 (U.S. EPA 2018).

California

Based on CARB's California Greenhouse Gas Inventory for 2000-2016, California produced 429.4 MMT CO_2e in 2016 (CARB 2018a). The largest source of GHGs in California is transportation, which generates 41 percent of the state's total GHG emissions. The industrial sector is the second largest source, contributing 23 percent of the state's GHG emissions, and electric power accounted for approximately 16 percent (CARB 2018a). California emissions are due in part to its large size and large population compared to other states. However, per capita emissions in California are lower than all states except New York (U.S. Energy Information Administration 2019). 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 CO_2e (CARB 2018b). These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

Significance Thresholds

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

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases

Individual projects do not generate enough GHG emissions to substantially influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that may be significant, even if individual changes resulting from a project are limited. 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]).

To determine a project-specific threshold, guidance on GHG significance thresholds in the region from SCAQMD, the air district in which the project site is located, were evaluated. The SCAQMD's GHG CEQA Significance Threshold Working Group considered a tiered approach to determine the significance of residential and commercial projects. The identified thresholds focused on land uses that generate traffic, and require energy and water, and generate waste. The project would not generate traffic, require energy or water, and would not generate waste, and thus the SCAQMD identified threshold may not be applicable to a construction only project.

The SCAQMD GHG Thresholds web site provides a link to several other agencies for evaluation of their efforts on climate change including the California Attorney General's Office, and several air districts. After evaluating all the other agencies thresholds, only the SMAQMD has developed thresholds specifically for construction emissions separate from operational emissions. The SMAQMD recommends assessing construction emissions separately from operation emission using a threshold of 1,100 MT CO_2E/year for construction emissions. This threshold is to be used to assess the actual construction emissions in an annual period and is not intended for assessing amortized construction emissions. While this threshold is not specific to the region, it is specific to the type of emissions that would occur from the project and is the most applicable threshold identified.

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

Less Than Significant Impact. This section evaluates potential impacts of the proposed project related to the generation of GHG emissions. Complete modeling results are included as Appendix A of this report.

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 cumulative effects that are significant, even if individual changes resulting from a project are limited. 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]).

Project construction activities are assumed to occur over a period of approximately 12 months. As shown in Table 6, construction activities for the project would generate an estimated 1,072 MT CO_2e during the entire construction period.

Table 6 Estimated Construction Emissions of Greenhouse Gases

Construction Year	Annual Emissions MT CO_2e
	95.69
	357.56
	491.69
	126.97
Total	1,072
Construction GHG Threshold	1,100/year
Exceed threshold?	**No**

Notes: See Appendix A for modeling results. Some numbers may not add up precisely due to rounding considerations.

As shown in Table 6, the project would not exceed the construction project-specific threshold.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

No Impact. The 2016 RTP/SCS outlines SCAG's transportation vision for the region, including making transportation more sustainable, some of which would have the effect of reducing GHG emissions in the region (SCAG 2016). The sustainability strategies include land use strategies (focus new growth around transit, plan for growth around livable corridors, provide more options for short trips, support local sustainability planning, and protect natural and farm lands), transportation strategies (preserve our existing system, manage congestion, and promote safety and security), completing our system (transit, passenger rail, active transportation, highways and arterials, regional express lane network, goods movement, meeting airport demand), and mobility innovations (zero-emissions vehicles, neighborhood electric vehicles, and shared mobility. The project is a GAP connector completing a link in the regional transportation network and is included in the RTP/SCS and is intended to satisfy existing vehicle transportation demand. In addition, the project would provide bike lanes, consistent with the 2016 RTP/SCS objective of increasing bicycle use to encourage alternative modes of transportation. Therefore, the project would not conflict with the 2016 RTP/SCS. The project is consistent with state and local policies for reducing GHG emissions.

NO IMPACT

9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	■	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☐	☐	■
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	■	☐
e. For a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	■
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	■	☐

a-b. 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 forseeable upset and accident conditions involving the likely release of hazardous materials into the environment?

Construction-Related Impacts

Less Than Significant Impact. 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.

A Hazardous Materials Technical Study (HMTS) was conducted by Rincon Consultants on July 23, 2019. The technical study identifies that the central-western portion of the subject property was used for agricultural purposes. Agricultural land use is typically associated with the use of pesticides and arsenic, thus creating potential for impacted soil to be encountered during grading/construction activities. The technical study recommends conducting soil assessments on the existing nursery property within the footprint of the project. Additionally, four petroleum AST's were observed on the adjacent dairy on the eastern portion of the subject property. Stained soil was observed beneath the three AST's located in the covered storage area. To help reduce potential health impacts during grading and construction, the technical study recommends properly abandoning and removing the AST's and conducting a soil assessment in the vicinity of the AST's located in the covered storage area.

The technical study concludes that with adherence to stated recommendations, the project would not create a significant hazard to the public or environment during construction activities. Impacts would be less than significant.

Operation-Related Impacts

Generally, maintenance and upkeep of roadways and bridges would occasionally require the use of various solvents and paints. Transport and use 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.

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. 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 would not be stored on site during operation of the project.

LESS THAN SIGNIFICANT IMPACT

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

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 0.8 miles 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 not result in potentially significant impacts related to hazardous emissions or hazardous materials handling within one-quarter mile of an existing or proposed school.

NO IMPACT

d. Would the project be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less Than Significant Impact. A review of the Cortese List database and federal superfund site database found that the project site is not listed as a hazardous materials site. The nearest major hazardous materials site is located approximately 4.75 miles southeast at 1841 Hillside Avenue in the City of Norco, is not included on the national priorities list (DTSC 2020). The site had contaminants such as Perchlorate and Polychlorinated Biphenyls (PCB's) and has since undergone site remediation. No sites have been identified under the Cortese List within 1,000 feet to the project site. Therefore, the project would not be located on or near a hazardous site, and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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

No Impact. The Chino Airport is approximately 2.5 miles west of the westernmost boundary 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 ALUCP, 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. The project would not consist of

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.

NO IMPACT

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

Less Than Significant. Development of the project would not interfere with Eastvale's EOP or LHMP, nor cause permanent alteration to vehicle circulation routes that would negatively impede on traffic flow. The proposed project would help traffic flow through the extension of Limonite Avenue and the addition of a vehicular bridge over the Cucamonga Creek Channel. 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.

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. Given the above considerations, potential for the project to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan is less than significant.

LESS THAN SIGNIFICANT IMPACT

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

Less Than Significant Impact. 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 Riverbed 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 Riverbed and is not considered to be an area at greater risk of wildfire.

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 provide immediate fire protection services for the proposed project.

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.

LESS THAN SIGNIFICANT IMPACT

10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	■	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	■	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation on- or off-site;	☐	☐	■	☐
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☐	■
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	■	☐
(iv) Impede or redirect flood flows?	☐	☐	■	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	■
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	■	☐

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).

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact. 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.

LESS THAN SIGNIFICANT IMPACT

b. 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?

Less Than Significant Impact. 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.

LESS THAN SIGNIFICANT IMPACT

c.(i) 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?

c.(ii) 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?

c.(iii) 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 that 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?

c.(iv) 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?

Less Than Significant Impact. 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.

LESS THAN SIGNIFICANT IMPACT

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

No Impact. 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

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant 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.

LESS THAN SIGNIFICANT IMPACT

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11 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	■	☐
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	■	☐

a. Would the project physically divide an established community?

No Impact. The project would construct an approximately 6,180 feet (1.17 mile) long new segment of Limonite Avenue between Kimball Avenue and the existing Limonite Avenue east of Archibald Avenue across the Cucamonga Creek Channel. 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 Homestead project, this corridor would be completed and improve connectivity between areas east and west of Cucamonga Creek Channel.

For the reasons stated above, the potential for the project to physically divide an established community is considered less than significant.

LESS THAN SIGNIFICANT IMPACT

b. 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?

Less Than Significant Impact. The project would be consistent with the land use designation and related requirements and existing with the existing zone. Proposed development would comply with land use and zoning regulations.

LESS THAN SIGNIFICANT IMPACT

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12 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	■
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	■

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. 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.

NO IMPACT

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13 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	■	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	■	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	■

Overview of Sound Measurement

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (Caltrans 2013a).

Noise levels are commonly 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 so that they are consistent with the human hearing response, which is most sensitive to frequencies around 4,000 Hertz and less sensitive to frequencies around and below 100 Hertz (Kinsler, et. al. 1999). Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dBA; reducing the energy in half would result in a 3 dBA decrease (Crocker 2007).

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not “sound twice as loud” as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible (8

times the sound energy); and that an increase (or decrease) of 10 dBA sounds twice (half) as loud ([10.5x the sound energy] Crocker 2007).

Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in level as the distance from the source increases. The manner in which noise reduces with distance depends on factors such as the type of sources (e.g., point or line, the path the sound will travel, site conditions, and obstructions). Noise levels from a point source typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance (e.g., construction, industrial machinery, ventilation units). Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013a). The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site, such as a parking lot or smooth body of water, receives no additional ground attenuation and the changes in noise levels with distance (drop-off rate) result from simply the geometric spreading of the source. An additional ground attenuation value of 1.5 dBA per doubling of distance applies to a soft site (e.g., soft dirt, grass, or scattered bushes and trees) (Caltrans 2013a). Noise levels may also be reduced by intervening structures. The amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, and man-made features such as buildings and walls, can substantially alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2017). Structures can substantially reduce exposure to noise as well. The FHWA's guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important factors of project noise impact. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. One of the most frequently used noise metrics is the equivalent noise level (L_{eq}); it considers both duration and sound power level. L_{eq} 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. Typically, L_{eq} is summed over a one-hour period. L_{max} is the highest root mean squared (RMS) sound pressure level within the sampling period, and L_{min} is the lowest RMS sound pressure level within the measuring period (Crocker 2007). Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{dn}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours.

Vibration

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. The number of cycles per second of oscillation makes up the vibration frequency, described in terms of Hz. The frequency of a vibrating object describes how rapidly it oscillates. The normal frequency range of most groundborne vibration that can be felt by the human body starts from a low frequency of less than 1 Hz and goes to a high of about 200 Hz (Crocker 2007).

While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as

groundborne noise. Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hz), or when foundations or utilities, such as sewer and water pipes, physically connect the structure and the vibration source (Federal Transit Administration [FTA] 2018). Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern from vibration is that it can be intrusive and annoying to building occupants and vibration-sensitive land uses.

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High-frequency vibrations diminish much more rapidly than low frequencies, so low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances (Caltrans 2013b). When a building is affected by vibration, a ground-to-foundation coupling loss will usually reduce the overall vibration level. However, under rare circumstances, the ground-to-foundation coupling may actually amplify the vibration level due to structural resonances of the floors and walls.

Vibration amplitudes are usually expressed in peak particle velocity (PPV) or RMS vibration velocity. The PPV and RMS velocity are normally described in inches per second. PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in monitoring of blasting vibration because it is related to the stresses that are experienced by buildings (Caltrans 2013b).

Sensitive Receivers

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Sensitive land uses are generally defined as locations where people reside or where the presence of noise could adversely affect the use of the land. The City General Plan list of noise sensitive uses includes residential dwellings, hotels, hospitals, nursing homes, educational facilities, libraries, and biological open space (City of Indio 2019). Surrounding land uses that would be considered sensitive receivers include the Shadow Hills RV Resort located approximately 330 feet to the north (zoned Community Commercial [CC]), vacant parcels located approximately 200 feet across Jefferson Street (northern parcel is zoned Residential Light [RL]; southern parcel is zoned Mixed-Use Specific Plan [MU SP]), and area designated as Sun City Shadow Hills Project Master Plan (PMP) east of the project site that is a single-family neighborhood.

Vibration sensitive receivers are similar to noise sensitive receivers, such as residences and institutional uses (e.g., schools, libraries, and religious facilities). However, vibration sensitive receivers also include buildings where vibrations may interfere with vibration-sensitive equipment, affected by levels that may be well below those associated with human annoyance (FTA 2018; Caltrans 2013b).

Project Noise Setting

The most common source of noise in the project site vicinity is vehicular traffic from Archibald Avenue, Kimball Avenue, and Hellman Avenue. To characterize ambient sound levels at and near the project site existing traffic volumes from the project traffic report were modeled and are presented in Table 7.

Table 7 Existing Traffic Noise Levels

Receiver	Land Use	CNEL
1	SFR	66
2	SFR	64
3	Comm.	49
4	Comm.	66
5	Comm.	68
6	SFR	52
7	SFR	54
8	SFR	53
9	Park	57
10	Park	58
11	Comm.	71
12	SFR	62
13	SFR	61
14	SFR	62
15	Comm.	65

Receiver locations are shown in Figure 4.

Regulatory Framework

The City of Eastvale has adopted a Noise Element of the General Plan to control and abate environmental noise, and to protect the citizens of City of Eastvale from excessive exposure to noise. The Noise Element specifies the maximum allowable exterior noise levels for new developments impacted by transportation and stationary noise sources. To protect the City of Eastvale residents from excessive noise, the Noise Element contains the following four goals:

- **N-1** Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors and noise-sensitive uses of Eastvale.
- **N-2** Locate noise-tolerant land uses within areas irrevocably committed to land uses that are noise-producing, such as transportation corridors.
- **N-3** Ensure that noise sensitive uses do not encroach into areas needed by noise generating uses.
- **N-4** Locate noise sources away from existing noise sensitive land uses unless appropriate noise control measures are provided.

Table 8 *Noise Compatibility by Land Use Designation* in the City of Eastvale General Plan provides guidelines to evaluate the acceptability of the transportation related noise level impacts. Residential land use in the Project study area, is considered *completely compatible* with exterior noise levels below 60 CNEL and *tentatively compatible* with noise levels between 60 to 70 CNEL. Non-residential, or non-noise-sensitive use, is considered *completely compatible* with exterior noise levels less than 70 CNEL, and *tentatively compatible* with exterior noise levels approaching 75 CNEL.

Table 8 Noise Compatibility by Land Use Designation

Land Use Designations	Completely Compatible	Tentatively Compatible	Normally Incompatible	Completely Incompatible

All Residential (Single- and Multi-Family)	Less than 60 dBA	60-70 dBA	70-75 dBA	Greater than 75 dBA
All Non-Residential (Commercial, Industrial & Institutional)	Less than 70 dBA	70-75 dBA	Greater than 75 dBA	(2)
Public Parks (Lands on which public parks are located or planned)	Less than 65 dBA	65-70 dBA	70-75 dBA	Greater than 75 dBA

(1) All noise levels shown in this table are designated CNEL.
(2) To be determined as part of the project review process.

Stationary-Source Noise Level Standards

The City of Eastvale General Plan Noise Element identifies exterior noise limits to control operational noise impacts associated with the onsite noise sources, such as heating, ventilation and air conditioning units. Table 9 provides the City's standards for maximum exterior non-transportation noise levels to which land designated for residential land uses may be exposed for any 30-minute period on any day.

Table 9 Exterior Noise Level Standards for Non-Transportation Noise

Land Use Type	Time Period Maximum	Noise Level (dBA)
Single-Family Homes and Duplexes	10 p.m. to 7 a.m.	50
	7 a.m. to 10 p.m.	60
Multiple Residential 3 or More Units Per Building (Triplex +)	10 p.m. to 7 a.m.	55
	7 a.m. to 10 p.m.	60

Construction Noise Level Standards

The City of Eastvale has set restrictions to control noise impacts associated with the construction of the proposed project. According to the City of Eastvale Municipal Code Section 8.52.020, construction activities are limited to the hours of 6:00 a.m. to 6:00 p.m. June through September, and 7:00 a.m. to 6:00 p.m. October through May. However, the City has not established a numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a substantial temporary or periodic noise increase.

While the City does not have specific noise level criteria for assessing construction noise impacts, the FTA has developed guidance for determining whether construction of a project would result in a substantial temporary increase in noise levels (FTA 2018). Based on FTA guidance, a significant impact would occur if project-generated construction noise exceeds a 1-hour 80 dBA L_{eq} noise limit at a residence (FTA 2018). Similarly, the FTA recommends that in urban environments construction should not double the ambient noise level.

Vibration Standards

Policy N-3 of the the City of Eastvale General Plan Noise Element identifies a vibration level standard for sensitive land uses of 0.0787 inches per second (in./sec.) peak particle velocity (PPV).

Therefore, for the purposes of this analysis, the vibration level shall not exceed 0.0787 in./sec. PPV at the nearby sensitive receiver locations during project construction activities

Significance Thresholds

The following thresholds are based on Eastvale noise standards and Appendix G of the CEQA guidelines. Noise impacts would be considered significant if:

- **Item 1:** The project would result in the 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.
  - Based on policies N-4 and N-9, if the project resulted in noise levels in excess of tentatively acceptable levels, or interior noise levels at an affected resident exceeds interior noise level limits, impacts would be considered significant.
- **Item 2:** The project would result in the generation of excessive ground-borne vibration or ground-borne noise levels.
  - If the project results in vibration levels in excess of 0.0787 in./sec. PPV, it would be considered significant.
- **Item 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, if the project exposes people residing or working in the project area to excessive noise levels.

a. Would the project result in 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?

Construction

At a distance of 300 feet, a dozer, front-end loader and a dump truck would generate a noise level of 65 dBA L_{eq}. The FTA's construction noise limit is 80 dBA L_{eq} for residential land uses; therefore, project construction noise levels would not exceed construction noise thresholds. Therefore, impacts from construction noise would be less than significant.

Operation

The project would not have any on-site stationary noise sources. The primary impacts from project operation would be vehicles operating on the new roadway as it would represent a new permanent noise source in the project area.

The project would not generate new vehicle trips but would create a roadway and future traffic would generate noise along the new alignment. In addition, the gap closure would draw existing traffic from other roadways, changing the traffic pattern on those roadways. Traffic data was obtained from the project's Traffic Impact Analysis (Fehr and Peers 2019). Due to the type of project and the lack of an existing roadway along most of the alignment, the project is evaluated against the noise levels increase near existing roadways and against the City's Land Use Compatibility levels. Thus, if the project results in an increase of greater than 3 dBA but does not increase noise levels over the tentatively acceptable levels then the noise level increase would not be considered significant.

Modeled results are shown in Table 10 and noise level contours along the project alignment are presented in Figure though Figure for the opening year and Figure through Figure for the design year. Based on the modeled noise levels in Table 10, in the opening year the project would generally result in a 1 dBA increase at local receivers, with the exception of Receiver 3, where the increase would be approximately 21 dBA. However, the future noise level would be 70 CNEL and would be completely compatible with the commercial land use per Eastvale General Plan Noise Element standards and the increases in noise levels in the opening year would be less than significant. Similarly, as shown in Table 10, in the design year the project would generally result in a 1 to 4 dBA increase at local receivers, with the exception of Receiver 3, where the increase would be approximately 24 dBA. The other receivers where increases greater than 3 dBA would occur are 6, 8 and 11. However, as with the opening year noise levels, these noise levels would be completely compatible with the affected land uses per Eastvale General Plan Noise Element standards and the increases in traffic noise levels would be less than significant.

Figure 6 Opening Year (2022) Noise Level Contours

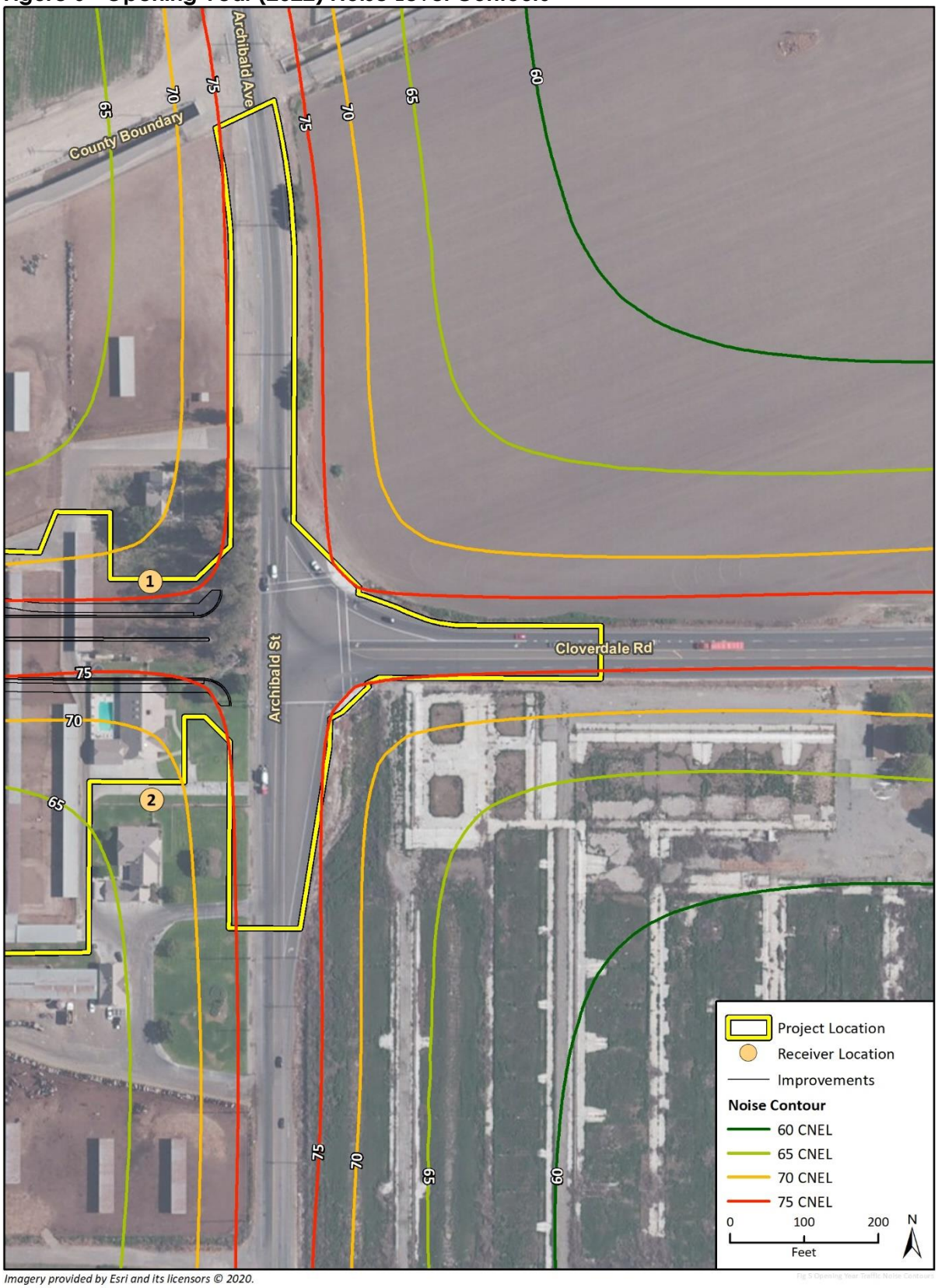

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Figure 7 Opening Year (2022) Noise Level Contours

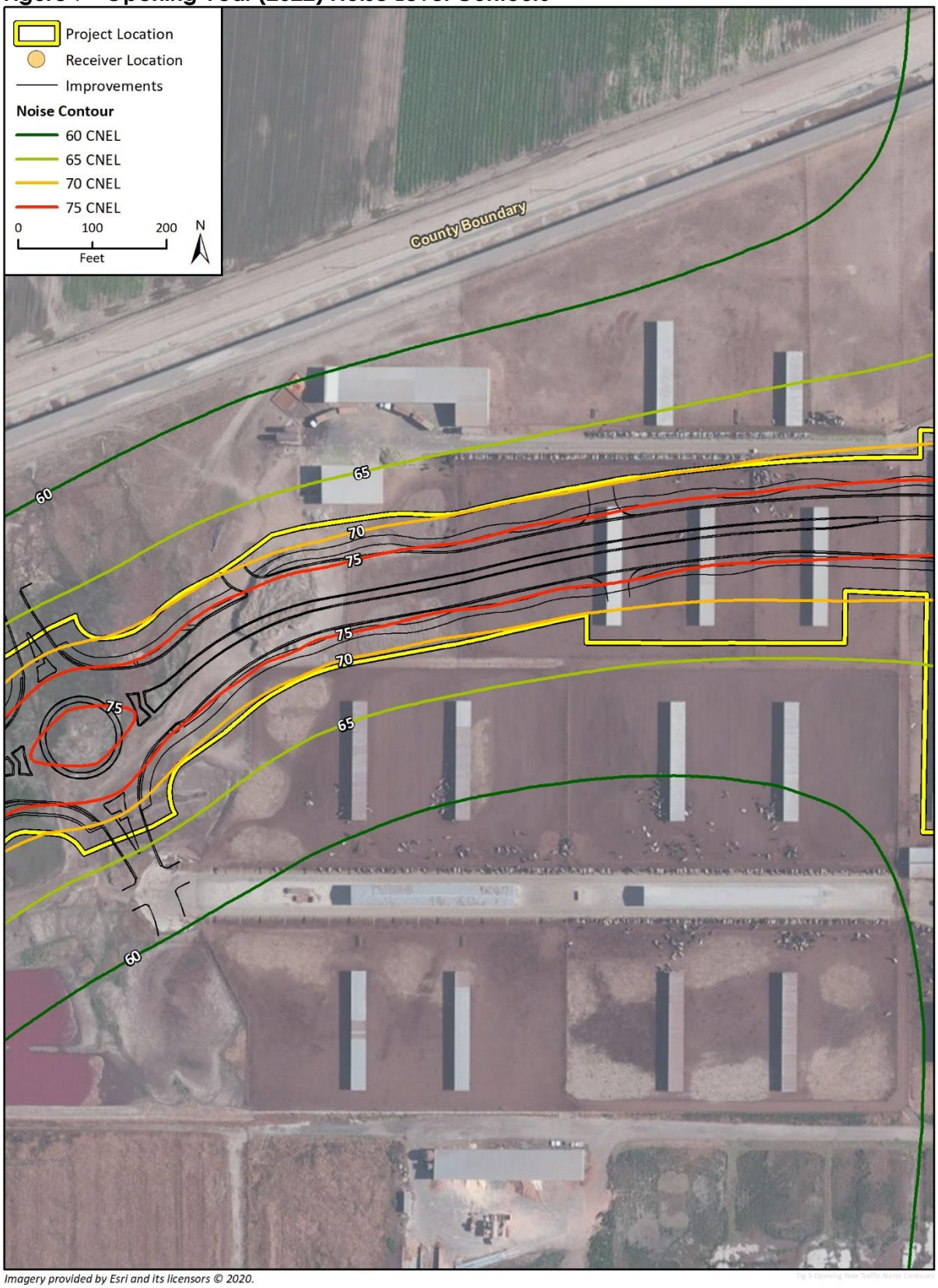

Figure 8 Opening Year (2022) Noise Level Contours

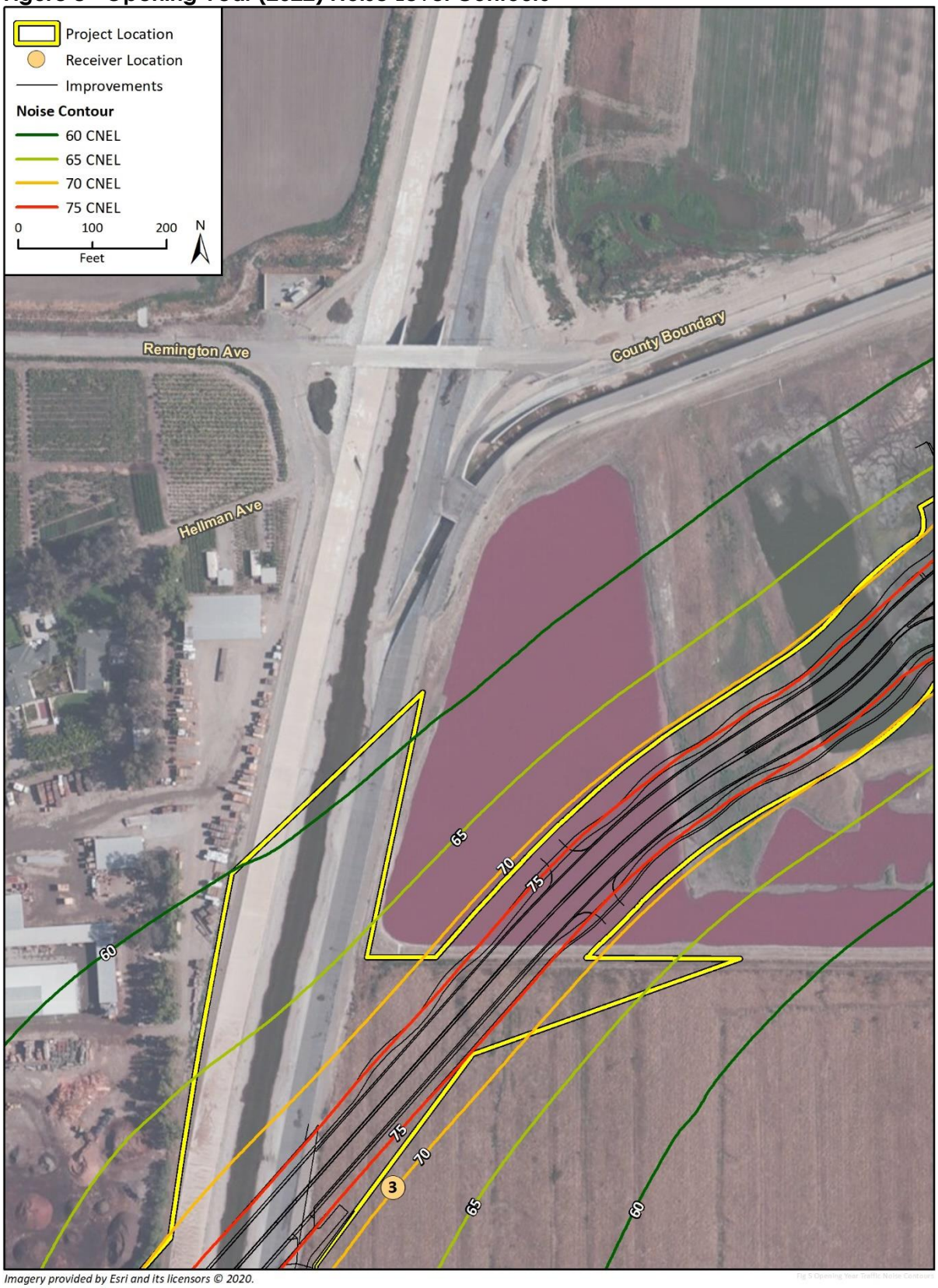

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Figure 9 Opening Year (2022) Noise Level Contours

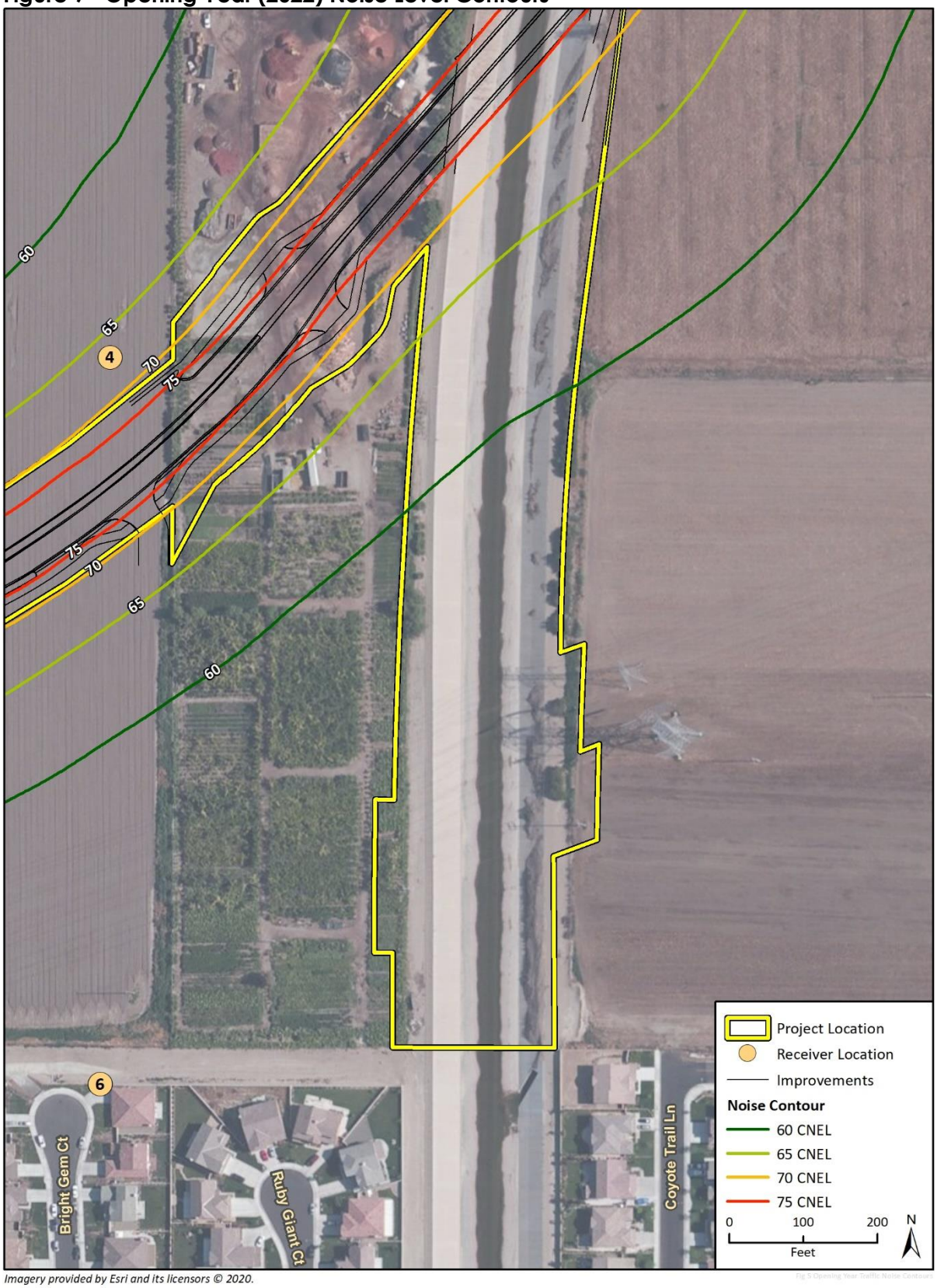

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Figure 10 Opening Year (2022) Noise Level Contours

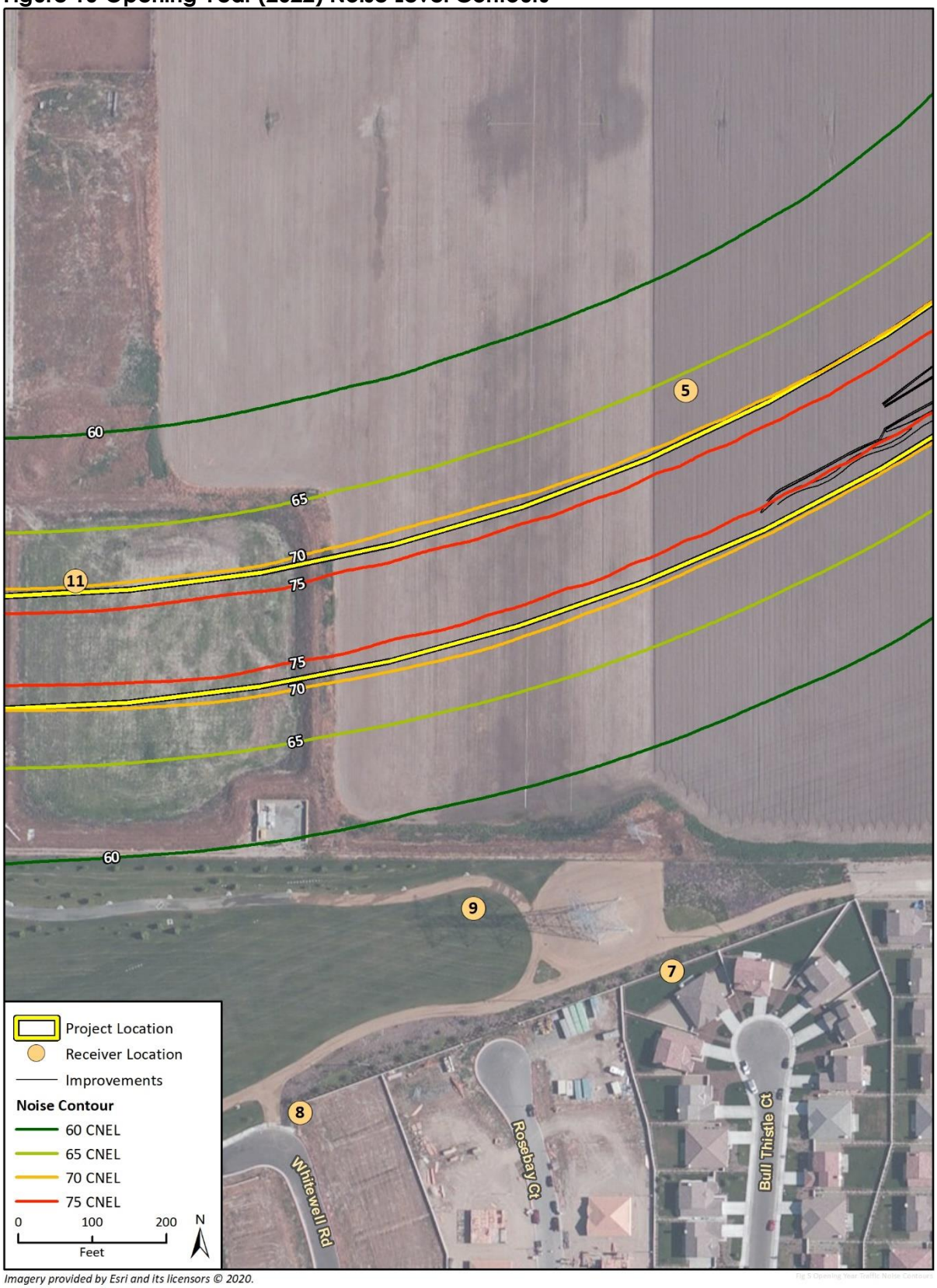

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Figure 11 Opening Year (2022) Noise Level Contours

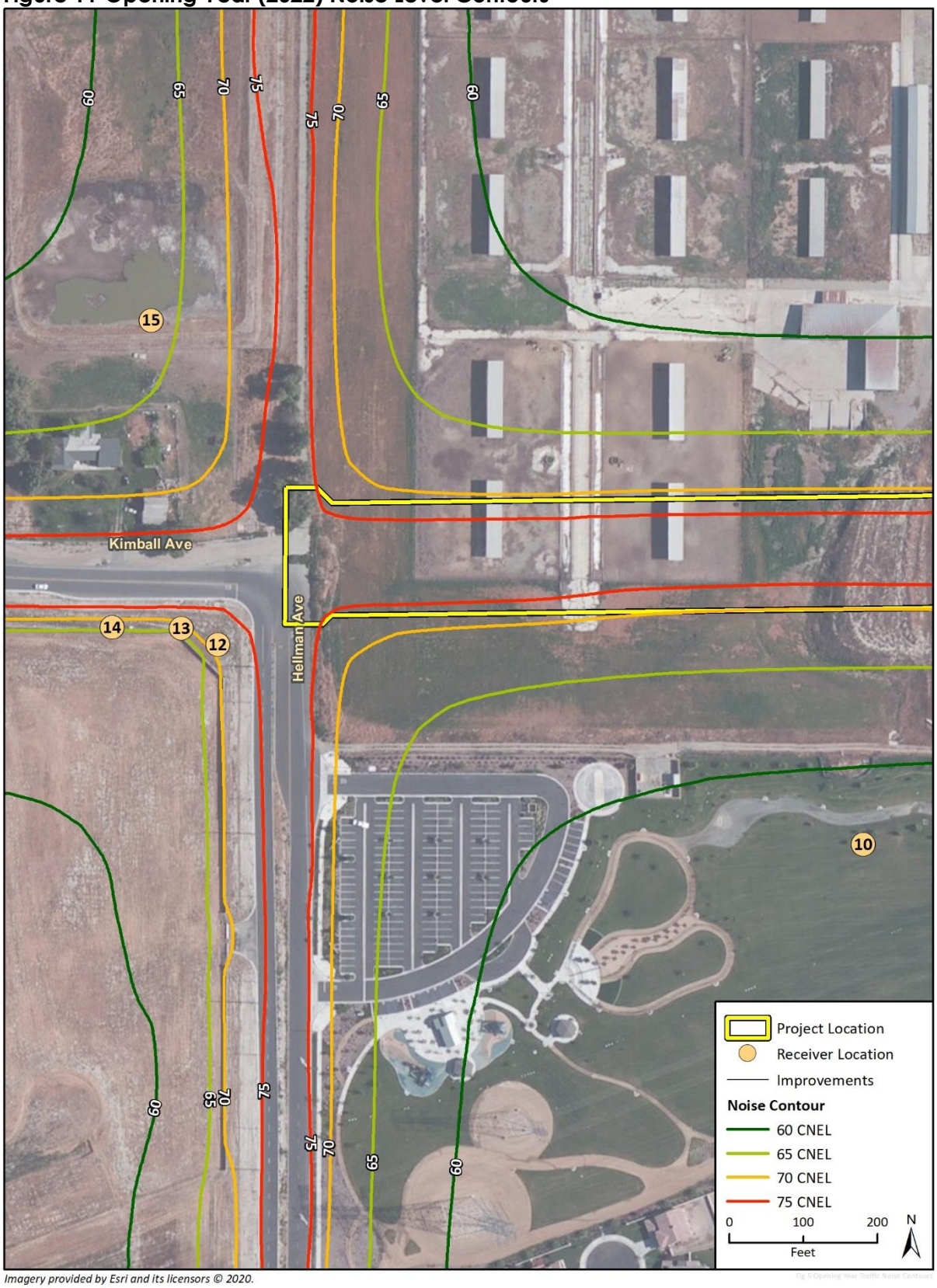

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Figure 12 Design Year (2024) Noise Level Contours

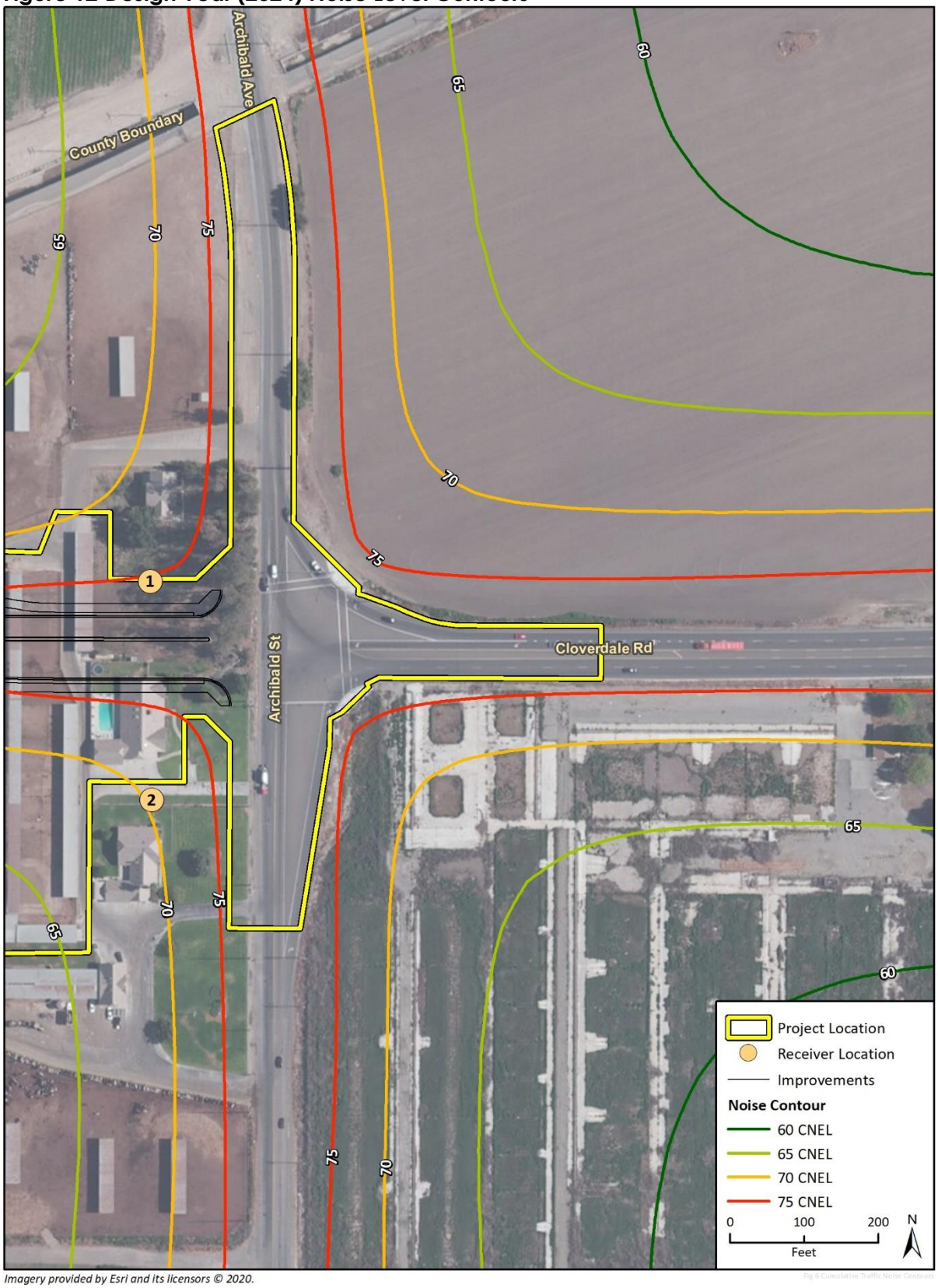

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Figure 13 Design Year (2024) Noise Level Contours

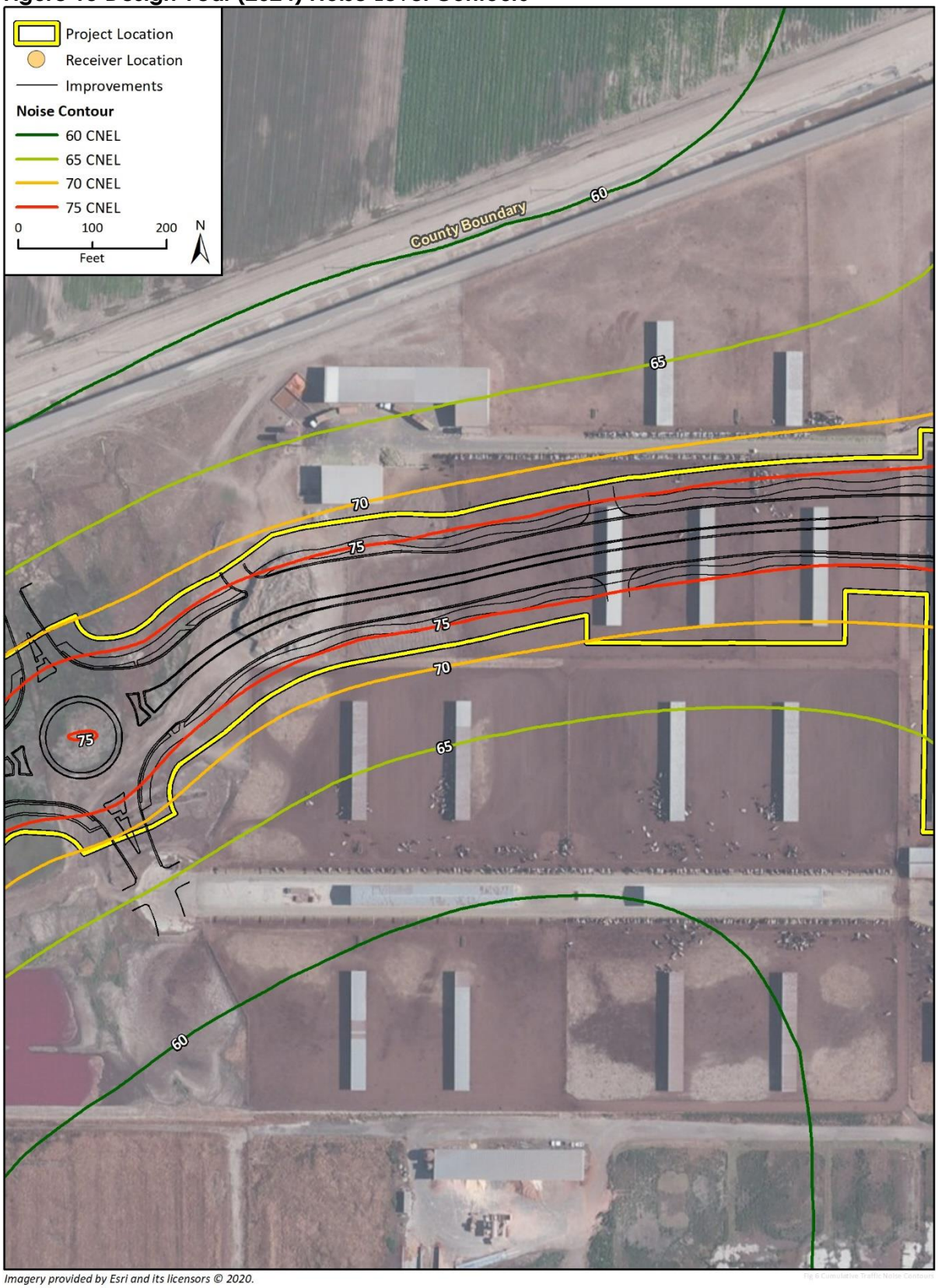

Figure 14 Design Year (2024) Noise Level Contours

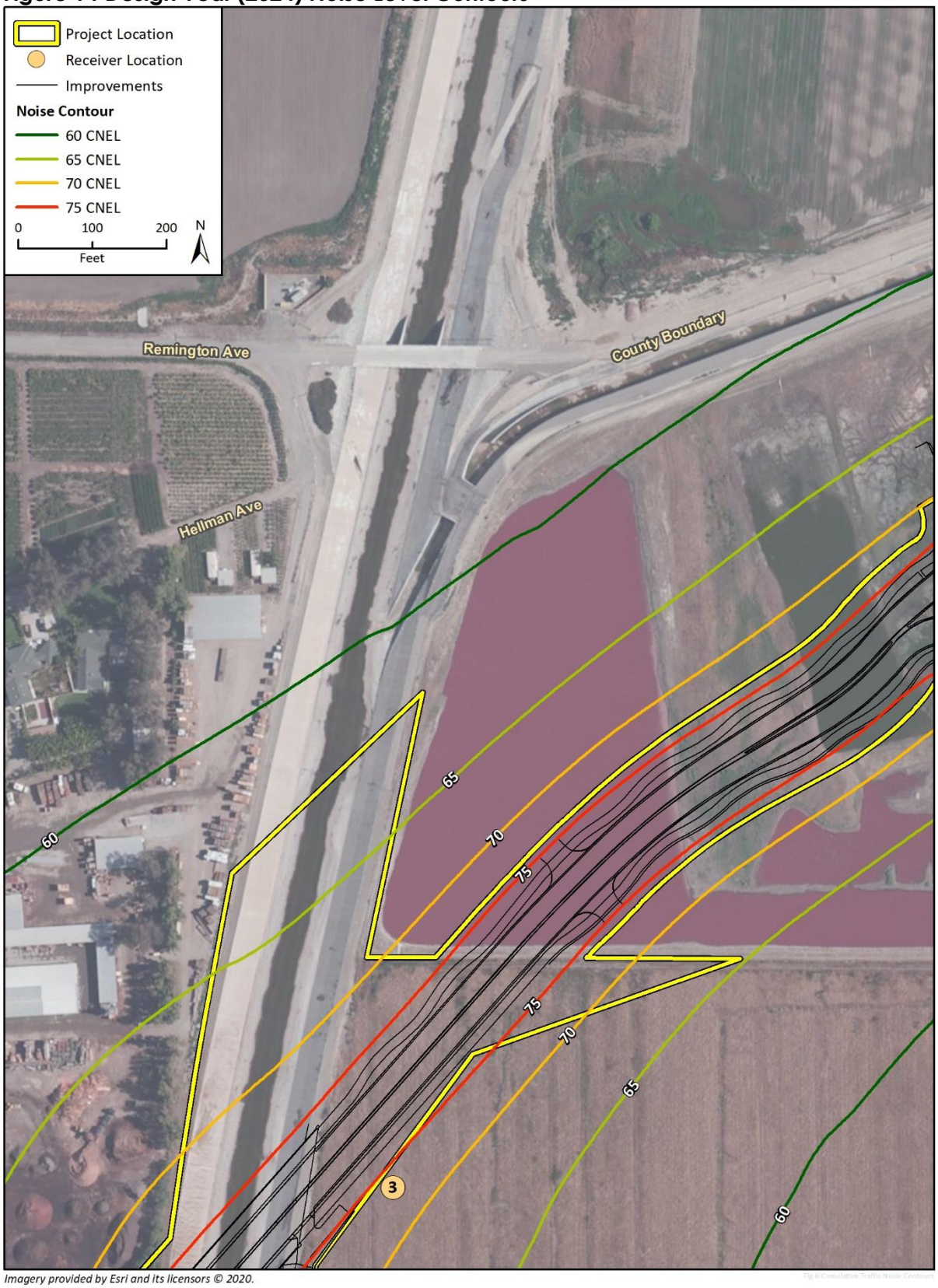

Figure 15 Design Year (2024) Noise Level Contours

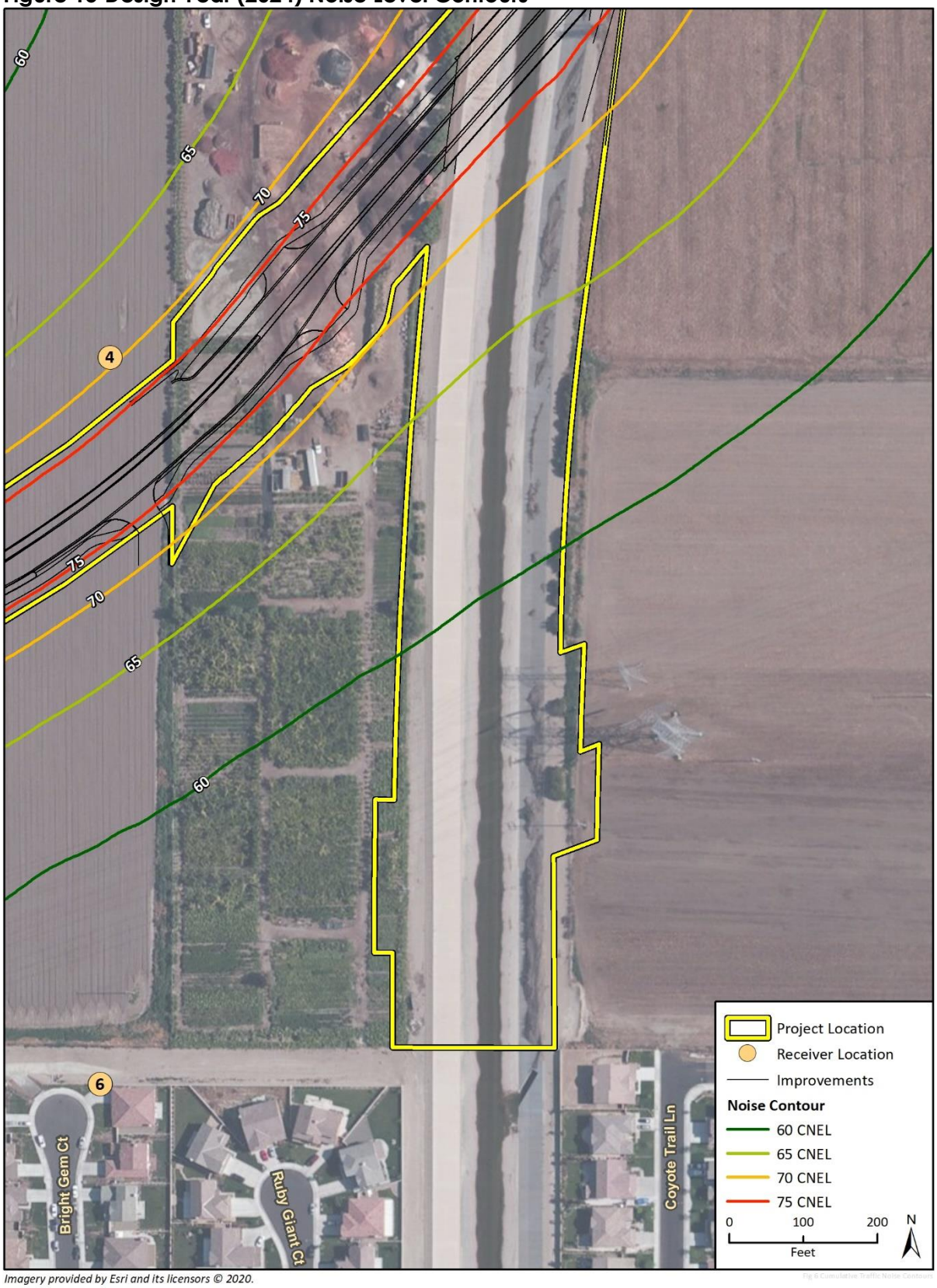

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Figure 16 Design Year (2024) Noise Level Contours

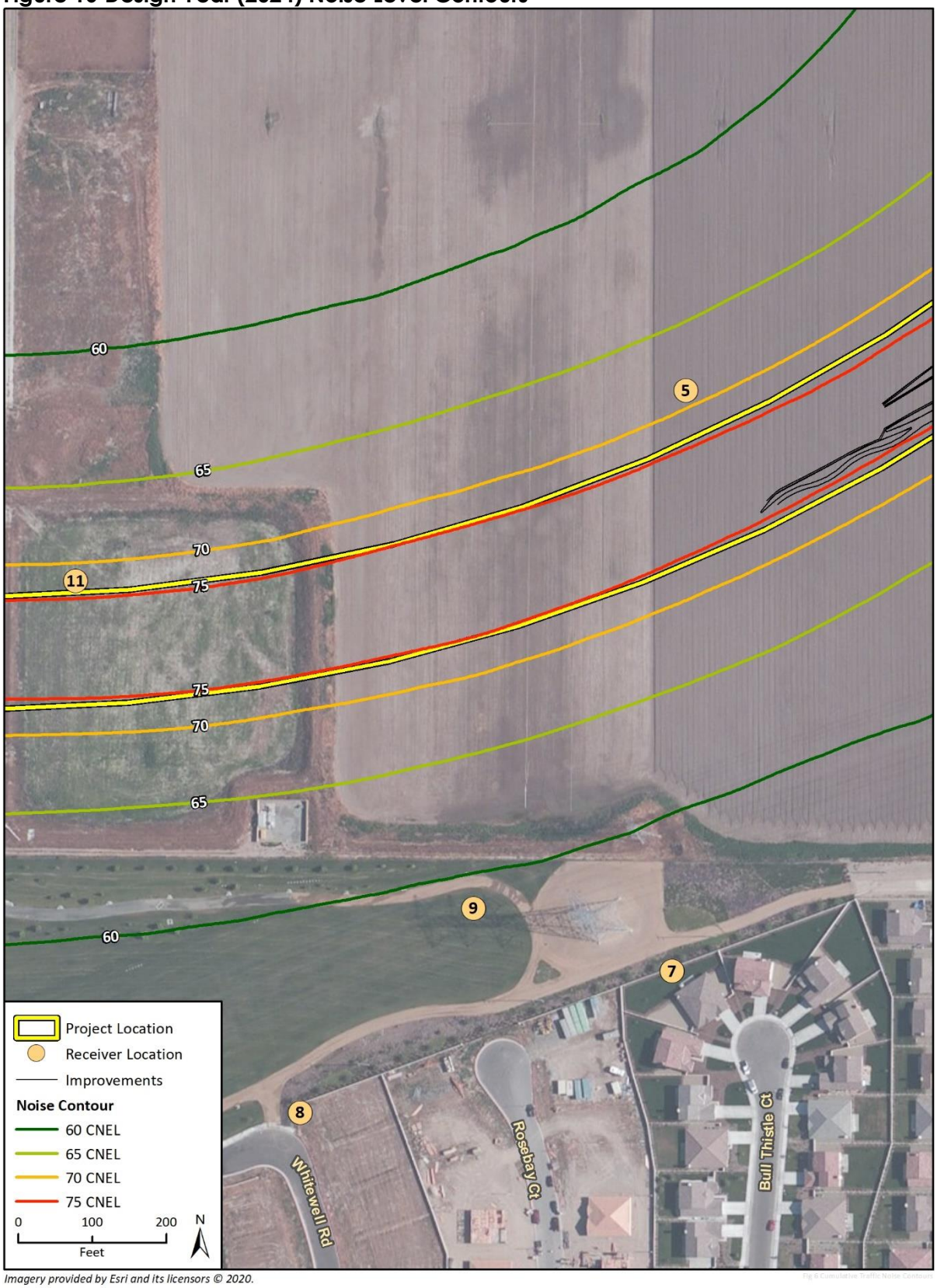

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Figure 17 Design Year (2024) Noise Level Contours

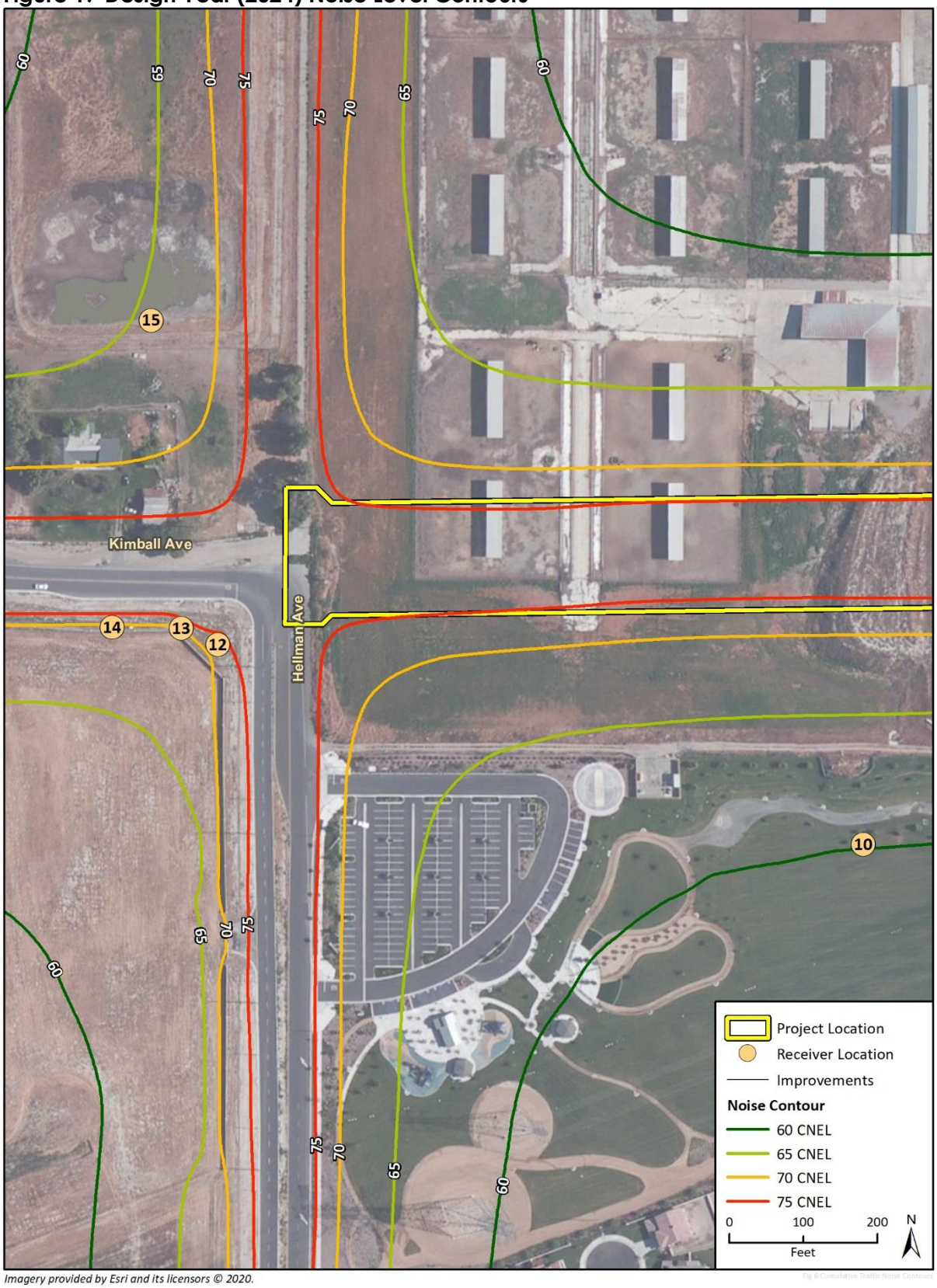

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Table 10 Traffic Noise Levels

Receiver	Land Use	Noise Level Limit*	Existing	Opening Year (2022)	Design Year (2042)
1	SFR	65	66	67	69
2	SFR	65	64	64	67
3	Comm.	75	49	70	73
4	Comm.	75	66	67	69
5	Comm.	75	68	66	69
6	SFR	65	52	53	56
7	SFR	65	54	54	57
8	SFR	65	53	54	57
9	Park	65	57	57	60
10	Park	65	58	59	61
11	Comm.	75	71	71	75
12	SFR	65	62	62	65
13	SFR	65	61	62	64
1114	SFR	65	62	62	64
15	Comm.	75	65	65	67

* Noise Limit Based on General Plan Tentatively Compatible Level.

LESS THAN SIGNIFICANT IMPACT

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be conducted by the project. The greatest anticipated source of vibration during general project construction activities would be from an excavator, which may be used within 80 feet of the nearest off-site structure. A vibratory roller was used for the purpose of this analysis as they create the highest anticipated vibration levels during construction activities. A vibratory roller generates approximately 0.21 in./sec. PPV at a distance of 25 feet (Caltrans 2013b). This would equal a vibration level of 0.058 in./sec. PPV at 80 feet. This vibration level is lower than the City's threshold of 0.0787 in./sec. PPV. Therefore, temporary impacts associated with construction would be less than significant.

The project does not include any substantial vibration sources associated with operation. Therefore, operational vibration impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The Chino Airport is the nearest public airport, located approximately 1.25 miles to the northwest of the project site. According to the noise compatibility contours figure for the Chino

Airport in the Riverside County Airport Land Use Compatibility Plan Policy Document (Riverside County Airport Land Use Commission 2004), the project site is located outside the airport's 60 CNEL noise contour but within Safety Zone III of the airport. However, the project is a roadway and would not hinder or create obstructions to operations at the Chino Airport. Therefore, no substantial noise exposure from airport noise would occur to construction workers, or users of the proposed roadway.

NO IMPACT

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14 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	■
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

a. Would the project 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)?

No Impact. The project would construct an approximately 6,180 feet (1.17 mile) long new segment of Limonite Avenue between Kimball Avenue and the existing Limonite Avenue east of Archibald Avenue across the Cucamonga Creek Channel. The construction of this gap closure would not induce unplanned population growth directly or indirectly, and no impact on population would occur.

NO IMPACT

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The nature of the project would not displace substantial people or housing or require construction of replacement housing. No impact on housing would occur.

NO IMPACT

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15 Public Services

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:				
1 Fire protection?	☐	☐	■	☐
2 Police protection?	☐	☐	■	☐
3 Schools?	☐	☐	■	☐
4 Parks?	☐	☐	■	☐
5 Other public facilities?	☐	☐	■	☐

a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

a.4. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the

construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

a.5. Would the project result in substantial adverse physical impacts associated with the provision of other new or physically altered public facilities, or the need for other new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

Less Than Significant Impact. 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 Homestead project, this corridor would be completed and improve connectivity between areas east and west of Cucamonga Creek Channel. This project would improve the response times for police and fire and would not have an adverse impact on parks or other public facilities.

LESS THAN SIGNIFICANT IMPACT

16 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	■
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	■

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

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

No Impact. 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. Improvements to the Limonite Gap Enclosure would include the addition of a Class II bike lane with a transition to a multi-use trail on both sides and a landscaped parkway. 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. The project would also not increase the demand on recreational facilities.

NO IMPACT

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17 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	■	☐
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	■	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	☐	☐	■	☐
d. Result in inadequate emergency access?	☐	☐	■	☐

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

d. Would the project result in inadequate emergency access?

Less Than Significant Impact. 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 Homestead project, this corridor would be completed and improve connectivity between areas east and west of Cucamonga Creek Channel. Improvements to the Limonite Gap Enclosure would include the addition of a Class II bike lane with a transition to a multi-use trail on both sides. The project would not adversely impact roadway segments and freeway facilities and would not be designed potentially hazardous geometric features. The project would improve emergency access to the future Homestead project and improve connectivity.

LESS THAN SIGNIFICANT IMPACT

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18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	■	☐	☐

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.

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

b. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is 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?

Less Than Significant Impact 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.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

Mitigation Measures:

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:

10. Project grading and development scheduling.
11. 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.
12. 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.
13. 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:

14. **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.
15. **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:

b. 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.

c. 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.

d. 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.

e. 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.

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19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	■
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	■
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	■
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	■
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	■

[xxx]

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

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

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

d. 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?

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact. The project would construct an approximately 6,180 feet (1.17 mile) long new segment of Limonite Avenue between Kimball Avenue and the existing Limonite Avenue east of Archibald Avenue across the Cucamonga Creek Channel. This transportation project would not require the expansion of water or wastewater and would not generate solid waste. The project would not be applicable to federal, state, and local water, wastewater, and solid waste management and reduction statues and regulations.

NO IMPACT

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20 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	■	☐
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	■	☐
d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	■	☐

a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

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

c. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less Than Significant Impact. 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. 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.

LESS THAN SIGNIFICANT IMPACT

21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Does the project:				
a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	■	☐	☐
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	■	☐
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	■	☐

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

Less Than Significant with Mitigation Incorporated. As discussed in Section 4, *Biological Resources*, the project site contains land cover types that would be classified as bare ground, disturbed, and developed. 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. The project site is surrounded by existing development, and regional wildlife movement is restricted due to the urbanized nature of area. The Cucamonga Creek channel is the only drainage feature on the project site. The Cucamonga Creek Channel is a cement-lined storm flow drainage that runs north to south and traverses through the center of the site. It contains no hydrophytic vegetation and is partially lined with non-native grass habitat. the project area does contain potentially suitable nesting habitat for BUOW. A single observation of BUOW sign was documented during the survey. Due to the presence of suitable BUOW habitat and the single observation within the study area, the proposed project would be required to comply with the standard conditions under the MSHCP, requiring a focused BUOW survey. Mitigation Measure BIO-1 would require sensitive species and nesting bird surveys prior to project construction, minimizing the potential for construction activities to have direct or indirect impacts on such species temporarily occupying or traversing the project site.

As noted under Section 5, *Cultural Resources*, the project site contains no structures which was determined to be ineligible for federal, state, or local designation. Though a cultural resources records search and field survey failed to identify archaeological resources on or immediately adjacent to the project site, construction activities have the potential to damage or destroy undiscovered scientifically important archaeological resources. Mitigation Measure CR-1 and CR-2 would reduce this impact to a less than significant level by halting ground-disturbing activities in the vicinity of any archaeological resources find and requiring evaluation and treatment of the resource under the direction of a qualified archaeologist.

Additionally, as discussed in Section 18, *Tribal Cultural Resources*, Mitigation Measures TCR-1A through TCR-1C would reduce potential impacts to tribal cultural resources to a less than significant level by requiring Native American monitoring during grading/excavation activities, establishing professional standards for monitors, and creating protocols in the event of an unanticipated discovery of archaeological resources, tribal cultural resources, or human remains and associated funerary objects. Therefore, impacts related to reduction of habitat, fish and wildlife populations, plant or animal communities, rare or endangered plant or animal range, or important examples of California history or prehistory would be less than significant with mitigation incorporated.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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

Less Than Significant Impact. As described in the discussion of environmental checklist Sections 1 through 20, the project would have no impact, a less than significant impact, or a less than significant impact with mitigation incorporated with respect to all environmental issues. Cumulative impacts of several resource areas have been addressed in the individual resource sections above: Air Quality, Greenhouse Gases. As noted in Section 3, *Air Quality*, the project would not result in a cumulatively considerable net increase of criteria pollutants, as project construction and operation would remain below SCAQMD daily thresholds. Other resource areas (e.g., agricultural/forestry, mineral resources) were determined to have no impact. Therefore, the project would not contribute to cumulative impacts related to these issues. Several resource issues (e.g., geology, hazards and hazardous materials) are project-specific by nature and impacts at one location do not add to impacts at other locations or create additive impacts. Furthermore, future projects in the vicinity of

the project site would be required to undergo the appropriate level of environmental review and mitigate potential impacts, as necessary.

LESS THAN SIGNIFICANT IMPACT

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

In general, impacts to human beings are associated with air quality, hazards and hazardous materials, and noise impacts. As discussed in Section 3, *Air Quality*, the project would result in less than significant impacts related to emissions of criteria pollutants, toxic air contaminants, or odors. As detailed in Section 9, *Hazards and Hazardous Materials,* the project would not result, either directly or indirectly, in adverse impacts related to hazardous materials. As discussed in Section 13, *Noise,* noise impacts associated with construction equipment operation on the project site would be less than significant. Compliance with applicable rules and regulations and contained in this document would reduce potential impacts on human beings to a less than significant level.

LESS THAN SIGNIFICANT IMPACT

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Appendix A

Model Output Files

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> Lemonite Gap Closure				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust					
Project Phases (Pounds)	**ROG (lbs/day)**	**CO (lbs/day)**	**NOx (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**SOx (lbs/day)**	**CO2 (lbs/day)**	**CH4 (lbs/day)**	**N2O (lbs/day)**	**CO2e (lbs/day)**
Grubbing/Land Clearing	1.23	13.43	19.17	50.73	0.73	50.00	10.89	0.49	10.40	0.08	7,956.53	0.60	0.94	8,250.56
Grading/Excavation	7.30	77.88	60.79	52.57	2.57	50.00	12.66	2.26	10.40	0.17	16,922.91	4.70	0.39	17,155.34
Drainage/Utilities/Sub-Grade	6.55	52.02	73.68	53.06	3.06	50.00	13.15	2.75	10.40	0.13	12,539.86	2.75	0.42	12,735.00
Paving	1.33	14.77	18.41	0.89	0.89	0.00	0.68	0.68	0.00	0.06	6,075.03	0.58	0.64	6,280.58
Maximum (pounds/day)	7.30	77.88	73.68	53.06	3.06	50.00	13.15	2.75	10.40	0.17	16,922.91	4.70	0.94	17,155.34
Total (tons/construction project)	0.74	7.16	7.15	5.91	0.30	5.61	1.43	0.26	1.17	0.02	1,727.11	0.41	0.06	1,756.60

Notes:

Project Start Year ->	2021
Project Length (months) ->	12
Total Project Area (acres) ->	22
Maximum Area Disturbed/Day (acres) ->	5
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	947	0	1,440	0	320	40
Grading/Excavation	210	0	330	0	1,200	40
Drainage/Utilities/Sub-Grade	316	0	480	0	800	40
Paving	0	631	0	960	400	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Lemonite Gap Closure

Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.02	0.18	0.25	0.67	0.01	0.66	0.14	0.01	0.14	0.00	105.03	0.01	0.01	98.80
Grading/Excavation	0.43	4.63	3.61	3.12	0.15	2.97	0.75	0.13	0.62	0.01	1,005.22	0.28	0.02	924.46
Drainage/Utilities/Sub-Grade	0.26	2.06	2.92	2.10	0.12	1.98	0.52	0.11	0.41	0.01	496.58	0.11	0.02	457.50
Paving	0.03	0.29	0.36	0.02	0.02	0.00	0.01	0.01	0.00	0.00	120.29	0.01	0.01	112.81
Maximum (tons/phase)	0.43	4.63	3.61	3.12	0.15	2.97	0.75	0.13	0.62	0.01	1005.22	0.28	0.02	924.46
Total (tons/construction project)	0.74	7.16	7.15	5.91	0.30	5.61	1.43	0.26	1.17	0.02	1727.11	0.41	0.06	1,593.57

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Road Construction Emissions Model **Version 9.0.0**

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Lemonite Gap Closure	
Construction Start Year	2021	Enter a Year between 2014 and 2040 (inclusive)
Project Type	3	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	12.00	months
Working Days per Month	22.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	2	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the Ione formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	1.17	miles
Total Project Area	22.00	acres
Maximum Area Disturbed/Day	5.00	acres
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx#regionalseries

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing	20.00		947.00
	Grading/Excavation	20.00		210.00
	Drainage/Utilities/Sub-Grade	20.00	316.00	
	Paving	20.00		
Asphalt	Grubbing/Land Clearing	20.00		
	Grading/Excavation	20.00		
	Drainage/Utilities/Sub-Grade	20.00		
	Paving	20.00	631.00	

Mitigation Options

On-road Fleet Emissions Mitigation	2010 and Newer On-road Vehicles Fleet	Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Off-road Equipment Emissions Mitigation	Tier 4 Equipment	Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard
Will all off-road equipment be tier 4?	Tier 4 equipment for limited equipment types	

If 'Tier 4 equipment for limited equipment types' is selected, please provide tier information for each equipment type in cells from E183 to E379 below.

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing		1.20		1/1/2021
Grading/Excavation		5.40		2/7/2021
Drainage/Utilities/Sub-Grade		3.60		7/22/2021
Paving		1.80		11/9/2021
Totals (Months)		12		

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		48	1440.00
Miles/round trip: Grading/Excavation		30.00		11	330.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		16	480.00
Miles/round trip: Paving		30.00		0	0.00

2010+ Model Year Mitigation Option Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grading/Excavation (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Paving (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,777.75	0.00	0.28	1,861.07
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	3.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.13	1.34	10.10	0.36	0.16	0.05	5,648.65	0.01	0.89	5,913.39
Tons per const. Period - Grubbing/Land Clearing	0.00	0.02	0.13	0.00	0.00	0.00	74.56	0.00	0.01	78.06
Pounds per day - Grading/Excavation	0.03	0.31	2.31	0.08	0.04	0.01	1,294.48	0.00	0.20	1,355.15
Tons per const. Period - Grading/Excavation	0.00	0.02	0.14	0.00	0.00	0.00	76.89	0.00	0.01	80.50
Pounds per day - Drainage/Utilities/Sub-Grade	0.04	0.45	3.37	0.12	0.05	0.02	1,882.88	0.00	0.30	1,971.13
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.02	0.13	0.00	0.00	0.00	74.56	0.00	0.01	78.06
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.01	0.05	0.40	0.01	0.01	0.00	226.02	0.00	0.04	236.61

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		0	0.00
Miles/round trip: Grading/Excavation		30.00		0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		0	0.00
Miles/round trip: Paving		30.00		32	960.00

2010+ Model Year Mitigation Option Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grading/Excavation (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Paving (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,777.75	0.00	0.28	1,861.07
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	3.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.09	0.89	6.74	0.24	0.10	0.04	3,762.50	0.00	0.59	3,938.84
Tons per const. Period - Paving	0.00	0.02	0.13	0.00	0.00	0.00	74.50	0.00	0.01	77.99
Total tons per construction project	0.00	0.02	0.13	0.00	0.00	0.00	74.50	0.00	0.01	77.99

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions	User Override of Worker Commute Default Values	Default Values		
User Input				
Miles/ one-way trip		20	Calculated	Calculated
One-way trips/day		2	Daily Trips	Daily VMT
No. of employees: Grubbing/Land Clearing		8	16	320.00
No. of employees: Grading/Excavation		30	60	1,200.00
No. of employees: Drainage/Utilities/Sub-Grade		20	40	800.00
No. of employees: Paving		10	20	400.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.02	1.10	0.10	0.05	0.02	0.00	339.80	0.00	0.01	342.28
Grading/Excavation (grams/mile)	0.02	1.10	0.10	0.05	0.02	0.00	339.80	0.00	0.01	342.28
Draining/Utilities/Sub-Grade (grams/mile)	0.02	1.10	0.10	0.05	0.02	0.00	339.80	0.00	0.01	342.28
Paving (grams/mile)	0.02	1.10	0.10	0.05	0.02	0.00	339.24	0.00	0.01	341.71
Grubbing/Land Clearing (grams/trip)	1.18	2.95	0.34	0.00	0.00	0.00	72.81	0.08	0.04	85.39
Grading/Excavation (grams/trip)	1.18	2.95	0.34	0.00	0.00	0.00	72.81	0.08	0.04	85.39
Draining/Utilities/Sub-Grade (grams/trip)	1.18	2.95	0.34	0.00	0.00	0.00	72.81	0.08	0.04	85.39
Paving (grams/trip)	1.17	2.94	0.34	0.00	0.00	0.00	72.70	0.08	0.04	85.24
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.06	0.88	0.08	0.03	0.01	0.00	242.29	0.01	0.01	244.48
Tons per const. Period - Grubbing/Land Clearing	0.00	0.01	0.00	0.00	0.00	0.00	3.20	0.00	0.00	3.23
Pounds per day - Grading/Excavation	0.21	3.30	0.30	0.12	0.05	0.01	908.58	0.02	0.03	916.81
Tons per const. Period - Grading/Excavation	0.01	0.20	0.02	0.01	0.00	0.00	53.97	0.00	0.00	54.46
Pounds per day - Drainage/Utilities/Sub-Grade	0.14	2.20	0.20	0.08	0.03	0.01	605.72	0.02	0.02	611.21
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.01	0.09	0.01	0.00	0.00	0.00	23.99	0.00	0.00	24.20
Pounds per day - Paving	0.07	1.10	0.10	0.04	0.02	0.00	302.36	0.01	0.01	305.10
Tons per const. Period - Paving	0.00	0.02	0.00	0.00	0.00	0.00	5.99	0.00	0.00	6.04
Total tons per construction project	0.02	0.32	0.03	0.01	0.00	0.00	87.14	0.00	0.00	87.93

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Round Trips/Vehicle/Day	Default Values Round Trips/Vehicle/Day	Calculated Trips/day	User Override of Miles/Round Trip	Default Values Miles/Round Trip	Calculated Daily VMT
User Input								
Grubbing/Land Clearing - Exhaust		1		5	5		8.00	40.00
Grading/Excavation - Exhaust		1		5	5		8.00	40.00
Drainage/Utilities/Subgrade		1		5	5		8.00	40.00
Paving		1		5	5		8.00	40.00

2010+ Model Year Mitigation Option Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grading/Excavation (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Paving (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,777.75	0.00	0.28	1,861.07
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	3.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.04	0.31	0.01	0.00	0.00	156.91	0.00	0.02	164.26
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	2.07	0.00	0.00	2.17
Pounds per day - Grading/Excavation	0.00	0.04	0.31	0.01	0.00	0.00	156.91	0.00	0.02	164.26
Tons per const. Period - Grading/Excavation	0.00	0.00	0.02	0.00	0.00	0.00	9.32	0.00	0.00	9.76
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.04	0.31	0.01	0.00	0.00	156.91	0.00	0.02	164.26
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.01	0.00	0.00	0.00	6.21	0.00	0.00	6.50
Pounds per day - Paving	0.00	0.04	0.31	0.01	0.00	0.00	156.77	0.00	0.02	164.12
Tons per const. Period - Paving	0.00	0.00	0.01	0.00	0.00	0.00	3.10	0.00	0.00	3.25
Total tons per construction project	0.00	0.00	0.04	0.00	0.00	0.00	20.71	0.00	0.00	21.68

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		5.00	50.00	0.66	10.40	0.14
Fugitive Dust - Grading/Excavation		5.00	50.00	2.97	10.40	0.62
Fugitive Dust - Drainage/Utilities/Subgrade		5.00	50.00	1.98	10.40	0.41

Values in cells E232 through E236, E283 through E287, E334 through E338, and E385 through E389 are required when non-default Equipment are used and they are not all Tier 4

Off-Road Equipment Emissions

Grubbing/Land Clearing	Default Number of Vehicles	Mitigation Option Override of	Current		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Model Default Tier	Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	Model Default Tier	Model Default Tier	Crawler Tractors	0.55	2.44	6.97	0.26	0.24	0.01	760.36	0.25	0.01	768.56
		Model Default Tier	Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	Tier 4	Tier 4	Excavators	0.32	7.84	0.64	0.03	0.03	0.01	1,000.38	0.32	0.01	1,011.17
		Model Default Tier	Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	Model Default Tier	Model Default Tier	Signal Boards	0.17	0.90	1.08	0.04	0.04	0.00	147.94	0.02	0.00	148.69
		Model Default Tier	Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing	pounds per day	1.04	11.17	8.68	0.34	0.31	0.02	1,908.69	0.58	0.02	1,928.43
Grubbing/Land Clearing	tons per phase	0.01	0.15	0.11	0.00	0.00	0.00	25.19	0.01	0.00	25.46

Grading/Excavation	Default Number of Vehicles	Mitigation Option Override of	Current		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Model Default Tier	Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	Model Default Tier	Model Default Tier	Cranes	0.41	1.98	4.85	0.20	0.18	0.01	558.74	0.18	0.01	564.76
	2	Model Default Tier	Model Default Tier	Crawler Tractors	1.10	4.87	13.94	0.52	0.48	0.02	1,520.73	0.49	0.01	1,537.12
		Model Default Tier	Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	Tier 4	Tier 4	Excavators	0.63	15.67	1.27	0.06	0.06	0.02	2,000.77	0.65	0.02	2,022.34
		Model Default Tier	Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	Model Default Tier	Model Default Tier	Graders	0.91	3.53	11.85	0.38	0.35	0.01	1,283.37	0.42	0.01	1,297.19
		Model Default Tier	Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	Model Default Tier	Model Default Tier	Rollers	0.57	5.64	5.77	0.35	0.32	0.01	762.27	0.25	0.01	770.48
		Model Default Tier	Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	Model Default Tier	Model Default Tier	Rubber Tired Loaders	1.03	4.80	11.59	0.39	0.36	0.02	1,815.68	0.59	0.02	1,835.29
	4	Tier 4	Tier 4	Scrapers	1.86	32.31	3.73	0.19	0.17	0.06	5,871.65	1.90	0.05	5,934.95
	3	Model Default Tier	Model Default Tier	Signal Boards	0.17	0.90	1.08	0.04	0.04	0.00	147.94	0.02	0.00	148.69
		Model Default Tier	Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	Model Default Tier	Model Default Tier	Tractors/Loaders/Backhoes	0.37	4.52	3.79	0.22	0.21	0.01	601.80	0.19	0.01	608.28
		Model Default Tier	Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
	Grading/Excavation	pounds per day	7.06	74.23	57.87	2.35	2.17	0.15	14,562.94	4.68	0.13	14,719.11
	Grading/Excavation	tons per phase	0.42	4.41	3.44	0.14	0.13	0.01	865.04	0.28	0.01	874.32

Drainage/Utilities/Subgrade	Default Number of Vehicles	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Current Equipment Tier		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*				pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Model Default Tier	Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	Model Default Tier	Model Default Tier	Air Compressors	0.29	2.42	2.04	0.13	0.13	0.00	375.26	0.03	0.00	376.75
		Model Default Tier	Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	Model Default Tier	Model Default Tier	Generator Sets	0.36	3.68	3.17	0.17	0.17	0.01	623.04	0.03	0.00	625.23
	2	Model Default Tier	Model Default Tier	Graders	0.91	3.53	11.85	0.38	0.35	0.01	1,283.37	0.42	0.01	1,297.19
		Model Default Tier	Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	Model Default Tier	Model Default Tier	Plate Compactors	0.04	0.21	0.25	0.01	0.01	0.00	34.48	0.00	0.00	34.65
		Model Default Tier	Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	Model Default Tier	Model Default Tier	Pumps	0.38	3.74	3.21	0.18	0.18	0.01	623.04	0.03	0.00	625.28
		Model Default Tier	Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	Model Default Tier	Model Default Tier	Rough Terrain Forklifts	0.12	2.29	1.61	0.06	0.06	0.00	333.77	0.11	0.00	337.37
		Model Default Tier	Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	Model Default Tier	Model Default Tier	Scrapers	3.72	28.02	42.81	1.67	1.53	0.06	5,871.65	1.90	0.05	5,934.95
	3	Model Default Tier	Model Default Tier	Signal Boards	0.17	0.90	1.08	0.04	0.04	0.00	147.94	0.02	0.00	148.69
		Model Default Tier	Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	Model Default Tier	Model Default Tier	Tractors/Loaders/Backhoes	0.37	4.52	3.79	0.22	0.21	0.01	601.80	0.19	0.01	608.28
		Model Default Tier	Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
				pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Drainage/Utilities/Sub-Grade	pounds per day	6.36	49.33	69.81	2.85	2.66	0.10	9,894.35	2.73	0.09	9,988.40
Drainage/Utilities/Sub-Grade	tons per phase	0.25	1.95	2.76	0.11	0.11	0.00	391.82	0.11	0.00	395.54

Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Current Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
		Model Default Tier	Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	Model Default Tier	Model Default Tier	Pavers	0.24	2.90	2.57	0.12	0.11	0.00	455.07	0.15	0.00	459.98
	1	Model Default Tier	Model Default Tier	Paving Equipment	0.19	2.54	1.93	0.10	0.09	0.00	394.46	0.13	0.00	398.71
		Model Default Tier	Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	Model Default Tier	Model Default Tier	Rollers	0.19	1.88	1.91	0.12	0.11	0.00	254.09	0.08	0.00	256.83
		Model Default Tier	Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	Model Default Tier	Model Default Tier	Signal Boards	0.17	0.90	1.08	0.04	0.04	0.00	147.94	0.02	0.00	148.69
		Model Default Tier	Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	Model Default Tier	Model Default Tier	Tractors/Loaders/Backhoes	0.37	4.52	3.77	0.22	0.20	0.01	601.83	0.19	0.01	608.31
		Model Default Tier	Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Model Default Tier	Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Paving	pounds per day	1.17	12.75	11.26	0.60	0.55	0.02	1,853.39	0.57	0.02	1,872.52
Paving	tons per phase	0.02	0.25	0.22	0.01	0.01	0.00	36.70	0.01	0.00	37.08
Total Emissions all Phases (tons per construction period) =>		0.71	6.76	6.54	0.27	0.25	0.01	1,318.75	0.40	0.01	1,332.39

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET