4.3 AIR QUALITY

This section is based on the Air Quality Impact Analysis[1] and Health Risk Assessment[2] prepared by LSA and attached to this Environmental Impact Report (EIR) in **Appendices C-1** and **C-2,** respectively. This section describes existing air quality and evaluates short-term impacts during construction, long-term emissions associated with operation, and how potential impacts correlate to human health.

4.3.1 Existing Setting

The Development Project is located in the City of Banning (City) and Riverside County, which are part of the South Coast Air Basin[3] (Basin) and are under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). Background information about air pollutants and health effects, climate, meteorological conditions, and regional air quality conditions in the Basin and local air quality conditions in the vicinity of the Project site is provided below.

4.3.1.1 Air Pollutants and Health Effects

Both State and federal governments have established health-based ambient air quality standards for six criteria air pollutants: carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Two criteria pollutants, O_3 and NO_2, are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as CO, SO_2, and Pb are considered local pollutants that tend to accumulate in the air locally.

The primary pollutants of concern in the planning area are O_3, CO, and suspended particulate matter. Significance thresholds established by an air quality district are used to manage total regional and local emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual development projects that would contribute to regional and local emissions and could adversely affect or delay the air basin's projected attainment target goals for nonattainment criteria pollutants.

Because of the conservative nature of the significance thresholds, and the basin-wide context of individual development project emissions, there is no direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like nitrogen oxides (NO^X) and reactive organic gases (ROGs).

No single project is sufficient in size to by itself result in nonattainment of ambient air quality standards. However, if a project's individual emissions exceed an applicable threshold, especially for

1 LSA Associates, Inc. 2023c. *Air Quality Impact Analysis, Sunset Crossroads Specific Plan*. October.
2 LSA Associates, Inc. 2023d. *Health Risk Assessment, Sunset Crossroads Specific Plan*. March.
3 This air basin includes all of Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties.

pollutants for which the air basin is in nonattainment, it could constitute a significant project impact as well as contribute to existing cumulatively significant adverse air quality impacts. Air quality districts develop applicable thresholds of significance for a project's individual emissions based on the attainment status for criteria pollutants in the air basin, and on localized significance thresholds, if any, in the project area. If a project exceeds the identified significance thresholds, project emissions could be significant and cumulatively contribute to the nonattainment status resulting in significant adverse air quality impacts.

Some populations, including children, the elderly, and individuals with pre-existing respiratory or cardiovascular illness, are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects and are considered "sensitive receptors." Structures where they can remain for longer periods of time such as residences, schools, hospitals, nursing homes, and similar uses are considered "sensitive receptor locations."

Air pollutants and their health effects, and other air pollution-related considerations are summarized in **Table 4.3.A: Summary of Health Effects of the Major Criteria Air Pollutants** and are described in more detail below.

Ozone. O_3 is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving ROGs and NO_X. The main sources of ROGs and NO_X, often referred to as ozone precursors, are combustion processes (including combustion in motor vehicle engines) and the evaporation of solvents, paints, and fuels. Automobiles are typically the largest source of ozone precursors.[4] Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Carbon Monoxide. CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles.[5] CO transport is limited—it disperses with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations near congested roadways or intersections may reach unhealthful levels that adversely affect local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service (LOS) or with extremely high traffic volumes. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impair central nervous system function, and can induce angina (chest pain) in persons with serious heart disease. Extremely high levels of CO, such as those generated when a vehicle is running in an unventilated garage, can be fatal.

4 United States Environmental Protection Agency (EPA). 2022. Website: https://www.epa.gov/ozone-pollution-and-your-patients-health/what-ozone (accessed February 2023).

5 United States Environmental Protection Agency (EPA). 2022. Website: https://www.epa.gov/indoor-air-quality-iaq/what-carbon-monoxide (accessed February 2023).

Table 4.3.A: Summary of Health Effects of the Major Criteria Air Pollutants

Pollutant	Description	Health Effects	Examples of Sources
Particulate Matter ($PM_{2.5}$ and PM_{10} = less than or equal to 2.5 or 10 microns in size, respectively)	Particulate matter (PM) is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles (PM_{10}) derive from a variety of sources, including windblown dust and grinding operations. Fuel combustion and the resultant exhaust from power plants and diesel buses and trucks are primarily responsible for fine particle ($PM_{2.5}$) levels. Fine particles can also form in the atmosphere through chemical reactions. PM_{10} can accumulate in the respiratory system and aggravate health problems (e.g., asthma). The EPA's scientific review concluded that $PM_{2.5}$ particles, which penetrate deeply into the lungs, are more likely than coarse particles to contribute to the health effects listed in a number of recently published community epidemiological studies at concentrations that extend well below those allowed by the current PM_{10} standards.	• Hospitalizations for worsened heart diseases • Emergency room visits for asthma • Premature death	• Cars and trucks (especially diesels) • Fireplaces, wood stoves • Windblown dust from roadways, agriculture, and construction
Ozone (O_3)	O_3 (smog) is formed by photochemical reactions between oxides of nitrogen and reactive organic gases (ROGs) rather than being directly emitted. O_3 is a pungent, colorless gas typical of Southern California smog.	• Cough, chest tightness • Difficulty taking a deep breath • Worsened asthma symptoms • Lung inflammation	• Precursor sources[1]: motor vehicles, industrial emissions, and consumer products
Carbon Monoxide (CO)	CO is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. CO is a colorless, odorless gas.	• Chest pain in heart patients[2] • Headaches, nausea[2] • Reduced mental alertness[2] • Death at very high levels[2]	• Any source that burns fuel, such as cars, trucks, construction and farming equipment, and residential heaters and stoves
Nitrogen Dioxide (NO_2)	NO_2, a reddish-brown gas, and nitric oxide (NO), a colorless, odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as nitrogen oxides, or NO_X. NO_X is a primary component of the photochemical smog reaction. It also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition (i.e., acid rain).	• Increased response to allergens	• See carbon monoxide sources
Sulfur Dioxide (SO_2)	SO_2 is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels.	• Increased response to allergens • Injures lung tissue when combined with fine particulate matter	• See carbon monoxide sources
Lead (Pb)	Lead is a heavy metal that was used in paints, plumbing, and a variety of other materials.	• Once in the bloodstream, lead can cause damage to the brain, nervous system, and other body systems. Children are highly susceptible to the effects of lead.	• Old paints and coatings, plumbing, and a variety of other materials

Table 4.3.A: Summary of Health Effects of the Major Criteria Air Pollutants

Pollutant	Description	Health Effects	Examples of Sources
Volatile Organic Compounds (VOCs; also known as reactive organic gases [ROGs] and reactive organic compounds [ROCs])	Volatile organic compounds are not defined as criteria pollutants; however, because VOCs accumulate in the atmosphere more quickly during the winter when sunlight is limited and photochemical reactions are slower, they are a prime component of the photochemical smog reaction.	• No direct health effects	• Formed from the combustion of fuels and the evaporation of organic solvents
Sulfates	Sulfates occur in combination with metal and/or hydrogen ions. Sulfur in vehicle use is oxidized to SO_2 during the combustion process and subsequently is converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of the State due to regional meteorological features.	• Increased response to allergens	• Combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur
Hydrogen Sulfide (H_2S)	H_2S is a colorless gas with the odor of rotten eggs. H_2S is formed during bacterial decomposition of sulfur-containing organic substances. In 1984, a CARB committee concluded that the ambient standard for H_2S is adequate to protect public health and to significantly reduce odor annoyance.	• Increased response to allergens	• H_2S can be present in sewer gas and some natural gas and can be emitted as the result of geothermal-energy exploitation
Visibility-Reducing Particles	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry, solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition and can be made up of many different materials (e.g., metals, soot, soil, dust, and salt). The statewide standard is intended to limit the frequency and the severity of visibility impairment due to regional haze.	• See Particulate Matter health effects	• See Particulate Matter sources
Toxic Air Contaminants	In addition to the criteria pollutants, toxic air contaminants (TACs) are another group of pollutants of concern. Some examples of TACs include benzene, butadiene, formaldehyde, and hydrogen sulfide.	• Cancer • Chronic eye, lung, or skin irritation • Neurological and reproductive disorders	• Cars and trucks (especially diesels) • Industrial sources such as chrome platers • Neighborhood businesses such as dry cleaners and service stations • Building materials and products

Source: CARB Common Air Pollutants CARB Website: www.arb.ca.gov/resources/common-air-pollutants (accessed January 2023).

[1] Ozone is not generated directly by these sources. Rather, chemicals emitted by these precursor sources react with sunlight to form ozone in the atmosphere.

[2] Health effects from CO exposures occur at levels considerably higher than ambient.

CARB = California Air Resources Board

EPA = United States Environmental Protection Agency

Particulate Matter. Particulate matter is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from humanmade and natural sources. Particulate matter is categorized in two size ranges: PM_{10} for particles less than 10 microns in diameter, and $PM_{2.5}$ for particles less than 2.5 microns in diameter. Motor vehicles are the primary generators of particulates, through tailpipe emissions as well as brake pad, tire wear, and entrained road dust. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of such fine particulates. These fine particulates are small enough to be inhaled into the deepest parts of the human lung and can cause adverse health effects. According to the California Air Resources Board (CARB), studies in the United States and elsewhere have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks, and studies of children's health in California have demonstrated that particle pollution may significantly reduce lung function growth in children.[6] Statewide attainment of particulate matter standards could reduce premature deaths, hospital admissions for cardiovascular and respiratory disease, asthma-related emergency room visits, and episodes of respiratory illness in California.

Nitrogen Dioxide. NO_2 is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. NO_2 decreases lung function and may reduce resistance to infection.[7]

Sulfur Dioxide. SO_2 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. SO_2 has the potential to damage materials and can cause health effects at high concentrations. It can irritate lung tissue and increase the risk of acute and chronic respiratory disease. SO_2 also reduces visibility and the level of sunlight at the ground surface.[8]

Lead. Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery factories. Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the United States Environmental Protection Agency (EPA) established national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The EPA banned the use of leaded gasoline in highway vehicles in December

6 California Air Resources Board (CARB). 2020. *Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10})*. Website: ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health (accessed October 2022).

7 United States Environmental Protection Agency (EPA). 2022. Website: https://www.epa.gov/no2-pollution/basic-information-about-no2#What%20is%20NO2 (accessed February 2023).

8 United States Environmental Protection Agency (EPA). 2022. Website: https://www.epa.gov/so2-pollution (accessed February 2023).

1995. As a result of EPA regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.[9]

Volatile Organic Compounds. Volatile organic compounds (VOCs; also known as ROGs and reactive organic compounds [ROCs]) are formed from the combustion of fuels and the evaporation of organic solvents. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. VOCs are not defined as criteria pollutants; however, because VOCs accumulate in the atmosphere more quickly during the winter when sunlight is limited and photochemical reactions are slower, they are a prime component of the photochemical smog reaction. Due to the role VOC plays in O_3 formation, it is classified as a precursor pollutant and only a regional emissions threshold has been established. The SCAQMD uses the terms VOC and ROG interchangeably.

Toxic Air Contaminants. In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. Some examples of TACs include benzene, butadiene, formaldehyde, and hydrogen sulfide. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

TACs do not have ambient air quality standards but are regulated by the EPA, CARB, and SCAQMD. In 1998, the CARB identified particulate matter from diesel-fueled engines as a TAC. The CARB has completed a risk management process that identified potential cancer risks for a range of activities and land uses that are characterized by use of diesel-fueled engines.[10] High-volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high-volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate matter (DPM) is emitted from mobile sources—primarily "off-road" sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units, as well as trucks and buses traveling on freeways and local roadways.

Improvements over the last 40 years to diesel fuel and diesel engines have resulted in lower emissions of some of these TACs.[11] These improvements resulted in a 75 percent reduction in particle emissions from diesel-powered trucks and other equipment in 2010 and an 85 percent reduction in 2020 as compared to 2000 levels. These improvements are anticipated to continue into the foreseeable future. As a result, concentrations of DPM (which is the most important TAC) have declined by

9 United States Environmental Protection Agency (EPA). 2022. Website: https://www.epa.gov/lead (accessed February 2023).

10 California Air Resources Board (CARB). 2000. *Fact Sheet – California's Plan to Reduce Diesel Particulate Matter Emissions*. October. Website: www.arb.ca.gov/diesel/factsheets/rrpfactsheet.pdf (accessed October 2022).

11 United States Environmental Protection Agency (EPA). *Learn About Impacts of Diesel Exhaust and the Diesel Emissions Reduction Act (DERA)*. Website: www.epa.gov/dera/learn-about-impacts-diesel-exhaust-and-diesel-emissions-reduction-act-dera (accessed January 2023).

68 percent between 1990 and 2012, despite a 31 percent increase in State population and an 81 percent increase in diesel vehicle miles traveled (VMT), and the significant reductions in cancer risk to California residents from the implementation of air toxics controls are likely to continue.

4.3.1.2 National and State Ambient Air Quality Standards

Both State and federal governments have established health-based ambient air quality standards (AAQS) for criteria air pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established AAQS, or criteria, for outdoor concentrations in order to protect public health.

Both the EPA and CARB have established AAQS for the following common pollutants: CO, O_3, NO_2, SO_2, Pb, and suspended particulate matter. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. These AAQS are levels of contaminants that avoid specific adverse health effects associated with each pollutant.

Federal standards include both primary and secondary standards. Primary standards establish limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.[12] State and federal standards for the criteria air pollutants are listed in **Table 4.3.B: Federal and State Ambient Air Quality Standards**.

4.3.1.3 Sensitive Receptors

Sensitive receptors include residences, schools, hospitals, nursing homes, and similar uses sensitive to air quality. Land uses in the vicinity of the immediate proposed Development Project include vacant/undeveloped land, residential, utility, and commercial uses. The proposed Development Site is nestled between multiple residential communities and a nearby satellite school campus (Mount San Jacinto College campus) identified as sensitive receptors. The nearest sensitive receptors would be located approximately 50 feet (15 meters) west, in the Sun Lakes Community. The areas adjacent to the Project site include the following uses:

- **North:** Union Pacific Railroad right-of-way and Interstate 10 (I-10), and commercial uses along West Ramsey Street. The closest commercial uses are approximately 500 feet from the Project site boundary.

- **South:** Single-family homes and agricultural uses. The closest homes to the south are approximately 150 feet from the Project site boundary.

- **East:** Community of single-family homes, a storage facility, and the Mount San Jacinto College satellite campus. The closest is the college, and the closest building is approximately 115 feet east of the Development Site, across Sunset Avenue.

[12] United States Environmental Protection Agency (EPA). 2017. Criteria Air Pollutants. October. Website: www.epa.gov/criteria-air-pollutants (accessed October 2022).

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Table 4.3.B: National and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3) [8]	1-Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM_{10}) [9]	24-Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		–		
Fine Particulate Matter ($PM_{2.5}$) [9]	24-Hour	–		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³	15 µg/m³	
Carbon Monoxide (CO)	1-Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	–	
	8-Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	–	Non-Dispersive Infrared Photometry (NDIR)
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m³)		–	–	
Nitrogen Dioxide (NO_2) [10]	1-Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	–	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.03 ppm (57 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO_2) [11]	1-Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³) [11]	–	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3-Hour	–		–	0.5 ppm (1300 µg/m³)	
	24-Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas) [11]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas) [11]	–	
Lead (Pb) [12,13]	30-Day Average	1.5 µg/m³	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m³ (for certain areas) [12]	Same as Primary Standard	
	Rolling 3-Month Average	–		0.15 µg/m³		
Visibility-Reducing Particles [14]	8-Hour	See Footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24-Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride [12]	24-Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Source: Ambient Air Quality Standards (CARB 2016).

1 California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2 National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained 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. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact EPA for further clarification and current national policies.

3 Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4 Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

5 National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7 Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

8 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9 On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10 To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11 On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12 The CARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13 The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14 In 1989, the CARB converted both the general Statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the Statewide and Lake Tahoe Air Basin standards, respectively.

°C = degrees Celsius
µg/m³ = micrograms per cubic meter
CARB = California Air Resources Board
mg/m³ = milligrams per cubic meter
ppb = parts per billion
ppm = parts per million
EPA = United States Environmental Protection Agency

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- **West:** Age-restricted residential development in the Sun Lakes Community and recreational vehicle storage. The closest homes to the west are approximately 50 feet from the Project site boundary.

4.3.1.4 Climate and Meteorology

Air quality in the planning area is affected not only by various emission sources (e.g., mobile and industry) but also by atmospheric conditions (e.g., wind speed, wind direction, temperature, amount of sunshine, humidity, and rainfall). The regional climate within the Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality within the Basin is primarily influenced by a wide range of emissions sources—such as dense population centers, heavy vehicular traffic, and industry—and meteorology.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 70s measured in degrees Fahrenheit (°F). The nearest climatological station to the Project site is the Beaumont Monitoring Station.[13] The monthly average maximum temperature recorded at this station ranged from 60.2°F in January to 93.1°F in July, with an annual average maximum of 74.5°F. The monthly average minimum temperature recorded at this station ranged from 35.7°F in January to 59.3°F in August, with an annual average minimum of 45.3°F. January is typically the coldest month, and July and August are typically the warmest months in this area of the Basin.

The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. The Beaumont Monitoring Station precipitation shows that average monthly rainfall varied from 3.73 inches in February to 1.76 inches or less from May to November, with an annual total of 20.89 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in midafternoon to late afternoon on hot summer days, when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning.

Winds in the Project area blow predominantly from the south-southwest, with relatively low velocities. Wind speeds in the Project area average about 5 miles per hour (mph). Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the Basin.

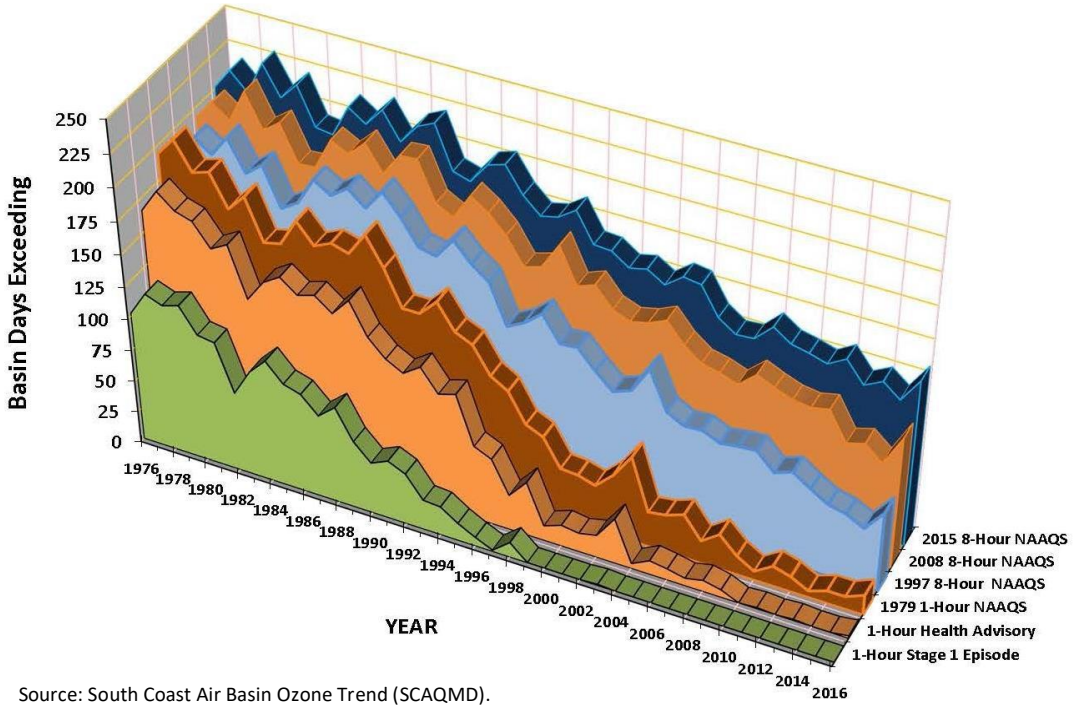
[13] Western Regional Climate Center. 2023. Station Data Inventory Listings. Website: wrcc.dri.edu/Monitoring/Stations/station_inventory_show.php?snet=coop&sstate=CA (accessed February 2023).

Strong, dry, north or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO and NO_X because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog.

4.3.1.5 Regional Air Quality

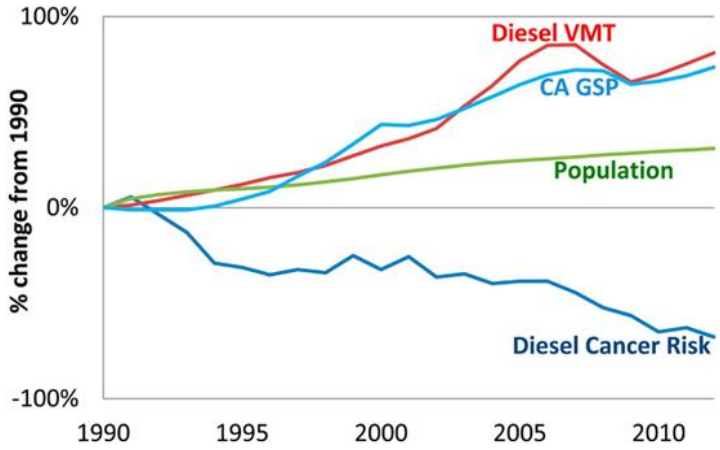
Criteria Pollutants. As previously discussed, the Project is under the jurisdiction of the SCAQMD, which is responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the Basin to bring the area into compliance with federal and State air quality standards. Air quality in the Basin has improved as a result of the development of SCAQMD rules and control programs and the development and application of cleaner technology. O_3, NO_X, VOCs, and CO have been generally decreasing since 1975. The levels of PM_{10} and $PM_{2.5}$ in the air have decreased since 1975, and direct emissions of $PM_{2.5}$ have decreased, although direct emissions of PM_{10} have shown little change. **Figure 4.3-1: South Coast Air Basin Ozone Trend** shows the O_3 trend in the Basin.



Source: South Coast Air Basin Ozone Trend (SCAQMD).

Figure 4.3-1: South Coast Air Basin Ozone Trend

Toxic Air Contaminants Trends. In 1984, the CARB adopted regulations to reduce TAC emissions from mobile and stationary sources and consumer products. A CARB study showed that the ambient concentration and emissions of the seven TACs responsible for the most cancer risk from airborne exposure have declined by 76 percent between 1990 and 2012.[14] Concentrations of diesel PM, the most important TAC, have declined by 68 percent between 1990 and 2012 despite a 31 percent increase in State population and an 81 percent increase in diesel VMT, as shown on **Figure 4.3-2: California Population, Gross State Product, Diesel Cancer Risk, and Diesel Vehicle Miles Traveled**. The study also found that the significant reductions in cancer risk to California residents from the implementation of air toxics controls are likely to continue.



Source: Ambient and Emission Trends of Toxic Air Contaminants in California (Propper et al. 2015).

Figure 4.3-2: California Population, Gross State Product, Diesel Cancer Risk, and Diesel Vehicle Miles Traveled

Cancer Risk Trends. According to the CARB, cancer risk in the Basin has declined since 1990. Since the late 1980s, the SCAQMD has conducted five Mobile Source Air Toxics (MSAT) studies. The latest MATES V study monitored air toxins between May 1, 2018, and April 30, 2019, and found that cancer risk from air toxics had declined significantly in the Basin with a 40 percent decrease in cancer risk since the monitoring for the MATES IV study (which occurred between July 1, 2012, and June 30, 2013) and an 84 percent decrease in cancer risk since the monitoring for the MATES II study (which occurred between April 1, 1998, and March 31, 1999).

The MATES V study also analyzed impacts specific to the communities experiencing environmental injustices (Environmental Justice [EJ] communities) that were evaluated using the Senate Bill (SB) 535 definition of disadvantaged communities, the results of which found that between the MATES IV and MATES V studies, the cancer risk from air toxics decreased by 57 percent in EJ communities overall, compared to a 53 percent reduction in non-EJ communities. The MATES studies report that the

[14] Pew Center. 2006. *Pew Center on Global Climate Change and the Pew Center on the States, Climate Change 101: Understanding and Responding to Global Climate Change.* October.

ambient cancer risk at the nearest monitoring station to the Project area (Rubidoux) dropped from 4,450 per million in 1998 to approximately 769 per million in 2018.

4.3.1.6 Local Air Quality

The SCAQMD, together with the CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station that monitors air pollutant data closest to the site is the Banning Airport Air Quality Monitoring Station at 200 South Hathaway Street, approximately 1 mile west of the Project site. While this is the closest station, only O_3, NO_2, and PM_{10} data were available for the years 2019 to 2021. CO and $PM_{2.5}$ data for those same years were available at the Palm Springs Air Quality Monitoring Station at FS-590 Racquet Club Avenue, approximately 18 miles east of the Project site. The air quality trends from these stations are used to represent the ambient air quality in the Project area. The ambient air quality data in **Table 4.3.C: Air Quality Concentrations in the Project Vicinity** show that CO, NO_2, and $PM_{2.5}$ levels are below the applicable State and federal standards. However, O_3 levels frequently exceed their respective standards, and PM_{10} levels occasionally exceed the State and federal 24-hour standards.

4.3.2 NOP/Scoping Meeting Comments

The City of Banning received nine comment letters during the public review period of the Notice of Preparation (NOP). Two comment letters included comments related to air quality. For copies of the comment letters, refer to **Appendix A-2** of this Draft EIR.

4.3.3 Methodology

The methodology used to estimate air quality impacts is described below.

4.3.3.1 Air Quality Impact Analysis

Construction Emissions. The California Emissions Estimator Model version 2020.4.0 (CalEEMod) computer program was used to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to and from the site. As described in the Project Description, the Development Project would construct 268,400 square feet of commercial uses within a 47.9-acre portion of the Development Site designated for freeway-oriented General Commercial land uses and 5,545,000 square feet of industrial land uses within a 392.0-acre portion of the Development Site.

For purposes of this analysis, it is assumed that the Development Project would be constructed in four phases with an overall duration of approximately 51 months. Mass grading of the Southern Portion of the site is planned to be undertaken at the start of Phase 1. Mass grading of the Northern Portion of the site is planned to be undertaken at the start of Phase 2. Thus, the construction emissions during Phases 1 and 2 will be more intense than either of the later phases. Buildings 1 through 4 comprise Phase 1 construction. Phase 2 would include the extension of Lincoln Avenue through the site and the commercial center and gas station, as well as Buildings 5 and 6. Phase 3 would include Buildings 7 and 10, and Phase 4 would include Buildings 8 and 9. The complete and detailed construction schedule provided by the Project Applicant used in this analysis is shown in **Chapter 3.0** (note that some operations would occur concurrently).

Table 4.3.C: Air Quality Concentrations in the Project Vicinity

Pollutant	Standard	2019	2020	2021
CO (Measured at the Palm Springs Air Quality Monitoring Station)[1]				
Maximum 1-hour concentration (ppm)		1.3	0.8	0.8
No. of days exceeded	State: 20 ppm	0	0	0
	Federal: 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		0.7	0.5	0.4
No. of days exceeded	State: 9 ppm	0	0	0
	Federal: 9 ppm	0	0	0
O_3 (Measured at the Banning Airport Air Quality Monitoring Station)[2]				
Maximum 1-hour concentration (ppm)		0.119	0.150	0.139
No. of days exceeded	State: 0.09 ppm	24	29	ND
Max 8-hr concentration (ppm)		0.096	0.115	0.116
No. of days exceeded	State: 0.07 ppm	59	68	ND
	Federal: 0.07 ppm	59	68	ND
PM_{10} (Measured at the Banning Airport Air Quality Monitoring Station)[2]				
Maximum 24-hour concentration ($\mu g/m^3$)		63.8	69.3	48.0
No. of days exceeded	State: 50 $\mu g/m^3$	2	1	0
	Federal: 150 $\mu g/m^3$	0	0	0
Annual avg. concentration ($\mu g/m^3$)		17.7	21.2	20.7
Exceeds Standard?	State: 20 $\mu g/m^3$	No	Yes	Yes
$PM_{2.5}$ (Measured at the Palm Springs Air Quality Monitoring Station)[1]				
Maximum 24-hour concentration ($\mu g/m^3$)		15.5	23.9	13.5
No. of days exceeded	Federal: 35 $\mu g/m^3$	0	0	0
Annual avg. concentration ($\mu g/m^3$)		6.1	6.4	6.2
Exceeds Standard?	State: 12 $\mu g/m^3$	No	No	No
	Federal: 12 $\mu g/m^3$	No	No	No
NO_2 (Measured at the Banning Airport Air Quality Monitoring Station)[2]				
Maximum 1-hour concentration (ppb):		56.0	51.1	56.8
No. of days exceeded	State: 180 ppb	0	0	0
	Federal: 100 ppb	0	0	0
Annual avg. concentration (ppb):		7.5	8.5	8.7
Exceeds standard?	State: 30 ppb	No	No	No
	Federal: 53 ppb	No	No	No

Source 1: Air Data: Air Quality Data Collected at Outdoor Monitors across the U.S. Website: www.epa.gov/outdoor-air-quality-data (accessed January 2023).
Source 2: CARB's iADAM Air Quality Data Statistics. Website: www.arb.ca.gov/adam/topfour/topfour1.php (accessed January 2023).
Notes: Data were collected from the closest stations to the Project site where each criteria pollutant data were available.
[1] The Palm Springs Air Quality Monitoring Station is located at FS-590 Racquet Club Avenue, Palm Springs, California.
[2] The Banning Air Quality Monitoring Station is located at 200 South Hathaway Street, Banning, California.

$\mu g/m^3$ = micrograms per cubic meter
CARB = California Air Resources Board
CO = carbon monoxide
EPA = United States Environmental Protection Agency
ND = No data available
NO_2 = nitrogen dioxide
O_3 = ozone
$PM_{2.5}$ = particulate matter smaller than 2.5 microns in size
PM_{10} = particulate matter smaller than 10 microns in size
ppb = parts per billion
ppm = parts per million

The construction analysis includes the estimation of construction equipment that would be used during each construction activity, the hours of use for that construction equipment, the quantities of earth and debris to be moved, and the on-road vehicle trips (e.g., worker, soil hauling, and vendor trips). The proposed earthwork for the Development Project assumes the site would be balanced (no import or export needed). CalEEMod defaults are assumed for the construction activities, off-road equipment, and on-road construction fleet mix and trip lengths, other than the assumption that the warehouse and industrial buildings would only have architectural coatings applied to the office and

mezzanine areas. The CalEEMod output reports shown in the appendix of the air quality technical report in **Appendix C-1** include all construction parameters used in the analysis.

Localized Construction Emissions Impact Analysis. Localized significance thresholds (LSTs) were developed in response to the SCAQMD's Governing Board Environmental Justice Enhancement Initiative I-4. SCAQMD published its *Final Localized Significance Threshold Methodology* in June 2003 and updated it in July 2008,[15] recommending that all air quality analyses include an assessment of both construction and operational impacts on the air quality of nearby sensitive receptors. LSTs are only applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project site that are not expected to cause or contribute to an exceedance of the most stringent applicable short-term federal or State AAQS and were developed based on the ambient concentrations of that pollutant for each Source Receptor Area and distance to the nearest sensitive receptor.

See **Section 4.3.1.1** and **Table 4.3.A** above for discussions of the health impacts from these pollutants.

Following the SCAQMD LST methodology, for sites larger than 5 acres (e.g., the Development Project), air dispersion modeling is required. LSA conducted air dispersion modeling for the Development Project using methodology based on guidance provided by the SCAQMD.

Air dispersion modeling was performed using the EPA's American Meteorological Society/ Environmental Protection Agency Regulatory Model (AERMOD) version 21112 modeling system (computer software) with the Lakes Environmental Software implementation/user interface, AERMOD-View version 10.2.1. The modeling followed SCAQMD guidance to calculate the pollutant concentrations at all proximate receptors as discussed below. AERMOD parameters were set consistent with SCAQMD and EPA guidance, with principal parameters of this modeling described in **Table 4.3.D: American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) Principal Parameters Used for the Localized Significance Thresholds (LST) Analyses**.

Operational Emissions. Long-term air pollutant emission impacts are those associated with stationary sources and mobile sources from the operation of the Development Project. The proposed Development Project would result in increases in both area and mobile-source emissions. The area-source emission categories include sources such as consumer products and landscaping equipment. Energy sources include natural gas consumption for building heating if it is utilized. Mobile sources include all the cars and trucks involved with warehouse and commercial operations both on and off site, as well as the vehicles visiting the gas station and other Development Project land uses. Mobile sources would also include warehouse equipment such as forklifts, material handlers, etc.

The Development Project would incorporate many project design features. The following project design features would be implemented by the Development Project that would go above and beyond the minimum building requirements and would potentially affect the Project operational emissions:

[15] SCAQMD. 2008. Final Localized Significance Threshold Methodology. June. Website: www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf (accessed January 2023).

Table 4.3.D: American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) Principal Parameters Used for the Localized Significance Thresholds (LST) Analyses

Parameter	Details
Meteorological Data	The latest 5-year meteorological data (2011–2015) for the Banning monitoring station from the SCAQMD were downloaded and then input to AERMOD.
Urban versus Rural Option	Urban areas typically have more surface roughness, as well as structures and low-albedo surfaces that absorb more sunlight—and thus more heat—relative to rural areas. Based on the SCAQMD guidelines, the urban dispersion option was selected, and the 2,189,641 population of Riverside County specified.
Terrain Characteristics and Elevation Data	The terrain in the vicinity of the modeled project site is varied. The elevation of the modeled site is about 730 to 760 meters above sea level. Digital elevation model files were imported into AERMOD so that complex terrain features were evaluated as appropriate, and elevations were assigned to the emission sources and receptors. Digital elevation data were obtained through AERMOD View in the United States Geological Survey's National Elevation Dataset format with an approximately 10-meter (1/3 arc-second) resolution.
Emission Sources and Release Parameters	Two distinct modeling approaches were used to develop the mass rate LSTs for the gaseous pollutants (i.e., NO_2, CO, and $PM_{2.5}$) and particulate matter (i.e., PM_{10}). AERMOD alone was used for NO_2, CO, and $PM_{2.5}$. For PM_{10}, a combination of AERMOD modeling and an empirical equation, developed by Desert Research Institute, were used to describe concentration changes as a function of downwind distance. Air dispersion modeling was conducted using emissions estimated using CalEEMod, building downwash effects included, and averaging times of 1 hour, 8 hours, 24 hours, and annual specified. Exhaust emissions of NO_2, CO, and $PM_{2.5}$ from construction equipment are modeled as a set of side-by-side elevated volume sources. The release height is assumed to be 5 meters. This represents the mid-range of the expected plume rise from frequently used construction equipment during daytime atmospheric conditions. All construction exhaust emissions are assumed to take place over the 8-hour period between 8:00 a.m. to 4:00 p.m. Fugitive dust emissions of PM_{10} and $PM_{2.5}$ are treated as a ground-based square area source with the dimension of the volume sources described above. Since fugitive dust consists of a significant fraction of large particles greater than 10 microns, plume depletion due to dry removal mechanisms was assumed (i.e., DRYDPLT). The fugitive PM_{10} emissions are separated into the three particle sizes of less than one micron (µm), 1.0 to 2.5 µm, and 2.5 to 10 µm in aerodynamic diameter, which have the assumed weight fractions of 7.87, 12.92, and 79.22 percent, respectively. The particle density for all three size bins is 2.3 grams per cubic centimeter. An initial vertical dimension of 1 meter is assumed to represent the initial vertical spread of the emissions. Based on this assumption, the initial vertical dimension resulted in a vertical concentration profile that closely matched the vertical profile observed during research. As with the construction equipment, all the fugitive dust emissions are assumed to be emitted over the 8-hour period from 8:00 a.m. to 4:00 p.m.
Receptors	Receptor locations include residential, commercial, and industrial land use areas, as well as any other area where persons can be situated for an hour or longer at a time. These other areas include parks, bus stops, and sidewalks but would not include the tops of buildings, roadways, or permanent bodies of water such as oceans or lakes. For the purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor to be a receptor such as a residence, hospital, or convalescent facility, where it is possible that an individual could remain for 24 hours. The nearest sensitive receptors are the single-family homes located across Sunset Avenue, approximately 70 feet east of the Development Site boundary.

Source: Compiled by LSA Associates, Inc. (2023).
Note: See Appendix D for additional information.
AERMOD = American Meteorological Society/EPA Regulatory Model
CalEEMod = California Emissions Estimator Model
CEQA = California Environmental Quality Act
CO = carbon monoxide
LST = localized significance threshold
NO_2 = nitrogen dioxide
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SCAQMD = South Coast Air Quality Management District

- Occupant-sensing lighting that dims to at least 50 percent when unoccupied will be installed within the interior areas of the warehouses and offices.
- Office space heating within the warehouses will utilize heat pumps.
- Development Project street improvements will include sidewalks.
- Secure bicycle storage racks or bicycle lockers, and employee lockers will be provided within the industrial land uses of the Development Project.
- Larger parking spaces will be provided that can accommodate vans used for ride-sharing programs, reserve them for vanpools/carpools, and include adequate passenger waiting/loading areas.
- Adequate areas for on-site parking, on-site queuing, and truck check-in points will be provided.
- Signs will be posted that clearly show the designated entry and exit points from the public street for trucks and service vehicles. Signs will be posted on site that indicate all parking and maintenance of trucks must be conducted within designated on-site areas and not within the surrounding community or public streets.
- Traffic signals installed as part of the Development Project will be smart signals that can be synchronized and connected to an Intelligent Transportation System (ITS).

The operational emissions analysis incorporated these aspects of the Project in the CalEEMod modeling as project features.

The Project will be constructed in phases according to the phasing plan. The number of Project-related vehicles that would be operating on a daily basis in each phase is described in the *Sunset Crossroads Traffic Analysis.*[16]

CalEEMod was used to model the operational emissions from the Project-related vehicles, consistent with the trip generation estimates from the traffic analysis. In addition to vehicle emissions during movement, CalEEMod includes evaporative, starting, and idling emissions for every trip consistent with the regulations limiting the time allowed for idling trucks. The number of vehicle trips by operational phase was based on the traffic analysis prepared for the Project.

Two sets of CalEEMod analyses were conducted, one just including the project features listed in **Chapter 3.0 Project Description** of this EIR and the other set adding in the mitigation measures listed below in the Long-Term Regional Air Quality Impact section below. Other than the traffic parameters and either the project features or the mitigation measures, the default parameters for the land uses listed in **Table 4.3.E: Project Land Uses** were used to represent the operating parameters of the

[16] Urban Crossroads. 2023. *Sunset Crossroads Traffic Analysis*. August.

Table 4.3.E: Project Land Uses

Project Component	Project Land Use Category	CalEEMod Land Use Category	Land Use Size
Building 1	High-Cube Fulfillment	Unrefrigerated Warehouse – No Rail	1,420,000 sf
Building 2	High-Cube Fulfillment	Unrefrigerated Warehouse – No Rail	1,386,000 sf
Building 3	High-Cube Fulfillment	Unrefrigerated Warehouse – No Rail	575,000 sf
Building 4	General Light Industrial	General Heavy Industry	44,000 sf
Building 5	Warehousing	Unrefrigerated Warehouse – No Rail	105,500 sf
Building 6	General Light Industrial	General Heavy Industry	42,500 sf
Building 7	High-Cube Transload	Unrefrigerated Warehouse – No Rail	896,000 sf
Building 8	High-Cube Parcel Hub	Unrefrigerated Warehouse – No Rail	250,000 sf
Building 9	Warehousing	Unrefrigerated Warehouse – No Rail	274,000 sf
Building 10 (split equally)	General Light Industrial (50%)	General Light Industry	111,000 sf
	Warehousing (50%)	Warehousing	111,000 sf
High-Cube Cold Storage[1]	High-Cube Cold Storage	Refrigerated Warehouse – No Rail	330,000 sf
Commercial	A mix of commercial land use types	Hotel (125 rooms)	90,000 sf
		Quality Restaurant	9,500 sf
		Fast Food with Drive Thru	7,000 sf
		High Turnover Restaurant	40,000 sf
		Health Club	116,700 sf
		Regional Shopping Center	178,200 sf
		Medical Office	9,500 sf
		Gas Station (26 pumps)	7,500 sf
Open Space	Open Space Areas	City Park	65.4 acres
Pavement	Pavement	Parking Lot	239.59 acres
65 megawatt-hours battery energy storage system (BESS) facility		General Light Industrial	10,000 sf

Source: Northpoint Development & Urban Crossroads. 2023. *Sunset Crossroads Traffic Analysis.* August 2023.
[1] Building number has not been identified for this project component.
Note: CalEEMod does not allow the "General Light Industrial" land use category when the square footage is the size of this Project, thus "General Light Industry" was used. Pavement area was estimated by assuming that all area not covered by buildings or included as open space is paved.
CalEEMod = California Emission Estimator Model
sf = square feet

proposed Development Project. It was assumed that each warehouse would have four forklifts and four general warehouse equipment pieces. The analysis also includes the use of electric landscape equipment. The battery energy storage system (BESS) was modeled as "General Light Industrial," with all natural gas and water use eliminated and solid waste reduced as the BESS would only be containers of battery banks with lights, control systems, and air conditioning (AC). BESS-related solid waste would be limited to maintenance that would include replacing parts that would generate waste packaging and maintenance crew activities.

The project could include a battery storage facility within Planning Area 7 of the Development Site. The size would be determined if proposed for development.

Including the approximately 90,000-square-foot hotel, the total square footage of the Development Project would be approximately 5,903,400 square feet. No building facilities related to the BESS are

anticipated, so no square footage associated with the BESS is included in the Development Project square footage calculation.

Localized Operational Emissions Impact Analysis. Similar to the localized construction emissions impact analysis described above, SCAQMD LST methodology was followed to assess the localized operational emissions impacts. The AERMOD analysis was configured as described in **Table 4.3.D**, except for aspects in the Emission Sources and Release Parameters section of the table. The same exhaust modeling approach was used; however, instead of a set of side-by-side elevated volume sources, exhaust emissions were modeled as a series of volume sources for all truck movement routes and on-site car travel and point sources for all truck idling locations. The SCAQMD LST methodology specifies that only emissions sources that occur on site should be included; therefore, the volume sources are limited to the on-site portions of the vehicle routes. Building downwash was configured to include the effects of air flow over and around buildings. The same depletion parameters were used for PM_{10} and $PM_{2.5}$ emissions. A figure showing these volume and point sources for the AERMOD modeling for this LST analysis is included in Appendix C of the *Air Quality Impact Analysis Report*.

See **Section 4.3.1.1** and **Table 4.3.A** for discussions of the health impacts from these pollutants.

Health Risk Assessment (HRA). Long-term TAC emissions associated with the operation of the Development Project could alter the existing health risk levels in the Project vicinity. For the purposes of an HRA, short-term emissions are of concern for analyzing acute health impacts, and long-term emissions are of concern for analyzing chronic and carcinogenic health impacts. A screening-level multipathway assessment has been conducted. This technique was chosen as recommended in the Office of Environmental Health Hazard Assessment.[17] An HRA was conducted that included analyzing the inhalation, dermal soil, mother's milk, and homegrown produce pathways. This technique was chosen as prescribed in the SCAQMD *AB 2588 and Rule 1402 Supplemental Guidelines.*[18]

The OEHHA has determined that long-term exposure to diesel exhaust particulates poses the highest cancer risk of any TAC it has evaluated. Exposure to diesel exhaust can also have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles (also known as DPM) made people with allergies more susceptible to the materials to which they are allergic (e.g., dust and pollen). Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks. For risk assessment procedures, the OEHHA specifies that the surrogate for whole diesel exhaust is DPM.

The conservative nature of this analysis is due primarily to the following three factors:

1. The CARB-adopted diesel exhaust unit risk factor (URF) of 300 in 1 million micrograms per cubic meter ($\mu g/m^3$) is based on the upper 95th percentile of estimated risk for each of the

[17] California Office of Environmental Health Hazard Assessment (OEHHA). 2001. Health Effects of Diesel Exhaust. May 21, 2001. Website: https://oehha.ca.gov/air/health-effects-diesel-exhaust (accessed January 2023).

[18] SCAQMD. 2020. AB 2588 and Rule 1402 Supplemental Guidelines. October. Website: www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-supplemental-guidelines.pdf (accessed January 2023).

epidemiological studies used to develop the URF. Therefore, the risk factor is already representative of the conservative risk posed by DPM.

2. The risk estimates assume sensitive residence receptors will be subject to DPM for 24 hours per day, 350 days per year, and workers for 8 hours per day, 240 days per year. As a conservative measure, the SCAQMD does not recognize indoor adjustments for residents. However, typical people spend the majority of their time indoors versus remaining outdoors for 24 hours per day, 350 days per year.

3. The exposure to DPM is assumed to be constant for the given period analyzed (i.e., 30 years for residents, 9 years for children, and 25 years for workers). However, emissions from DPM are expected to substantially decrease in the future with the implementation of standard regulatory requirements and technological advancement to reduce DPM.

Improvements over the last 40 years to diesel fuel and diesel engines have resulted in lower emissions of some of these TACs. These improvements resulted in a 75 percent reduction in particle emissions from diesel-powered trucks and other equipment in 2010 and an 85 percent reduction in 2020 as compared to 2000 levels.[19] These improvements are anticipated to continue into the foreseeable future.

The HRA analyzed the health risk levels from operation under full Project operation (buildout of Phase 4). While nearby sensitive receptors would be exposed to TACs during the earlier phase periods, the emissions will be at the highest level when the entire Project is in operation; therefore, health risks levels will be lower during the earlier phase periods.

TAC emissions from vehicle operations throughout the Development Site and surrounding off-site roadways as well as from gas station operations during loading, breathing, refueling, and spillage actions were included. The TACs included in this HRA include DPM (as PM_{10} and $PM_{2.5}$) from the diesel vehicle exhaust, 1,3-butadiene, benzene, ethylbenzene, methyl ethyl ketone (MEK), naphthalene, propylene, styrene, toluene, and xylenes (all components of ROGs) from the gasoline vehicle exhaust, and benzene, ethylbenzene, and naphthalene from the gasoline station operations.

HRA-specific air dispersion modeling was conducted for the HRA with the EPA's AERMOD model similarly to how it was used for the LST analysis to predict TAC emission dispersion, with the primary difference that this HRA analysis includes all on-site emissions sources and vehicle emissions when traveling both on and off site. The CARB Hot Spots Analysis and Reporting Program (HARP) model was used to translate the TAC concentrations from AERMOD into long-term carcinogenic and chronic, and short-term acute health risk levels following the guidance in the SCAQMD risk assessment guidelines[20] for sensitive receptors.

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19 California Office of Environmental Health Hazard Assessment (OEHHA). 2001. Health Effects of Diesel Exhaust. May 21, 2001. Website: https://oehha.ca.gov/air/health-effects-diesel-exhaust (accessed January 2023).

20 SCAQMD. 2003. *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis.* August. Website: www.aqmd.gov/docs/default-source/ceqa/handbook/mobile-source-toxics-analysis.doc (accessed January 2023).

CO Hot Spot Analysis. The primary mobile-source pollutant of local concern is CO, a direct function of vehicle idling time at congested intersections and, thus, of traffic flow conditions. CO transport is extremely limited. Under normal meteorological conditions, CO disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels, affecting local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable LOS or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended to determine a project's effect on local CO levels.

See the Air Pollution Constituents and Attainment Status Section on page 16 and the Regional Air Quality Improvement Section on page 24 in the Air Quality Impact Analysis technical report for discussions of the health impacts from CO.

4.3.4 Regulatory Setting

The EPA and CARB regulate direct emissions from motor vehicles. The SCAQMD is the regional agency primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as monitoring ambient pollutant concentrations.

The applicable federal, State, regional, and local regulatory framework are discussed below.

4.3.4.1 Federal Regulations

Clean Air Act. At the federal level, the EPA has been charged with establishing and implementing national air quality programs and mandates pursuant to the Federal Clean Air Act (FCAA), which was enacted in 1963 and subsequently amended in 1970, 1977, and 1990.

The FCAA required the EPA to establish national ambient air quality standards (NAAQS) for the six criteria pollutants and required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP) for local areas that do not meet these standards. The FCAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The FCAA requires demonstration of reasonable progress toward attainment and provides for sanctions for failure to attain or meet interim milestones. The EPA has responsibility to review all state SIPs to determine conformity with the mandates of the FCAA and determine if implementation will achieve air quality goals. Failure to submit an approvable SIP or to implement the plan within the mandated timeframe may result in sanctions on transportation funding and stationary air pollution sources in the air basin. The provisions of the FCAA most applicable to the Development Project area include Title I (Non-Attainment Provisions) for the criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and Pb, and Title II (Mobile Source Provisions). See **Table 4.3.B** for the State and federal air quality standards.

The SmartWay Program is a public-private initiative between the EPA, large and small trucking companies, rail carriers, logistics companies, commercial manufacturers, retailers, and other federal

and State agencies. Its purpose is to improve fuel efficiency and the environmental performance (reduction of pollution emissions) of the goods movement supply chains. SmartWay is comprised of four components:

1. **SmartWay Transport Partnership:** A partnership in which freight carriers and shippers commit to benchmark operations, track fuel consumption, and improve performance annually.

2. **SmartWay Technology Program:** A testing, verification, and designation program to help freight companies identify equipment, technologies, and strategies that save fuel and lower emissions.

3. **SmartWay Vehicles:** A program that ranks light-duty cars and small trucks and identifies superior environmental performers with the SmartWay logo.

4. **SmartWay International Interests:** Guidance and resources for countries seeking to develop freight sustainability programs modeled after SmartWay.

SmartWay effectively refers to requirements geared toward reducing fuel consumption. Most large trucking fleets driving newer vehicles are compliant with SmartWay design requirements. Moreover, over time, all heavy-duty trucks will have to comply with the 2010 CARB GHG Regulation[21] that is designed with the SmartWay Program in mind, to reduce emissions by making them more fuel-efficient. For instance, in 2015, 53-foot or longer dry vans or refrigerated trailers equipped with a combination of SmartWay-verified, low-rolling resistance tires and SmartWay-verified aerodynamic devices would obtain an approximately 10 percent or more fuel savings over traditional trailers.

Through the SmartWay Technology Program, the EPA has evaluated the fuel saving benefits of various devices through grants, cooperative agreements, emissions and fuel economy testing, demonstration projects and technical literature review. As a result, the EPA has determined that the following types of technologies provide fuel saving and/or emission-reducing benefits when used properly in their designed applications and has verified certain products:

- **Idle Reduction Technologies:** Less idling of the engine when it is not needed would reduce fuel consumption.

- **Aerodynamic Technologies:** Aerodynamic technologies minimize drag and improve airflow over the entire tractor-trailer vehicle. Aerodynamic technologies include gap fairings that reduce turbulence between the tractor and trailer, side skirts that minimize wind under the trailer, and rear fairings that reduce turbulence and pressure drop at the rear of the trailer.

- **Low Rolling Resistance Tires:** Can roll longer without slowing down, thereby reducing the amount of fuel used. Rolling resistance (or rolling friction or rolling drag) is the force resisting the motion when a tire rolls on a surface. The wheel will eventually slow down because of this resistance.

[21] CARB. n.d. CARB Tractor-Trailer Greenhouse Gas Regulation. Website: www.arb.ca.gov/our-work/programs/ttghg (accessed January 2023).

- **Retrofit Technologies:** Retrofit technologies include things such as diesel particulate filters, emissions upgrades (to a higher tier), etc., that would reduce emissions.

- **Federal Excise Tax Exemptions**

4.3.4.2 State Regulations

California Clean Air Act. In 1988, the California Clean Air Act (CCAA) required that all air quality districts in the State endeavor to achieve and maintain California ambient air quality standards (CAAQS) for CO, O_3, SO_2, and NO_2 by the earliest practical date. The CCAA provides districts with authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. A Clean Air Plan shows how a district would reduce emissions to achieve air quality standards. Generally, the State standards for these pollutants are more stringent than the national standards.

California Air Resources Board. The CARB is responsible for implementing the CCAA, which seeks to achieve maximum reduction of vehicular and other mobile emissions to attain CAAQS. The CARB also established the CAAQS for the 10 air pollutants designated in the CCAA. These 10 State air pollutants are the 6 criteria pollutants designated by the FCAA as well as 4 others (i.e., visibility-reducing particulates, hydrogen sulfide (H_2S), sulfates, and vinyl chloride. Generally, the CAAQS are more stringent than the NAAQS. The following are applicable CARB regulations:

- **California Code of Regulations (CCR) Title 24 Part 6:** California's Energy Efficiency Standards for Residential and Nonresidential Buildings was first adopted in 1978 as a response to reducing California's energy consumption. Energy-efficient buildings require less electricity and natural gas; therefore, increased energy efficiency reduces fossil fuel consumption and decreases air quality emissions.

- **CCR Title 24 Part 11:** California Green Building Standards Code is a uniform regulatory code for all residential, commercial, and school buildings. Local jurisdictions may adopt more stringent requirements. The most recent approved update consisting of the 2022 California Green Building Code Standards became effective on January 1, 2023. The 2022 Title 24 standards will result in less energy use, thereby reducing air pollutant emissions associated with energy consumption in the Basin and across the State of California.

- **CARB regulations adopted starting in 1984 (e.g., Assembly Bill 1807 [Tanner, Statutes of 1983]: and the Hot Spots Information and Assessment Act (Assembly Bill 2588) in 1988):** Requires CARB to identify and control toxic air pollutants to reduce the amount of TAC emissions from mobile and area sources, such as cars, trucks, stationary products, and consumer products including mobile source emissions of diesel particulate matter (DPM), benzene (C_6H_6), and 1,3-butadiene (C_4H_6); those that are derived from stationary sources: perchloroethylene (C_2Cl_4) and hexavalent

chromium (Cr(VI)); and those derived from photochemical reactions of emitted VOCs: formaldehyde (CH_2O) and acetaldehyde (C_2H_4O). [22,23]

- CARB's 2000 Diesel Risk Reduction Plan (DRRP) regarding replacement and retrofit of diesel-fueled engines and the use of ultra-low-sulfur (less than 15 parts per million [ppm]) diesel fuel. As a result, DPM concentrations are expected to decline 71 percent from 2000–2020, even though the State's population increased 31 percent and the amount of diesel VMT increased 81 percent.

- CARB 2007 regulation of off-road duty diesel vehicles used in construction, mining, and industrial operations to reduce DPM and NO_X emissions. The regulation limits idling to no more than 5 consecutive minutes and imposes a timeline for performance requirements based on a fleet's average NO_X emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits.

- **CCR Title 13, Section 1956.8** contains CARB-adopted standards to reduce emissions from various types of new on-road heavy-duty engines and vehicles, including the Heavy-Duty Diesel Vehicle Idling Reduction Program, and the Heavy-Duty Diesel In-Use Compliance Program.

- **CCR Title 13, Section 2025** was adopted by CARB in 2008 to reduce emissions of DPM, NO_X, and other criteria pollutants from In-Use Heavy-Duty Diesel-Fueled Vehicles and applies to all on-road heavy-duty diesel-fueled vehicles with a gross vehicle weight rating greater than 14,000 pounds, agricultural yard trucks with off-road certified engines, and certain diesel-fueled shuttle vehicles of any gross vehicle weight rating. Older, heavier trucks (i.e., those with pre-year 2000 engines and a gross vehicle weight rating greater than 26,000 pounds) are required to have a PM filter installed and must replace their engine with a 2010 engine between 2015 and 2020, depending on the model year. Effective December 31, 2014, the regulation was amended to require diesel trucks and buses that operate in California to be upgraded to further reduce emissions by, among other things, requiring mandatory replacement of lighter and older heavier trucks so that by January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent.

4.3.4.3 Regional and Local Regulations

Southern California Association of Governments (SCAG). SCAG is a council of governments for Los Angeles, Orange, Riverside, San Bernardino, Imperial, and Ventura Counties. It is a regional planning agency and serves as a forum for regional issues relating to transportation, the economy and community development, and the environment. Although SCAG is not an Air Quality Management District (AQMD), it is responsible for developing transportation, land use, and energy conservation measures that affect air quality, and has been designated by the EPA as the Metropolitan Planning Organization responsible for ensuring compliance with the requirements of the CAA for the Basin. With regard to air quality planning, SCAG prepares the Regional Transportation Plan (RTP) and

22 Since the DRRP was completed in 2000, the CARB has adopted Airborne Toxic Control Measures (ATCMs) and regulations in alignment with the plan, including the landmark Truck and Bus Regulation, and has achieved a statewide reduction in ambient DPM levels of over 70 percent from 2000 levels.

23 CARB. 2021. *2020 Mobile Source Strategy*. October. Website: www.arb.ca.gov/sites/default/files/2021-12/2020_Mobile_Source_Strategy.pdf (accessed January 2023).

Regional Transportation Improvement Program (RTIP), which address regional development and growth forecasts and form the basis for the land use and transportation control portions of the AQMP and are utilized in preparation of the air quality forecasts and consistency analysis included in the AQMP. The RTP, RTIP, and AQMP are based on projections originating within local jurisdictions.

The SCAG Regional Comprehensive Plan (RCP) provides growth forecasts that are used in the development of air quality-related land use and transportation control strategies by the SCAQMD. The RCP is a framework for decision-making for local governments, assisting them in meeting federal and State mandates for growth management, mobility, and environmental standards while maintaining consistency with regional goals regarding growth and changes. Policies within the RCP include consideration of air quality, land use, transportation, and economic relationships by all levels of government.

On September 3, 2020, the SCAG Regional Council adopted its second Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) required by SB 375, which was enacted to reduce greenhouse gas (GHG) emissions and help meet criteria pollutant standards by integrating transportation, land use, and environmental planning. Connect SoCal is also known as the *2020–2045 Regional Transportation Plan/Sustainable Communities Strategy: A Plan for Mobility, Accessibility, Sustainability, and High Quality of Life* (2020–2045 RTP/SCS). The 2020–2045 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals to achieve a more sustainable growth pattern, improve efficiency of movement of goods, and help the Southern California region meet FCAA requirements. Connect SoCal embodies a collective vision for the region's future and is developed with input from local governments, including taking into account their emissions inventory, county transportation commissions (CTCs), tribal governments, non-profit organizations, businesses, and local stakeholders within Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties.

South Coast Air Quality Management District. The SCAQMD is the agency principally responsible for comprehensive air pollution control in the Basin. The SCAQMD implements certain programs and regulations required by the FCAA and the CCAA. The SCAQMD prepares AQMPs for Basin areas in nonattainment for CAAQS and NAAQS). Currently, the NAAQS and CAAQS are exceeded in most parts of the Basin for some pollutants. The SCAQMD is directly responsible for reducing emissions from stationary (area and point) sources. The SCAQMD develops rules and regulations, establishes permitting requirements, inspects emissions sources, and enforces such measures. The following SCAQMD rules would be applicable to the Project:

- **Rule 402, Nuisance:** Requires that no person shall 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. The proposed Project will be required to comply with Rule 402.

- **Rule 403, Fugitive Dust:** Requires projects to incorporate fugitive dust control measures to prevent and reduce fugitive dust emissions and requires best available control measures to be applied to earth-moving and grading activities. The proposed Project will be required to comply with Rule 403.

- **Rule 1113, Architectural Coatings:** Limits the VOC content of architectural coatings used on projects in the SCAQMD. The proposed Project will be required to comply with Rule 1113.

- **SCAQMD Rule 2305, Warehouse Indirect Source Rule:** Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program.[24] This is a regulatory program to reduce air pollution from warehouse-related activities and is focused on emissions from vehicles that service large warehouses. Rule 316 establishes a fee system to support the Rule 2305 program on an ongoing basis. The rules apply to operators and owners of existing and new warehouses with floor space greater than or equal to 100,000 square feet within a single building (i.e., large warehouses) and establish a point system for reduction of emissions either implementing a menu of items including purchasing/renting/leasing near-zero emission (NZE) and zero emission (ZE) yard equipment, installing on-site ZE fueling stations, and providing on-site solar PV systems that are intended to offset or reduce warehouse emissions. Owners and operators may also implement custom WAIRE plans for individual facilities (subject to SCAQMD approval) or pay mitigation fees to have the SCAQMD implement measures within the Basin. The number of WAIRE points required for a specific operator is based on the number of truck trips and type of trucks at each of their warehouses every year. While the Project proponent may be defined as a warehouse owner and would submit a Warehouse Operation Notice(s), as required, the Project proponent does not intend to be the warehouse operator and has no knowledge of the future operations. Thus, the specific information required by Rule 2305 for calculating potential emissions is unavailable, and the necessary number of points is unknown because that would be based on the actions of future operators. Therefore, even though the WAIRE program will result in reduced emissions from warehouse activities from the Development Project, it cannot be relied upon for CEQA purposes and, conservatively, no specific emission reductions from the WAIRE Program are accounted for in this analysis.

The SCAQMD is responsible for demonstrating regional compliance with AAQS. It prepares a series of AQMPs to meet the CAAQS and NAAQS. The SCAQMD and SCAG are responsible for formulating and implementing the AQMP for the Basin. The main purpose of an AQMP is to bring the area into compliance with federal and State air quality standards. Approximately every 3 years, the SCAQMD prepares a new AQMP, updating the previous plan and the 20-year horizon.[25] The Final 2022 Air Quality Management Plan is the currently adopted AQMP.

Riverside County. Riverside County adopted their General Plan on December 8, 2015.[26] The Air Quality Element in the *County of Riverside General Plan* identifies goals, policies, and programs meant to balance the County's actions regarding land use, circulation, and other regulatory actions and their associated potential effects on local and regional air quality. The following policies are designed to establish a regional basis for improving air quality:

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24 SCAQMD. 2021. Rule 2305 – Warehouse Indirect Source Rule. May 7. Website: www.aqmd.gov/docs/default-source/rule-book/reg-xxiii/r2305.pdf (accessed May 2022).

25 South Coast Air Quality Management District (SCAQMD). 2022. Final 2022 Air Quality Management Plan. December.

26 Riverside County. 2015. General Plan. December 8. Website: https://planning.rctlma.org/General-Plan-Zoning/General-Plan (accessed January 2023).

AQ 2.1: The County land use planning efforts shall assure that sensitive receptors are separated and protected from polluting point sources to the greatest extent possible. (AI 114)

AQ 2.2: Require site plan designs to protect people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources when possible. (AI 114)

AQ 2.3: Encourage the use of pollution control measures such as landscaping, vegetation, and other materials, which trap particulate matter or control pollution. (AI 114)

AQ 2.4: Consider creating a program to plant urban trees on an Area Plan basis that removes pollutants from the air, provides shade and decreases the negative impacts of heat on the air. (AI 114)

AQ 3.1: Allow the marketplace, as much as possible, to determine the most economical approach to relieve congestion and cut emissions.

AQ 3.2: Seek new cooperative relationships between employers and employees to reduce vehicle miles traveled.

AQ 3.3: Encourage large employers and commercial/industrial complexes to create Transportation Management Associations. (AI 115)

AQ 3.4: Encourage employee rideshares and transit incentives for employers with more than 25 employees at a single location.

These policies will not apply to the Development Project once the Project is annexed into the City.

City of Banning. The Air Quality Element and Energy and Mineral (EMR) sections of the *City of Banning General Plan*[27] identify goals, policies, and programs meant to balance the City's actions regarding land use, circulation and other regulatory actions and their associated potential effects on local and regional air quality. This element includes air quality policies intended to limit sources of air pollution and sensitive receptor exposure. Many of the policies are to assist the City directly and indirectly through good practice measures to ensure continued improved air quality into the future.

The following air quality goals and policies are applicable to the Project:

Goal: To preserve and enhance local air quality for the protection of the health and welfare of the community.

AQ Policy 1: The City shall be proactive in regulating local pollutant emitters and shall cooperate with the Southern California Association of Governments and the South Coast Air Quality Management District to assure compliance with air quality standards.

AQ Policy 2: The City shall continue to coordinate and cooperate with local, regional and federal efforts to monitor, manage and reduce the levels of major pollutants affecting the

[27] City of Banning. 2006. Environmental Resources – Air Quality Element. April 19. Website: http://banning.ca.us/DocumentCenter/View/664/GP-Ch-IV-Environmental-Resources (accessed January 2023).

City and region, with particular emphasis on PM10 and ozone emissions, as well as other emissions associated with diesel-fueled equipment and motor vehicles

AQ Policy 3: City land use planning efforts shall assure that sensitive receptors are separated from polluting point sources.

AQ Policy 4: Development proposals brought before the City shall be reviewed for their potential to adversely impact local and regional air quality and shall be required to mitigate any significant impacts.

AQ Policy 5: The City shall promote the use of clean and/or renewable alternative energy sources for transportation, heating and cooling.

AQ Policy 6: The City shall support the development of facilities and projects that facilitate and enhance the use of alternative modes of transportation, including pedestrian-oriented retail and activity centers, dedicated bicycle paths and lanes, and community-wide multi-use trails.

The following Energy and Mineral Policies are related to air quality:

EMR Policy 1: Promote Energy conservation throughout all areas of the community and sectors of the local economy including the planning and construction of urban uses and in City and regional transportation systems.

EMR Policy 2: Promote the integration of alternative energy systems including but not limited to solar, thermal, photovoltaics, and other clean energy systems directly into building design and construction.

EMR Policy 3: Support public and private efforts to develop and operate alternative systems of wind, solar and other electrical production, which take advantage of local renewable resources.

4.3.5 Thresholds of Significance

The following thresholds of significance are from Appendix G of the *CEQA Guidelines,* which provides that, where available, the significance criteria established by the applicable AQMD may be relied on to make the determinations of whether or not a project would have a significant impact related to air quality. The Development Project would result in a significant impact to air quality if the Development Project or any Development Project-related component would :

Threshold 4.3.1: Conflict with or obstruct implementation of the applicable air quality plan.

Threshold 4.3.2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard.

Threshold 4.3.3: Expose sensitive receptors to substantial pollutant concentrations.

Threshold 4.3.4: Create objectionable odors affecting a substantial number of people.

4.3.5.1 Regional Criteria Pollutant Thresholds for Construction and Operational Emissions

The SCAQMD has established daily emissions thresholds for construction and operation of a proposed project in the Basin. The emissions thresholds were established based on the attainment status of the Basin with regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

Table 4.3.F: Regional Thresholds for Construction and Operational Emissions lists the CEQA significance thresholds for construction and operational emissions established for the Basin.

Table 4.3.F: Regional Thresholds for Construction and Operational Emissions

Emissions Source	Pollutant Emissions Threshold (lbs/day)					
	VOCs	NO_X	CO	PM_{10}	$PM_{2.5}$	SO_X
Construction	75	100	550	150	55	150
Operations	55	55	550	150	55	150

Source: South Coast Air Quality Management District (SCAQMD). 2019. Air Quality Significance Thresholds. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf (accessed October 2022).

CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SO_X = sulfur oxides
VOCs = volatile organic compounds

Projects in the Basin with construction- or operation-related emissions that exceed any of their respective emission thresholds would be considered significant under SCAQMD guidelines. These thresholds, which SCAQMD developed and that apply throughout the Basin, apply as both project and cumulative thresholds. If a project exceeds these standards, it is considered to have a project-specific and cumulative impact.

4.3.5.2 Local Microscale Concentration Standards

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the Project site are above or below State and federal CO standards. Because ambient CO levels are below the standards throughout the Basin, a project would be considered to have a significant CO impact if project emissions result in an exceedance of one or more of the 1-hour or 8-hour standards. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20 ppm
- California State 8-hour CO standard of 9 ppm

4.3.5.3 Health Risk Assessment Thresholds of Significance

Both the State and federal governments have established health-based AAQS for seven air pollutants. For other air pollutants without defined significance standards, the definition of substantial pollutant

concentrations varies. For TACs, "substantial" is taken to mean that the individual health risk exceeds a threshold considered to be a prudent risk management level.

The following limits for maximum individual cancer risk (MICR) and noncancer acute and chronic Hazard Index (HI) from project emissions of TACs are considered appropriate for use in determining the health risk for projects in the Basin:

- **MICR:** MICR is the estimated probability of a maximum exposed individual (MEI) contracting cancer as a result of exposure to TACs over a period of 30 years for adults and 9 years for children in residential locations and over a period of 25 years for workers. The MICR calculations include multipathway consideration, when applicable.

  The cumulative increase in MICR that is the sum of the calculated MICR values for all TACs would be considered significant if it would result in an increased MICR greater than 10 in 1 million (1×10^{-5}) at any receptor location.

- **Chronic HI:** Chronic HI is the ratio of the estimated long-term level of exposure to a TAC for a potential MEI to its chronic reference exposure level. The chronic HI calculations include multipathway consideration, when applicable.

  The project would be considered significant if the cumulative increase in total chronic HI for any target organ system would exceed 1.0 at any receptor location.

- **Acute HI:** Acute HI is the ratio of the estimated maximum 1-hour concentration of a TAC for a potential MEI to its acute reference exposure level.

  The project would be considered significant if the cumulative increase in total acute HI for any target organ system would exceed 1.0 at any receptor location.

The SCAQMD *CEQA Air Quality Handbook*[28] (currently under revision) states that emissions of TACs are considered significant if an HRA shows an increased risk of greater than 10 in 1 million. Based on guidance from SCAQMD in the document *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis,*[29] for the purpose of this analysis, the threshold of 10 in 1 million was used as the cancer risk threshold for the proposed Project.

4.3.5.4 Thresholds for Determining Impacts to Sensitive Receptors

The localized significance for project air emissions of NO_X and CO are the AAQS listed in **Table 4.3.B**. Since both PM_{10} and $PM_{2.5}$ are in nonattainment, their thresholds are not based on AAQS exceedance,

28 SCAQMD. 1993. CEQA Air Quality Handbook. November. Website: www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993) as updated March 2023. The SCAQMD air quality significance thresholds were updated in March 2023 to reflect the U.S. EPA's redesignation of the Coachella Valley from Severe-15 to Extreme nonattainment for the 2008 ozone national ambient air quality standards (NAAQS) (accessed August 2023).

29 SCAQMD. 2002. Mobile Source Toxics Analysis Website: www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis (accessed January 2023).

but rather a violation of SCAQMD Rules 403 or 1301. The Rule 403 threshold of 10.4 µg/m^3 applies to construction activities. The Rule 1301 threshold of 2.5 µg/m^3 applies to nonaggregate handling operational activities.

4.3.6 Impact Analysis

Air pollutant emissions associated with the Project would occur over the short term from construction activities and over the long term from Project-related vehicular trips and due to energy consumption (e.g., electricity and natural gas usage) by the proposed land uses.

4.3.6.1 Air Quality Management Plan Consistency

Threshold 4.3.1: Would the Development Project conflict with or obstruct implementation of the applicable air quality plan?

The proposed Development Site is located within the Basin and is within the jurisdiction of the SCAQMD. The 2022 AQMP is the applicable plan for the Development Project. As discussed below, it is based on two criteria: (1) whether the project is consistent with SCAG's growth forecasts, which are based, in part, on the planned land uses in general plans of cities located within the SCAG region; and (2) whether the project would increase the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP. Basin-wide air pollution levels are monitored by the SCAQMD through the AQMP. Note that the federal and state air quality standards are exceeded in most parts of the Basin, and the measures from the 2022 AQMD and Connect SoCal have been instituted to address these exceedances. The current regional AQMP is the 2022 AQMP, which was approved by the SCAQMD on December 2, 2022. On October 1, 2015, the EPA strengthened the NAAQS for ground-level ozone, lowering the primary and secondary ozone standard levels to 70 parts per billion (ppb). The Basin is classified as an "extreme" nonattainment area, and the Coachella Valley is classified as a "severe-15" nonattainment area for the 2015 Ozone NAAQS. The 2022 AQMP was developed to address the requirements for meeting this standard.

The 2022 AQMP builds upon measures already in place from previous AQMPs. It also includes a variety of additional strategies such as regulation, accelerated deployment of available cleaner technologies (e.g., zero emissions technologies, when cost-effective and feasible, and low NO_X technologies in other applications), best management practices, co-benefits from existing programs (e.g., climate and energy efficiency), incentives, and other CAA measures to achieve the 2015 8-hour ozone standard.

The AQMP control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, conformance with the AQMP for development projects is determined by demonstrating compliance with local land use plans and/or population projections. The AQMP uses the assumptions and projections of local planning agencies in effect at the time it is drafted to determine control strategies for regional compliance status. Since the AQMP is based on local land use plans, projects that are deemed consistent with local land use plans are found to be consistent with the AQMP.

CEQA requires that Specific Plans be evaluated for consistency with the AQMP. SCAQMD's *CEQA Air Quality Handbook* provides the following two criteria to determine whether a project would be consistent or in conflict with the AQMP:

- **Consistency Criterion No. 1:** The project would not generate population and employment growth that would be inconsistent with SCAG growth forecasts.

- **Consistency Criterion No. 2:** The project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

Consistency Criterion No. 1 refers to the SCAG's growth forecasts and associated assumptions included in the AQMP. The future air quality levels projected in the AQMP are based on SCAG's growth projections, which are based, in part, on the general plans of cities located within the SCAG region. Therefore, if the level of employment related to the proposed project is consistent with the applicable assumptions used in the development of the AQMP, the project would not jeopardize attainment of the air quality levels identified in the AQMP.

The Project would require a general plan land use change. Based on residential occupancy densities, the existing residential use designations would accommodate up to 3,752 persons, while the commercial usus under the existing designations would provide employment for up to 610 persons, for a total of 4,362 residents and employees. The Development Project would allow for up to 5,993 employees at full buildout. As a result of the growth in employment projections for the project site, the proposed Project would not be consistent with Consistency Criterion No. 1. Once the General Plan Amendment is approved, the AQMP modeling updated, and the SCAG growth forecasts updated, the Project would then be consistent with Criterion No. 1. However, the Development Project is not currently consistent with the growth projections included in the AQMP, and therefore this criterion is not met.

Consistency Criterion No. 2 refers to violations of the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if LSTs or regional significance thresholds were exceeded. As evaluated under Thresholds 4.3.2 and 4.3.3 below, the Development Project's localized construction-source emissions would not exceed applicable LST thresholds. Additionally, with implementation of **Mitigation Measure AIR-1**, the Development Project's regional construction-source emissions would not exceed the applicable regional thresholds. As such, construction of the Development Project would not have the potential to result in a significant impact with respect to this criterion, would not have the potential to conflict with the AQMP according to this criterion, and would not be potentially significant.

As evaluated under Thresholds 4.3.2 and 4.3.3 below, the Development Project would not exceed the LST thresholds for operational activity. However, the regional operational-source emissions are anticipated to exceed the regional thresholds of significance for VOC, NO_X, CO, PM_{10}. and $PM_{2.5}$ emissions and would not be reduced to less than significant with imposition of mitigation measures. As such, the Development Project operations have the potential to result in a significant impact with

respect to this criterion, and the Development Project would have the potential to conflict with the AQMP according to this criterion.

Impact Conclusion. Based on the preceding, the Project is determined to be inconsistent with Consistency Criterion No. 1, and impacts would be potentially significant.

Level of Significance Prior to Mitigation: Implementation of the Project would be inconsistent with the 2022 AQMP, and this impact would be considered significant and unavoidable.

Mitigation Measures:

MM AIR-1 During construction of the proposed Development Project, the Project contractor shall ensure all 50 horsepower or more off-road diesel-powered construction equipment is powered with California Air Resources Board (CARB) certified Tier 4 Final engines or the equivalent.

During construction of the proposed Development Project, the Project contractor shall only use interior paints with low volatile organic compound (VOC) content with a maximum concentration of 30 grams per liter (g/L) for residential building architectural coating to reduce VOC emissions. All building and site plans shall note use of paints with a low VOC content with a maximum concentration of 30 g/L verified.

The City of Banning shall verify this two-part measure has been incorporated into construction plans prior to issuance of any construction permits and during architectural coating activities.

MM AIR-2 The following multi-part mitigation measure shall be implemented during Project operation:

- Implement Mitigation Measures GHG-4, GHG-5, and GHG-6.
- All facility-owned and operated fleet equipment with a gross vehicle weight rating greater than 14,000 pounds accessing the site shall meet or exceed 2010 model-year emissions equivalent engine standards as currently defined in California Code of Regulations Title 13, Division 3, Chapter 1, Article 4.5, Section 2025. Facility operators shall maintain records on site demonstrating compliance with this requirement and shall make records available for inspection by the City of Banning, SCAQMD, and State upon request.
- All on-site cargo handling equipment including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and other on-site equipment shall be electric with the necessary electrical plug-in charging included in the design of the Development Project electrical system, buildings, and equipment storage and parking areas.

- Tenant lease agreements for the Development Project shall include contractual language restricting trucks and support equipment from nonessential idling longer than 5 minutes while on site. The idling restriction will be presented on signs at the entrance to the industrial portions of the Development Project as well as at loading docks and truck parking areas.

- All facility operators shall train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.

- Interior- and exterior-facing signs, including signs directed at all dock and delivery areas, shall be provided identifying idling restrictions and contact information to report violations to CARB, the air district, and the building manager.

- At buildout of the industrial land uses a minimum of 50 Level 3 AC Class 8 electric vehicle (EV) truck chargers shall be installed at the tractor trailer parking spaces in logical locations to facilitate electric truck charging.

- For the warehouse/industrial portions of the Development Project, the buildings' electrical room shall be sufficiently sized to hold additional panels that may be needed to supply power for installation of electric charging systems for electric trucks and power transport refrigeration units (TRUs). Conduit shall be installed from the electrical room to all tractor trailer parking spaces in logical locations on site to facilitate future electric truck charging.

- At buildout, the Development Project shall include the higher value of either:

    - At least 350 Level 2 AC EV chargers; or

    - A percentage of total parking spaces with Level 2 AC EV chargers to comply with the minimum requirements of CCR, Title 24, Part 11: California Green Building Standards Code.

- All truck/dock bays that serve cold storage facilities within the proposed buildings shall be electrified to facilitate plug-in capabilities and support use of electric standby and/or hybrid electric TRUs.

- Prior to issuance of occupancy permits for the industrial/warehouse area, the Development Project operators employing 200 or more employees shall be required to establish and promote a rideshare program and prepare and submit a Transportation Demand Management Program detailing strategies that discourage single-occupancy vehicle trips by employees by increasing

and providing financial incentives for alternate modes of transportation, including carpooling/vanpools, public transit, and biking.

- Signs at every truck exit driveway shall be provided showing directional information to the truck route.
- Every tenant shall be required to train staff in charge of keeping vehicle records in diesel technologies and compliance with CARB regulations, by attending CARB-approved courses. Facility operators shall also be required to maintain records on site demonstrating compliance and make records available for inspection by the City of Banning, SCAQMD, and State upon request.
- Tenants shall be required to enroll in the United States Environmental Protection Agency's SmartWay program, and tenants shall be required to use carriers that are SmartWay carriers.
- Industrial and commercial buildings within the Development Project shall be all electric unless the land use requires natural gas (i.e., restaurants, bakeries, dental and medical laboratories).
- Tenants shall be provided with information on incentive programs, such as the Carl Moyer Program and Voucher Incentive Program, to upgrade their fleets.

Level of Significance After Mitigation: The proposed Development Project would not be consistent with the 2022 AQMP because the employment projections for the Development Site would increase with implementation of the Project, and the Development Project would result in VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions that would exceed SCAQMD thresholds without mitigation. Implementation of **Mitigation Measure AIR-1** would reduce construction emissions associated with the Development Project to a less than significant level. However, emissions associated with operation of the Development Project would remain significant and unavoidable, even with implementation of the planned project design features and **Mitigation Measure AIR-2**. No additional feasible mitigation measures are available that can reduce impacts to less than significant. As such, the Project would not be consistent with the attainment of the AAQS or emission reductions assumptions indicated in the AQMP. Therefore, based on the requirements for consistency with emission control strategies in the AQMP, the Development Project would conflict with or obstruct the implementation of the AQMP and/or applicable portions of the SIP. Therefore, this impact would be significant and unavoidable.

4.3.6.2 Increase in Criteria Pollutants (Regional Construction and Operation)

Threshold 4.3.2: Would the Development Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard?

The Basin is currently designated nonattainment for the federal and State standards for O_3 and $PM_{2.5}$. In addition, the Basin is in nonattainment for the State PM_{10} standard. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing significant adverse air quality impacts if they exceed the threshold of significance for criteria pollutants, and the project's impact on air quality would be considered cumulatively significant. The following analysis assesses the potential cumulative air quality impacts associated with construction and operation of the proposed Project.

Construction Emissions. During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by demolition, grading, paving, building, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, VOCs, directly emitted particulate matter ($PM_{2.5}$ and PM_{10}), and TACs such as diesel exhaust particulate matter.

Project construction activities would include site preparation, grading, building, paving, and architectural coating (painting). Construction-related effects on air quality from the proposed Project would be greatest during the site preparation phase for each area due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The SCAQMD has established standard measures for reducing fugitive dust emissions (PM_{10}). With the implementation of these control measures fugitive dust emissions from construction activities would not result in adverse air quality impacts.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_x, VOC, and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

As discussed above, CalEEMod was used to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to the site. Detailed construction equipment assumptions

used in this analysis and daily emission rates by phase are detailed in the Air Quality Impact Analysis for the Sunset Crossroads Specific Plan included in **Appendix C-1** of this EIR. The list of construction equipment by phase estimated using defaults in the CalEEMod model are shown in **Table 4.3.G: Diesel Construction Equipment Utilized by Construction Phase**.

Construction-related emissions are presented as a summary in **Table 4.3.H: Project Construction Emissions**.

The VOC, NO_X, CO, and SO_X emissions rates shown in **Table 4.3.H** are from the CalEEMod output tables listed as "Unmitigated Construction," while the emissions of PM_{10} and $PM_{2.5}$ are from the CalEEMod output tables listed as "Mitigated Construction." See **Appendix C-1** for all CalEEMod modeling inputs and results. This is because CalEEMod does not provide a method of including the required construction emissions control measures, or standard conditions required by the SCAQMD. Thus, the standard conditions were included in the CalEEMod modeling as mitigation. All emissions in **Table 4.3.H** are the combination of the on- and off-site emissions and the greater of summer and winter emissions. The daily emissions rates shown reflect all combinations of overlapping construction operations.

As shown in **Table 4.3.H**, Project construction emissions would result in an exceedance of VOC, NO_X, and $PM_{2.5}$ thresholds. Therefore, implementation of **Mitigation Measure AIR-1** (described in **Section 4.3.6.1**) would be required to reduce regional air emissions during Project construction by requiring that all 50 horsepower or more off-road diesel-powered construction equipment is powered with CARB certified Tier 4 Final engines or the equivalent. This measure would reduce NO_x and $PM_{2.5}$ emissions by requiring the cleanest available engines to minimize emissions during the construction period. Additionally, this measure would reduce VOC emissions by requiring the use of low-VOC content architectural coatings.

Table 4.3.I: Short-Term Regional Construction Emissions With Mitigation shows the mitigated construction emissions and indicates that with implementation of **Mitigation Measure AIR-1**, maximum daily construction emissions would be less than the SCAQMD thresholds of all pollutants except for VOCs. **Mitigation Measure AIR-1** would reduce construction VOCs by requiring low-VOC paint application. There are no additional feasible mitigation measures to further reduce VOC emissions. Therefore, the proposed Development Project would result in significant construction air quality impacts.

Table 4.3.G: Diesel Construction Equipment Utilized by Construction Phase

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horsepower	Load Factor
Mass Grading - Phase 1	Excavators	2	8	158	0.38
Mass Grading - Phase 1	Graders	5	8	187	0.41
Mass Grading - Phase 1	Rubber Tired Dozers	5	8	247	0.4
Mass Grading - Phase 1	Scrapers	5	8	367	0.48
Mass Grading - Phase 1	Tractors/Loaders/Backhoes	5	8	97	0.37
Building 1 - Grading	Excavators	2	8	158	0.38
Building 1 - Grading	Graders	1	8	187	0.41
Building 1 - Grading	Rubber Tired Dozers	1	8	247	0.4
Building 1 - Grading	Scrapers	2	8	367	0.48
Building 1 - Grading	Tractors/Loaders/Backhoes	2	8	97	0.37
Building 1 - Sitework-Utilities	Rubber Tired Dozers	3	8	247	0.4
Building 1 - Sitework-Utilities	Tractors/Loaders/Backhoes	4	8	97	0.37
Building 2 - Grading	Excavators	2	8	158	0.38
Building 2 - Grading	Graders	1	8	187	0.41
Building 2 - Grading	Rubber Tired Dozers	1	8	247	0.4
Building 2 - Grading	Scrapers	2	8	367	0.48
Building 2 - Grading	Tractors/Loaders/Backhoes	2	8	97	0.37
Building 1 - Building Construction	Cranes	1	7	231	0.29
Building 1 - Building Construction	Forklifts	3	8	89	0.2
Building 1 - Building Construction	Generator Sets	1	8	84	0.74
Building 1 - Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37
Building 1 - Building Construction	Welders	1	8	46	0.45
Building 2 - Sitework-Utilities	Rubber Tired Dozers	3	8	247	0.4
Building 2 - Sitework-Utilities	Tractors/Loaders/Backhoes	4	8	97	0.37
Building 2 - Building Construction	Cranes	1	7	231	0.29
Building 2 - Building Construction	Forklifts	3	8	89	0.2
Building 2 - Building Construction	Generator Sets	1	8	84	0.74
Building 2 - Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37
Building 2 - Building Construction	Welders	1	8	46	0.45
Building 3 - Grading	Excavators	2	8	158	0.38
Building 3 - Grading	Graders	1	8	187	0.41
Building 3 - Grading	Rubber Tired Dozers	1	8	247	0.4
Building 3 - Grading	Scrapers	2	8	367	0.48
Building 3 - Grading	Tractors/Loaders/Backhoes	2	8	97	0.37
Building 3 - Sitework-Utilities	Rubber Tired Dozers	3	8	247	0.4
Building 3 - Sitework-Utilities	Tractors/Loaders/Backhoes	4	8	97	0.37
Building 3 - Building Construction	Cranes	1	7	231	0.29
Building 3 - Building Construction	Forklifts	3	8	89	0.2
Building 3 - Building Construction	Generator Sets	1	8	84	0.74
Building 3 - Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37
Building 3 - Building Construction	Welders	1	8	46	0.45
Building 1 - Tenant finish	Air Compressors	1	6	78	0.48
Building 4 - Grading	Excavators	2	8	158	0.38
Building 4 - Grading	Graders	1	8	187	0.41
Building 4 - Grading	Rubber Tired Dozers	1	8	247	0.4
Building 4 - Grading	Scrapers	2	8	367	0.48
Building 4 - Grading	Tractors/Loaders/Backhoes	2	8	97	0.37
Building 4 - Sitework-Utilities	Rubber Tired Dozers	3	8	247	0.4
Building 4 - Sitework-Utilities	Tractors/Loaders/Backhoes	4	8	97	0.37
Building 4 - Building Construction	Cranes	1	7	231	0.29

Table 4.3.G: Diesel Construction Equipment Utilized by Construction Phase

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horsepower	Load Factor
Building 4 - Building Construction	Forklifts	3	8	89	0.2
Building 4 - Building Construction	Generator Sets	1	8	84	0.74
Building 4 - Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37
Building 4 - Building Construction	Welders	1	8	46	0.45
Building 2 - Tenant finish	Air Compressors	1	6	78	0.48
Building 1 - Sitework-paving	Pavers	2	8	130	0.42
Building 1 - Sitework-paving	Paving Equipment	2	8	132	0.36
Building 1 - Sitework-paving	Rollers	2	8	80	0.38
Building 2 - Sitework-paving	Pavers	2	8	130	0.42
Building 2 - Sitework-paving	Paving Equipment	2	8	132	0.36
Building 2 - Sitework-paving	Rollers	2	8	80	0.38
Mass Grading - Phase 2	Excavators	2	8	158	0.38
Mass Grading - Phase 2	Graders	5	8	187	0.41
Mass Grading - Phase 2	Rubber Tired Dozers	5	8	247	0.4
Mass Grading - Phase 2	Scrapers	5	8	367	0.48
Mass Grading - Phase 2	Tractors/Loaders/Backhoes	5	8	97	0.37
Building 3 - Tenant finish	Air Compressors	1	6	78	0.48
Building 3 - Sitework-paving	Pavers	2	8	130	0.42
Building 3 - Sitework-paving	Paving Equipment	2	8	132	0.36
Building 3 - Sitework-paving	Rollers	2	8	80	0.38
Building 4 - Tenant finish	Air Compressors	1	6	78	0.48
Lincoln Avenue - Grading	Excavators	2	8	158	0.38
Lincoln Avenue - Grading	Graders	1	8	187	0.41
Lincoln Avenue - Grading	Rubber Tired Dozers	1	8	247	0.4
Lincoln Avenue - Grading	Scrapers	2	8	367	0.48
Lincoln Avenue - Grading	Tractors/Loaders/Backhoes	2	8	97	0.37
Building 5 - Grading	Excavators	2	8	158	0.38
Building 5 - Grading	Graders	1	8	187	0.41
Building 5 - Grading	Rubber Tired Dozers	1	8	247	0.4
Building 5 - Grading	Scrapers	2	8	367	0.48
Building 5 - Grading	Tractors/Loaders/Backhoes	2	8	97	0.37
Building 4 - Sitework-paving	Pavers	2	8	130	0.42
Building 4 - Sitework-paving	Paving Equipment	2	8	132	0.36
Building 4 - Sitework-paving	Rollers	2	8	80	0.38
Building 5 - Sitework-Utilities	Rubber Tired Dozers	3	8	247	0.4
Building 5 - Sitework-Utilities	Tractors/Loaders/Backhoes	4	8	97	0.37
Building 5 - Building Construction	Cranes	1	7	231	0.29
Building 5 - Building Construction	Forklifts	3	8	89	0.2
Building 5 - Building Construction	Generator Sets	1	8	84	0.74
Building 5 - Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37
Building 5 - Building Construction	Welders	1	8	46	0.45
Commercial - Grading	Excavators	2	8	158	0.38
Commercial - Grading	Graders	1	8	187	0.41
Commercial - Grading	Rubber Tired Dozers	1	8	247	0.4
Commercial - Grading	Scrapers	2	8	367	0.48
Commercial - Grading	Tractors/Loaders/Backhoes	2	8	97	0.37
Building 6 - Grading	Excavators	2	8	158	0.38
Building 6 - Grading	Graders	1	8	187	0.41
Building 6 - Grading	Rubber Tired Dozers	1	8	247	0.4
Building 6 - Grading	Scrapers	2	8	367	0.48

Table 4.3.G: Diesel Construction Equipment Utilized by Construction Phase

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horsepower	Load Factor
Building 6 - Grading	Tractors/Loaders/Backhoes	2	8	97	0.37
Building 6 - Sitework-Utilities	Rubber Tired Dozers	3	8	247	0.4
Building 6 - Sitework-Utilities	Tractors/Loaders/Backhoes	4	8	97	0.37
Building 6 - Building Construction	Cranes	1	7	231	0.29
Building 6 - Building Construction	Forklifts	3	8	89	0.2
Building 6 - Building Construction	Generator Sets	1	8	84	0.74
Building 6 - Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37
Building 6 - Building Construction	Welders	1	8	46	0.45
Commercial - Sitework-Utilities	Rubber Tired Dozers	3	8	247	0.4
Commercial - Sitework-Utilities	Tractors/Loaders/Backhoes	4	8	97	0.37
Lincoln Avenue - Paving	Pavers	2	8	130	0.42
Lincoln Avenue - Paving	Paving Equipment	2	8	132	0.36
Lincoln Avenue - Paving	Rollers	2	8	80	0.38
Building 7 - Grading	Excavators	2	8	158	0.38
Building 7 - Grading	Graders	1	8	187	0.41
Building 7 - Grading	Rubber Tired Dozers	1	8	247	0.4
Building 7 - Grading	Scrapers	2	8	367	0.48
Building 7 - Grading	Tractors/Loaders/Backhoes	2	8	97	0.37
Commercial - Tenant finish	Air Compressors	1	6	78	0.48
Building 5 - Tenant finish	Air Compressors	1	6	78	0.48
Building 7 - Sitework-Utilities	Rubber Tired Dozers	3	8	247	0.4
Building 7 - Sitework-Utilities	Tractors/Loaders/Backhoes	4	8	97	0.37
Building 5 - Sitework-paving	Pavers	2	8	130	0.42
Building 5 - Sitework-paving	Paving Equipment	2	8	132	0.36
Building 5 - Sitework-paving	Rollers	2	8	80	0.38
Building 7 - Building Construction	Cranes	1	7	231	0.29
Building 7 - Building Construction	Forklifts	3	8	89	0.2
Building 7 - Building Construction	Generator Sets	1	8	84	0.74
Building 7 - Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37
Building 7 - Building Construction	Welders	1	8	46	0.45
Building 6 - Tenant finish	Air Compressors	1	6	78	0.48
Building 6 - Sitework-paving	Pavers	2	8	130	0.42
Building 6 - Sitework-paving	Paving Equipment	2	8	132	0.36
Building 6 - Sitework-paving	Rollers	2	8	80	0.38
Commercial - Building Construction	Cranes	1	7	231	0.29
Commercial - Building Construction	Forklifts	3	8	89	0.2
Commercial - Building Construction	Generator Sets	1	8	84	0.74
Commercial - Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37
Commercial - Building Construction	Welders	1	8	46	0.45
Building 10 - Grading	Excavators	2	8	158	0.38
Building 10 - Grading	Graders	1	8	187	0.41
Building 10 - Grading	Rubber Tired Dozers	1	8	247	0.4
Building 10 - Grading	Scrapers	2	8	367	0.48
Building 10 - Grading	Tractors/Loaders/Backhoes	2	8	97	0.37
Building 10 - Sitework-Utilities	Rubber Tired Dozers	3	8	247	0.4
Building 10 - Sitework-Utilities	Tractors/Loaders/Backhoes	4	8	97	0.37
Building 10 - Building Construction	Cranes	1	7	231	0.29
Building 10 - Building Construction	Forklifts	3	8	89	0.2
Building 10 - Building Construction	Generator Sets	1	8	84	0.74
Building 10 - Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37

Table 4.3.G: Diesel Construction Equipment Utilized by Construction Phase

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horsepower	Load Factor
Building 10 - Building Construction	Welders	1	8	46	0.45
Building 7 - Tenant finish	Air Compressors	1	6	78	0.48
Building 7 - Sitework-paving	Pavers	2	8	130	0.42
Building 7 - Sitework-paving	Paving Equipment	2	8	132	0.36
Building 7 - Sitework-paving	Rollers	2	8	80	0.38
Commercial - Sitework-paving	Pavers	2	8	130	0.42
Commercial - Sitework-paving	Paving Equipment	2	8	132	0.36
Commercial - Sitework-paving	Rollers	2	8	80	0.38
Building 10 - Tenant finish	Air Compressors	1	6	78	0.48
Building 8 - Grading	Excavators	2	8	158	0.38
Building 8 - Grading	Graders	1	8	187	0.41
Building 8 - Grading	Rubber Tired Dozers	1	8	247	0.4
Building 8 - Grading	Scrapers	2	8	367	0.48
Building 8 - Grading	Tractors/Loaders/Backhoes	2	8	97	0.37
Building 10 - Sitework-paving	Pavers	2	8	130	0.42
Building 10 - Sitework-paving	Paving Equipment	2	8	132	0.36
Building 10 - Sitework-paving	Rollers	2	8	80	0.38
Building 8 - Sitework-Utilities	Rubber Tired Dozers	3	8	247	0.4
Building 8 - Sitework-Utilities	Tractors/Loaders/Backhoes	4	8	97	0.37
Building 8 - Building Construction	Cranes	1	7	231	0.29
Building 8 - Building Construction	Forklifts	3	8	89	0.2
Building 8 - Building Construction	Generator Sets	1	8	84	0.74
Building 8 - Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37
Building 8 - Building Construction	Welders	1	8	46	0.45
Building 9 - Grading	Excavators	2	8	158	0.38
Building 9 - Grading	Graders	1	8	187	0.41
Building 9 - Grading	Rubber Tired Dozers	1	8	247	0.4
Building 9 - Grading	Scrapers	2	8	367	0.48
Building 9 - Grading	Tractors/Loaders/Backhoes	2	8	97	0.37
Building 8 - Tenant finish	Air Compressors	1	6	78	0.48
Building 9 - Sitework-Utilities	Rubber Tired Dozers	3	8	247	0.4
Building 9 - Sitework-Utilities	Tractors/Loaders/Backhoes	4	8	97	0.37
Building 9 - Building Construction	Cranes	1	7	231	0.29
Building 9 - Building Construction	Forklifts	3	8	89	0.2
Building 9 - Building Construction	Generator Sets	1	8	84	0.74
Building 9 - Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37
Building 9 - Building Construction	Welders	1	8	46	0.45
Building 8 - Sitework-paving	Pavers	2	8	130	0.42
Building 8 - Sitework-paving	Paving Equipment	2	8	132	0.36
Building 8 - Sitework-paving	Rollers	2	8	80	0.38
Building 9 - Tenant finish	Air Compressors	1	6	78	0.48
Building 9 - Sitework-paving	Pavers	2	8	130	0.42
Building 9 - Sitework-paving	Paving Equipment	2	8	132	0.36
Building 9 - Sitework-paving	Rollers	2	8	80	0.38

Source: Compiled by LSA using CalEEMod (August 2023).

Table 4.3.H: Project Construction Emissions

Construction Year	Maximum Pollutant Emissions (lbs/day)					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2023	20	173	169	<1	92	45
2024	888	287	237	<1	124	61
2025	759	171	193	<1	101	52
2026	714	108	124	<1	58	29
2027	336	41	43	<1	24	12
SCAQMD Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Threshold?	**Yes**	**Yes**	**No**	**No**	**No**	**Yes**

Source: Compiled by LSA Associates, Inc. (September 2023).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOC = volatile organic compound

Table 4.3.I: Short-Term Regional Construction Emissions With Mitigation

Construction Year	Maximum Daily Regional Pollutant Emissions (lbs/day)					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2023	9	35	185	<1	39	16
2024	874	42	277	<1	39	17
2025	751	30	219	<1	34	16
2026	710	21	143	<1	20	9
2027	334	7	48	<1	9	4
SCAQMD Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Threshold?	**Yes**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (September 2023).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

Fugitive Dust. Fugitive dust emissions are generally associated with land clearing and exposure of soils to the air and wind, as well as cut-and-fill grading operations. Dust generated during construction varies substantially on a project-by-project basis, depending on the level of activity, the specific operations, and weather conditions at the time of construction.

The construction calculations prepared for the Development Project assumed that dust control measures (watering a minimum of two times daily) would be employed to reduce emissions of fugitive dust during site grading. Furthermore, all construction would need to comply with SCAQMD Rule 403 regarding the emission of fugitive dust. **Tables 4.3.H** and **4.3.I** list total construction emissions (i.e., fugitive dust emissions and construction equipment exhausts) that have incorporated the following Rule 403 measures that would be implemented to significantly reduce PM_{10} emissions from construction:

- Water active sites at least twice daily (locations where grading is to occur shall be thoroughly watered prior to earthmoving).

- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 feet (0.6 meter) of freeboard (vertical space between the top of the load and the top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.

- Reduce traffic speeds on all unpaved roads to 15 mph or less.

Construction Emissions Conclusions. **Table 4.3.I** shows that with implementation of Mitigation Measure AIR-1, daily regional construction emissions would not exceed the daily thresholds of any criteria pollutant emission thresholds established by the SCAQMD other than VOCs; thus, during construction, there would be no regional air quality impacts except for VOCs.

Operational Emissions. Long-term air pollutant emission impacts that would result from the proposed Project are those associated with mobile sources (e.g., vehicle trips), energy sources (e.g., electricity), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment.

Mobile source emissions include emissions associated with passenger vehicles which are based on the trip numbers, length, and fleet mix/vehicle type assumptions in the Traffic Analysis for employees and site visitors/shoppers. The truck trip assumptions are also based on the Traffic Analysis for trips and fleet mix. A truck trip length of 40 miles was assumed based on previous recommendations by the SCAQMD.

Fugitive dust emissions associated with mobile source emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM_{10} occurs when vehicle tires pulverize small rocks and pavement, and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emissions processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles.

Energy source emissions result from activities in buildings for which electricity is used. The quantity of emissions is the product of usage intensity (i.e., the amount of electricity) and the emission factor of the fuel source. Major sources of energy demand include building mechanical systems, such as heating and air conditioning, lighting, and plug-in electronics, such as refrigerators or computers. Greater building or appliance efficiency reduces the amount of energy for a given activity and thus lowers the resultant emissions. The emission factor is determined by the fuel source, with cleaner energy sources, like renewable energy, producing fewer emissions than conventional sources.

Area source emissions consist of direct sources of air emissions located at the Project site and associated with the Development Project, and include architectural coatings, the use of landscaping and landscape maintenance equipment, architectural coatings used in routine maintenance, and the use of consumer products.

Based on the assumed construction and buildout schedule of the proposed Project, there is potential for overlap between construction and operational activity. The preceding analysis of the construction emissions and operational emissions was completed pursuant to the SCAQMD 1993 CEQA Handbook which specifies separate quantification of construction and operation emissions and then comparing each to the applicable construction and operational thresholds of significance. SCAQMD has not

developed or published a combined construction and operational emission significance threshold, but combining the construction emissions with the operational emissions will present a conservative, maximum daily emissions summary of building construction and operational activities for each of the four phases of Project development.

As described in the Methodology section, aspects of the Project will be occupied during the period when other aspects of the Project are still under construction. **Tables 4.3.J** through **4.3.M** show the regional emissions from the four main combinations: Phase 1 operating while Phase 2 construction occurs, Phases 1 and 2 operating while Phase 3 construction occurs, Phases 1, 2, and 3 operating while Phase 4 construction occurs, and finally, when all phases are operating after construction is completed.

Long-term operational emissions associated with the proposed Project were calculated using CalEEMod. **Tables 4.3.J** through **4.3.M** show unmitigated long-term operational emissions combined with concurrent construction for each phase of the proposed Development Project. The combined emissions shown are conservative as the peak daily operational emissions and the peak daily construction emissions are not likely to occur on the same day for each phase or for a sustained duration. As shown in **Tables 4.3.J** through **4.3.M**, assuming the worst-case scenario of overlap of construction and operations set forth in each table, the daily emissions from Project operations would exceed the SCAQMD thresholds for all pollutants except for SO_X. This analysis was based on standard construction methods and assumes the buildings would meet the minimum design requirements of California Title 24.

As shown in **Tables 4.3.J** through **4.3.M**, even with implementation of the designated project design features, the proposed Development Project would result in a significant and unavoidable impact for VOCs, NOx, CO, PM_{10}, and $PM_{2.5}$, and mitigation would be required. Note that **Table 4.3.M** shows that even at full buildout when construction has completed the operational Project emissions alone exceed thresholds of all pollutants except SO_X.

Therefore, implementation of **Mitigation Measure AIR-2** would be required to reduce criteria pollutant emissions from the proposed Development Project to the extent feasible. **Mitigation Measure AIR-2** includes measures to reduce truck and other operational emissions to the extent feasible. Mitigated emissions are shown in **Table 4.3.N: Regional Mitigated Combined Construction and Operational Emissions**.

Further, as discussed in the *Sunset Crossroads Vehicle Miles Traveled (VMT) Analysis,*[30] Transportation Demand Management (TDM) strategies have been incorporated into the project design including commute trip reduction marketing, rideshare program, and end-of-trip bicycle facilities.

30 Urban Crossroads. 2023. Sunset Crossroads Traffic Analysis. August.

Table 4.3.J: Regional Combined Construction and Operational Emissions – Opening Year of Phase 1 (2024)

Source	Pollutant Emissions (lbs/day)					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Sources	74	<1	<1	<1	<1	<1
Energy Sources	<1	2	2	<1	<1	<1
Light-Duty Mobile Sources	10	9	159	<1	59	16
Heavy-Duty Mobile Sources	4	164	50	<1	32	10
Warehouse Equipment	2	25	134	<1	1	<1
Total Operational Emissions	**90**	**200**	**345**	**1**	**92**	**27**
2024 Construction Emissions	874	42	277	1	39	17
Total Project Emissions	**964**	**242**	**622**	**2**	**131**	**44**
SCAQMD Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (October 2023).
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

Table 4.3.K: Regional Combined Construction and Operational Emissions – Opening Year of Phase 2 (2025) (Includes Operational Emissions of Phase 1)

Source	Pollutant Emissions (lbs/day)					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Sources	93	<1	<1	<1	<1	<1
Energy Sources	2	14	12	<1	<1	<1
Light-Duty Mobile Sources	28	31	357	<1	118	32
Heavy-Duty Mobile Sources	6	253	87	1	48	15
Warehouse Equipment	3	45	229	<1	2	2
Total Operational Emissions[1]	**132**	**342**	**685**	**2**	**169**	**49**
2025 Construction Emissions	751	30	218	<1	34	16
Total Project Emissions	**883**	**372**	**903**	**3**	**203**	**65**
SCAQMD Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Source: Compiled by LSA Associates, Inc. (October 2023).
[1] Includes operational emissions of Phases 1 and 2.
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

Table 4.3.L: Regional Combined Construction and Operational Emissions – Opening Year of Phase 3 (2026)

Source	Pollutant Emissions (lbs/day)					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Sources	118	<1	<1	<1	<1	<1
Energy Sources	2	15	13	<1	1	1
Light-Duty Mobile Sources	33	38	399	1	133	36
Heavy-Duty Mobile Sources	7	279	96	1	55	17
Warehouse Equipment	4	63	321	<1	2	2
Total Operational Emissions[1]	**163**	**394**	**829**	**3**	**191**	**56**
2026 Construction Emissions	710	21	143	<1	20	9
Total Project Emissions	**873**	**415**	**972**	**3**	**211**	**65**
SCAQMD Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Source: Compiled by LSA Associates, Inc. (October 2023).
[1] Includes operational emissions of Phases 1, 2, and 3.
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

Table 4.3.M: Regional Combined Construction and Operational Emissions – Opening Year of Phase 4 (2027) (Buildout)

Source	Pollutant Emissions (lbs/day)					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Sources	130	<1	<1	<1	<1	<1
Energy Sources	2	15	13	<1	1	1
Light-Duty Mobile Sources	33	37	409	1	145	39
Heavy-Duty Mobile Sources	7	299	102	1	60	19
Warehouse Equipment	6	81	413	<1	3	3
Total Operational Emissions[1]	**177**	**432**	**937**	**3**	**210**	**62**
2027 Construction Emissions	334	7	48	<1	9	4
Total Project Emissions	**511**	**439**	**985**	**3**	**219**	**66**
SCAQMD Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Source: Compiled by LSA Associates, Inc. (October 2023).
[1] Includes operational emissions of Phases 1 through 4.
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

Table 4.3.N: Regional Mitigated Combined Construction and Operational Emissions

Source	Pollutant Emissions (lbs/day)					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 1 Combined Emissions	962	217	488	2	130	43
Phase 2 Combined Emissions	880	326	673	2	201	64
Phase 3 Combined Emissions	869	352	650	3	209	63
Phase 4 Combined Emissions	506	357	572	3	216	63
Completed Development Project	172	350	524	3	207	59
SCAQMD Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Source: Compiled by LSA Associates, Inc. (October 2023).
Note: Combined Emissions means the combination of concurrent construction emissions and operational emissions.
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

Other regional transportation measures that may reduce VMT include but are not limited to improving/increasing access to transit, increasing access to common goods and services, or orientating land uses toward alternative transportation. These regional transportation measures may be infeasible at the project level but will generally be implemented as the surrounding communities develop. The *Sunset Crossroads Vehicle Miles Traveled (VMT) Analysis* concludes that there is no means, however, to quantify any VMT reductions that could result. Additionally, the effectiveness of any VMT reduction program would be dependent on as yet unknown building tenant(s); and as noted above, VMT reductions from various CTR measures cannot be guaranteed.

Mitigation Measure AIR-2 would require the implementation of all feasible measures to reduce operational impacts associated with the Development Project. Mitigation measures identified in the transportation analysis would further reduce Development Project impacts; however, the emission reduction associated with some measures, including those that would reduce Project VMT, cannot be quantified. Therefore, the proposed Development Project would result in significant operational air quality impacts.

Assessment of Project-Related Health Impacts. Although the emissions from Project operations would exceed the SCAQMD's numeric regional mass daily emission thresholds, this does not in itself constitute a significant health impact to residents in the Project vicinity and within the Basin.

The SCAQMD's numeric regional mass daily emission thresholds are based in part on Section 180 I of the CAA. It should be noted that the numeric regional mass daily emission thresholds have not changed since their adoption as part of the *CEQA Air Quality Handbook* published by SCAQMD in 1993 (over 20 years ago). The numeric regional mass daily emission thresholds are also intended to provide a means of consistency in significance determination within the environmental review process.

Notwithstanding, simply exceeding the SCAQMD's numeric regional mass daily emission thresholds does not constitute a particular health impact to an individual nearby. The reason for this is that the mass daily emission thresholds are in lbs/day emitted into the air, whereas health effects are determined based on the concentration of a pollutant in the air at a particular location (e.g., ppm by volume of air or $\mu g/m^3$ of air). CAAQS and NAAQS were developed to protect the most susceptible

population groups from adverse health effects and were established in terms of ppm or µg/m^3 for the applicable emissions.

For this reason, the SCAQMD developed a methodology to assist lead agencies in analyzing localized air quality impacts from a proposed project as they relate to CO, NO_X, $PM_{2.5}$, and PM_{10}. This methodology is collectively referred to as the LST as described above. LSTs differ from the numeric regional mass daily emission thresholds in that LSTs are based on (1) the amount of emissions generated from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable NAAQS or CAAQS, and (2) the ambient concentrations of the pollutant and the relative distance to the nearest sensitive receptor (the SCAQMD performed air dispersion modeling to determine what amount of emissions generated a particular concentration at a particular distance).

This air quality analysis evaluated the Project's localized impact to air quality for emissions of CO, NO_X, $PM_{2.5}$, and PM_{10} by modeling the Project's on-site emissions with EPA's air dispersion model AERMOD and comparing the resulting pollutant concentrations at surrounding sensitive receptors to the CAAQS. As shown in **Tables 4.3.O** and **4.3.P**, which are provided later, the Project emissions would not be expected to exceed the most stringent applicable NAAQS or CAAQS for CO, NO_X, $PM_{2.5}$, and PM_{10}. It should be noted that the AAQS are developed and represent levels at which the most susceptible persons (children and the elderly) are protected. In other words, the AAQS are purposefully set low to protect children, the elderly, and those with existing respiratory problems.

Furthermore, as described in **Section 4.3.1.5**, air quality trends for emissions of CO, NO_X, VOCs, and O_3 (which is a byproduct of NO_X and VOCs) have been trending downward within the Basin even as development has increased over the last several years.

The SCAQMD has acknowledged that for criteria pollutants, it would be extremely difficult, if not impossible, to quantify health impacts for various reasons, including modeling limitations as well as where in the atmosphere air pollutants interact and form.

Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Because of the relatively small amount of emissions from the Project relative to regional-wide emissions, it would be speculative to assess whether or the extent to which the Project would contribute to adverse health effects. Even though SCAQMD has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, SCAQMD has not provided methodology, and modeling does not currently exist, to assess the specific correlation between mass emissions generated, cumulative increases from individual projects, and the effect on health or even to determine how exceeding the regional thresholds by small amounts would affect the number of days the region is in nonattainment. SCAQMD staff has not and does not currently know of a way to accurately quantify O_3-related health impacts caused by NO_X or VOC emissions from relatively small projects, due to photochemistry and regional model limitations. Similarly, CARB methodology has reported that a $PM_{2.5}$ methodology is not suited for small projects and may yield unreliable results. For these reasons, mass emissions are not correlated with concentrations of emissions or how many additional individuals in the air basin would be affected by the health effects cited above. In contrast, for extremely large regional projects (unlike

the Development Project), the SCAQMD has only been able to correlate potential health outcomes for very large emissions sources. As part of its rulemaking activity, specifically 6,620 lbs/day of NO_X and 89,180 lbs/day of VOCs were expected to result in approximately 20 premature deaths per year and 89,947 school absences due to O_3.

The proposed Project does not generate anywhere near 6,620 lbs/day of NO_X or 89,190 lbs/day of VOC emissions. As shown in **Table 4.3.N**, the Project would generate a maximum of 357 lbs/day of NO_X during Phase 4 operations combined with 2027 construction (5.4 percent of 6,620 lbs/day). As shown in **Table 4.3.N**, the Project would generate a maximum of 962 lbs/day of VOC emissions during Phase 1 operations combined with 2024 construction (1.1 percent of 89,190 lbs/day).

Therefore, the Project's emissions are not sufficiently high enough to use a regional modeling program to correlate health effects on a basin-wide level.

Notwithstanding, as previously noted, this air quality analysis does include a site-specific localized impact analysis that correlates potential Project health impacts on a local level to immediately adjacent land uses.

Accordingly, current scientific, technological, and modeling limitations do not allow for the relation of expected adverse air quality impacts to likely specific health consequences.

Impact Conclusion. **Table 4.3.I** shows that with implementation of **Mitigation Measure AIR-1**, daily regional construction emissions would not exceed the daily thresholds of any criteria pollutant emission thresholds established by SCAQMD during construction except for VOCs. As shown in **Tables 4.3.J** through **4.3.M**, assuming the worst-case scenario of overlap of construction and operations set forth in each table, the daily emissions from Project operations would exceed the SCAQMD thresholds for all pollutants except for SO_X.

Level of Significance Prior to Mitigation: Prior to mitigation, emissions associated with operation of the Development Project would be considered significant and mitigation measures will be required.

Regulatory Compliance Measures and Mitigation Measures: The following regulatory compliance measures pertaining to air quality are applicable to the proposed Project.

RCM AQ-1 **SCAQMD Rule 403.** During clearing, grading, earth moving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust preventative measures by using the following procedures, in compliance with South Coast Air Quality Management District (SCAQMD) Rule 403 during construction. The applicable Rule 403 measures are as follows:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least twice daily (locations where grading is to occur shall be thoroughly watered prior to earthmoving).

- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 feet (0.6 meter) of freeboard (vertical space between the top of the load and the top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.

- Pave construction access roads at least 100 feet (30 meters) onto the site from the main road.

- Reduce traffic speeds on all unpaved roads to 15 mph or less.

RCM AQ-2 All trucks that are to haul excavated or graded material shall comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2), and (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads.

RCM AQ-3 Prior to approval of the Project plans and specifications, the City shall confirm that the construction bid packages specify:

- Contractors shall use high-volume low-pressure paint applicators with a minimum transfer efficiency of at least 50 percent;

- Coatings and solvents that will be utilized have a volatile organic compound content lower than required under SCAQMD Rule 1113; and

- To the extent feasible, construction/building materials shall be composed of pre-painted materials.

RCM AQ-4 The Project shall comply with SCAQMD Rule 402. Rule 402 prohibits the discharge of air contaminants or other material from any type of operations, which can cause nuisance or annoyance to any considerable number of people or to the public or which endangers the comfort or repose of any such persons, or the public.

Mitigation Measures: Implement **Mitigation Measure AIR-1** and **Mitigation Measure AIR-2**. As set forth previously, the following mitigation measures pertaining to air quality are applicable to the proposed Project.

Level of Significance After Mitigation: Construction emissions of all pollutants except for VOCs associated with the Project would be reduced to a less than significant level with implementation of **Mitigation Measure AIR-1**. However, emissions associated with operation of the Development Project would remain significant and unavoidable, even with implementation of the planned project design features and **Mitigation Measure AIR-2**, which would require all feasible measures to reduce potential impacts. Therefore, this impact would be significant and unavoidable.

4.3.6.3 Exposure of Sensitive Receptors (Localized Significance Thresholds and CO Hotspots)

Threshold 4.3.3: Would the Development Project expose sensitive receptors to substantial pollutant concentrations?

Construction LST. **Table 4.3.O: Construction Localized Significance** lists the construction-related criteria pollutant concentrations compared to the LSTs for the Project area as calculated using AERMOD air dispersion modeling, with the ambient pollutant concentrations, and following the SCAQMD LST methodology as described in the Methodology section. **Figure 4.3-3: Sensitive Receptors Near the Project Site** shows the sensitive receptors near the Project site. The concentration increases shown in **Table 4.3.O** occur near the Project site at the school (Mount San Jacinto College campus) across Sunset Avenue, approximately 115 feet from the Project site. It should be noted that although the campus is not the closest receptor, due to meteorological conditions in the area, the concentrations produced during construction are the highest at this location. The LST dispersion analysis details and calculations are included in Appendix D of the Air Quality Impact Analysis Report.

Table 4.3.O: Construction Localized Significance

Pollutant	AAQS	Ambient Concentration	Localized Threshold	Maximum Concentration Increase	Over/(Under)	Adverse Concentration
CO (1-hour)	20 ppm	1.3 ppm	18.7 ppm	0.09 ppm	(18.6 ppm)	No
CO (8-hour)	9.0 ppm	0.7 ppm	8.3 ppm	0.04 ppm	(8.3 ppm)	No
NO_2 (1-hour)	180 ppb	56.8 ppb	123.2 ppb	0.31 ppb	(122.9 ppb)	No
PM_{10} (24-hour)[1]			10.4 µg/m³	9.8 µg/m³	(0.6 µg/m³)	No
$PM_{2.5}$ (24-hour)[1]			10.4 µg/m³	2.1 µg/m³	(8.3 µg/m³)	No

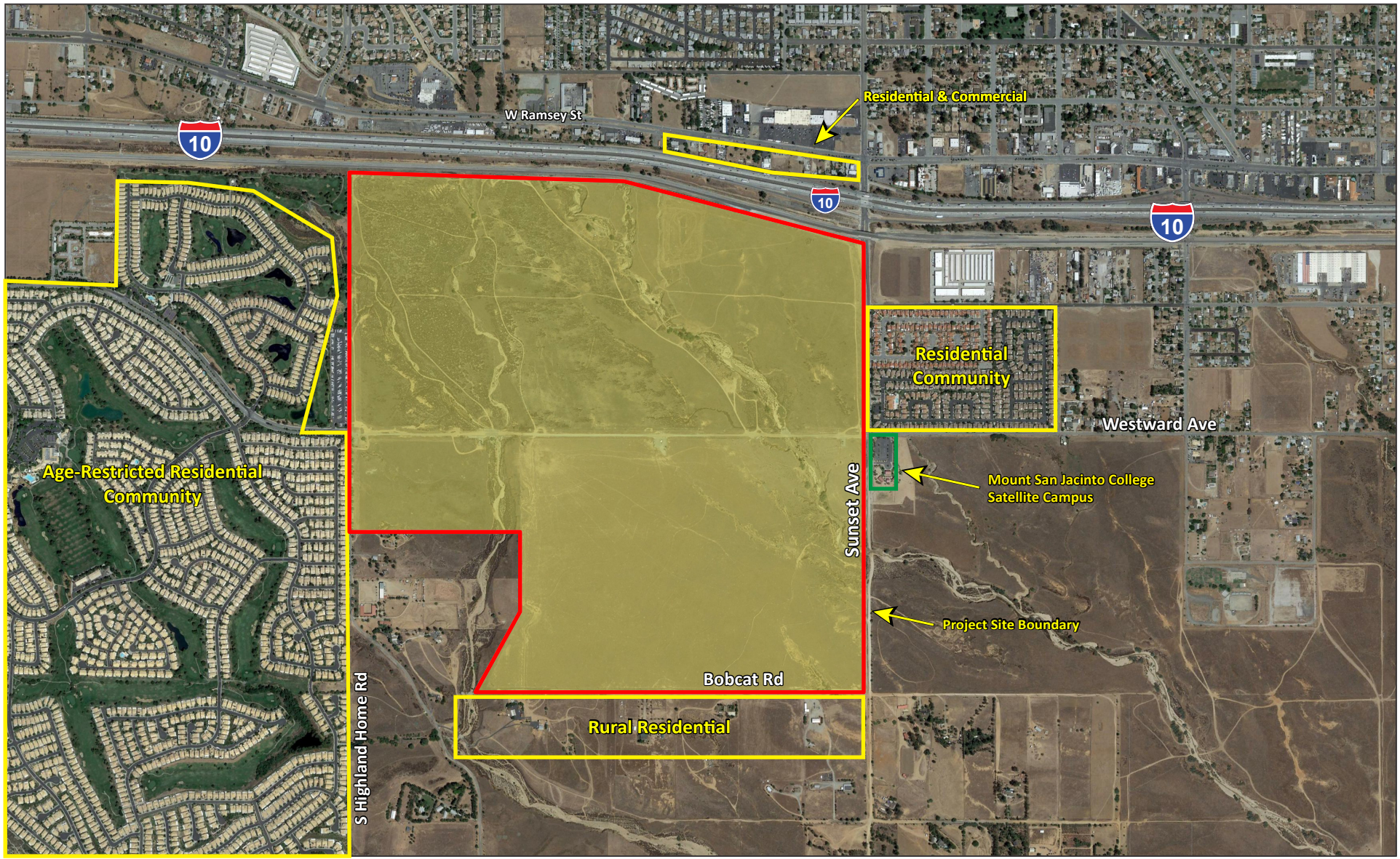
Source: Compiled by LSA Associates, Inc. (September 2023).

[1] Since both PM_{10} and $PM_{2.5}$ are in nonattainment, the thresholds are not based on AAQS exceedance, but rather a violation of SCAQMD Rule 403.

AAQS = ambient air quality standards
CO = carbon monoxide
µg/m³ = microgram of pollutant per cubic meter of air
NO_2 = nitrogen dioxide
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ppm = parts per million
SCAQMD = South Coast Air Quality Management District

As shown in **Table 4.3.O**, construction criteria pollutant concentrations during construction of the Development Project would not exceed the localized thresholds. Therefore, construction-related emissions would not result in a locally significant air quality impact.

Operational LST. This analysis utilizes the SCAQMD Final Localized Significance Threshold Methodology described in the Methodology section above. **Table 4.3.P: Operational Localized Significance** shows the calculated on-site emissions for the proposed operational activities compared with the appropriate LSTs. **Figure 4.3-3** shows the sensitive receptors near the Project site. Appendix D of the Air Quality Impact Analysis (see **Appendix C-1**) contains the details and figures of the analysis. **Table 4.3.P** shows that none of the criteria pollutant concentrations would exceed the LST thresholds at the nearest sensitive land uses to the east. Therefore, the proposed operational activity would not result in a localized significant air quality impact.



LSA

LEGEND

Project Location

Sensitive Receptors

0 650 1300

FEET

SOURCE: Google Earth 2022

FIGURE 4.3-3

Sunset Crossroads

Sensitive Receptors Near the Project Site

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Table 4.3.P: Operational Localized Significance

Pollutant	AAQS	Ambient Concentration	Threshold	Maximum Concentration Increase	Over/(Under)	Adverse Concentration
CO (1-hour)	20 ppm	1.3 ppm	18.7 ppm	<1 ppm	(18.7 ppm)	No
CO (8-hour)	9.0 ppm	0.7 ppm	8.3 ppm	<1 ppm	(8.3 ppm)	No
NO_2 (1-hour)	180 ppb	56.8 ppb	123.2 ppb	0.4 ppb	(122.8 ppb)	No
PM_{10} (24-hour)[1]			2.5 µg/m³	0.3 µg/m³	(2.2 µg/m³)	No
$PM_{2.5}$ (24-hour)[1]			2.5 µg/m³	0.1 µg/m³	(2.4 µg/m³)	No

Source: Compiled by LSA Associates, Inc. (October 2023).

[1] Since both PM_{10} and $PM_{2.5}$ are in nonattainment, the thresholds are not based on AAQS exceedance, but rather a violation of SCAQMD Rule 1301.

AAQS = ambient air quality standards
CO = carbon monoxide
µg/m³ = microgram of pollutant per cubic meter of air
NO_2 = nitrogen dioxide
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ppm = parts per million
SCAQMD = South Coast Air Quality Management District

Operational Health Risk Assessment. The HRA was conducted using three models: the CARB's California Emissions Factor Model, Version 2021 (EMFAC2021) for vehicle emissions factors and percentages of fuel type within the overall vehicle fleet, the USEPA's AERMOD air dispersion model to determine how the TACs would move through the atmosphere after release from sources both on site and on surrounding roadways, and the CARB's HARP model to translate the pollutant concentrations from AERMOD into individual health risks at the nearby sensitive receptor locations. Exposure to TACs from vehicle exhaust can result in both immediate and long-term health effects. According to the EPA's *Learn About Impacts of Diesel Exhaust and the Diesel Emissions Reduction Act (DERA)* website[31], exposure to diesel exhaust can lead to serious health conditions such as asthma and respiratory illnesses and can worsen existing heart and lung disease, especially in children and the elderly. According to the CARB's Overview: Diesel Exhaust & Health website[32], in 2012, additional studies on the cancer-causing potential of diesel exhaust published since CARB's determination led the International Agency for Research on Cancer (IARC, a division of the World Health Organization) to list diesel engine exhaust as "carcinogenic to humans." Emissions from gasoline-powered vehicles also contain TACs with short-term acute health effects.

The Acute Hazard Index is the ratio of the average short term (generally one hour) ambient concentration of an acutely toxic substance divided by the acute reference exposure level set by the OEHHA. This ratio is repeated for every acutely toxic substance, and all are summed to derive the overall Acute Hazard Index. If this Acute Hazard Index is above 1.0, then adverse health effects may occur. Using the modeling methods described above for the Project, **Table 4.3.Q: Health Risk Levels for Nearby Residents and Students** shows the acute health risks results from the operation of the proposed Project for the maximum exposed individual, including both residents, students, and workers.

31 United States Environmental Protection Agency (EPA). 2022. Website: www.epa.gov/dera/learn-about-impacts-diesel-exhaust-and-diesel-emissions-reduction-act-dera (accessed September 2022).

32 CARB. 2022. Website: www.arb.ca.gov/resources/overview-diesel-exhaust-and-health (accessed September 2022).

Table 4.3.Q: Health Risk Levels for Nearby Residents and Students

Location	Maximum Cancer Risk	Maximum Noncancer Chronic Risk (Hazard Index)	Maximum Noncancer Acute Risk (Hazard Index)
Residential & Student MEI Risks	3.3 in 1 million	0.0008	0.0005
Worker MEI Risks	0.02 in 1 million	0.0001	0.0001
SCAQMD Significance Threshold	**10 in 1 million**	**1.0**	**1.0**
Significant?	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (2022).
MEI = maximum exposed individual
SCAQMD = South Coast Air Quality Management District

As shown in **Table 4.3.Q**, the Acute HI would be 0.0005 for the residential and student MEI and 0.0001 for the worker MEI, both less than the threshold of 1.0. Acute impacts are a result of exposure to contaminant concentrations at extremely high levels. The proposed Project would operate in an outdoor environment. As demonstrated by the results of the analysis, air dispersion between the emission sources and the receptor locations would substantially limit contaminant concentrations to the extent that a significant acute risk would not occur.

Table 4.3.Q also shows the carcinogenic and chronic health risks from the operation of the proposed Project. The residential risk incorporates both the risk for a child living in a nearby residence for 9 years (the standard period of time for child risk) and an adult living in a nearby residence for 30 years (considered a conservative period of time for an individual to live in any one residence). The maximum cancer risk for the residential MEI would be 3.3 in 1 million, which would be less than the threshold of 10 in 1 million. The maximum cancer risk for the worker MEI would be 0.02 in 1 million, which would be less than the threshold of 10 in 1 million. The chronic health risks from the operation of the proposed Project are also shown in **Table 4.3.Q**. The health risk levels for the students attending the school (Mount San Jacinto College) campus would be lower than the residential levels due to the normal attendance period being less than 30 years.

As shown in **Table 4.3.Q**, the future health risk to nearby residents, students, and workers from Project-related emissions of TACs from the operation of the proposed Project would be below the SCAQMD's HRA thresholds. No significant health risk would occur from the operation of the Project, and no mitigation is necessary. The HARP modeling reports and AERMOD information are included in **Appendix C-1**.

Long-Term Microscale (CO Hot Spot) Analysis. An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate Project vicinity are not available. Ambient CO levels monitored at the Palm Springs Monitoring Station showed a highest recorded 1-hour concentration of 1.3 ppm (the State standard is 20 ppm) and a highest 8-hour concentration of 0.7 ppm (the State standard is 9 ppm) during the 3-year period (**Table 4.3.C**). The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis.

As shown in **Table 4.3.C**, the existing CO concentrations in the Project area are extremely low. Because ambient CO levels are below the standards throughout the Basin, this Project would only be considered to have a significant CO impact if Project emissions result in an exceedance of one or more of the 1-hour or 8-hour standards. As the ambient concentrations are very low compared to the AAQS and with the current motor vehicle control programs, the exhaust emissions of CO will remain extremely low. Therefore, the Project can be implemented in an existing setting with no significant peak-hour intersection impacts. Because no CO hot spots would occur, there would be no Project-related impacts on CO concentrations.

Impact Conclusion. Construction of the proposed Project may expose surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, construction contractors would be required to implement measures to reduce or eliminate emissions by following SCAQMD rules for standard construction practices. As shown in **Table 4.3.O** and **Table 4.3.P**, the Project would not result in significant localized emissions during Project construction or operation. Additionally, as shown in **Table 4.3.Q**, the future health risk to nearby residents, students, and workers from Project-related emissions of TACs from the operation of the proposed Project would be below the SCAQMD's HRA thresholds. Therefore, the Project would not be a source of substantial pollutant emissions and sensitive receptors would not be exposed to substantial pollutant concentrations during either Project construction or operation. As such, impacts are considered ***less than significant***, and no mitigation is required.

Level of Significance Prior to Mitigation: Prior to mitigation, the proposed Project would result in less than significant impacts. However, the following regulatory compliance measures are existing SCAQMD regulations that are applicable to the proposed Project and are considered in the analysis of potential impacts related to air quality. These requirements are considered to be mandatory regulatory compliance measures; therefore, they are not mitigation measures.

Regulatory Compliance Measures and Mitigation Measures: Regulatory compliance measures AQ-1, AQ-2, AQ-3, and AQ-4 would require compliance with applicable SCAQMD rules.

Level of Significance After Mitigation: No mitigation measures related to exposure of sensitive receptors for construction or long-term operations are required for the proposed Project.

4.3.6.4 Odors

Threshold 4.3.4: Would the Development Project create objectionable odors affecting a substantial number of people?

Odors from Construction Activities. Heavy-duty equipment in the Project vicinity during construction would emit odors, primarily from the vendor trucks and heavy-duty off-road equipment exhaust. This odor may be noticeable by nearby sensitive receptors; however, these odors would be expected of any construction and not necessarily be objectionable. These odors would also dissipate quickly beyond 300 feet from a source and would be temporary in nature. Additionally, the construction-produced odors would cease to occur after individual construction is completed. No other sources of objectionable odors have been identified for the proposed Development Project, and no mitigation measures are required.

SCAQMD Rule 402 regarding nuisances states:

> 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.

The odor section of *CEQA Guidelines* Appendix G has two parts – whether air contaminants are emitted which cause injury, nuisance, or annoyance, or whether the odors endanger health/safety, or comfort, or cause injury/damage to business or property. The proposed uses are not anticipated to emit any odors that would result in either condition. Therefore, objectionable odors posing a health risk to potential existing off-site uses would not occur as a result of the proposed Development Project.

Odors from Operational Activities. Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. While the Project would include restaurants and a gas station with a vapor recovery system limiting odors, the Project does not propose any of the land uses listed above. Further, the Project would be required to comply with SCAQMD Rule 402, Nuisance, which states:

> 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.

The proposed Development Project would include industrial and commercial uses that would not be a significant source of odor emissions. City and County regulations require trash storage areas to be in an enclosed area to limit air circulation, and through adherence to City and County regulations, odors from the trash storage areas would be less than significant. Vapor recovery systems on gas nozzles would minimize odors from the gas station, and cooking odors would be limited by complying with Rules 1113 and 1138. Therefore, the Project would not result in odors that would adversely affect a substantial number of people. As such, Project-related impacts associated with odors would be less than significant, and no mitigation measures are required.

Impact Conclusion. The Project would not result in odors that would adversely affect a substantial number of people. As such, Project-related impacts associated with odors would be ***less than significant***, and no mitigation measures are required.

Level of Significance Prior to Mitigation: Less than Significant Impact.

Regulatory Compliance Measures and Mitigation Measures: No Regulatory Compliance or Mitigation Measures are required.

Level of Significance After Mitigation: No mitigation measures related to odor are required for the proposed Project.

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