4.3 AIR QUALITY AND GREENHOUSE GAS EMISSIONS

This section presents the environmental setting and impact analysis for air quality and greenhouse gas (GHG) emissions. This air quality and GHG emissions analysis considers the whole of the Proposed Project, whereas other resource topic sections focus only on the revised project. The CPUC determined that this analysis approach was necessary for air quality and GHG emissions because a number of substantial changes have occurred since the time of the 2013 RTRP EIR analysis. These changes have the potential to cause new significant impacts for the Proposed Project which include:

1. New air quality modeling methodology
2. Changes in background pollutant concentrations since the analysis in the 2013 RTRP EIR
3. Construction locations have changed and are closer to sensitive receptors
4. Construction schedule now includes concurrent construction activities
5. Types of construction activity proposed

These changes could result in a new significant air quality impacts not previously analyzed in the 2013 RTRP EIR. Additional information on the approach to this analysis is provided below in Section 4.3.7 Project Impact Analysis. Appendix G presents the Air Quality and Greenhouse Gas Emissions Technical Memorandum that supports the analysis in this section.

4.3.1 Consideration of Scoping Comments

The public expressed concerns regarding air quality impacts during public scoping for this Subsequent EIR. Table 4.3-1 summarizes the scoping comments received regarding air quality and GHG impacts and identifies how and/or where these comments are addressed.

Table 4.3-1 Scoping Comments Related to Air Quality Impacts

Summary of Comment	Location Comment is Addressed
South Coast Air Quality Management District requested to review the Draft Subsequent EIR, including all air quality appendices.	The South Coast Air Quality Management District was sent a copy of the Draft Subsequent EIR for review.
Undergrounding power lines create odors during paving.	Objectionable odors are addressed in this Subsequent EIR. Refer to Section 4.3.7: Project Impact Analysis under Impact Air-e.
Project will degrade air quality and cause air pollution.	This air quality analysis considers Impacts on air quality and air pollution. Refer to Section 4.3.7: Project Impact Analysis under Impacts Air-a, Air-b, and Air-c.

4.3.2 Approach to Data Collection

Air Basin Designations

The current status of the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) attainment in the South Coast Air Basin (SCAB), as of 2016[1], was acquired from the SCAQMD (SCAQMD, 2016b).

Emission Factors

Vehicular emissions were computed using the California Air Resources Board's (CARB) emission factor model, EMission FACtor (EMFAC) 2014 (v1.0.7), to estimate on-road emissions, using the 2020[2] emission factors. Emissions from heavy-duty equipment, such as excavators, loaders, cranes, and off-road haul trucks were computed by using emission factors from CARB's OFFROAD emissions model and the 2020 emission factors. The emission factors for vehicles traveling over paved or unpaved roads were calculated using the methodology found in Section 13.2, of the U.S. Environmental Protection Agency's (USEPA's) AP-42. Fugitive dust emissions from site preparation, grading equipment passes, soil movement, unloading/loading of materials, and other construction related activities is based on work performed by Midwest Research Institute (Refer to Appendix G for further details).

Helicopter combustion emissions were based on the FAA's *Aviation Emissions and Air Quality Handbook* (FAA, 2015) and the FAA's Aviation Environmental Design Tool (FAA, 2014). The helicopter combustion emission calculations were reviewed per the *Guidance on Determination of Helicopter Emissions* (FOCA, 2015). (Refer to Appendix G for further details)

Ambient Air Pollutant Concentrations

Background air pollutant concentration data for the years 2013 through 2016 were obtained from SCAQMD (SCAQMD, 2016a). The closest air monitoring station to the Proposed Project is the Mira Loma station (also referred to as Metropolitan Riverside 3) located at 5130 Poinsettia Place in Riverside. Meteorological data used during modeling was obtained from SCAQMD for the period 2012 through 2016 (Refer to Appendix G for further details).

4.3.3 Environmental Setting

Air Basin

The Proposed Project area is within SCAB, which encompasses Orange County and the coastal portions of Los Angeles, San Bernardino, and Riverside Counties. SCAQMD is the regional agency tasked with managing air quality and GHG emission reductions in SCAB.

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1 2016 data are the most recent at the time of the NOP.

2 Construction is now assumed to start in 2021, as detailed in Appendix A, but use of 2020 emission factors is a conservative approach.

Climate, Meteorology, and Geography

Meteorological and climatological conditions influence ambient air quality. The topography and climate of SCAB results in a higher potential for air pollution than other parts of the state. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cap, or "inversion," over the cool marine layer and inhibits the pollutants released into the marine layer from dispersing upward. Light winds during the summer further limit ventilation. Sunlight triggers the photochemical reactions that produce ozone, and this region experiences more days of sunlight than many other major urban areas in the nation (City of Riverside, 2012).

Criteria Air Pollutant Standards and Definitions

Federal Standards

The USEPA has set air pollutant emission standards, referred to as NAAQS, to protect public health. NAAQS are defined for six criteria pollutants:

- Ozone (O_3)
- Carbon monoxide (CO)
- Nitrogen dioxide (NO_2)
- Sulfur dioxide (SO_2)
- Lead (Pb)
- Particulate matter (PM)

Particulate matter criteria pollutants are classified as either respirable particulate matter less than 10 micrometers in diameter (PM_{10}), or fine particulate matter less than 2.5 micrometers in diameter ($PM_{2.5}$).

Ozone

Ozone is found in the upper atmosphere (as the ozone layer) as well as at ground level. At ground level, ozone is considered a pollutant. Ozone forms when ozone precursors (i.e., reactive organic gases [ROGs], carbon monoxide, and nitrogen oxides [NO_X]) react with sunlight in the atmosphere. Sources of these precursors include fuel combustion in vehicles and industrial processes, gasoline vapors, and chemical solvents. Ozone can cause respiratory problems (e.g., chest pain, coughing, throat irritation) and exacerbate existing respiratory problems, such as asthma and bronchitis (USEPA, 2016a). Ozone is at the highest concentrations in summer. From the late 1970s to 2014, maximum ozone concentrations have been reduced by approximately 60 percent (SCAQMD, 2014).

Carbon Monoxide

Carbon monoxide is a colorless, odorless gas produced by the incomplete combustion of fossil fuels, and is emitted directly from internal combustion engines. Carbon monoxide concentrations tend to be the highest on winter mornings when surface-based inversions trap the pollutant at ground level. The primary source of carbon monoxide in urban areas is from motor vehicles. Higher concentrations of carbon monoxide are found along transportation corridors. Public exposure to carbon monoxide results in reduced oxygen-carrying capacity of the blood. High carbon monoxide concentrations can result in health risks, particularly for individuals with compromised cardiovascular systems (USEPA, 2016d). There were six state

exceedances and two federal exceedances in 2000, compared with no state or federal exceedances in 2014 (SCAQMD, 2016a).

Nitrogen Dioxide

Nitrogen dioxide is formed during combustion of fossil fuels from vehicles and industrial processes. Nitrogen dioxide is an ozone precursor, which can also cause acid rain and acid snow. Health effects of nitrogen dioxide include airway inflammation in healthy people, and exacerbation of preexisting asthma (USEPA, 2016a).

Sulfur Dioxide

Sulfur dioxide is a colorless, acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. Sulfur dioxide has the potential to damage building materials, and can cause health effects at high concentrations. It can irritate lung tissue and increase the risk of acute and chronic respiratory disease. Sulfur dioxide is a precursor to the formation of atmospheric sulfate and particulate matter, and contributes to potential atmospheric sulfuric acid formation that can precipitate downwind as acid rain (USEPA, 2016a). Industrial facilities also contribute to gaseous sulfur dioxide levels in SCAB. No exceedances of sulfur oxides (SO_x) have occurred in SCAB since the 1960s (SCAQMD, 1997).

Lead

Lead has a range of adverse neurotoxin health effects and was formerly released into the atmosphere primarily via leaded gasoline products. The phase-out of leaded gasoline in California resulted in decreasing levels of atmospheric lead. Most aviation gasoline (general aviation fuel for piston engines) also contains lead. Lead is a highly stable compound that accumulates in the environment and in living organisms. In humans, lead exposures can interfere with the maturation and development of red blood cells, affect liver and kidney functions, and cause nervous system damage (CARB, 2015b). There has not been a state or federal exceedance in SCAB since 1983 (SCAQMD, 1997).

Particulate Matter

Respirable Particulate Matter. Particulate matter is a combination of liquid or solid particles suspended in the air. PM_{10} particles are smaller than 10 micrometers in diameter and typically include dust, pollen, and mold. Liquid particles include those from sprays and other toxic chemical compounds. PM_{10} particles are a threat to health because they can enter the lungs and are small enough that the respiratory system cannot naturally filter them out. PM_{10} can exacerbate asthma and bronchitis and potentially contribute to premature death (USEPA, 2016a).

Fine Particulate Matter. Fine particulate matter is a combination of liquid or solid particles suspended in the air. $PM_{2.5}$ particles are smaller than 2.5 micrometers in diameter and typically include combustion particles, organic compounds, and metal particles. $PM_{2.5}$ is considered more hazardous to human health than PM_{10} because it can contain a larger variety of toxic components than PM_{10}, and can travel farther into the lungs, potentially causing scarring of lung tissue and reduced lung capacity (USEPA, 2016a).

State Standards
CARB has set CAAQS for four pollutants in addition to the six NAAQS criteria pollutants:

- Sulfates
- Hydrogen sulfide (H_2S)
- Vinyl chloride (C_2H_3Cl)
- Visibility-reducing particles

Table 4.3-2 presents the NAAQS and CAAQS for the criteria air pollutants at different averaging periods, along with the primary and secondary standards for each. Primary standards are the levels of air quality necessary to protect the public health with an adequate margin of safety. Secondary standards are the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

Sulfates
Sulfates are the oxidized ionic form of sulfur. Most sulfur-containing emissions come from combustion of fossil fuels, which form sulfate in the air. Health effects of sulfate exposure include exacerbation of asthma, increased risk of cardio-pulmonary disease, and lung irritation (CARB, 2016).

Hydrogen Sulfide
Hydrogen sulfide is released principally in natural gas purification, oil refinement, and geothermal energy production (CARB, 2016). Hydrogen sulfide is a mucous membrane and respiratory tract irritant. Health effects of hydrogen sulfide exposure range from shortness of breath, bronchitis, headaches, and, at higher levels, loss of consciousness, seizures, and death (ATSDR, 2014).

Vinyl Chloride
Vinyl chloride is a manufactured substance used to make polyvinyl chloride plastic and vinyl products. Immediate effects from exposure include dizziness and drowsiness. High levels of vinyl chloride can damage the liver, lungs, and kidneys (ATSDR, 2006).

Visibility-Reducing Particles
Visibility-reducing particles include solid particles, liquid globules, and solid particles with liquid coatings, sources of which include a variety of natural and manmade sources. The composition of the particles varies widely. The effect of these particles is regional haze and limitation of long-distance visibility. Effects of particles on health are detailed under respirable and fine particulate matter above (CARB, 2016).

Table 4.3-2 NAAQS and CAAQS for Criteria Air Pollutants

Pollutant	Averaging Time	CAAQS [a]	NAAQS [b]	
			Primary	Secondary
O_3	1 Hour	0.09 ppm (180 µg/m³)	---	---
	8 Hours	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³) [c]	0.070 ppm (137 µg/m³) [c]
CO	1 Hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	---
	8 Hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	---
NO_2	1 Hour	0.18 ppm (339 µg/m³)	100 ppb (188 µg/m³)	---
	AAM	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)	0.053 ppm (100 µg/m³)
SO_2	1 Hour	0.25 ppm (655 µg/m³)	75 ppb (196 µg/m³)	---
	3 Hours	---	---	0.5 ppm (1,300 µg/m³)
	24 Hours	0.04 ppm (105 µg/m³)	0.14 ppm (365 µg/m³) [d]	---
	AAM	---	0.030 ppm (81 µg/m³) [d]	---
Pb	30-Day Average	1.5 µg/m³	---	---
	Calendar Quarter	---	1.5 µg/m³ [e]	1.5 µg/m³ [e]
	Rolling 3-Month Average	---	0.15 µg/m³	0.15 µg/m³
PM_{10}	24 Hours	50 µg/m³	150 µg/m³ [f]	150 µg/m³ [f]
	AAM	20 µg/m³	–	---
$PM_{2.5}$	24 Hours	---	35 µg/m³ [g]	35 µg/m³ [g]
	AAM	12 µg/m³	12.0 µg/m³	15 µg/m³
Sulfates	24 Hours	25 µg/m³	---	---
H_2S	1 Hour	0.03 ppm (42 µg/m³)	---	---
C_2H_3Cl	24 Hours	0.01 ppm (26 µg/m³)	---	---
Visibility Reducing Particles	8 Hours	Extinction coefficient of 0.23 per kilometer	---	---

Notes:

[a] Pollutant concentrations should not exceed CA standards for O_3, CO, SO_2 (1- and 24-hour), NO_2, PM_{10}, $PM_{2.5}$, and visibility reducing particles. Pollutant concentrations shall not equal or exceed any other concentrations.

[b] Pollutant concentrations should not exceed national standards (other than O_3, particulate matter, and those based on AAM) more than once per year. Annual standards should never be exceeded.

[c] An area achieves the O_3 standard when the fourth-highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard.

[d] Applies to areas of nonattainment; however, there are no nonattainment areas in California.

[e] Applies to areas of nonattainment in Los Angeles County only.

[f] An area achieves the PM_{10} 24-hour standard when the expected number of days per calendar year with a 24-hour average concentration greater than 150 µg/m³ is equal to or less than one.

[g] An area achieves the $PM_{2.5}$ 24-hour standard when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

mg/m³: Milligrams per cubic meter
µg/m³: Micrograms per cubic meter
ppb: Parts per billion
ppm: Parts per million
AAM: Annual Arithmetic Mean

Source: (CARB, 2016a)

Existing Air Quality Conditions

Air Basin Designations

USEPA and CARB designate attainment status for air quality standards (NAAQS or CAAQS) within air basins. Attainment areas meet or exceed ambient air quality standards and nonattainment areas do not. Nonattainment areas are sometimes classified by degree of underperformance (i.e., marginal, moderate, serious, severe, and extreme). If there is insufficient air quality monitoring data to support a classification, the area is unclassified. It is generally assumed that unclassified areas are meeting the ambient air quality standard. Table 4.3-3 presents a summary of the air quality attainment designations by USEPA and CARB for SCAB in the Proposed Project area.

Local Air Quality

SCAQMD has ambient air quality monitoring stations in Riverside County. Each monitoring station collects data on a variety of criteria air pollutant concentrations. The Proposed Project is located in Source Receptor Area 23, Metropolitan Riverside, within the Riverside Valley air

Table 4.3-3 Air Basin Designations

Pollutant	SCAB	
	Federal Designation	State Designation
1-Hour O_3	Nonattainment (Extreme) [a]	Nonattainment
8-Hour O_3	Nonattainment (Extreme)	Nonattainment
CO	Unclassified/Attainment	Attainment
NO_2	Unclassified/Attainment	Attainment
SO_2	Attainment	Attainment
Pb	Unclassified/Attainment [b]	Attainment
Annual PM_{10}	–--	Nonattainment
24-Hour PM_{10}	Attainment (Maintenance)	Nonattainment
Annual $PM_{2.5}$	Nonattainment (Serious)	Nonattainment
24-Hour $PM_{2.5}$	Nonattainment (Serious)	–--
Sulfates	–--	Attainment
H_2S	–--	Unclassified
Visibility Reducing Particles	–--	Unclassified

Notes:

[a] Although the federal 1-hour ozone standard has been discontinued, attainment has not been reached. SCAB must still reach attainment for the 1-hour ozone as required under federal law.

[b] In the Proposed Project area.

Sources: (SCAQMD, 2016b)

monitoring area. The closest air monitoring station to the Proposed Project is the "Mira Loma" (also referred to as Metropolitan Riverside 3) station located at 5130 Poinsettia Place in Riverside. Table 4.3-4 presents local ambient air quality monitoring data for 2013 through 2016 and compares measured pollutant concentrations with the most stringent applicable NAAQS or CAAQS. Table values presented in bold type exceed applicable standards.

Toxic Air Contaminants

TACs, also referred to as hazardous air pollutants or air toxics, are a broad class of compounds known to have the potential to cause morbidity or mortality (i.e., have carcinogenic qualities) and include, but are not limited to, the criteria air pollutants listed above and diesel exhaust emissions. TACs are substances identified by the California EPA listed in Title 17, CCR, § 93000. TACs can cause long-term health effects such as cancer, asthma, and neurological damage as well as short-term health effects including, but not limited to, eye watering and headaches. TACs in SCAB have been reduced by 89.2 percent between 1989 and 2013 (SDAPCD, 2013).

Diesel exhaust is a complex mixture of gases, vapors, and fine particles. Some of the gaseous components of diesel exhaust, such as benzene, formaldehyde, and 1,3-butadiene, are suspected or known to cause cancer in humans. The particulates in diesel exhaust (diesel particulate matter) are mainly comprised of aggregates of spherical carbon particles coated with inorganic and organic substances (CARB, 1998).

USEPA regulates hazardous air pollutant emissions for mobile sources through Section 202(l) of the Clean Air Act (CAA) and the Control of Hazardous Air Pollutants from Mobile Sources (Final Rule). The rule regulates fuel, reducing mobile source air toxics emissions (USEPA, 2016d). CARB has also adopted regulations, such as Airborne Toxic Control Measures to reduce airborne toxics emissions, including measures that apply to mobile sources (CARB, 2015a).

Sensitive Receptors

According to the USEPA, sensitive receptors include uses in which occupants are more susceptible to the adverse effects from exposure to toxic chemicals, pesticides, and other pollutants (USEPA, 2016f). SCAQMD defines a sensitive receptor as a person in the population who is susceptible to negative health impacts due to air contaminant exposure (SCAQMD, 2005). By way of example, sensitive receptors can be located at the following types of facilities:

- Schools (K through 12), playgrounds, and childcare centers
- Long-term health care facilities
- Rehabilitation centers
- Convalescent centers
- Hospitals
- Retirement homes
- Residences

Table 4.3-4 Local Ambient Air Quality Concentrations at Nearby Monitoring Stations

Pollutant	Most Stringent Applicable Standard	Maximum Concentration			
		2013	2014	2015	2016
O_3					
Number of days 1-hour standard exceeded	0.09 ppm [a]	11	17	29	34
Maximum 1-hour (ppm)		0.118	0.138	0.127	0.140
Number of days 8-hour standard exceeded	0.07 ppm [a, b]	31	52	51	65
Maximum 8-hour (ppm)		0.096	0.102	0.104	0.106
NO_2					
Number of days 1-hour standard exceeded		0	0	0	0
Maximum 1-hour (ppm)	0.18 ppm [a]	0.053	0.057	0.068	0.0649
CO					
Number of days 1-hour standard exceeded	20 ppm [a]	---	0	0	0
Maximum 1-hour (ppm)		---	2	2.3	1.9
Number of days 8-hour standard exceeded	9 ppm [a, b]	0	0	0	0
Maximum 8-hour (ppm)		1.9	2.4	1.6	1.4
SO_2					
Number of days 1-hour standard exceeded	0.25 ppm [a]	0 [c]	0 [c]	0 [c]	0 [c]
Maximum 1-hour (ppm)		0.0081 [c]	0.0056 [c]	0.0019 [c]	0.0056 [c]
PM_{10} [c]					
Maximum 24-hour (µg/m³)		143.0	83.0	109.0	88.0
Estimated Days 24-hour standard exceeded	50 µg/m³ [b]	73.0	89.1	123.8	---
Estimated Days 24-hour standard exceeded	150 µg/m³ [a]	0	0	---	---
$PM_{2.5}$					
Maximum 24-hour (µg/m³)		56.5	73.6	56.6	47.2
Number of days 24-hour standard exceeded	35 µg/m³ [b]	9.0	9.0	17.0	7.0
Annual average (µg/m³)		14.1	---	13.3	14.0

Notes:

ppm = parts per million

µg/m³ = micrograms per cubic meter

~~**Bold** values exceed applicable standard~~

--- indicates that no data is available

[a] State standard, not to be exceeded

[b] Federal standard, not to be exceeded

[c] Information attained from nearest monitoring station (Riverside-Rubidoux/ Metropolitan Riverside County 1) that records CO and SO_x

Source: (SCAQMD, 2016a)

SCAQMD guidance indicates a minimum buffer zone of 300 meters (1,000 feet) between truck traffic and sensitive receptors (SCAQMD, 2003) in order to reduce pollutant exposure. Studies of health risk have found the highest impacts on sensitive receptors within 1,000 feet (CARB, 2005). Sensitive receptors near the Proposed Project area are listed in Table 4.3-5 and shown in Figure 4.3-1 and Figure 4.3-2.

Odors

Land uses that generate considerable odors include agriculture, chemical plants, and landfills. Siting a land use that generates odors near existing sensitive receptors or siting a new sensitive receptor near an existing odor source could result in an odor impact. The level of impact an odor could have on sensitive receptors is dependent upon variables such as wind speed and direction, facility design features, and distance from source to receptor (SCAQMD, 2005).

Land uses in the Proposed Project area are primarily residential with some commercial, industrial, and agricultural uses in the City of Jurupa Valley. Primarily open space and residential uses are in the City of Riverside with industrial uses located along the eastern end of the Proposed Project. The City of Riverside Wastewater Treatment Plant is an existing source of odors.

Table 4.3-5 Sensitive Receptors within 1,000 Feet of the Proposed Project

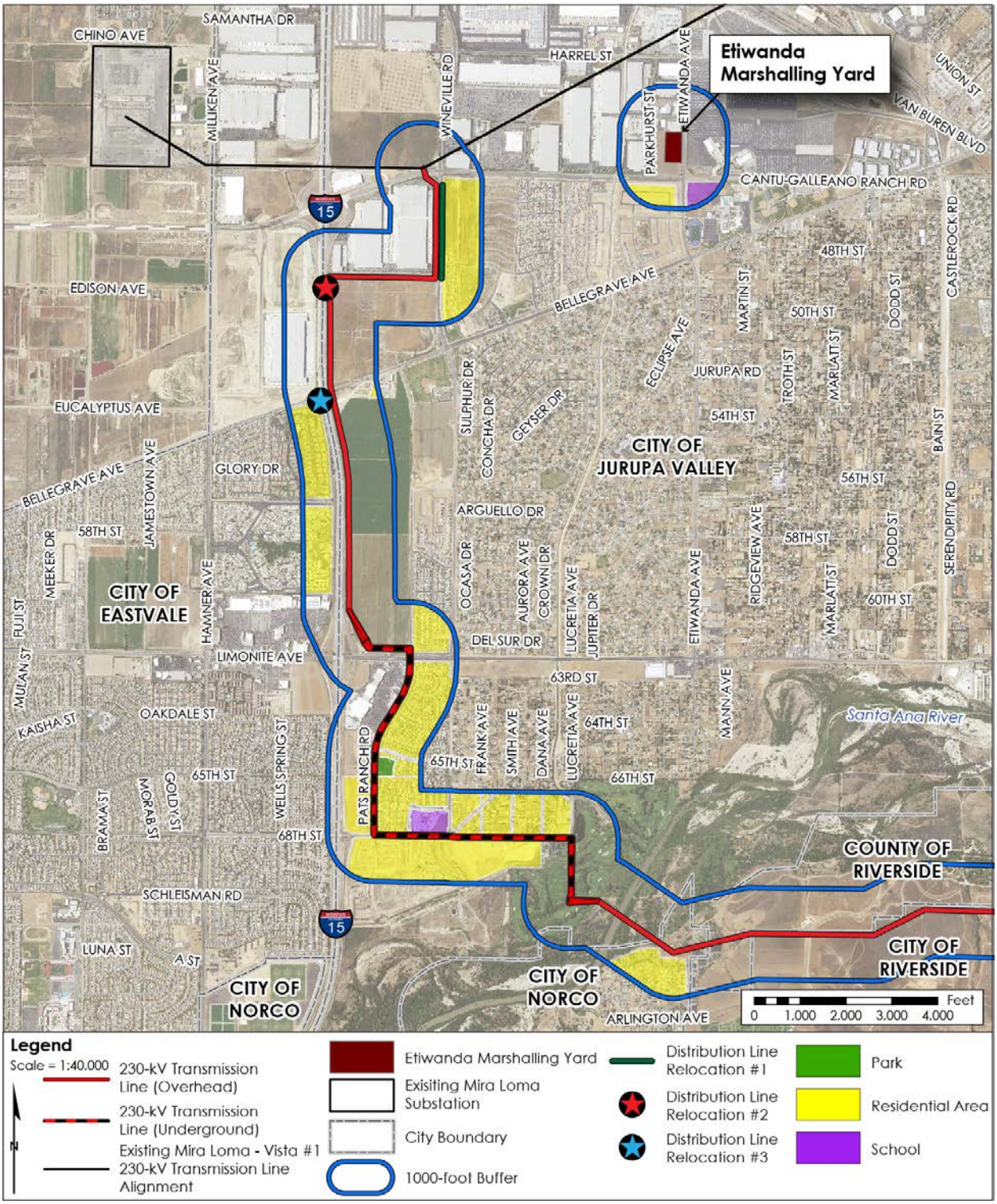
Receptor Type	Distance to Nearest Project Component Work Area (feet)
Overhead Transmission Alignment	
Residences	75
Underground Transmission Alignment	
Residences	30
Louis Vandermolen Elementary School	50
Limonite Meadows Park (active recreation and playground)	240
Distribution Line Relocations	
Residences (near Relocation #1 [b])	85
Etiwanda Marshalling Yard	
Residences [a]	495
Jurupa Valley High School	420

Notes:

[a] Homes in the Serrano Ranch community were under construction at the time this document was published. The distance provided considers the closest possible residence within the Serrano Ranch community, even if it was not constructed at the time the document was published.

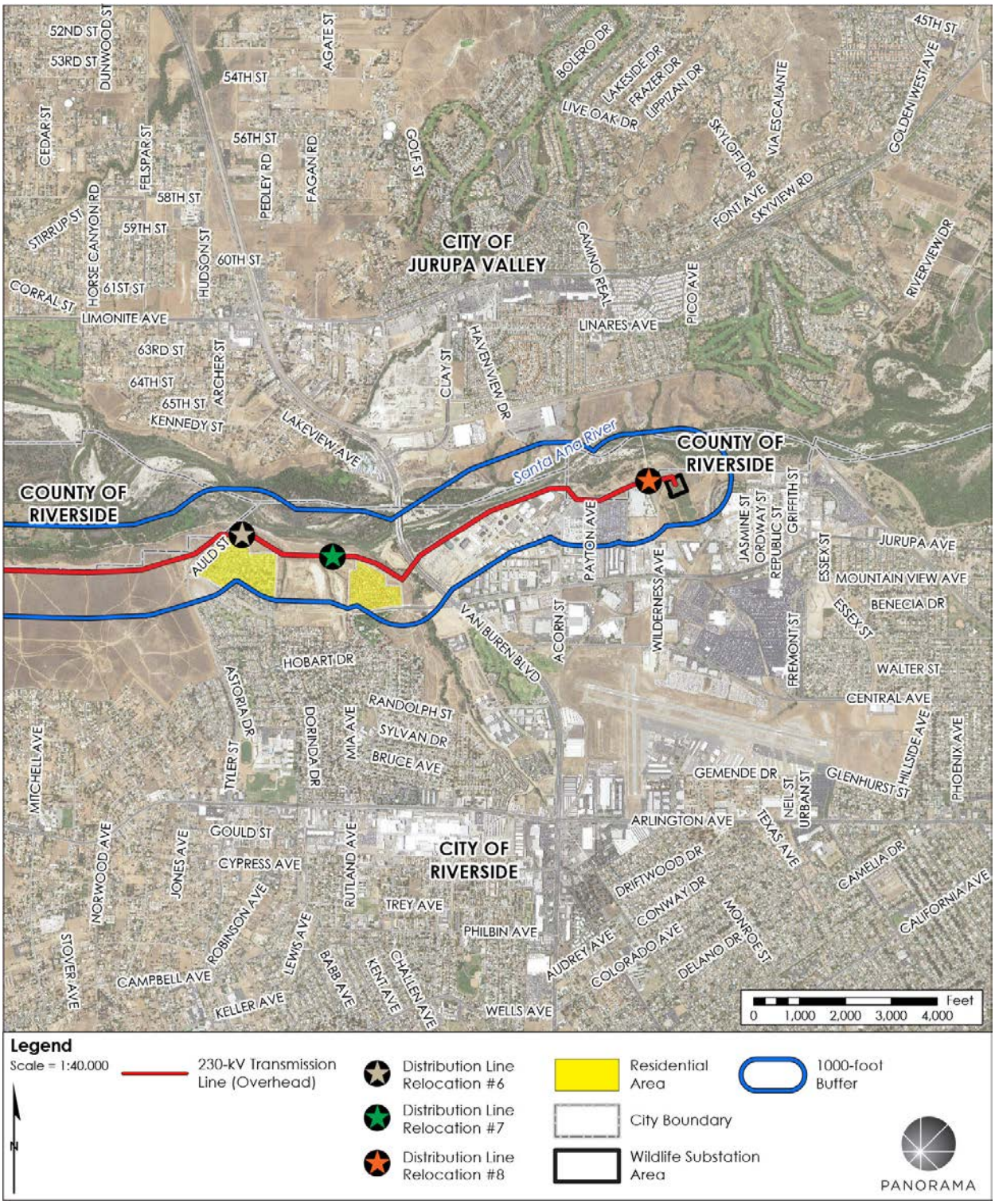
[b] Distribution Line Relocation #1 is located the closest to residences. Other Distribution Line Relocations are located within 1,000 feet of residences as well but further away.

Figure 4.3-1 Sensitive Receptors within 1,000 Feet of the Proposed Project (Map 1 of 2)



Source: (ESRI, 2017; SCE, 2017; USGS, 2012)

Figure 4.3-2 Sensitive Receptors within 1,000 Feet of the Proposed Project (Map 2 of 2)



Source: (ESRI, 2017; SCE, 2017; USGS, 2012)

Valley Fever

Valley Fever or coccidioidomycosis is primarily a disease of the lungs caused by inhalation of spores of the *Coccidioides immitis* or *Coccidioides posadasii* fungus. Following infection, 60 percent of persons develop either no disease or symptoms not requiring treatment. The other 40 percent of infected persons develop an influenza-like lung disease with symptoms including fever, chills, sweats, chest pain, cough, headache, and fatigue. The disease can spread beyond the lungs to other organs (California Coccidioidomycosis Collaborative, 2014). Individuals who are most susceptible include adults aged 60 or older, people with a weakened immune systems, pregnant women, and people who are black or Filipino (Riverside University Health System, 2015).

Spores can become disturbed by natural phenomenon, such as dust storms and earthquakes, and human activities, such as construction and agricultural activities (California Coccidioidomycosis Collaborative, 2014). Valley Fever is common in the Central Valley and Central Coast of California. Riverside County is not an area with a high incidence of Valley Fever, with a rate of 2.6[3] cases per 100,000 persons compared to the overall rate of 13.7 cases per 100,000 in California overall in 2016 (Bartolone, 2017). Historically, approximately half of reported cases in Riverside occurred in the western portion of the County (Riverside University Health System, 2015).

Greenhouse Gases and Climate Change

The natural process through which heat is retained in the troposphere is called the greenhouse effect. The process through which the greenhouse effect traps heat in the troposphere is from energy from the sun (i.e., sunlight) entering the atmosphere, which is absorbed by the Earth. The energy is re-emitted by the Earth in the form of infrared radiation. A certain portion is absorbed by GHGs, increasing the atmospheric temperature (USEPA, 2016e).

The most common GHGs are carbon dioxide (CO_2) and water vapor. Other important GHGs include methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). GHGs are released into the earth's atmosphere through a variety of natural processes and human activities. Primary GHG emission sources are listed in Table 4.3-6.

Each GHG has its own potency and effect upon the earth's energy balance, expressed in terms of a global warming potential (GWP); carbon dioxide is assigned a GWP value of 1, and SF_6 is several orders of magnitude stronger, with a GWP of 23,500 (IPCC, 2013). In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of equivalent CO_2 (CO_2e).

[3] 63 cases overall.

Table 4.3-6 Greenhouse Gas Emission Sources

Source Category	Example Source	GHG
Energy	Electricity generation	CO_2
	Transportation	N_2O
Industry	Refrigeration and cooling	HFCs
	Semi-conductor manufacturing	PFCs
	Substations	SF_6
Agriculture	Crop fertilization	N_2O
	Livestock	CH_4
Waste	Landfill operation	CH_4

Existing Greenhouse Gas Emission Statewide

Total gross estimated California GHG emissions in 2014[4] were 441.5 million metric tons of carbon dioxide equivalent (MT CO_2e), a decrease of 2.8 million MT CO_2e from 2013. Table 4.3-7 shows the Statewide GHG emissions for the years 1990 and 2014 (CARB, 2016f). During the 2000 to 2014 period, per capita GHG emissions in California declined from a peak in 2001 of 13.9 metric tons per person to 11.4 metric tons per person in 2014, an 18 percent decrease. The reductions in California GHG emissions during this time period are attributed to energy efficiency and conservation efforts (CARB, 2016e).

Table 4.3-7 California Greenhouse Gas Inventory

Source Category	1990 (million MT CO_2e)	2014 (million MT CO_2e)
Total Energy	*386.41*	*367.70*
Energy Industries	157.33	139.95
Manufacturing Industries and Construction	24.24	20.28
Transport	150.02	158.62
Other Sectors	48.19	41.02
Non-Specified	1.38	–
Fugitive Emissions from Fuels	5.25	7.84
Industrial Processes and Product Use	*18.34*	*30.24*
Agriculture, Forestry and Other Land Use	*19.11*	*32.85*

[4] The most recent year for which estimated GHG emissions are available.

Source Category	1990 (million MT CO_2e)	2014 (million MT CO_2e)
Waste	*9.42*	*10.73*
Gross California GHG Emissions	**433.29**	**441.50**

Sources: (CARB, 2007; CARB, 2016f)

4.3.4 Regulatory Setting

Federal

U.S. Environmental Protection Agency

Clean Air Act

USEPA is responsible for enforcing the federal CAA. The NAAQS were established by the federal CAA of 1970 and amended in 1977 and 1990. Table 4.3-2 presents the NAAQS for the criteria air pollutants at different averaging periods. As part of its enforcement responsibilities, USEPA requires each state with non-attainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards.

Massachusetts v. US Environmental Protection Agency

On April 2, 2007, the Supreme Court found in Massachusetts v. USEPA that GHGs are air pollutants under the CAA. USEPA, therefore, has the authority to regulate GHG emissions. The Supreme Court found that the CAA authorizes USEPA to regulate motor vehicle GHG emissions if USEPA determines they cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare (USEPA, 2016b).

Light-Duty Vehicle Standards

In collaboration with the National Highway Traffic Safety Administration (NHTSA), USEPA finalized the program to reduce GHG emissions and improve fuel economy for light-duty vehicles to reduce GHGs in 2010 and then extended the project in 2012 (USEPA, 2012). Standards include fuel economy targets and improvements in vehicle technologies including improved vehicle aerodynamics, reduced vehicle weight, lower tire rolling resistance, and expanded production of electric and hybrid vehicles.

Heavy-Duty Truck and Bus Standards

In August 2011, USEPA and NHTSA announced the first-ever program to reduce GHG emissions and improve the fuel efficiency of heavy-duty trucks and buses and reduce carbon dioxide emissions over the life of applicable heavy-duty vehicles (USEPA, 2011). The program includes standards for fuel consumption and emissions for combination tractors and vocational vehicles, nitrous oxide and methane emissions standards applicable to all heavy-duty engines, pick-ups, and vans, and standards for leakage of hydrofluorocarbon refrigerants from air conditioning systems.

State

California Air Resources Board

California Clean Air Act

CARB oversees air quality planning and control throughout California, including oversight of regional air quality management districts. It is primarily responsible for ensuring implementation of the 1989 amendments to the California Clean Air Act (CCAA), responding to the federal CAA requirements, and regulating emissions from motor vehicles and consumer products within the state. CARB is responsible for establishing and reviewing state standards, approving Air Quality Management Programs (AQMPs), compiling the California SIP, securing approval of the SIP from USEPA, conducting research and planning, and identifying TACs.

Pursuant to the CCAA, CARB sets CAAQS under California Health and Safety Code § 39606. The CAAQS, listed in Table 4.3-2 are intended to protect public health, safety, and welfare.

California Air Toxics Program

The California Air Toxics Program establishes the process for the identification and control of TACs and includes provisions to make the public aware of significant toxic exposures and for reducing risk. The Office of Environmental Health Hazard Assessment (OEHHA) is responsible for the Air Toxics Hot Spots Program. OEHHA has adopted the Guidance Manual for Preparation of Health Risk Assessments. OEHHA recommends assessing cancer risk for projects where the maximally-exposed individual resident or sensitive receptor is exposed for two months or longer (OEHHA, 2015).

On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation

In 2008, CARB approved the On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation to reduce emissions of diesel particulate matter and nitrogen oxide from existing on-road heavy-duty diesel-fueled vehicles.

Greenhouse Gas Emission Control Regulations

The state has passed a number of bills designed to reduce GHG emissions, including:

- Assembly Bill 1493: Clean car standards for passenger vehicles
- Executive Order S-3-05: Created 2010, 2020, and 2050 GHG reduction targets
- Assembly Bill 32: Global Warming Solutions Act of 2006, and as amended in 2016 (detailed below)
- Senate Bill 97: Added climate change to the CEQA analysis
- Senate Bill 375: Created regional GHG reduction targets
- Executive Order B-30-15: Created interim 2030 GHG reduction targets

Assembly Bill 32 (Global Warming Solutions Act of 2006)

AB 32 (Chapter 488, States of 2006), the Global Warming Solutions Act of 2006, set the 2020 GHG emissions reduction goal into law and directed CARB to develop discrete early actions to reduce GHG emissions. This is in addition to preparing the Climate Change Scoping Plan (Scoping Plan), which outlines a framework of measures that would eventually be adopted and

implemented to reach AB 32 goals (CARB, 2016e). CARB approved the Scoping Plan in 2008 and updated it in May 2014.

In September of 2016, AB 32 was extended to achieve reductions in GHG of 40 percent below 1990 levels by 2030. Adopted regulations that correspond to elements of the Scoping Plan include the 33 percent Renewable Portfolio Standard by 2020 (Senate Bill [SB] X1-2), the Cap-and-Trade Program, and the Low Carbon Fuel Standard (LCFS) program. The LCFS program was adopted by CARB in 2009, with the goal of reducing the carbon intensity of transportation fuel in California by at least 10 percent, compared to a 2010 baseline by 2020.The LCFS program applies to any transportation fuel sold, supplied, or offered for sale in California, except alternative fuel that is not a biomass-based fuel, liquefied petroleum gas, and fuel for some specific vehicles and vessels (CARB, 2016d).

The newest Scoping Plan, adopted in 2017, describes ongoing and proposed programs and policies to achieve the 2030 GHG target for several sectors (i.e., energy, transportation, industry, water, waste management, and natural and working lands) (CARB, 2017).

CARB has prepared the Mobile Source Strategy, which addresses the current and proposed programs for reducing all mobile source emissions, including GHG emissions (CARB, 2016g).

Local

SCAQMD

SCAQMD has jurisdiction over air quality programs in Riverside County. SCAQMD regulates most air pollution sources in the county, except for motor vehicles, marine vessels, aircraft, agricultural equipment, and other sources regulated by CARB or USEPA.

2016 Air Quality Management Program

The 2016 AQMP outlines how SCAQMD will make progress toward attainment of the California ozone and particulate matter air quality standards by addressing emissions of the two ozone precursors, reactive organic matter and nitrogen oxide. SCAQMD regulates stationary emission sources and some area-wide emission sources (e.g., water heaters and architectural coatings). A significant portion of particulate matter, reactive organic matter, and nitrogen oxide emissions come from sources regulated at the state and federal levels (e.g., on-road vehicles, off-road vehicles, and off-road equipment). California Health and Safety Code § 40914 requires the AQMP to reduce nonattainment pollutants (particulate matter and ozone precursor emissions) by 5 percent annually or, if that is not feasible, to have a schedule for adopting every feasible control measure within its jurisdiction (SCAQMD, 2017).

The 2016 AQMP identifies strategies to achieve ozone and $PM_{2.5}$ NAAQS, and clean air objectives. Although mobile sources contributed most of the NOx (precursor to ozone) emissions within SCAB in 2012, SCAQMD has limited authority to regulate mobile sources. SCAQMD therefore coordinates with CARB and USEPA to ensure strategies are implemented to achieve mobile source reductions. Strategies to address area and stationary sources within SCAQMD's purview are discussed in the 2016 AQMP as well as the emission reductions that

would be achieved by CARB's mobile source strategies. SCAQMD has proposed and adopted control measures to limit reactive organic gases from coatings (SCAQMD, 2017).

Rules

The following SCAQMD rules would apply to the Proposed Project:

Rule 402.	**Nuisance:** A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
Rule 403.	**Fugitive Dust:** Rule 403 limits fugitive dust emissions to the property line of the emissions source or to not exceed 20 percent opacity if the emissions are from movement of a motorized vehicle. A variety of fugitive dust reduction measures are specified in Rule 403 for activities that have the potential to generate large quantities of fugitive dust.

Western Regional Council of Government

Subregional Climate Action Plan

The Western Regional Council of Government (WRCOG), which includes incorporated cities and municipalities within Western Riverside County, developed a Climate Action Plan (CAP) in September 2014. The following applicable state and regional measures outlined in the CAP are applicable to the Proposed Project (WRCOG, 2014).

Measure SR-6	Pavley and Low Carbon Fuel Standard Requirements for vehicles to use cleaner fuels.
Measure SR-13	Construction & Demolition Waste Diversion Meet mandatory requirement to divert 50 percent of C&D waste from landfills by 2020 and exceed requirement by diverting 75 percent of C&D waste from landfills by 2035.

County of Riverside

General Plan

The County of Riverside General Plan, adopted in December 2015, outlines the following policies in Chapter 9, Air Quality Element that are applicable to the Proposed Project (County of Riverside, 2015a).

Policy AQ-4.7	To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, Mojave Desert Air Quality Management District

(MDAQMD), SCAB, the Environmental Protection Agency and the CARB.

Policy AQ 4.9 Require compliance with SCAQMD Rules 403 and 403.1, and support appropriate future measures to reduce fugitive dust emanating from construction sites.

Riverside County Climate Action Plan

The County of Riverside CAP, adopted in December 2015, identifies many GHG emissions reduction programs and regulations to achieve the state's reduction target of attaining 1990 levels of GHG emissions by 2020. Programs and regulations pertinent to the Proposed Project include anti-idling enforcement and an incentive program to ensure a diversion of 60 percent of construction waste and use of locally sourced construction materials (County of Riverside, 2015b).

City of Jurupa Valley

Draft 2017 General Plan

The City of Jurupa Valley adopted the 2017 Draft General Plan in August 2017. The General Plan Air Quality Element identifies the following policies and goals that are relevant to the Proposed Project (City of Jurupa Valley, 2017):

Policy AQ 3.4 **Emissions Mitigation.** Require every project to mitigate any of its anticipated emissions that exceed allowable levels as established by the SCAQMD, the USEPA, and CARB, to the greatest extent possible.

Policy AQ 3.5 **Fugitive Dust Reduction Measures.** Apply, as appropriate, measures contained in the County's Fugitive Dust Reduction to the entire City.

Policy AQ 3.6 **Grading in High Winds.** Suspend all grading when wind speeds exceed 25 miles per hour.

Policy AQ 4.2 **Particulate Matter.** Reduce particulate matter from agriculture, construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights of way, and off-road vehicles to the maximum extent possible.

Policy AQ 5.1 **Reduce Solid Waste.** Utilize source reduction, recycling, and other appropriate measures to reduce the amount of solid waste disposed of in landfills.

City of Riverside

City of Riverside General Plan 2025

The City of Riverside 2025 General Plan, adopted in November 2007, outlines the following policies in the Air Quality Element that are applicable to the Proposed Project (City of Riverside, 2007).

Policy AQ-1.3 Separate, buffer and protect sensitive receptors from significant sources of pollution to the greatest extent possible.

Objective AQ-4	Reduce particulate matter, as defined by the EPA, as either airborne photochemical precipitates or windborne dust.
Policy AQ-4.2	Reduce particulate matter from agriculture (e.g., require use of clean non-diesel equipment and particulate traps), construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights-of-way and off-road vehicles to the extent possible, as provided in SCAQMD Rule 403.
Policy AQ-4.5	Require the suspension of all grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour.
Objective AQ-5	Increase energy efficiency and conservation in an effort to reduce air pollution.
Policy AQ-5.1	Utilize source reduction, recycling and other appropriate measures to reduce the amount of solid waste disposed of in landfills.

Economic Prosperity Action Plan and Climate Action Plan

The Economic Prosperity Action Plan (EPAP) and CAP, adopted by the City of Riverside in January 2016, provide measures for four major sectors: energy, transportation and land use, water, and solid waste. The energy measures will increase community-wide building and equipment efficiency and renewable energy use, and promote energy efficiency and renewable energy generation for use supporting municipal operations that support the community. The applicable state and regional measures outlined in the EPAP and CAP for the Proposed Project are as follows (City of Riverside, 2016):

Measure SR-6	**Pavley and Low Carbon Fuel Standard.** Requirements for vehicles to use cleaner fuels.
Measure SR-13	**Construction & Demolition Waste Diversion.** Meet mandatory requirement to divert 50 percent of C&D waste from landfills by 2020 and exceed requirement by diverting 90 percent of C&D waste from landfills by 2035.

Green Action Plan

The appointed Clean Green Task Force prepared the 2007 Sustainability Policy Statement (SPS) to indicate how the City could implement cleaner, greener, and more sustainable programs. The SPS covered eight main categories: Save Water, Keep it Clean, Make it Solar, Make it Shady, Clean the Air, Save Fuel, Make it Smart, and Build Green. The Clean and Green Sustainable Riverside Action Plan (Action Plan) was prepared to tie specific tasks to the policies set forth in the SPS. These action steps cover seven vital areas of city life: energy, greenhouse gas emissions, waste, urban design, urban nature, transportation, and water. The Action Plan includes measures that apply to the Proposed Project (City of Riverside, 2005).

Item 12	Implement programs to encourage and increase participation of diverted waste from landfills by 2 percent before the end of 2008.

Item 13 Develop measures to encourage that a minimum of 40 percent of the waste from all construction sites be recycled throughout Riverside by the end of 2008.

4.3.5 Applicant's Environmental Protection Elements

SCE has proposed EPEs to reduce environmental impacts. The EPEs that avoid or reduce potentially significant impacts of the Proposed Project will be incorporated as part of any CPUC project approval, and SCE will be required to adhere to the EPEs as well as any identified mitigation measures. The EPEs are included in the MMRP for the Proposed Project (refer to Chapter 9: Mitigation Monitoring and Reporting Plan of this Subsequent EIR), and the implementation of the EPEs will be monitored and documented in the same manner as mitigation measures. The EPEs that are applicable to the air quality and GHG emissions analysis are provided in Table 4.3-8.

Table 4.3-8 Environmental Protection Elements for Air Quality and GHG Emissions

Environmental Protection Element	Requirements
EPE AQ-01: Comply with SCAQMD Requirements	The construction activities shall comply with the SCAQMD requirements, as applicable to the project.
EPE AQ-02: Worker Environmental Awareness Program	A general Air Quality Worker Environmental Awareness Program (WEAP) would be prepared. All construction crews and contractors would be required to participate in this WEAP training prior to starting work on the project. The air quality WEAP may be combined with the general WEAP for sensitive species as described under 2013 Final EIR mitigation measure BIO-05.

4.3.6 CEQA Significance Criteria

Appendix G of CEQA Guidelines (14 CCR 15000 *et seq.*) provides guidance on assessing whether a project would have significant impacts on the environment. Changes to the Proposed Project or changes in baseline conditions that were not analyzed in the 2013 RTRP EIR require additional analysis to fully disclose potential impacts of the Proposed Project. The CPUC prepared an Initial Study Checklist (refer to Appendix B in this Subsequent EIR) to identify the new potentially significant or increased impacts that may occur as a result of the Proposed Project elements or changes in baseline conditions. The Initial Study Checklist indicated that the project has the potential for new or increased impacts under the significance criteria included below. Note that the Initial Study Checklist found Impact e) of the Air Quality analysis and Impact a) of the Greenhouse Gas Emissions analysis to have no new significant impact. This analysis will analyze Impact e) of the Air Quality analysis again in response to a scoping comment, which is analyzed below. The remaining Appendix G significance criterion is not addressed in this section because it was determined to not have a greater impact as described in the 2013 RTRP EIR. CEQA significance criteria are lettered below to match the criteria lettering

in the 2013 RTRP EIR. Consistent with Appendix G, the Proposed Project would have significant impacts on air quality if it would:

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

Consistent with Appendix G, the Proposed Project would have significant impacts on GHG emissions if it would:

b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of greenhouse gases

Impact Thresholds

The significance thresholds adopted by SCAQMD, shown in Table 4.3-9, assist lead agencies in evaluating when potential air quality impacts from a project would be considered significant under CEQA. The thresholds in Table 4.3-9 are used in conjunction with air quality criteria a., b., c., d., and e. (above) to determine whether thresholds are exceeded.

Two factors are used to determine a significant project's consistency with the 2016 AQMP in accordance with the SCAQMD *CEQA Air Quality Handbook* (SCAQMD, 1993). These indicators are used in conjunction with air quality criteria a. (above) to determine whether the threshold is exceeded.

1. Whether the project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
2. Whether the project will exceed the assumptions in the AQMP or increments based on the year of project build-out and phase.

The emissions generated by construction, operation, and maintenance of the Proposed Project will be compared against the thresholds in Table 4.3-9 and compliance with SCAQMD control measures to determine consistency with the AQMP. A discussion of population growth associated with the Proposed Project will be conducted to determine consistency with the AQMP.

Table 4.3-9 SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds		
Pollutant	**Construction (pounds/day)**	**Operation (pounds/day)**
NOx	100	55
ROG	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_2	150	150
CO	550	550
Lead	3	3
Odor		
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality Thresholds for Criteria Pollutants		
Pollutant	**Averaging Period**	**Pollutant Concentration**
CO	1-hour /8-hour	Project is significant if it causes or contributes to an exceedance of the attainment standards of 20 ppm (1-hour) and 9 ppm (8-hour).
NO_2	1-hour	Project is significant if it causes or contributes to an exceedance of the following attainment standard 0.18 ppm.
	Annual	0.03 ppm (state) and 0.0534 ppm (federal)
PM_{10}	24-hour	10.4 µg/m^3 (Construction) and 2.5 µg/m^3 (Operation)
	Annual	1.0 µg/m^3
$PM_{2.5}$	24-hour	10.4 µg/m^3 (Construction) and 2.5 µg/m^3 (Operation)

Source: (SCAQMD, 2015)

4.3.7 Project Impact Analysis

Approach to Impact Analysis

Overview

This impact analysis considers whether implementation of the Proposed Project would result in significant impacts on air quality and GHG emissions, and focuses on reasonably foreseeable effects of the Proposed Project as compared with baseline conditions. The analysis uses significance criteria based on the CEQA Appendix G Guidelines. These criteria may be

modified to address project impacts. The potential direct and indirect effects of the Proposed Project are addressed below, and the cumulative effects are addressed in Chapter 5: Cumulative Impacts.

The significance of an impact is first considered prior to application of EPEs and a significance determination is made. The implementation of EPEs is then considered when determining whether impacts would be significant and thus would require mitigation. Mitigation measures are then applied to reduce significant impacts of the Proposed Project.

The approach to mitigation measures is different from other sections in this Subsequent EIR because the mitigation measures are all new measures, although 2013 RTRP EIR measures that pertain to the Proposed Project have been fully incorporated into the new mitigation measures. The new measures only apply to the Proposed Project, under the jurisdiction of the CPUC. The new measures were developed to consolidate similar related requirements and streamline the mitigation. In other resource topic sections of this Subsequent EIR, 2013 RTRP EIR mitigation measures individually, with modifications when appropriate, and/or with additional new mitigation measures to reduce significant impacts.

Proposed Project Analysis

This air quality section includes a broader analysis than other Subsequent EIR resource topic sections due to changes in the Proposed Project and other conditions. This section includes an analysis of the Proposed Project subject to review by CPUC, versus just the revised project, because the changed circumstances could result in new significant impacts. The 2013 RTRP EIR air quality modeling analyzed the single 230-kV transmission line construction activity that would generate the highest daily air quality emissions (i.e., conductor installation) in combination with the other RPU components. New construction activities have been added to the Proposed Project, which has changed the overall quantity of criteria air pollutants and GHG emissions generated by the Proposed Project. Furthermore, the most recent preliminary construction schedule (refer to Appendix A) for the Proposed Project indicates that several 230-kV transmission line construction activities could occur simultaneously (i.e., TSP foundation installation, TSP erection, conductor installation, underground vault installation, potentially jack and bore, and Wildlife Substation construction). Simultaneous construction of multiple project elements and underground construction was not considered in the 2013 RTRP EIR air quality analysis. Changes in emissions from construction or operation of the Proposed Project as a whole could exceed significance thresholds; therefore, analyzing the revised project in isolation would not accurately characterize project impacts.

The following sections describe the approach to analysis for construction and operation criteria pollutants.

Construction

Daily Air Quality Emissions

Intermittent (short-term) emissions from Proposed Project construction equipment, vehicles, and activities were evaluated. The air quality analysis focuses on daily construction emissions

and compares the emission estimates to thresholds of significance presented in Table 4.3-9. The air quality analysis is consistent with the methods described in the SCAQMD *CEQA Air Quality Handbook* (SCAQMD, 1993).

Criteria pollutant and fugitive dust emissions were estimated for all Proposed Project sources. Emissions were calculated from combustion sources such as on-road vehicles from employees and haul trucks, as well as on-site combustion equipment such as loaders and excavators. Fugitive dust emissions from grading, loading/unloading, and vehicle movement on unpaved surfaces were also calculated. Vehicular emissions were computed using the CARB's emission factor model, EMission FACtor (EMFAC) 2014, to estimate on-road emissions. Emissions from heavy-duty equipment, such as excavators, loaders, cranes, off-road haul trucks were computed by using emission factors from CARB's OFFROAD emissions model.

Effects on Local Ambient Air Quality

The 2013 RTRP EIR analyzed ambient air quality emissions from construction of a single pole. A comparative analysis with the 2013 RTRP EIR is not appropriate due to:

- New air quality modeling methodology
- Changes in background concentrations of pollutants since the analysis in the 2013 RTRP EIR
- Construction locations have changed and are closer to sensitive receptors
- Type of construction activity proposed

The Proposed Project could also result in a significant ambient air quality impact if construction of the proposed underground transmission line segment would generate ambient air pollutant emissions that exceed the significance concentration thresholds set forth in Table 4.3-9.

Projected ambient air concentrations were modeled at several locations along the proposed 230-kV transmission line to provide a comprehensive assessment of construction activities and where exceedances could occur. Construction of the underground transmission line segment would generate the greatest concentration of ambient air pollutant emissions compared to all other Proposed Project components primarily due to proximity to sensitive receptors. Underground vault installation would cause the highest ambient air pollutant concentrations.

Segments of the underground alignment in the vicinity of the Louis Vandermolen Fundamental Elementary School, residential housing on 68th Street, and residential housing on Pats Ranch Road were modeled to determine local ambient air concentrations that could be generated from construction occurring near these sensitive receptors. Construction activities associated with vault installation were generally modeled to occur within a 100-foot by 150-foot work area. No other construction activity could ~~occur within~~ overlap with this work area at the same time, due to space and safety constraints. Although several construction activities could occur simultaneously they would not occur in the same area as one another.

Conductor installation would generate the highest ambient air pollutant concentrations of the overhead construction activities. An overhead alignment segment adjacent to the closest

residential housing on Bradford Street was modeled to determine local ambient air concentrations that could be generated from construction occurring near these homes. Construction activities associated with conductor installation were generally modeled to occur within a 1,580-foot by 150-foot work area.

The American Meteorological Society/U.S. EPA Regulatory Model Improvement Committee Model (AERMOD) Version 16216 was used to model the air dispersion of pollutants from ~~the underground~~ construction of the Proposed Project and from off-site ambient air concentrations. Further information regarding the assumptions used during air quality modeling are included in Appendix G of this Subsequent EIR.

Toxic Air Contaminants

A qualitative assessment was conducted to address the potential for sensitive receptors to experience long-term exposure (i.e., emissions for longer than two continuous months) to TAC emissions. The assessment was conducted in accordance with the OEHHA Guidance Manual.

Odor

A qualitative assessment was conducted to address the potential for the Proposed Project to generate objectionable odors.

Operation and Maintenance

The long-term air quality impacts from the Proposed Project operation and maintenance were evaluated. The air quality analysis focuses on daily emissions from operation and maintenance activities (mobile, area, stationary, and fugitive sources) and compares the emission estimates to thresholds of significance presented in Table 4.3-9. The overall emissions from the Proposed Project operation and maintenance would include maintenance of transmission lines, distribution lines, and the Wildlife Substation.

Summary of Impacts

Table 4.3-10 presents a summary of the CEQA significance criteria and impacts on air quality and GHG emissions that would occur during construction, operation, and maintenance of the Proposed Project.

Table 4.3-10 Summary of Proposed Project Impacts on Air Quality and GHG Emissions

Significance Criterion	Project Phase	Significance before EPEs	Significance after EPEs and before Mitigation	Significance after Mitigation
Impact Air-a: Would the Proposed Project conflict with or obstruct implementation of the applicable air quality plan?	Construction	Significant	Significant EPE AQ-01 EPE AQ-02	Less than Significant MM AQ-01 MM AQ-02 MM AQ-03
	Operation and Maintenance	Less than Significant	---	---
Impact Air-b: Would the Proposed Project violate an air quality standard or contribute substantially to an existing or projected air quality violation?	Construction	Significant	Significant EPE AQ-01 EPE AQ-02	Less than Significant MM AQ-01 MM AQ-02 MM AQ-03
	Operation and Maintenance	Less than Significant	---	---
Impact Air-c: Would the Proposed Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	Construction	Significant	Significant EPE AQ-01 EPE AQ-02	Less than Significant MM AQ-01 MM AQ-02 MM AQ-03
	Operation and Maintenance	Less than Significant	---	---
Impact Air-d: Would the Proposed Project expose sensitive receptors to substantial pollutant concentrations?	Construction	Significant	Significant EPE AQ-01 EPE AQ-02	Less than Significant MM AQ-01 MM AQ-02
	Operation and Maintenance	Less than Significant	---	---
Impact Air-e: Would the Proposed Project create objectionable odors affecting a substantial number of people?	Construction	Less than Significant	---	---
	Operation and Maintenance	No Impact	---	---
Impact GHG-b: Would the Proposed Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of greenhouse gases?	Construction	No Impact	---	---
	Operation and Maintenance	No Impact	---	---

Impact Discussion

	Significance Determination
Impact Air-a: Would the Proposed Project conflict with or obstruct implementation of the applicable air quality plan?	**Construction: *Less than Significant with Mitigation***
	Operation & Maintenance: *No Impact*

Construction

Construction of the Proposed Project would generate emissions in excess of the SCAQMD significance thresholds as analyzed under Impact Air-b, which could increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of air quality standards. The Proposed Project could conflict with the 2016 AQMP due to the quantity of construction emissions.

The Proposed Project does not propose activities that would change population or employment levels within SCAB. The Proposed Project would not conflict with or obstruct the 2016 AQMP by inducing growth and exceeding the assumptions used in the AQMP. The Proposed Project would not conflict with stationary source control measures identified in the 2016 AQMP because no new stationary sources would be constructed. Coatings that could be applied during Proposed Project construction would comply with existing Rule 1113, Architectural Coatings. The Proposed Project would not conflict with adopted area source rules. Construction activities would involve ground-disturbing activities, which may not comply with Rule 403 regarding fugitive dust control. The Proposed Project could conflict with adopted fugitive dust rules.

The EPEs and mitigation measures implemented under Impact Air-b would require compliance with Rule 403 and minimize construction emissions to below the SCAQMD significance thresholds (Refer to Impact Air-b for a detailed analysis). The Proposed Project would not conflict with or obstruct the 2016 AQMP by increasing in the frequency or severity of existing air quality violations, causing or contributing to new violations, or delaying timely attainment of air quality standards. ***The impact would be less than significant with mitigation.***

Operation and Maintenance

The Proposed Project would not require any SCE personnel to be present during operation of the new transmission facilities. Inspection and maintenance would be performed by SCE staff on a routine and as-needed basis (refer to Section 2.5: Operation and Maintenance of the Subsequent EIR). Operation and maintenance of the Proposed Project would not conflict with or obstruct the 2016 AQMP by inducing growth, conflicting with the identified control measures, or generating emissions in excess of the SCAQMD significant thresholds. ***No impact would occur.***

Mitigation Measures: MM AQ-01, MM AQ-02, and MM AQ-03

Significance after Mitigation: Less than Significant

	Significance Determination
Impact Air-b: Would the Proposed Project violate an air quality standard or contribute substantially to an existing or projected air quality violation?	**Construction:** ***Less than Significant with Mitigation***
	Operation & Maintenance: ***Less than Significant***

Construction

Daily Air Quality Emissions

The Proposed Project construction would generate criteria pollutant emissions from construction vehicles and equipment and fugitive dust from surface disturbance. Table 4.3-11 shows the estimated unmitigated daily emissions for all construction-related emissions. The estimated unmitigated construction emissions of NOx, $PM_{2.5}$, and PM_{10} would exceed the SCAQMD significance thresholds when several construction activities occur simultaneously.

SCAB is currently in violation of ozone and particulate matter air quality standards, as identified in Table 4.3-11. The Proposed Project would contribute to the existing air quality violations by emitting ozone precursors (NOx ~~and ROG~~) and particulate matter in excess of the SCAQMD significance thresholds. The emissions generated during Proposed Project construction could contribute substantially to an existing or projected air quality violation, which would be a significant impact.

Table 4.3-11 Unmitigated Maximum Estimated Daily Emissions Generated During Proposed Project Construction (pounds)

Project Element	NOx	ROG	CO	PM_{10}	$PM_{2.5}$	SO_2
Proposed Project						
TSP Foundation Installation	10.8	0.9	8.5	99.2	11.5	0.0
TSP Erection	10.4	0.9	8.9	53.6	6.3	0.0
Conductor Installation	62.1	5.7	33.6	227.3	27.7	0.1
Underground Vault Installation	48.1	3.7	32.6	104.4	15.5	0.1
Jack and Bore (trenchless)	30.4	2.08	17.1	27.6	4.09	0.06
Wildlife Substation	5.6	0.4	5.4	110.0	12.5	0.0
Total for Proposed Project	**167**	13.6	106	**622**	**77.6**	0.35
SCAQMD Significance Threshold	100	75	550	150	55	150
Exceed Threshold (**Yes**/No)?	**Yes**	No	No	**Yes**	**Yes**	No

Notes:
Bold indicates an exceedance.
Totals may not add due to rounding.

Source: (RCH Group, 2018)

Construction of the Proposed Project in conjunction with the RPU components of the RTRP would result in higher emissions than depicted in Table 4.3-11. Construction of the Proposed Project, in combination with the emissions from construction of the RPU components, would result in a greater exceedance of the particulate matter and NOx significance thresholds, which would be a significant effect.

SCE would implement EPE AQ-01 and EPE AQ-02 to ensure compliance with SCAQMD requirements and preparation of an air quality WEAP. Specific engine and fugitive dust controls are not identified as part of these EPEs. The impact from contribution to an existing or projected air quality violation could remain significant.

MM AQ-01 requires SCE to prepare and implement a Fugitive Dust Control Plan that includes short- and long-term dust control measures, such as watering soil piles and exposed surfaces, to reduce particulate matter emissions from construction of the Proposed Project. MM AQ-02 specifies exhaust emissions controls for worker vehicles and construction equipment. MM AQ-03 requires construction phasing to ensure that installation of conductor would not occur simultaneously with the TSP foundation installation and TSP erection. MM AQ-03 further restricts construction of the Proposed Project from overlapping with construction of the RPU components of the RTRP. These mitigation measures in combination reduce emissions of NOx, $PM_{2.5}$, and PM_{10} to below the SCAQMD significance thresholds as shown in Table 4.3-12. ***The impact from contribution to an existing or projected air quality violation would be less than significant with mitigation.***

Ambient Air Quality

Construction equipment operation and ground-disturbing activities associated with Proposed Project construction would generate emissions that result in localized increased pollutant concentrations. The location and concentrations of pollutants would depend on the construction activity, the receptor location, topography, wind speeds, and wind directions. The activities would include equipment operation, trenching, vault installation, and traffic on unpaved roads (see above). Dispersion, deposition, and transport of air pollutants result in reduced air pollutant concentrations farther away from the air pollutant source.

SCAQMD developed ambient air quality significance thresholds (Table 4.3-9) to ensure that a project does not contribute to an existing violation of federal or state air quality standards shown in Table 4.3-3 or result in loss of attainment of standards. SCAQMD developed ambient air quality significance thresholds for particulate matter that are more restrictive than the federal or state air quality standards Table 4.3-2 in an effort to achieve attainment.

Changes in ambient air quality resulting from 230-kV transmission line construction emissions were modeled at several locations to determine the potential highest ambient air pollutant concentrations. The maximum ambient air quality pollutant concentrations would be caused by vault installation and would occur at a residence located 30 feet away from the edge of proposed vault installation areas along Pats Ranch Road.

Table 4.3-12 Mitigated Maximum Estimated Daily Emissions Generated During Proposed Project Construction (pounds)

Project Element [a]	NOx	ROG	CO	PM_{10}	$PM_{2.5}$	SO_2
Proposed Project						
Underground Vault Installation	12.5	1.1	35.8	41.6	7.8	0.1
Jack and Bore (trenchless)	4.57	0.8	31.1	6.35	0.98	0.07
Underground Duct Bank Installation (open trench)	11.8	0.8	26.1	32.3	6.0	0.1
Underground Cable Installation	1.7	0.3	17.9	9.0	1.6	0.0
Cable Terminating	1.3	0.2	10.8	12.4	1.8	0.0
Cable Splicing	2.5	0.5	16.6	21.7	3.1	0.04
Distribution Line Relocation	3.5	0.2	4.3	23.8	3.5	0.0
Total for Proposed Project	37.9	3.9 ~~3.81~~	143	147	24.7	0.3 ~~0.35~~
SCAQMD Significance Threshold	100	75	550	150	55	150
Exceed Threshold (**Yes**/No)?	No	No	No	No	No	No

Notes:

Bold indicates an exceedance.

Totals may not add due to rounding.

[a] The project elements under the maximum daily emissions scenario with mitigation are different than those presented in Table 4.3-11 because MM AQ-03 restricts certain elements from being constructed simultaneously.

Source: (RCH Group, 2018)

Maximum unmitigated ambient concentrations of NO_2, PM_{10}, and $PM_{2.5}$ would be caused by underground construction and would exceed the SCAQMD significance thresholds, as shown in Table 4.3-13. The ambient air pollutant concentrations caused by project construction have the potential to contribute substantially to an existing or projected air quality violation and could result in a significant impact.

SCE would implement EPE AQ-01 and EPE AQ-02 to ensure compliance with SCAQMD requirements and preparation of an air quality WEAP. These measures do not identify specific engine and fugitive dust controls. The impact from contribution to an existing or projected air quality violation due to ambient air pollutant concentrations of NO_2, PM_{10}, and $PM_{2.5}$ from construction activities could remain significant.

Table 4.3-13 Unmitigated Maximum Estimated Ambient Pollutant Concentrations During Proposed Project Construction

Criteria	CO		NO_2	PM_{10}	$PM_{2.5}$
	1-Hour	8-Hour	1-Hour	24-Hour	24-Hour
Maximum Modeled Concentration (µg/m³)	553	202	735	37.2	12.5
Maximum Modeled Concentration (ppm)	0.48	0.18	0.39	---	---
Background Concentration (ppm)	2.30	2.40	0.07	---	---
Total Concentration (µg/m³ or ppm)	2.78	2.58	**0.46**	**137.2**	**12.5**
SCAQMD Significance Threshold	20	9	0.18	10.4	10.4
SCAQMD Significance Threshold Unit	ppm	ppm	ppm	µg/m³	µg/m³
Exceed Threshold (**Yes**/No)?	No	No	**Yes**	**Yes**	**Yes**

Notes:
Bold indicates an exceedance.
Totals may not add due to rounding.

Source: (RCH Group, 2018)

MM AQ-01 and MM AQ-02 would be implemented to reduce the ambient pollutant concentrations resulting from underground construction. MM AQ-01 requires SCE to prepare and implement a Fugitive Dust Control Plan that includes short- and long-term dust control measures to reduce particulate matter emissions generated during construction. MM AQ-02 specifies exhaust emission control requirements for worker vehicles and construction equipment. These measures would reduce ambient concentrations of NO_2, PM_{10}, and $PM_{2.5}$ to below significance thresholds, as shown in Table 4.3-14. Proposed Project construction emissions would not contribute to an existing or projected air quality violation. ***The impact would be less than significant with mitigation.***

Operation and Maintenance

The Proposed Project would not require any SCE personnel to be present during operation of the new transmission facilities. Inspection and maintenance would be performed by SCE staff on a routine and as-needed basis (refer to Section 2.5: Operation and Maintenance of this Subsequent EIR).

As shown in Table 4.3-15, the estimated daily emissions from all operation and maintenance activities are below the SCAQMD significance thresholds. The emissions from field inspection of Project infrastructure would not approach levels at or above SCAQMD thresholds due to the very limited number of vehicles (one to two) used in any one day during field inspection of the 230-kV transmission line. The emissions from operation and maintenance of the Proposed

Project would not contribute to an existing or projected air quality violation or violate standards. *The impact from operation and maintenance would be less than significant.*

Mitigation Measures: MM AQ-01, MM AQ-02, and MM AQ-03

Significance after Mitigation: Less than Significant

Table 4.3-14 Mitigated Maximum Estimated Ambient Pollutant Concentrations During Proposed Project Construction

Criteria	CO		NO_2	PM_{10}	$PM_{2.5}$
	1-Hour	8-Hour	1-Hour	24-Hour	24-Hour
Maximum Modeled Concentration (µg/m³)	582	212	61.9	9.21	2.19
Maximum Modeled Concentration (ppm)	0.51	0.19	0.03	---	---
Background Concentration (ppm)	2.30	2.40	0.07	---	---
Total Concentration (µg/m³ or ppm)	2.81	2.59	0.10	9.21	2.19
SCAQMD Significance Threshold	20	9	0.18	10.4	10.4
SCAQMD Significance Threshold Unit	ppm	ppm	ppm	µg/m³	µg/m³
Exceed Threshold (**Yes**/No)?	No	No	No	No	No
Notes: Totals may not add due to rounding.					

Source: (RCH Group, 2018)

Table 4.3-15 Maximum Estimated Daily Emissions During Project Operations (pounds)

Project Element	NOx	ROG	CO	PM_{10}	$PM_{2.5}$	SO_2
Total for the Proposed Project	**0.4**	**0.0**	**0.0**	**10.4**	**1.1**	**0.0**
SCAQMD Significance Threshold	55	55	550	150	55	150
Exceed Threshold (**Yes**/No)?	No	No	No	No	No	No

Source: (RCH Group, 2018)

Impact Air-c: Would the Proposed Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	Significance Determination
	Construction: ***Less than Significant with mitigation***
	Operation & Maintenance: ***Less than Significant***

Construction

SCAB is designated as a nonattainment area for ozone and $PM_{2.5}$ under both NAAQS and CAAQS and nonattainment for PM_{10} under CAAQS. The Proposed Project would have a cumulatively considerable impact on air quality if:

- The project would result in emissions that exceed the significance thresholds, or
- The project would conflict with any goal in an attainment plan

SCAQMD prepared the 2016 AQMP to define control measures to achieve attainment of NAAQS and CAAQS ozone and particulate matter standards (SCAQMD, 2017). The emissions inventories and projections in the 2016 AQMP include current emissions at the time of plan preparation and future emissions from all sources including area (i.e., household uses), stationary (i.e., electricity generation), and mobile (i.e., transportation) sources in SCAB. SCAQMD has established thresholds of significance for air pollutants and their precursors to attain and maintain ambient air quality standards considering current and future emission sources (cumulative impacts). The thresholds established for ozone precursor pollutants (ROG and NOx), PM_{10}, and $PM_{2.5}$ are also the thresholds at which a project would be considered to have a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment.

As analyzed under Impact Air-b above, the daily air pollutant emissions generated during construction of the Proposed Project would exceed the mass daily SCAQMD significance thresholds for NOx, $PM_{2.5}$, and PM_{10} as shown in Table 4.3-11. The maximum ambient concentrations of NO_2, PM_{10}, and $PM_{2.5}$ from construction would exceed the SCAQMD significance thresholds as shown in Table 4.3-13. The impact would be significant. SCE would implement EPE AQ-01 and EPE AQ-02, which would reduce the impact but daily emissions from multiple construction activities would result in maximum pollutant concentrations that would exceed the thresholds because these measures do not identify specific engine and fugitive dust controls.

MM AQ-01, MM AQ-02, and MM AQ-03 require preparation and implementation of a Fugitive Dust Control Plan, use of exhaust emissions controls, and requirements prohibiting overlap of certain construction activities. These mitigation measures would reduce the emissions from construction of the Proposed Project and ambient pollutant concentrations to below the SCAQMD significance thresholds for ozone precursor and particulate matter emissions, as shown in Table 4.3-12 and Table 4.3-14. The Proposed Project would not generate emissions of pollutants for which the region is in nonattainment in excess of significance thresholds. ***The impact would be less than significant with mitigation.***

Operation and Maintenance

The Proposed Project would not require any SCE personnel to be present during operation of the new transmission facilities. Inspection and maintenance would be performed by SCE staff on a routine and as-needed basis (refer to Section 2.5: Operation and Maintenance of the Subsequent EIR).

As described under Impact Air-b above, the estimated daily emissions from all operation and maintenance activities for the Proposed Project are less than the SCAQMD significance thresholds. The emissions from operation and maintenance of the Proposed Project would therefore not contribute significantly to criteria pollutants in nonattainment status. ***The impact of operation and maintenance emissions on nonattainment criteria pollutants would be less than significant.***

Mitigation Measures: MM AQ-01, MM AQ-02, and MM AQ-03
Significance after Mitigation: Less than Significant

	Significance Determination
Impact Air-d: Would the Proposed Project expose sensitive receptors to substantial pollutant concentrations?	**Construction:** ***Less than Significant with Mitigation***
	Operation & Maintenance: ***Less than Significant***

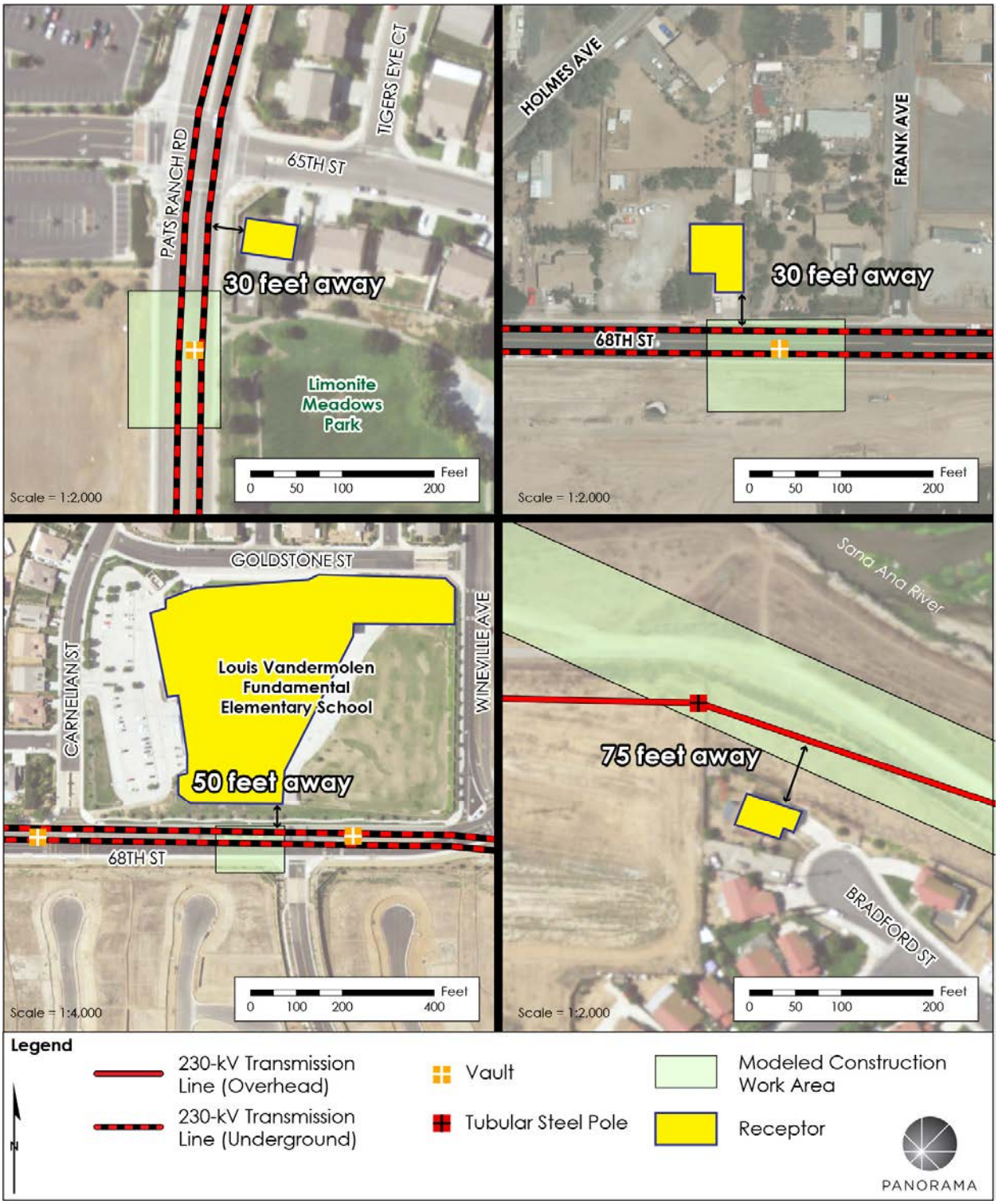
Construction

Ambient Pollutant Concentrations

Construction activities along the underground alignment of the Proposed Project would generate the greatest localized emissions in proximity to sensitive receptors. As described in Section 4.3.3: Environmental Setting above, air pollutants have the potential to cause health impacts on people. The ambient air quality impacts from construction activities generally decrease rapidly with distance from the emission sources. For example, the fugitive dust concentration is approximately half the estimated maximum ambient concentration at a distance of 85 feet from the emissions source and approximately a quarter the estimated maximum ambient concentration at a distance of 250 feet from the emissions source (RCH Group, 2018). Ambient air quality concentrations from construction emissions were modeled at sensitive receptor locations close to underground and overhead construction activities, including the Louis Vandermolen Fundamental Elementary School, residences on 68th Street, residences on Pats Ranch Road, and residences on Bradford Street. These four modeled locations are shown in Figure 4.3-3.

As shown in Table 4.3-16, ambient concentrations of NO_2, PM_{10}, and $PM_{2.5}$ caused by underground construction activities would exceed significance thresholds. The closest sensitive receptors to underground construction of the 230-kV transmission line, located approximately

Figure 4.3-3 Ambient Pollutant Concentrations Modeling Locations



Source: (RCH Group, 2018)

Note: The vault construction work area was modeled closer to the Louis Vandermolen Fundamental Elementary School to represent the worst-case scenario.

Table 4.3-16 Unmitigated Estimated Ambient Pollutant Concentrations During Proposed Project Underground Construction

Criteria	CO		NO_2	PM_{10}	$PM_{2.5}$
	1-Hour	8-Hour	1-Hour	24-Hour	24-Hour
Closest Residence (Pats Ranch Road Residence; 30 feet)					
Maximum Modeled Concentration (µg/m³)	553	202	735	37.2	12.5
Maximum Modeled Concentration (ppm)	0.48	0.18	0.39	---	---
Background Concentration (ppm)	2.30	2.40	0.07	---	---
Total Concentration (µg/m³ or ppm)	2.78	2.58	**0.46**	**37.2**	**12.5**
Closest Residence (68th Street Residence; 30 feet)					
Maximum Modeled Concentration (µg/m³)	553	147	735	23.8	9.09
Maximum Modeled Concentration (ppm)	0.48	0.13	0.39	---	---
Background Concentration (ppm)	2.30	2.40	0.07	---	---
Total Concentration (µg/m³ or ppm)	2.78	2.53	**0.46**	**23.8**	9.09
Closest School (Louis Vandermolen Elementary School; 50 feet)					
Maximum Modeled Concentration (µg/m³)	616	145	820	24.2	8.39
Maximum Modeled Concentration (ppm)	0.54	0.13	0.44	---	---
Background Concentration (ppm)	2.30	2.40	0.07	---	---
Total Concentration (µg/m³ or ppm)	2.84	2.53	**0.50**	**24.2**	8.39
Comparison to Thresholds					
SCAQMD Significance Threshold	20	9	0.18	10.4	10.4
SCAQMD Significance Threshold Unit	ppm	ppm	ppm	µg/m³	µg/m³
Exceed Threshold (**Yes**/No)?	No	No	**Yes**	**Yes**	**Yes**

Notes:

Bold indicates an exceedance

Source: (RCH Group, 2018)

30 feet away, would experience the highest ambient pollutant concentrations. Ambient concentrations of PM_{10} at the closest residence to overhead construction activities also would exceed the significance threshold, as shown in Table 4.3-17; however, due to the types of activities and distance, concentrations would be approximately half of the concentrations estimated to occur near underground construction activities. Impacts from local ambient concentrations of air pollutants on sensitive receptors adjacent to underground and overhead alignment construction would be potentially significant.

SCE would implement EPE AQ-01 and EPE AQ-02, which require compliance with SCAQMD requirements and preparation of an air quality WEAP but do not identify specific engine and fugitive dust controls. The impact on sensitive receptors from local ambient concentrations of air pollutants would remain potentially significant.

MM AQ-01 and MM AQ-02 would be implemented to reduce the ambient air concentrations caused by underground construction. MM AQ-01 requires SCE to prepare and implement a Fugitive Dust Control Plan that includes short- and long-term dust control measures to reduce particulate matter emissions generated during project construction. MM AQ-02 specifies exhaust emissions control requirements for worker vehicles and construction equipment. Table 4.3-18 shows the ambient air pollutant concentrations after mitigation for underground construction. Table 4.3-19 shows the ambient air pollutant concentrations after mitigation for overhead construction.

Table 4.3-17 Unmitigated Estimated Ambient Pollutant Concentrations During Proposed Project Overhead Construction

Criteria	CO		NO_2	PM_{10}	$PM_{2.5}$
	1-Hour	8-Hour	1-Hour	24-Hour	24-Hour
Closest Residence (Bradford Street; 75 feet)					
Maximum Modeled Concentration (µg/m³)	80.1	34.2	125	17.2	4.50
Maximum Modeled Concentration (ppm)	0.07	0.03	0.07	---	---
Background Concentration (ppm)	2.30	2.40	0.07	---	---
Total Concentration (µg/m³ or ppm)	2.37	2.43	0.14	**17.2**	4.50
					Comparison to Thresholds
SCAQMD Significance Threshold	20	9	0.18	10.4	10.4
SCAQMD Significance Threshold Unit	ppm	ppm	ppm	µg/m³	µg/m³
Exceed Threshold (**Yes**/No)?	No	No	No	**Yes**	No

Notes:

Bold indicates an exceedance

Source: (RCH Group, 2018)

Table 4.3-18 Mitigated Estimated Ambient Pollutant Concentrations During Proposed Project Underground Construction

Criteria	CO		NO_2	PM_{10}	$PM_{2.5}$
	1-Hour	8-Hour	1-Hour	24-Hour	24-Hour
Pats Ranch Road Residence (30 feet)					
Maximum Modeled Concentration (µg/m³)	582	212	61.9	9.21	2.19
Maximum Modeled Concentration (ppm)	0.51	0.19	0.03	---	---
Background Concentration (ppm)	2.30	2.40	0.07	---	---
Total Concentration (µg/m³ or ppm)	2.81	2.59	0.10	9.21	2.19
68th Street Residence (30 feet)					
Maximum Modeled Concentration (µg/m³)	582	155	62.0	5.87	1.46
Maximum Modeled Concentration (ppm)	0.51	0.14	0.03	---	---
Background Concentration (ppm)	2.30	2.40	0.07	---	---
Total Concentration (µg/m³ or ppm)	2.81	2.54	0.10	5.87	1.46
Louis Vandermolen Elementary School (50 feet)					
Maximum Modeled Concentration (µg/m³)	649	152	69.1	5.99	1.44
Maximum Modeled Concentration (ppm)	0.56	0.14	0.04	---	---
Background Concentration (ppm)	2.30	2.40	0.07	---	---
Total Concentration (µg/m³ or ppm)	2.86	2.54	0.10	5.99	1.44
Comparison to Thresholds					
SCAQMD Significance Threshold	20	9	0.18	10.4	10.4
SCAQMD Significance Threshold Unit	ppm	ppm	ppm	µg/m³	µg/m³
Exceed Threshold (**Yes**/No)?	No	No	No	No	No

Notes:

Bold indicates an exceedance

Source: (RCH Group, 2018)

Table 4.3-19 Mitigated Estimated Ambient Pollutant Concentrations During Proposed Project Overhead Construction

Criteria	CO		NO_2	PM_{10}	$PM_{2.5}$
	1-Hour	8-Hour	1-Hour	24-Hour	24-Hour
Bradford Street Residence (75 feet)					
Maximum Modeled Concentration (µg/m³)	114	48.6	13.7	4.19	1.03
Maximum Modeled Concentration (ppm)	0.10	0.04	0.01	---	---
Background Concentration (ppm)	2.30	2.40	0.07	---	---
Total Concentration (µg/m³ or ppm)	2.40	2.44	0.08	4.19	1.03
					Comparison to Thresholds
SCAQMD Significance Threshold	20	9	0.18	10.4	10.4
SCAQMD Significance Threshold Unit	ppm	ppm	ppm	µg/m³	µg/m³
Exceed Threshold (**Yes**/No)?	No	No	No	No	No

Source: (RCH Group, 2018)

Mitigated ambient concentrations of NO_2, PM_{10} and $PM_{2.5}$ would be below the SCAQMD significance thresholds near all sensitive receptors adjacent to the underground construction, regardless of distance. The temporary impact on adjacent sensitive receptors to the underground 230-kV transmission line from ambient concentrations of air pollutants due to underground construction would be reduced to below significance thresholds. ***The impact on sensitive receptors from exposure to substantial pollutant concentrations would be less than significant with mitigation.***

Carbon Monoxide Concentrations

CO emissions from construction traffic along the underground transmission line alignment could result in localized pollutant impacts. Congested intersections with a large volume of traffic have the greatest potential to experience high, localized concentrations of CO. High concentrations of CO have the potential to cause health problems, particularly cardiovascular and respiratory impacts. CO concentrations have the potential to exceed state or national ambient air quality standards when a project could increase vehicle trips at signalized intersections with a level of service (LOS) of E or F, or reduce the LOS to E or F (Caltrans, 1997).

Construction traffic would not reduce the LOS at any intersections to LOS E or F as analyzed in Section 4.13: Transportation and Traffic. CO concentrations from construction activities would be significantly below federal or state ambient air quality standards along 68th Street, even prior to mitigation, as shown in Table 4.3-13. An exceedance at an intersection or along the underground alignment during construction would not be expected because monitored locations throughout SCAB have not exceeded state or federal standards since achieving

attainment status in 2004 (CARB, 2016c). Maximum CO concentrations in 2015 were less than 10 percent of state and federal standards. The Proposed Project would not contribute emissions that would cause an exceedance. ***The impact on sensitive receptors from CO concentrations caused by construction traffic would be less than significant.***

Toxic Air Contaminants

Diesel-powered equipment and vehicles such as haul trucks, excavators, backhoes, and cranes would be used during construction of the Proposed Project. Grading and ground-disturbing activities would occur during construction of the overhead and underground segments. The operation of diesel-powered equipment would generate diesel exhaust emissions. The Proposed Project would be constructed with vehicles and equipment moving along the proposed underground and overhead 230-kV transmission line alignments throughout the duration of construction. Diesel-powered equipment and grading would emit TACs in the form of diesel exhaust emissions and fugitive dust.

Construction-related emissions would be short term in duration. TAC emissions from construction equipment and activities could impact sensitive receptors within 1,000 feet. Vault installation, a higher intensity construction activity, would occur for up to 7 work days at any one location. Only one or two vaults would be installed in the vicinity of any one sensitive receptor. Approximately 100 linear feet of duct bank installation would be conducted every day. Due to the linear nature of the Proposed Project, other construction activities, such as paving would not remain in any one location for a significant quantity of time. Sensitive receptors at any one location would not be exposed to TAC emissions from intense construction activities for greater than 2 continuous months, falling outside the time period for which OEHHA recommends a health risk assessment. ***The impact of TAC emissions on sensitive receptors would be less than significant.***

Valley Fever

Riverside County is an area with a low incidence rate, but the potential presence of spores that cause Valley Fever exists in the area of Proposed Project construction. Construction activities that disturb soil and result in airborne dust have the potential to spread the spores. The potential for construction activities to result in nearby residents contracting Valley Fever is low but the impact could be significant. Implementation of MM AQ-01 requires SCE to prepare and implement a Fugitive Dust Control Plan that includes short- and long-term dust control measures to reduce fugitive dust caused by project construction. Minimization of airborne dust would reduce the chance of exposure by residents to the spores. The impact on sensitive receptors from potential exposures to Valley Fever spores caused by construction would be less than significant with mitigation.

Operation and Maintenance

The Proposed Project would not require any SCE personnel to be present during operation of the new transmission facilities. Inspection and maintenance would be performed by SCE staff on a routine and as-needed basis (refer to Section 2.5: Operation and Maintenance of the Subsequent EIR).

Substantial increases in ambient air pollutant concentrations, TAC emissions, or CO emissions would not be anticipated due to the very limited number of vehicles (one or two) used in any one day during inspection and maintenance of the underground and overhead 230-kV transmission line. ***The impact on sensitive receptors would be less than significant.***

Mitigation Measures: MM AQ-01 and MM AQ-02
Significance after Mitigation: Less than Significant

	Significance Determination
Impact Air-e: Would the Proposed Project create objectionable odors affecting a substantial number of people?	**Construction: *Less than Significant***
	Operation & Maintenance: *No Impact*

Construction

Construction of the Proposed Project would generate temporary odors from diesel exhaust emissions and paving that could affect people in residential areas and other receptors along the underground alignment. Odors would be localized to work areas along the underground alignment. Equipment and vehicles would be used throughout construction. Paving would occur for up to 72 work days over the construction period. Construction activities would be confined to weekday and daytime hours. The numbers of people subjected to odors from paving would be limited because paving would occur during the daytime. The concentration of diesel engines and paving activities at any one location could increase the odors temporarily; however, the increases would not be substantial or permanent. A substantial number of people would not be subjected to significant, permanent odors. ***The impact resulting from the creation of objectionable odors would be less than significant.***

Operation and Maintenance

The Proposed Project would not require any SCE personnel to be present during operation of the new transmission facilities. Inspection and maintenance would be performed by SCE staff on a routine and as-needed basis (refer to Section 2.5: Operation and Maintenance of the Subsequent EIR). One or two vehicles would be needed to conduct inspections. Concentrations of diesel exhaust would be minimal. Odors would be insignificant and would not impact a substantial number of people. ***No impact would occur.***

Mitigation Measures: None Required

	Significance Determination
Impact GHG-b: Would the Proposed Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of greenhouse gases?	**Construction: *No Impact***
	Operation & Maintenance: *No Impact*

Construction

California Air Resources Board Climate Change Scoping Plan

The vehicles used during project construction are required to comply with the applicable GHG reduction programs for mobile sources. SCE or the construction contractor who owns the equipment and vehicles is required to provide verification of compliance to CARB or the USEPA under state and federal law. The Proposed Project would conform to relevant programs and recommended actions detailed in the Scoping Plan and Mobile Source Strategy. The Proposed Project would not conflict with regulations adopted to achieve the goals of the Scoping Plan. ***No impact would occur.***

Regional and Local Greenhouse Gas Reduction Plans

Overview

No local land use plans, policies, or regulations requiring discretionary approval would apply to the Proposed Project because, pursuant to GO No. 131-D, the CPUC has sole and exclusive jurisdiction over the siting and design of such facilities. The CPUC does strive to be consistent with local plans, as feasible. The GHG reduction plan consistency analysis provided below is for information purposes only.

WRCOG: Subregional Climate Action Plan

WRCOG's Subregional CAP identifies several measures relevant to the Proposed Project. Measure SR-6 requires compliance with Pavley and LCFS, described in detail under Section 4.3.3. SCE would comply with AB 1493 and Executive Order S-1-07 ensuring compliance with Pavley and LCFS. Measure SR-13 requires diversion of 50 percent of all construction and demolition waste. SCE would implement EPE UTIL-01, which specifies that SCE would divert recyclable construction materials. SCE would comply with AB 341 which requires 75 percent recycling by 2020. The Proposed Project would not conflict with this plan. ***No impact would occur.***

Riverside County: Climate Action Plan

The Riverside County CAP identifies several programs and regulations relevant to the Proposed Project. Idling of on- and off-road heavy-duty diesel vehicles is prohibited for more than 5 minutes, per measure R2-T8. Construction and operation of the Proposed Project would require use of heavy-duty diesel vehicles and equipment. SCE would comply with CCR § 2485, which requires trucks with a gross vehicle weight rating over 10,000 pounds to idle no longer than 5 consecutive minutes except under extenuating circumstances. MM AQ-02 also requires construction vehicles to limit idling to less than 5 minutes. Measure R2-S1 requires diversion of 75 percent of all waste in the County by 2020. SCE would implement EPE UTIL-01, which specifies that SCE would divert recyclable construction materials. SCE would comply with

AB 341 which requires 75 percent recycling by 2020. The Proposed Project would not conflict with this plan. ***No impact would occur.***

City of Riverside: Economic Prosperity Action Plan and Climate Action Plan
The City of Riverside's EPAP and CAP identifies several measures, similar to the Subregional CAP, that are applicable to the Proposed Project. Measure SR-6 requires compliance with Pavley and LCFS. SCE would comply with AB 1493 and Executive Order S-1-07 ensuring compliance with Pavley and LCFS. Measure SR-13 requires diversion of 50 percent of all construction and demolition waste. SCE would implement EPE UTIL-01, which specifies that SCE would divert recyclable construction materials. SCE would comply with AB 341 which requires 75 percent recycling by 2020. The Proposed Project would not conflict with this plan. ***No impact would occur.***

City of Riverside: Green Action Plan
The City of Riverside's Green Action Plan includes Items 12 and 13 that apply to the Proposed Project. Items 12 and 13 require diversion of waste. SCE would implement EPE UTIL-01, which specifies that SCE would divert recyclable construction materials. SCE would comply with AB 341 which requires 75 percent recycling by 2020. The Proposed Project would not conflict with this plan. ***No impact would occur.***

Operation and Maintenance

The Proposed Project would not require any SCE personnel to be present during operation of the new transmission facilities. Inspection and maintenance would be performed by SCE staff on a routine and as-needed basis (refer to Section 2.5: Operation and Maintenance of the Subsequent EIR). Vehicles used during inspections would comply with the applicable GHG reduction programs for mobile sources. Operation and maintenance activities would not conflict with the GHG reduction plans pertinent to the Proposed Project. ***No impact would occur.***

Mitigation Measures: None Required

4.3.8 Proposed Project ~~Revised Project~~ Mitigation Measures

MM AQ-01: Fugitive Dust Control Plan (Incorporates 2013 RTRP EIR MMs AQ-07 thru AQ-13 and AQ-18)

Prior to start of the initial on-site construction, a draft Fugitive Dust Control Plan shall be prepared in compliance with SCAQMD Rule 403. Fugitive dust shall be controlled by the applicable best available control measures listed in Table 1 of Rule 403. A draft Fugitive Dust Control Plan shall be submitted to the CPUC for review and approval at least 30 days prior to the initiation of construction.

Under SCAQMD Rule 403 – Fugitive Dust, the following provisions apply:

- The project applicant shall submit a Rule 403 Large Operation Notification to the Executive Officer.
- A sign shall be posted near the entrance of the facility with a responsible individual's name and phone number in case there are any fugitive dust control issues at the site.
- Appoint a construction relations officer to act as a community liaison concerning on-site construction activity, including resolution of issues related to PM_{10} generation from combustion emissions and fugitive dust generation.

- An on-site supervisor with a current fugitive dust control class certification shall be present who is available within 30 minutes to respond to any fugitive dust control issue at the site during normal business hours.
- The operation shall keep on-site records of specific dust control actions taken.

At a minimum, the Fugitive Dust Control Plan shall include the following control measures that must be implemented during construction:

- Limit vehicle speeds to 15 mph on unpaved surfaces.
- Track-out shall not extend 25 feet or more from an active operation and track-out shall be removed at the conclusion of each workday. The contractor shall use a gravel apron, 25 feet long by road width, or a pipe-grid track-out control device to reduce mud/dirt track-out from active operations and unpaved truck exit routes.
- The construction contractor shall use street sweepers (using reclaimed water) that comply with SCAQMD Rules 1186 and 1186.1.[5] The street sweepers shall operate for the length of the truck route to and from unpaved construction areas including the marshalling yards and in between construction sites.
- A wheel washing system shall be installed and used to remove bulk material from tires and vehicle undercarriages before vehicles exit the unpaved construction site.
- Operations on unpaved surfaces shall be suspended when winds exceed 25 miles per hour. When wind speeds are high enough to result in dust emissions crossing the work boundary, despite the application of dust mitigation measures, grading and earthmoving operations shall be suspended.
- Visible dust plumes shall not occur during periods when soil is being disturbed by equipment or by wind at any time. If dust plumes are visible or a dust complaint is lodged, dust control may be achieved by applying water before/during earthwork and onto unpaved traffic areas, phasing work to limit dust, and setting up wind fences to limit wind-blown dust.
- *Exposed Surfaces*
  - Water or a stabilizing agent shall be applied to exposed surfaces, including graded and disturbed areas, at least three times daily, preferably in the mid-morning, afternoon, and after work is finished for the day. Dust control shall be applied in sufficient quantity to prevent generation of dust plumes.
  - Soil stabilization shall be conducted at construction sites after normal working hours, on weekends, and holidays. This requirement also applies to inactive construction areas such as phased projects where disturbed land is left unattended. Applying water to form a visible crust on the soil and restricting vehicle access are often effective for short-term stabilization of disturbed surface areas. Long-term methods include applying dust suppressants and establishing vegetative cover. Stabilization best management practices used for disturbed areas not supporting construction traffic or active work may also include vegetation, plastic covering, erosion control fabrics and matting, and the early application of a gravel base on areas to be paved.
- *Stock Piles*
  - On-site soil stock piles shall be covered or watered at least twice per day. Water excavated soil piles hourly or cover with temporary coverings. All storage piles shall be covered overnight and during inactivity.
- *Haul Trucks*
  - Moisten excavated soil prior to loading on haul trucks. Cover all loads of dirt leaving the site or leave at least two feet of freeboard capacity in haul truck to reduce fugitive dust emissions while in-route to disposal site.

Applicable Locations: All Proposed Project locations

[5] Certified Street Sweeper, June 1, 2016, http://www.aqmd.gov/docs/default-source/rule-book/support-documents/rule-1186/certified-street-sweepers-equipment-list.pdf?sfvrsn=2

Performance Standards and Timing:

- **Prior to Construction:** (1) SCE submits the draft Fugitive Dust Control Plan to CPUC for review and approval at least 30 days prior to construction, (2) submit a Rule 403 Large Operation Notification to SCAQMD with copy provided to CPUC for verification
- **During Construction:** SCE implements the Fugitive Dust Control Plan
- **Following Construction:** N/A

MM AQ-02: Exhaust Emissions Control (Incorporates 2013 RTRP EIR MMs AQ-01 through AQ-06, AQ-15 through AQ-17, and AQ-19)

Exhaust emissions from worker vehicles, construction equipment, and vehicles shall be minimized by implementing the following control measures:

- Use ultra-low sulfur diesel fuel (e.g., <15 ppm).
- Use clean-burning on- and off-road diesel engines. Heavy-duty diesel-powered construction equipment manufactured after 1996 (with federally mandated "clean" diesel engines) shall be utilized.
- SCE or its contractor shall develop a program and require construction workers to carpool to construction sites.
- Restrict construction vehicle idling time to less than 5 minutes.
- Properly maintain mechanical equipment.
- Use particle traps and other appropriate controls to reduce diesel particulate matter. Other control equipment includes devices such as specialized catalytic converters (oxidation catalysts) control approximately 20 percent of diesel particulate matter, 40 percent of carbon monoxide, and 50 percent of hydrocarbon emissions.
- ~~Provide temporary traffic controls, such as a flag person, during all phases of construction to maintain smooth traffic flow.~~
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site.
- Define construction traffic routes to direct construction trucks away from congested streets or sensitive receptor areas.
- During Project construction, all off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet the Tier 4 emission standards~~, where available~~. In addition, all construction equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations (i.e., if Project construction goes beyond the anticipated schedule).
  - Alternatively, SCE or the contractor may be allowed to operate off-road equipment that does not meet Tier 4 emissions standards if SCE provides calculation evidence that use of the equipment will not cause an exceedance of SCAQMD significance thresholds. SCE must make a due diligence search to find and use equipment with the Tier 4 emissions standards or the highest emissions standards available. Circumstances where this may be applicable are limited to the following situations: (1) the equipment is specialty or unique and cannot be found with a Tier 4 engine (e.g., sag cat with three winches, PM_{10} street sweepers); (2) the equipment is not in use for more than 5 days total; and/or (3) the equipment is registered under CARB's Statewide Portable Equipment Registration Program.
- A copy of each unit's certified tier specification, BACT documentation, ~~and~~ CARB or SCAQMD operating permit, and Truck Regulation Upload, Compliance and Reporting System receipt shall be provided to the CPUC at the time of mobilization for each applicable unit of equipment.

Applicable Locations: All Proposed Project locations

Performance Standards and Timing:

- **Prior to Construction:** ~~N/A~~ SCE shall submit calculation evidence to the CPUC for review at least 2 weeks prior to use of off-road equipment that does not meet Tier 4 emissions standards, as needed
- **During Construction:** (1) SCE implements all exhaust emission control measures, (2) Provide copies of documentation proving that construction equipment and vehicles meet USEPA-Certified ~~Tier 3~~ Tier 4 emissions standards ~~or higher~~, are outfitted with BACT devices, and comply with the Truck and Bus Regulation to the CPUC as equipment is mobilized
- **Following Construction:** N/A

MM AQ-03: Overlap of Construction Activities (Incorporates 2013 RTRP EIR MM AQ-14)

The final project construction schedule shall be coordinated to ensure that the Conductor Installation activity shall not occur simultaneously with the TSP Foundation Installation and TSP Erection activities. Furthermore, air pollutant emissions generated during construction of SCE project components shall ~~not overlap with construction of the RPU components of the RTRP~~ be calculated with those from construction of the RPU components of the RTRP to determine which components can overlap without exceeding the peak daily SCAQMD significance thresholds. The final construction schedule and calculation evidence that the overlapping RTRP components do not exceed SCAQMD significance thresholds shall be provided to the CPUC at least 2 weeks prior to construction.

Applicable Locations: All Proposed Project locations

Performance Standards and Timing:

- **Prior to Construction:** SCE shall submit a final construction schedule to the CPUC for review at least two weeks prior to construction
- **During Construction:** SCE shall provide schedule updates throughout the construction process to ensure compliance with this mitigation measure
- **Following Construction:** N/A

4.3.9 Alternatives Setting

Environmental Setting

The environmental setting for air quality and greenhouse gas emissions under Alternatives 1 through 4 would be the similar to that of the Proposed Project; however, Alternatives 1 and 2 have the potential to impact different sensitive receptors, described below.

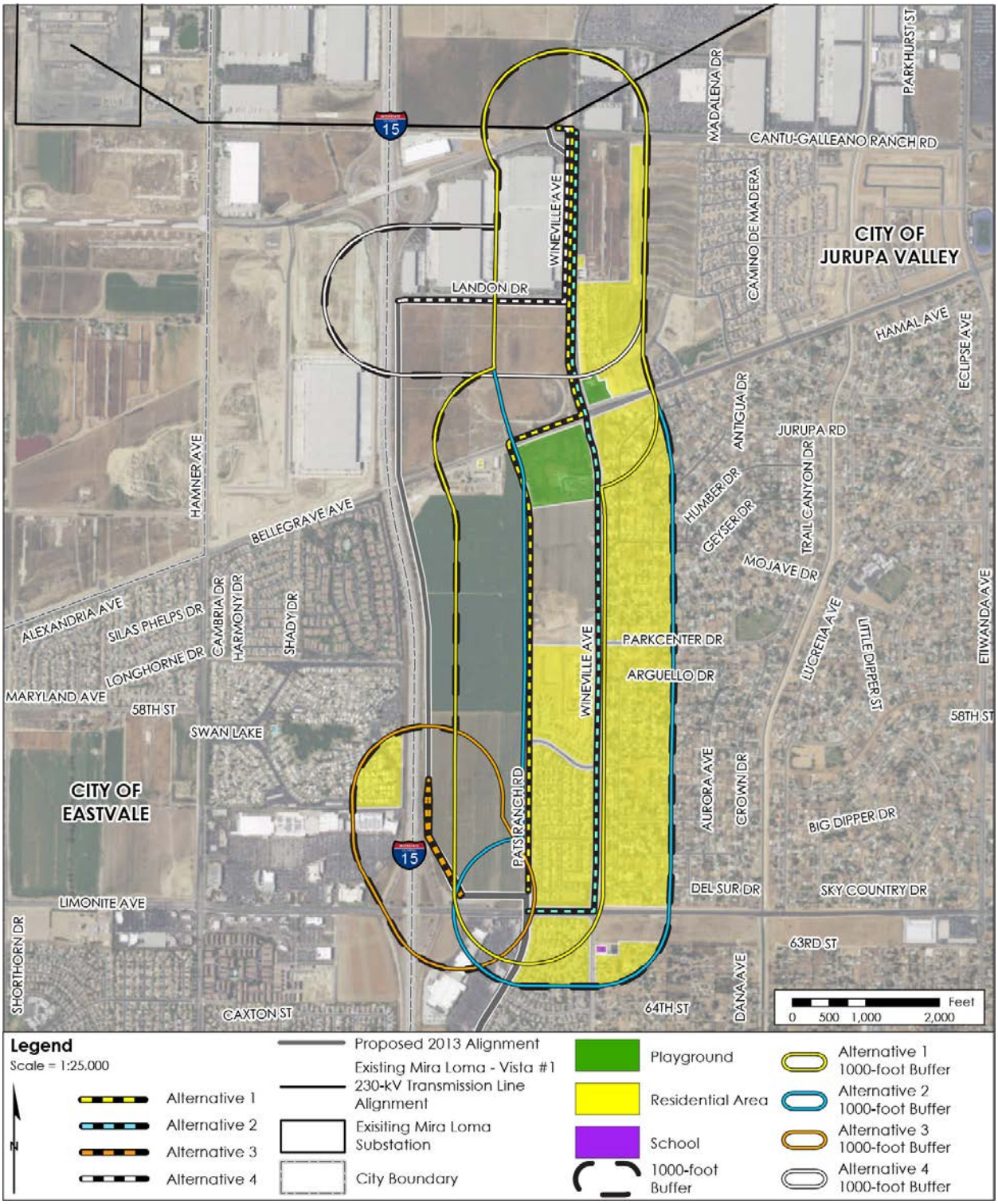
Sensitive Receptors

Underground transmission line construction would occur in proximity to sensitive receptors not considered in the Proposed Project impact analysis. Land uses with sensitive receptors located within 1,000 feet of the alternatives are shown in Figure 4.3-4.

Regulatory Setting

The regulatory setting for air quality and greenhouse gas emissions under Alternatives 1 through 4 would include the federal, State, and City of Jurupa Valley policies and regulations identified for the Proposed Project (refer to Section 4.3.4: Regulatory Setting).

Figure 4.3-4 Sensitive Receptors within 1,000 Feet of Alternatives 1 Through 4



Source: (esri, 2017; SCE, 2017; Google, Inc., 2017; City of Riverside Innovation and Technology Department, 2016; Riverside County Information Technology Geographical Solutions, 2014; CDFW, 2016)

4.3.10 Alternatives Impact Analysis

Alternatives Analysis Scope

The following analysis considers only the environmental impacts resulting from construction and operation of each alternative alignment segment. Any specific alternative replaces only a portion of the Revised Project and would require combination with the remaining unaffected segments of the Revised Project to form a complete alternative route through Jurupa Valley. Impacts resulting from construction and operation of the additional Revised Project elements necessary to form a complete alternative route are not considered in this section. A discussion of the environmental impacts resulting from construction and operation of the complete alternative route, comprised of each alternative alignment plus the unaffected Revised Project elements, is provided in Chapter 6: Comparison of Alternatives.

Impacts Avoided by the Alternatives

Alternatives 1 through 4 would be constructed in the same general area as the Proposed Project.

~~a. Conflict with or obstruct implementation of the applicable air quality plan~~

Alternatives 1 through 4 would have no impact on the following Appendix G significance criterion related to Greenhouse Gas Emissions:

b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases

~~None of the alternatives would conflict with or obstruct the implementation of an air quality plan because the alternatives would not induce population or employment growth within the SCAB or conflict with adopted area source rules.~~ The alternatives would not conflict with the CARB Climate Change Scoping Plan or other local GHG reduction plans because construction vehicles are legally required to comply with applicable GHG reduction programs. Impacts associated with ~~these~~ this significance ~~criteria~~ criterion are not discussed further.

Alternatives 1, 2, and 4 Environmental Impacts and Mitigation Measures

Alternative 1 and Alternative 2 involve construction of two riser poles at the northwest corner of Wineville Avenue and Cantu-Galleano Ranch Road. The Alternative 1 underground transmission line would be located within Wineville Avenue, Bellegrave Avenue, and Pats Ranch Road. The Alternative 2 underground transmission line would be located within Wineville Avenue and Limonite Avenue. Both Alternative 1 and Alternative 2 would meet the Revised Project underground alignment at the intersection of Limonite Avenue and Pats Ranch Road. Alternative 4 involves construction of a segment of underground transmission line that follows Wineville Avenue and Landon Drive. Two riser poles would be constructed at either end of the underground segment.

Impact Air-a: Would Alternative 1, 2, or 4 conflict with or obstruct implementation of the applicable air quality plan? **and** **Impact Air-b: Would Alternative 1, 2, or 4 violate an air quality standard or contribute substantially to an existing or projected air quality violation?**	**Significance Determination**
	Construction: ***Less than Significant with Mitigation***
	Operation & Maintenance: ***Less than Significant***

Construction

Conflict with an Air Quality Plan

Alternatives 1, 2, and 4 would not induce population growth or conflict with area or stationary source control measures. Construction of Alternatives 1, 2, and 4 could conflict with the AQMD fugitive dust rules. Construction of Alternatives 1, 2, and 4 could conflict with the 2016 AQMP by generating emissions in excess of SCAQMD significance thresholds. The impact from conflicts with an adopted air plan and fugitive dust rules and proposed EPEs and mitigation are discussed under daily air quality emissions, below.

Daily Air Quality Emissions

Alternative 1 would involve underground construction at locations along Pats Ranch Road and Wineville Avenue for approximately 18 months. Alternative 2 would involve underground construction at locations along Wineville Avenue for approximately 19 months. Alternative 4 would involve underground construction at locations along Wineville Avenue and Landon Avenue for nearly 8 months. SCE could construct the alternatives at the same time as it constructs other components of the Proposed Project. For the purpose of this air quality analysis, it was assumed that the number of equipment and personnel working on underground project components at any time would be double the quantities estimated for the Proposed Project due to the potential for concurrent construction of the Proposed Project and alternative. Jack and bore would only occur in one location; therefore, emissions would not be doubled. While the duration of construction for each alternative would differ, the peak daily emissions would be the same for Alternatives 1, 2, and 4 due to the similarity in construction activities.

Exhaust and ground-disturbance from vehicles and equipment used during construction of Alternatives 1, 2, and 4 would generate air pollutant emissions. The estimated unmitigated daily emissions of NO_x, PM_{10}, and $PM_{2.5}$ generated during construction of these alternatives in combination with the Proposed Project would exceed SCAQMD significance thresholds as shown in Table 4.3-20. The emissions generated during Alternatives 1, 2, or 4 construction could significantly contribute to an existing or projected air quality violation.

SCE would implement EPE AQ-01 (Comply with SCAQMD Requirements) and EPE AQ-02 (Worker Environmental Awareness Program); however, these EPEs do not specify engine and fugitive dust controls. The impact on an existing or projected air quality violation would remain potentially significant.

Table 4.3-20 Unmitigated Maximum Estimated Daily Emissions Generated During Alternatives 1, 2, and 4 Construction (pounds)

Project Element	NOx	ROG	CO	PM_{10}	$PM_{2.5}$	SO_2
Alternatives						
Vault Installation	96.1	7.3	65.2	208.8	31.0	0.2
Duct Bank Installation	50.3	4.3	40.0	160.8	23.2	0.1
Underground Cable Installation	37.2	3.4	29.8	49.8	7.1	0.1
Cable Terminating	20.3	1.6	20.6	86.3	10.3	0.0
Cable Splicing	30.9	3.2	23.2	151.6	17.9	0.1
Distribution Relocation	5.6	0.5	3.9	87.2	11.0	0.0
Jack and Bore (trenchless)	30.4	2.1	17.1	27.6	4.1	0.1
Total for Alternatives	~~240.5~~ **270.8**	~~20.3~~ 22.4	~~182.6~~ 199.8	~~**744.5**~~ **772.1**	~~**100.4**~~ **104.6**	0.6
SCAQMD Significance Threshold	100	75	550	150	55	150
Exceed Threshold (**Yes**/No)?	**Yes**	No	No	**Yes**	**Yes**	No

Note:
Totals may not add due to rounding.

Source: (RCH Group, 2017)

MM AQ-01 and MM AQ-02 require implementation of fugitive dust and exhaust emissions controls. MM AQ-03 requires construction phasing and prevents overlap with construction of the RPU components of the RTRP. These mitigation measures in combination would reduce emissions of NOx and $PM_{2.5}$ to below SCAQMD significance thresholds, as shown in Table 4.3-21. PM_{10} emissions, however, would remain potentially significant due to the equipment use, disturbance areas and number of truck trips required for construction of alternatives. The impact from contribution to an existing or projected air quality violation would remain potentially significant with the Proposed Project mitigation.

Additional mitigation is proposed for the alternatives to further reduce the impact from alternative construction. MM AQ-04 requires a limitation on the number of construction vehicles and equipment used on an active work site during construction in any one day, reducing the maximum daily emissions generated during construction of Alternatives 1, 2, and 4 to below SCAQMD significance thresholds. Emissions would be reduced to similar levels as the Proposed Project. ***The impact from an existing or projected air quality violation would less than significant with mitigation.***

Ambient Air Quality

Construction of Alternatives 1 and 2 would occur as close as 30 feet from sensitive receptors and the closest distance between and construction of Alternative 4 and sensitive receptors would be 78 feet. The distance to sensitive receptors and Alternatives 1 and 2 construction

Table 4.3-21 Mitigated Maximum Estimated Daily Emissions Generated During Alternatives 1, 2, and 4 Construction (pounds)

Project Element	NOx	ROG	CO	PM_{10}	$PM_{2.5}$	SO_2
Alternatives [a]						
Underground Vault Installation	25.1	2.2	71.5	83.3	15.6	0.2
Duct Bank Installation	23.6	1.6	52.2	64.6	12.1	0.1
Underground Cable Installation	3.3	0.5	35.8	18.0	3.1	0.1
Cable Terminating	2.7	0.5	21.6	24.8	3.5	0.0
Cable Splicing	5.0	0.9	33.1	43.4	6.2	0.1
Distribution Relocation	3.5	0.2	4.3	23.8	3.5	0.0
Jack and Bore (trenchless)	4.6	0.8	31.1	6.4	1.0	0.1
Total for Alternatives	~~63.2~~ 67.8	~~5.8~~ 6.7	~~218.5~~ 249.6	~~**257.9**~~ **264.3**	~~43.9~~ 45.0	0.6
SCAQMD Significance Threshold	100	75	550	150	55	150
Exceed Threshold (**Yes**/No)?	No	No	No	**Yes**	No	No

Note:

Totals may not add due to rounding.

[a] The project elements under the maximum daily emissions scenario with mitigation are different than those presented in Table 4.3-20 because MM AQ-03 restricts certain elements from being constructed simultaneously.

Source: (RCH Group, 2017)

would be similar to the modeled distance for the Proposed Project. Construction activities associated with Alternative 4 would be further away from sensitive receptors than the Proposed Project underground construction and the maximum emissions would therefore be less due to increased potential for dispersion. Maximum unmitigated ambient air pollutant concentrations similar to the modeled emission levels for the Proposed Project along Pats Ranch Road. Unmitigated ambient concentrations of NO_2, PM_{10}, and $PM_{2.5}$ resulting from construction of Alternatives 1, 2, and 4 would exceed SCAQMD significance thresholds. The ambient air pollutant concentrations caused by construction of Alternatives 1, 2, and 4 have the potential to contribute to an existing or projected air quality violation, which would be a significant impact.

SCE would implement EPE AQ-01 (Comply with SCAQMD Requirements) and EPE AQ-02 (Worker Environmental Awareness Program), but the EPEs do not identify specific engine and fugitive dust controls. The impact from contribution to an existing or projected air quality violation due to ambient air pollutant concentrations of NO_2, PM_{10}, and $PM_{2.5}$ could remain significant.

MM AQ-01 and MM AQ-02, which require fugitive dust and exhaust emission controls, would be implemented to reduce the ambient air concentrations as a result of underground construction. Mitigated ambient concentrations of NO_2, PM_{10}, and $PM_{2.5}$ would be reduced to below SCAQMD significance thresholds, similar to the Proposed Project. Construction of

Alternatives 1, 2, and 4 would not contribute to an existing or projected air quality violation. ***The construction impact would be less than significant with mitigation.***

Operation and Maintenance

Alternatives 1, 2, and 4 would involve the same frequency of operation and maintenance activities as the Proposed Project. One or two vehicles would be needed to conduct inspections. Emissions generated during operation and maintenance activities would be the same as the Proposed Project. Ambient air concentrations are expected to be negligible. Operation and maintenance of Alternatives 1, 2, and 4 would not conflict with or obstruct implementation of the 2016 AQMP. ***The impact from operation and maintenance would be less than significant.***

Mitigation Measures: MM AQ-01, MM AQ-02, and MM AQ-03 (refer to Section 4.3.8: Revised Project Mitigation Measures) and MM AQ-04

Significance after Mitigation: Less than Significant

Impact Air-c: Would Alternative 1, 2, or 4 result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	**Significance Determination**
	Construction: ***Less than Significant with Mitigation***
	Operation & Maintenance: ***Less than Significant***

Construction

The thresholds established for ozone precursor pollutants (ROG and NOx), PM_{10}, and $PM_{2.5}$ are also the thresholds at which a project would be considered to have a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment. As analyzed under Impact Air-b above, the daily air pollutant emissions generated during construction of the Alternatives 1, 2, and 4 would exceed the mass daily SCAQMD significance thresholds for NOx, $PM_{2.5}$, and PM_{10} as shown in ~~Table 4.3-11~~ Table 4.3-20. The maximum ambient concentrations of NO_2, PM_{10}, and $PM_{2.5}$ from construction of Alternatives 1, 2, and 4 would exceed SCAQMD significance thresholds, similar to the Proposed Project. The impact would be significant.

SCE would implement EPE AQ-01 (Comply with SCAQMD Requirements) and EPE AQ-02 (Worker Environmental Awareness Program), which would reduce the impacts but daily emissions and maximum pollutant concentrations would still exceed the thresholds because these measures do not identify specific engine and fugitive dust controls.

MM AQ-01, MM AQ-02, MM AQ-03, and MM AQ-04 would reduce ozone precursors and particulate matter emissions generated during construction and ambient pollutant concentrations to below SCAQMD significance thresholds, as shown in Table 4.3-22. Alternatives 1, 2, and 4 would not generate emissions of pollutants for in excess of significance thresholds. ***The impact would be less than significant with mitigation.***

Operation and Maintenance

Operation and maintenance activities for Alternatives 1, 2, and 4 would be conducted at the same frequency and intensity as the Proposed Project. Emissions generated during operation and maintenance activities would be the same as the Proposed Project. The emissions from operation and maintenance of Alternatives 1, 2, and 4 would not significantly contribute to criteria pollutants in nonattainment. ***The impact would be less than significant.***

Mitigation Measures: MM AQ-01, MM AQ-02, MM AQ-03 (refer to Section 4.3.8: Revised Project Mitigation Measures) and MM AQ-04

Significance after Mitigation: Less than Significant

Table 4.3-22 Mitigated Maximum Estimated Daily Emissions Generated During Alternatives 1, 2, and 4 Construction with Additional Limitations (pounds)

Project Element	NOx	ROG	CO	PM_{10}	$PM_{2.5}$	SO_2
Alternatives [a]						
Underground Vault Installation	12.5	1.1	35.8	41.6	7.8	0.1
Jack and Bore (trenchless)	4.6	0.8	31.1	6.4	1.0	0.1
Duct Bank Installation	11.8	0.8	26.1	32.3	6.0	0.1
Underground Cable Installation	1.66	0.3	17.9	9.0	1.6	0.0
Cable Terminating	1.33	0.2	10.8	12.4	1.8	0.0
Cable Splicing	2.52	0.45	16.6	21.7	3.1	0.04
Distribution Relocation	3.51	0.2	4.3	23.8	3.5	0.0
Total for Alternatives	~~33.4~~ 37.92	~~3.0~~ 3.85	~~111.0~~ 142.6	~~140.9~~ 147.2	~~23.7~~ 24.8	~~0.3~~ 0.34
SCAQMD Significance Threshold	100	75	550	150	55	150
Exceed Threshold (**Yes**/No)?	No	No	No	No	No	No

Notes:

Totals may not add due to rounding.

[a] The project elements under the maximum daily emissions scenario with mitigation are different than those presented in Table 4.3-20 because MM AQ-03 restricts certain elements from being constructed simultaneously.

(RCH Group, 2017)

	Significance Determination
Impact Air-d: Would Alternative 1, 2, or 4 expose sensitive receptors to substantial pollutant concentrations?	**Construction:** ***Less than Significant with Mitigation***
	Operation & Maintenance: ***Less than Significant***

Construction

Ambient Pollutant Concentrations

Alternatives 1 and 2 would expose a similar number of sensitive residential receptors to elevated concentrations of air pollutants from underground construction as the Proposed Project underground construction on Pat's Ranch Road, as shown in Figure 4.3-4. Sensitive receptors along Pats Ranch Road, north of Limonite Avenue, and along Wineville Avenue would experience ambient pollutant concentrations from construction of Alternatives 1 and 2 similar to or lower than the residence on Pats Ranch Road, south of Limonite Avenue, analyzed in the Proposed Project analysis (refer to Table 4.3-16 ~~in Section 4.3: Air Quality and Greenhouse Gas Emissions~~). Ambient pollutant concentrations from construction of Alternative 4 would be similar to or marginally higher than the residence on Bradford Street due to the similar distance but higher intensity construction activities. Ambient concentrations of NO_2, PM_{10}, and $PM_{2.5}$ would exceed significance thresholds at the maximally exposed sensitive receptors located approximately 80 feet away or closer from construction activities. The impact on sensitive receptors from ambient air pollutant concentrations would be potentially significant.

SCE would implement EPE AQ-01 (Comply with SCAQMD Requirements) and EPE AQ-02 (Worker Environmental Awareness Program), but the impact on sensitive receptors from local ambient pollutant concentrations would remain potentially significant. MM AQ-01 and MM AQ-02, which require fugitive dust and exhaust emission controls, would be implemented to reduce the ambient air concentrations as a result of underground construction. Mitigation would reduce the ambient concentrations generated from construction of the underground 230-kV line proposed as part of Alternatives 1, 2, and 4 (refer to Table 4.3-18 ~~in Section 4.3: Air Quality and Greenhouse Gas Emissions~~). ***The impact on sensitive receptors from exposure to substantial pollutant concentrations would be less than significant with mitigation.***

Carbon Monoxide Concentrations

As analyzed in Section 4.3: Air Quality and Greenhouse Gas Emissions, CO concentrations within SCAB have not exceeded state or federal standards since 2004 (CARB, 2016). CO concentrations due to construction of Alternatives 1, 2, and 4 would be similar to those modeled for the Proposed Project due to similar distances between the construction area and sensitive receptors. CO concentrations would not exceed SCAQMD significance thresholds at the maximally exposed receptor. ***The impact on sensitive receptors from CO concentrations caused by construction traffic would be less than significant.***

Toxic Air Contaminants

TAC emissions would be generated during construction from use of vehicles and equipment as well as ground-disturbing activities, similar to the Proposed Project. A similar number of sensitive receptors could be affected by TAC emissions during construction of Alternatives 1 and 2 compared to the Proposed Project. Alternative 4 would expose a much smaller number of sensitive receptors to TAC emissions compared to the Proposed Project. Construction of Alternatives 1, 2, and 4 would not expose sensitive receptors to TAC emissions from intense construction activities at any one location for greater than 2 continuous months. Due to the short duration of potential sensitive receptor exposure to increased TAC emissions, Alternative

1, 2, and 4 construction activities would not exceed the OEHHA screening threshold for a health risk assessment. ***The impact on sensitive receptors would be less than significant.***

Operation and Maintenance

Alternatives 1, 2, and 4 operation and maintenance activities would be conducted at the same frequency and intensity as the Proposed Project. Similar to the Proposed Project, minimal equipment and vehicle use is anticipated during operation and maintenance of Alternatives 1, 2, and 4. Air pollutant concentrations and quantities of TAC emissions would not be substantial. ***The impact on sensitive receptors would be less than significant.***

Mitigation Measures: MM AQ-01 and MM AQ-02 (refer to Section 4.3.8: Revised Project Mitigation Measures)

Significance after Mitigation: Less than Significant

	Significance Determination
Impact Air-e: Would Alternative 1, 2, or 4 create objectionable odors affecting a substantial number of people?	**Construction:** ***Less than Significant***
	Operation & Maintenance: ***No Impact***

Construction

Residents would experience temporary odors from diesel exhaust emissions and paving during construction of Alternatives 1, 2, and 4, due to the presence of vehicles and equipment operating in proximity to residences. The increase in odors from equipment and paving would not be substantial and the odors would dissipate rapidly at the end of the activity. A substantial number of people would not be subjected to significant odors. ***The impact would be less than significant.***

Operation and Maintenance

Alternatives 1, 2, and 4 would require the same operation and maintenance activities and frequency as the Proposed Project. Similar to the Proposed Project, minimal equipment and vehicle use is anticipated during operation and maintenance of Alternatives 1, 2, and 4. The underground transmission line would not generate any odors. ***No impact would occur.***

Mitigation Measures: None Required

	Significance Determination
Impact GHG-a: Would the Alternative 1, 2, or 4 generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	**Construction:** ***Less than Significant***
	Operation & Maintenance: ***Less than Significant***

Construction, Operation, and Maintenance

GHG emissions generated during construction of Alternative 1 would be greater than those estimated for the Proposed Project due to increased equipment and excavation activity (refer to Appendix G for details). Even if GHG emissions doubled, the total annual GHG emissions

would be less than 2 percent of the SCAQMD significance threshold. ***The impact would be less than significant.***

Mitigation Measures: None Required

Alternative 3 Environmental Impacts and Mitigation Measures

Alternative 3 involves extending the underground segment of the Revised Project by 0.25 mile along I-15 in the Revised Project alignment. The riser poles would be constructed at the north end of the extended underground segment.

Impact Air-a: Would Alternative 3 conflict with or obstruct implementation of the applicable air quality plan? **and** **Impact Air-b: Would Alternative 3 violate an air quality standard or contribute substantially to an existing or projected air quality violation?**	**Significance Determination**
	Construction: ***Less than Significant with Mitigation***
	Operation & Maintenance: ***Less than Significant***

Construction

Daily Air Quality Emissions

Alternative 3 would involve underground construction along the I-15 corridor for a slightly longer alignment than the Revised Project. Maximum daily emissions from Alternative 3 would be similar to Alternative 1, 2 and 4 because due to the same types of equipment and work areas needed during construction. Construction of Alternative 3 could conflict with the 2016 AQMP by generating emissions in excess of SCAQMD significance thresholds and by conflicting with adopted fugitive dust rules. The impact is potentially significant. Refer to Impact Air-a and Air-b of Alternative 1, 2, and 4 above for a discussion of the potentially significant impact on existing ozone and particulate matter air quality violations, as well as the EPEs and mitigation measures that are required to reduce the impact to less than significant. ***The impact from contribution to an existing or projected air quality violation would be less than significant with mitigation.***

Ambient Air Quality

Alternative 3 construction would be further from sensitive receptors than the minimum distances analyzed for the Proposed Project. The closest sensitive receptor would be approximately 420 feet away from Alternative 3 and across I-15. The distance to the nearest sensitive receptor is 14 times further away than the distance at which the maximum ambient air pollutant concentration would occur for the Proposed Project. Due to the rapid decrease in particulate matter across distance, concentrations of air pollutants from Alternative 3 construction would not exceed SCAQMD significance thresholds. Alternative 3 construction emissions would not contribute to an existing or projected air quality violation. ***The impact from increase in ambient air quality concentrations would be less than significant.***

Operation and Maintenance

Emissions generated during operation and maintenance of Alternative 3 would be similar to the Proposed Project. Refer to Impact Air-a and Air-b in Chapter 4.3: Air Quality, for a discussion of the impact. ***The impact is less than significant.***

Mitigation Measures: MM AQ-01, MM AQ-02, and MM AQ-03 (refer to Section 4.3.8: Revised Project Mitigation Measures) and MM AQ-04

Significance after Mitigation: Less than Significant

Impact Air-c: Would Alternative 3 result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	**Significance Determination**
	Construction: ***Less than Significant with Mitigation***
	Operation & Maintenance: ***Less than Significant***

Construction

Alternative 3 would have similar construction activities and peak intensity as construction of Alternatives 1, 2, and 4, provided above. The impact from generation of criteria air pollutants for which the region is in nonattainment is potentially significant. Refer to Impact Air-b of Alternatives 1, 2, and 4 for a discussion of the impact associated with a net increase in PM10 for which the project region is in nonattainment, as well as the EPEs and mitigation measures that would be implemented. Air pollutant concentrations would not exceed SCAQMD significance thresholds with mitigation. ***The impact would be less than significant with mitigation.***

Operation and Maintenance

Operation and maintenance of Alternative 3 would require the same level of vehicle equipment and activity as the Proposed Project. Alternative 3 operation and maintenance would produce negligible emissions of any criteria air pollutant. ***The impact would be less than significant.***

Mitigation Measures: MM AQ-01, MM AQ-02, and MM AQ-03 (refer to Section 4.3.8: Revised Project Mitigation Measures) and MM AQ-04

Significance after Mitigation: Less than Significant

	Significance Determination
	Construction: ***Less than Significant***
Impact Air-d: Would Alternative 3 expose sensitive receptors to substantial pollutant concentrations?	**Operation & Maintenance:** ***No impact***

Construction

The nearest new sensitive receptor to the Alternative 3 alignment is located across I-15, approximately 420 feet away. Due to the significant distance away from proposed construction activities, Alternative 3 would not result in ambient air pollutant concentrations at a receptor in excess of SCAQMD significance thresholds. I-15 would be the greatest source of emissions at the nearest receptors due to the high volume of traffic traveling through the area. ***The impact would be less than significant.***

Operation and Maintenance

Operation and maintenance would require the same level of vehicle equipment and activity as the Proposed Project. Alternative 3 operation and maintenance would not result in an increase in air pollutant concentrations at any sensitive receptor due to the high ambient pollutant concentrations caused by the adjacent I-15 highway. *No impact would occur.*

Mitigation Measures: None Required

	Significance Determination
Impact GHG-a: Would Alternative 3 generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	**Construction:** ***Less than Significant***
	Operation & Maintenance: ***Less than Significant***

Construction, Operation, and Maintenance

Similar to Alternative 1, 2, and 4, GHG emissions could be greater than those estimated in the Proposed Project, but not significantly greater due to the short duration of the construction activity. Refer to Impact GHG-a of Alternative 1, 2, and 4, for a discussion of the impact, above. ***The impact would be less than significant.***

Mitigation Measures: None Required

4.3.11 Mitigation Measures for Alternatives

MM AQ-04: Limitation of Daily Construction Vehicles and Equipment Use

The following equipment limitations apply to the identified construction activities:

- Vault Installation
  - No more than ~~39~~ 38 vehicles/equipment may be operating on an active work site, including truck trips providing materials to and from the work site, and 20 worker vehicles, in any one day
- Duct Bank Installation
  - No more than ~~31~~ 30 vehicles/equipment may be operating on an active work site, including truck trips providing materials to and from the work site, and 20 worker vehicles, in any one day
- Underground Cable Installation
  - No more than 7 vehicles/equipment may be operating on an active work site, including truck trips providing materials to and from the work site, and 10 worker vehicles, in any one day
- Cable Terminating
  - No more than 5 vehicles/equipment may be operating on an active work site, including truck trips providing materials to and from the work site, and 8 worker vehicles, in any one day
- Cable Splicing
  - No more than 8 vehicles/equipment may be operating on an active work site, including truck trips providing materials to and from the work site, and 16 worker vehicles, in any one day
- Jack and Bore (trenchless)
  - No more than 12 vehicles/equipment may be operating on an active work site, including truck trips providing materials to and from the work site, in any one day

Alternatively, SCE may be allowed to have a greater number of vehicles/equipment operating on an active work site if SCE provides calculation evidence that the larger number of vehicles/equipment do not exceed SCAQMD significance thresholds. Circumstances where this may be applicable include cases where SCE will use smaller vehicles/equipment than originally included in the calculations. The

calculation evidence shall be provided to the CPUC at least 2 weeks prior to initiation of the overlapping construction activities.
Applicable Locations: Construction of Alternatives 1, 2, 3, and 4 in combination with the Proposed Project
Performance Standards and Timing: • **Prior to Construction:** ~~N/A~~ SCE shall submit calculation evidence to the CPUC for review at least 2 weeks prior to construction • **During Construction:** Monitor the maximum number of vehicles and equipment used in any one day for five construction activities; Vault Installation, Duct Bank Installation, Underground Cable Installation, Cable Terminating, ~~and~~ Cable Splicing, and Jack and Bore • **Following Construction:** N/A

4.3.12 No Project Alternative Impact Analysis

Criteria pollutant and GHG emissions would result from installation of the battery storage and power generating facilities as well as during use of the gas-fired power generators. Construction of the No Project Alternative would result in fewer criteria pollutant and GHG emissions than construction of the Revised Project because the scale of construction would be much smaller; however, emissions from operation of the power generators would likely be substantial if the generators were used frequently. Power generation at RERC is regulated by SCAQMD. SCAQMD issues permits to stationary facilities that emit criteria pollutants and GHGs, which include emissions thresholds that cannot be exceeded. Existing power generation at RERC has operational restrictions due to the poor air quality in the air basin; additional criteria pollutant and GHG emissions from the use of additional power generators would likely result in a significant impact on air quality as emissions would likely exceed SCAQMD's emissions thresholds. The addition of new power generators may be infeasible because RERC would not be able to exceed criteria pollutant emissions thresholds at the power generating facility. Mitigation such as additional filters at the power generating facility may reduce to impact from criteria pollutants; however, emissions would remain above thresholds. ***Implementation of the No Project Alternative could result in a significant and unavoidable impact on air quality.***

4.3.13 References

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