

4.3 AIR QUALITY

4.3.1 Introduction

This section has been prepared for the proposed Menifee Valley Specific Plan Project (proposed Project) using methodologies and assumptions recommended in the air quality impact assessment guidelines of the South Coast Air Quality Management District (SCAQMD) in its *California Environmental Quality Act (CEQA) Air Quality Handbook*,¹ and associated updates. In keeping with these guidelines, 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. A Health Risk Assessment (HRA) was also performed and is summarized in this section. Air quality modeling data are included in **Appendix C** and the HRA data results are included in **Appendix D**.

4.3.2 Scoping Process

The City of Menifee (City) received 10 comment letters during the public review period of the Notice of Preparation (NOP). For copies of the NOP comment letters, refer to **Appendix A-1** of this Draft Environmental Impact Report (EIR). Three comment letters included comments related to air quality. Those comment letters are summarized as follows:

- Mitchell M. Tsai commented that the City should consider utilizing skilled and trained workforce policies and requirements to benefit the local area economically and mitigate greenhouse gas, air quality, and transportation impacts.
- The SCAQMD recommended identification of potential adverse air quality impacts associated with construction and operation of the Project. The comment letter also recommended the preparation of a health risk assessment if the Project would generate diesel emissions from construction or would attract diesel-fueled vehicular trips.
- David Cordero from the Southwest Regional Council of Carpenters (SWRCC) commented that local skilled and trained workforce requirements can boost economic development and mitigate transportation and greenhouse gas impacts by minimizing vehicle miles traveled.

4.3.3 Methodology

Build out of the proposed Project would result in criteria pollutant emissions associated with construction and operational sources. Construction activities would generate emissions from off-road construction equipment and on roadways as a result of construction-related truck hauling, vendor deliveries, and worker commuting. Operational activities would also generate emissions associated with miscellaneous on-site sources, such as natural gas combustion for cooking, heating, and landscaping equipment, and from operational-related traffic. This analysis utilized the California Emissions Estimator Model (CalEEMod) version 2020.4.0 to quantify the criteria pollutant emissions

¹ South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook*. Website: [http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-\(1993\)](http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993)) (accessed December 2022).

for both construction and operation of the proposed Project. The maximum daily emissions are calculated for the criteria pollutants. The CalEEMod output is contained in **Appendix C** of this EIR.

CalEEMod provides a platform to calculate both construction emissions and operational emissions from a project. It calculates both the daily maximum and annual average for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions. The model also provides default values for water and energy use. Specifically, the model performs the following calculations:

- Short-term construction emissions associated with site preparation, grading, building, architectural coating (painting), and paving from off-road construction equipment; on-road mobile equipment associated with workers, vendors, delivery, and hauling; fugitive dust associated with grading, truck loading, and roads; and volatile emissions of volatile organic compounds (VOCs) from architectural coating and paving.
- Operational emissions, such as on-road mobile vehicle traffic generated by the land uses, fugitive dust associated with roads, volatile emissions of VOCs from architectural coatings, off-road emissions from landscaping equipment, volatile emissions of VOCs from consumer products and cleaning supplies, natural gas usage in the buildings, electricity usage in the buildings, water usage by the land uses, and solid waste disposal by the land uses.

In addition, CalEEMod contains default values and existing regulation methodologies to use in each specific local air quality district region. Appropriate statewide default values can be utilized if regional default values are not defined. This analysis utilized Project-specific inputs and relevant model default factors for the Riverside County area, which is within the SCAQMD jurisdiction for the emissions inventory, consistent with SCAQMD requirements. In addition, this analysis includes six model runs, one for each of the three phases of the on-site improvements, a model run for build out of the on-site improvements, a model run for the off-site improvements, and a model run for the off-site roadway improvements.

4.3.4 Existing Environmental Setting

Menifee is part of the South Coast Air Basin (Basin) and is under the jurisdiction of 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.

4.3.4.1 Air Pollutants and Health Effects

Both the State and federal government have established health-based ambient air quality standards for six criteria air pollutants: carbon monoxide (CO), ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), 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, O₃ and NO₂, are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as CO, SO₂, and Pb are considered local pollutants that tend to accumulate in the air locally.

The primary pollutants of concern in the planning area are O₃, 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 VOCs.

Further, 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 ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, the air quality districts have considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

Occupants of facilities such as schools, daycare centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. Recreational uses are also considered sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise. These populations are referred to as sensitive receptors.

Air pollutants and their health effects, and other air pollution-related considerations are summarized in **Table 4.3.A** and are described in more detail below.

Ozone. O₃ is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving VOCs and NO_x. The main sources of VOCs 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. 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.

Table 4.3.A: Sources and Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Ozone (O ₃)	<ul style="list-style-type: none"> ● Precursor sources:¹ motor vehicles, industrial emissions, and consumer products. 	<ul style="list-style-type: none"> ● Respiratory symptoms. ● Worsening of lung disease leading to premature death. ● Damage to lung tissue. ● Crop, forest, and ecosystem damage. ● Damage to a variety of materials, including rubber, plastics, fabrics, paints, and metals.
Particulate Matter Less than 2.5 Microns in Diameter (PM _{2.5})	<ul style="list-style-type: none"> ● Cars and trucks (especially diesels). ● Fireplaces, woodstoves. ● Windblown dust from roadways, agriculture, and construction. 	<ul style="list-style-type: none"> ● Premature death. ● Hospitalization for worsening of cardiovascular disease. ● Hospitalization for respiratory disease. ● Asthma-related emergency room visits. ● Increased symptoms, increased inhaler usage.
Particulate Matter Less than 10 Microns in Diameter (PM ₁₀)	<ul style="list-style-type: none"> ● Cars and trucks (especially diesels). ● Fireplaces, woodstoves. ● Windblown dust from roadways, agriculture, and construction. 	<ul style="list-style-type: none"> ● Premature death and hospitalization, primarily for worsening of respiratory disease. ● Reduced visibility and material soiling.
Nitrogen Oxides (NO _x)	<ul style="list-style-type: none"> ● Any source that burns fuels such as cars, trucks, construction and farming equipment, and residential heaters and stoves. 	<ul style="list-style-type: none"> ● Lung irritation. ● Enhanced allergic responses.
Carbon Monoxide (CO)	<ul style="list-style-type: none"> ● Any source that burns fuels such as cars, trucks, construction and farming equipment, and residential heaters and stoves. 	<ul style="list-style-type: none"> ● Chest pain in patients with heart disease. ● Headache. ● Light-headedness. ● Reduced mental alertness.
Sulfur Oxides (SO _x)	<ul style="list-style-type: none"> ● Combustion of sulfur-containing fossil fuels. ● Smelting of sulfur-bearing metal ores. ● Industrial processes. 	<ul style="list-style-type: none"> ● Worsening of asthma: increased symptoms, increased medication usage, and emergency room visits.
Lead (Pb)	<ul style="list-style-type: none"> ● Contaminated soil. 	<ul style="list-style-type: none"> ● Impaired mental functioning in children. ● Learning disabilities in children. ● Brain and kidney damage.
Toxic Air Contaminants (TACs)	<ul style="list-style-type: none"> ● Cars and trucks (especially diesels). ● Industrial sources, such as chrome platers. ● Neighborhood businesses, such as dry cleaners and service stations. ● Building materials and products. 	<ul style="list-style-type: none"> ● Cancer. ● Reproductive and developmental effects. ● Neurological effects.

Source: Common Air Pollutants (California Air Resources Board 2018a).

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.

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. 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 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.

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: PM₁₀, 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.² 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. NO₂ is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO₂. Aside from its contribution to ozone formation, NO₂ also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO₂ may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. NO₂ decreases lung function and may reduce resistance to infection.

Sulfur Dioxide. SO₂ 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. SO₂ 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. SO₂ also reduces visibility and the level of sunlight at the ground surface.

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 (USEPA) 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 USEPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of USEPA regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.

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:

² California Air Resources Board (CARB). 2020. *Inhalable Particulate Matter and Health (PM_{2.5} and PM₁₀)*. Website: ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health (accessed December 2022).

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 USEPA, 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.³ 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 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.

The CARB Diesel Risk Reduction Plan is intended to substantially reduce diesel particulate matter emissions and associated health risks through introduction of ultra-low-sulfur diesel fuel—a step already implemented—and cleaner-burning diesel engines.⁴ The technology for reducing diesel particulate matter emissions from heavy-duty trucks is well established, and both State and federal agencies are moving aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions.

High Volume Roadways. Air pollutant exposures and their associated health burdens vary considerably within places in relation to sources of air pollution. Motor vehicle traffic is perhaps the most important source of intra-urban spatial variation in air pollution concentrations. Air quality research consistently demonstrates that pollutant levels are substantially higher near freeways and busy roadways, and human health studies have consistently demonstrated that children living within 100 to 200 meters (328 to 656 feet) of freeways or busy roadways have reduced lung function and higher rates of respiratory disease. At present, it is not possible to attribute the effects of roadway proximity on non-cancer health effects to one or more specific vehicle types or vehicle pollutants. Engine exhaust, from diesel, gasoline, and other combustion engines, is a complex mixture of particles and gases, with collective and individual toxicological characteristics.

³ CARB. 2000. *Fact Sheet – California’s Plan to Reduce Diesel Particulate Matter Emissions*. October. Website: www.arb.ca.gov/diesel/factsheets/rrpfactsheet.pdf (accessed December 2022).

⁴ CARB. 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October. Prepared by the Stationary Source Division and Mobile Source Control Division. Website: <https://ww2.arb.ca.gov/sites/default/files/classic/diesel/documents/rrpfinal.pdf> (accessed December 2022).

4.3.4.2 National and State Ambient Air Quality Standards

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

Both the USEPA and the CARB have established ambient air quality standards for the following common pollutants: CO, O₃, NO₂, SO₂, 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 ambient air quality standards 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.⁵ State and federal standards for the criteria air pollutants are listed in **Table 4.3.B**.

4.3.4.3 Existing Climate and Air Quality

The following provides a discussion of the local and regional air quality and climate in Menifee.

Climate and Meteorology. Air quality in Menifee is affected by various emission sources (e.g., mobile and industry) as well as atmospheric conditions (e.g., wind speed, wind direction, temperature, and rainfall). The combination of topography, low mixing height, abundant sunshine, and emissions from the second largest urban area in the United States gives the South Coast Air Basin some of the highest pollutant concentrations in the country.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the Project area is located in Perris, California.⁶ The monthly average maximum temperature recorded at this station ranged from 64.5°F in December to 96.9°F in August, with an annual average maximum of 78.7°F. The monthly average minimum temperature recorded at this station ranged from 34.7°F in January to 58.7°F in August, with an annual average minimum of 45.3°F. These levels are representative of the Project area.

⁵ United States Environmental Protection Agency (USEPA). 2017. Criteria Air Pollutants. October. Website: www.epa.gov/criteria-air-pollutants (accessed December 2022).

⁶ Western Regional Climate Center. Recent Climate in the West. Website: <http://www.wrcc.dri.edu> (accessed December 2022).

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

Pollutant	Averaging Time	California Standards ¹		Federal Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O₃)⁸	1-Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.07 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM₁₀)⁹	24-Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		–		
Fine Particulate Matter (PM_{2.5})⁹	24-Hour	–	Gravimetric or Beta Attenuation	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³		12.0 µg/m ³		
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	–	Non-Dispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		–		
Nitrogen Dioxide (NO₂)¹⁰	Annual Arithmetic Mean	0.03 ppm (57 µg/m ³)	Gas Phase Chemiluminescence	53 ppb (100 µg/m ³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1-Hour	0.18 ppm (339 µg/m ³)		100 ppb (188 µg/m ³)	–	
Lead (Pb)^{12,13}	30-Day Average	1.5 µg/m ³	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m ³ (for certain areas) ¹¹	Same as Primary Standard	
	Rolling 3-Month Average ⁹	–		0.15 µg/m ³		
Sulfur Dioxide (SO₂)¹¹	24-Hour	0.04 ppm (105 µg/m ³)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)	–	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3-Hour	–		–	0.5 ppm (1,300 µg/m ³)	
	1-Hour	0.25 ppm (655 µg/m ³)		75 ppb (196 µg/m ³) ¹¹	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas) ¹¹	–	
Visibility-Reducing Particles¹²	8-Hour	See footnote ¹⁴	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24-Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride¹⁰	24-Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

Source: Ambient Air Quality Standards (California Air Resources Board 2016).

Table notes continued on the following page

- ¹ California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM₁₀, 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 PM₁₀, 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 one. 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 USEPA 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 USEPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the USEPA.
- 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 PM₁₀ 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 SO₂ 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 SO₂ 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

USEPA = United States Environmental Protection Agency

The majority of annual rainfall in the Basin occurs between December and March. 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. Average monthly rainfall at the Perris station varied from 0.06 inches in June to 1.97 inches in November, with an annual total of 10.42 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, which is the semi-permanent high-pressure area of the north Pacific Ocean and is the dominating factor in California weather. 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 mid-afternoon 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 southwest, with average speeds of 4.1 miles per hour (mph).⁷ 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. Strong, dry, north, or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months and disperse air contaminants. The Santa Ana conditions tend to last for several days at a time.⁸

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 pollution 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 or ozone.

Attainment Status. The CARB is required to designate areas of the State as attainment, nonattainment, or unclassified for all State standards. An attainment designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A nonattainment designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An unclassified designation signifies that data do not support either an attainment or nonattainment status. The California Clean Air Act (CCAA) divides districts into moderate, serious,

⁷ Iowa Environmental Mesonet. 2021. Windrows. Website: https://mesonet.agron.iastate.edu/sites/windrose.phtml?network=CA_ASOS&station=F70 (accessed December 2022).

⁸ Ibid.

and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The USEPA designates areas for O₃, CO, and NO₂ as one of the following: does not meet the primary standards, or cannot be classified, or better than national standards. For SO₂, areas are designated as: does not meet the primary standards, does not meet the secondary standards, cannot be classified, or better than national standards. **Table 4.3.C** provides a summary of the attainment status for the Basin with respect to national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS).

Table 4.3.C: South Coast Air Basin Attainment Status

Pollutant	State	Federal
O ₃ 1 hour	Nonattainment	Extreme Nonattainment
O ₃ 8 hour	Nonattainment	Extreme Nonattainment
PM ₁₀	Nonattainment	Attainment/Maintenance
PM _{2.5}	Nonattainment	Serious Nonattainment
CO	Attainment	Attainment/Maintenance
NO ₂	Attainment	Attainment/Maintenance
SO ₂	N/A	Attainment/Unclassified
Lead	Attainment	Partial Nonattainment ¹
All others	Attainment/Unclassified	Attainment/Unclassified

Source: National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin (South Coast Air Quality Management District 2016).

¹ Partial Nonattainment designation – Los Angeles County portion of Basin only for near-source monitors. Expect redesignation to attainment based on current monitoring data.

CO = carbon monoxide PM₁₀ = particulate matter less than 10 microns in size
 N/A = not applicable PM_{2.5} = particulate matter less than 2.5 microns in size
 NO₂ = nitrogen dioxide SO₂ = sulfur dioxide
 O₃ = ozone

Air Quality Monitoring Results. Air quality monitoring stations are located throughout the nation and are maintained by the local air pollution control district and State air quality regulating agencies. The SCAQMD, together with the CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring stations closest to the Project area are located at 506 West Flint Street in Lake Elsinore and 5888 Mission Boulevard in Rubidoux, California.

Pollutant monitoring results for years 2019 to 2021 at the Lake Elsinore and Rubidoux monitoring stations, shown in **Table 4.3.D**, indicate that air quality in the vicinity of the city has generally been moderate. As indicated in the monitoring results, the federal PM₁₀ standard had no exceedances during the 3-year period. The State PM₁₀ standard was exceeded 110 times in 2019, 115 times in 2020, and 75 times in 2021. PM_{2.5} levels exceeded the federal standard an unknown number of times during the 3-year period. The State 1-hour ozone standards were exceeded 4 times in 2019, 18 times in 2020, and 18 times in 2021. The State 8-hour ozone standards were exceeded 31 times in 2019, 55 times in 2020, and 46 times in 2021. The federal 8-hour standards were exceeded 28 times in 2019, 54 times in 2020, and 44 times in 2021. The CO, SO₂, and NO₂ standards were also not exceeded in this area during the 3-year period.

Table 4.3.D: Ambient Air Quality in the Project Vicinity

Pollutant	Standard	2019	2020	2021
Carbon Monoxide (CO)¹				
Maximum 1-hour concentration (ppm)		1.3	0.9	0.9
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		0.7	0.7	0.8
Number of days exceeded:	State: > 9 ppm	0	0	0
	Federal: > 9 ppm	0	0	0
Ozone (O₃)¹				
Maximum 1-hour concentration (ppm)		0.108	0.130	0.118
Number of days exceeded:	State: > 0.09 ppm	4	18	18
Maximum 8-hour concentration (ppm)		0.089	0.100	0.098
Number of days exceeded:	State: > 0.07 ppm	31	55	46
	Federal: > 0.07 ppm	28	54	44
Coarse Particulates (PM₁₀)²				
Maximum 24-hour concentration (µg/m ³)		182.4	137.7	114.3
Number of days exceeded:	State: > 50 µg/m ³	110	115	75
	Federal: > 150 µg/m ³	0	0	0
Annual arithmetic average concentration (µg/m ³)		40.9	ND	33.2
Exceeded for the year:	State: > 20 µg/m ³	Yes	ND	Yes
	Federal: > 50 µg/m ³	No	ND	No
Fine Particulates (PM_{2.5})¹				
Maximum 24-hour concentration (µg/m ³)		17.6	41.6	28.8
Number of days exceeded:	Federal: > 35 µg/m ³	ND	ND	ND
Annual arithmetic average concentration (µg/m ³)		ND	7.2	6.9
Exceeded for the year:	State: > 12 µg/m ³	ND	No	No
	Federal: > 15 µg/m ³	ND	No	No
Nitrogen Dioxide (NO₂)¹				
Maximum 1-hour concentration (ppm)		0.038	0.043	0.043
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.006	0.007	0.007
Exceeded for the year:	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO₂)²				
Maximum 1-hour concentration (ppm)		0.0018	0.0022	0.0021
Number of days exceeded:	State: > 0.25 ppm	0	0	0
Maximum 24-hour concentration (ppm)		0.0009	0.001	0.0011
Number of days exceeded:	State: > 0.04 ppm	0	0	0
	Federal: > 0.14 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.00042	0.00034	0.00051
Exceeded for the year:	Federal: > 0.030 ppm	No	No	No

Source 1: iADAM Air Quality Data Statistics (CARB 2021)

Source 2: Outdoor Air Quality Data (EPA 2021).

¹ Data were taken from the 506 West Flint Street Lake Elsinore monitoring station

² Data taken from 5888 Mission Boulevard, Rubidoux monitoring station

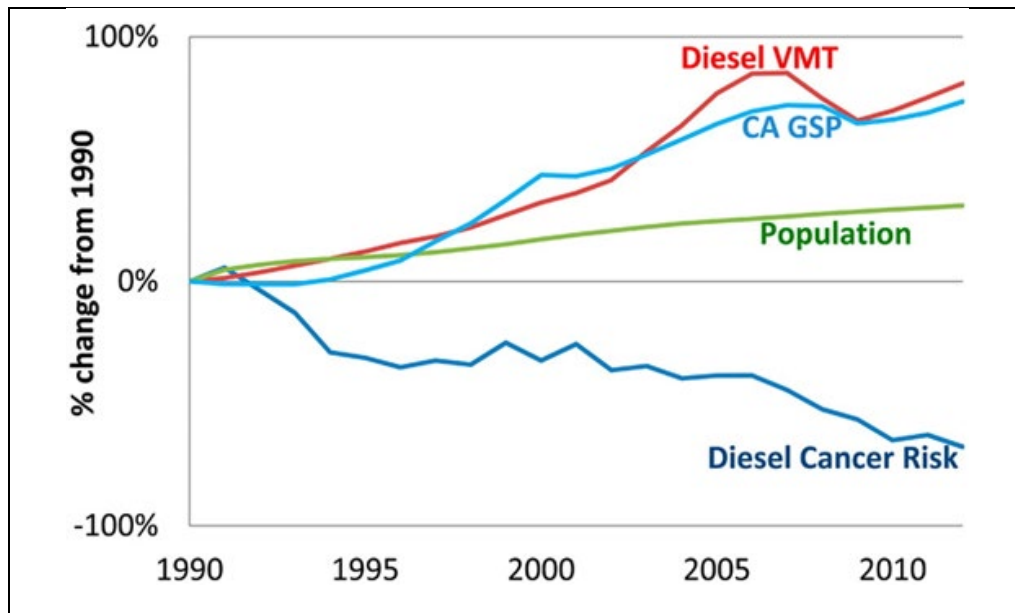
CARB = California Air Resources Board

EPA = United States Environmental Protection Agency

ND = No data. There was insufficient (or no) data to determine the value.

ppm = parts per million

Toxic Air Contaminant Trends. In 1984, the CARB adopted regulations to reduce TAC emissions from mobile and stationary sources, as well as consumer products. A CARB study showed that ambient concentrations and emissions of the seven TACs responsible for the most cancer risk from airborne exposure declined by 76 percent between 1990 and 2012.⁹ Concentrations of diesel particulate matter, a key TAC, declined by 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), as shown on **Figure 4.3-1**, below. 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, Ralph, et al. 2015).

Figure 4.3-1: California Population, Gross State Product (GSP), Diesel Cancer Risk, and Diesel Vehicle Miles Traveled (VMT) Regulatory Context

The USEPA and the 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.

4.3.5 Regulatory Setting

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

⁹ Propper, Ralph, et al. 2015. Ambient and Emission Trends of Toxic Air Contaminants in California. *American Chemical Society: Environmental Science & Technology*. Website: <https://pubs.acs.org/doi/full/10.1021/acs.est.5b02766> (accessed December 2022).

4.3.5.1 Federal Regulations

Federal Clean Air Act. At the federal level, the USEPA has been charged with implementing national air quality programs. The USEPA air quality mandates are drawn primarily from the Federal Clean Air Act (FCAA), which was enacted in 1963. The FCAA was amended in 1970, 1977, and 1990.

The FCAA required the USEPA to establish primary and secondary NAAQS and required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). 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 USEPA 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. If the USEPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area, which imposes additional control measures. 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 USEPA is also required to develop National Emission Standards for Hazardous Air Pollutants, which are defined as those which may reasonably be anticipated to result in increased deaths or serious illness, and which are not already regulated. An independent science advisory board reviews the health and exposure analyses conducted by the USEPA on suspected hazardous pollutants prior to regulatory development.

4.3.5.2 State Regulations

California Clean Air Act. In 1988, the CCAA required that all air quality districts in the State endeavor to achieve and maintain CAAQS for CO, O₃, SO₂, and NO₂ by the earliest practical date. The California Clean Air Act 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 the State's "clean air agency." The CARB's goals are to attain and maintain healthy air quality, protect the public from exposure to toxic air contaminants, and oversee compliance with air pollution rules and regulations.

Assembly Bill 2588 Air Toxics "Hot Spots" Information and Assessment Act. Under Assembly Bill (AB) 2588, stationary sources of air pollutants are required to report the types and quantities of certain substances that their facilities routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, identify facilities having localized impacts, determine health risks, and notify nearby residents of significant risks.

The California Air Resources Board Handbook. The CARB has developed an Air Quality and Land Use Handbook¹⁰ (CARB Handbook) (2005), which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. According to the CARB Handbook, air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California. The CARB Handbook recommends that county and city planning agencies strongly consider proximity to these sources when finding new locations for “sensitive” land uses such as homes, medical facilities, daycare centers, schools, and playgrounds.

Land use designations with air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the CARB Handbook include taking steps to avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles/day;
- Within 1,000 feet of a major service and maintenance rail yard;
- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries;
- Within 300 feet of any dry cleaning operation (for operations with two or more machines, provide 500 feet); and
- Within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

The CARB Handbook specifically states that its recommendations are advisory and acknowledges land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

The recommendations are generalized and do not consider site-specific meteorology, freeway truck percentages, or other factors that influence risk for a particular project site. The purpose of this guidance is to further examine project sites for actual health risk associated with the location of new sensitive land uses.

4.3.5.3 Regional Regulations

South Coast Air Quality Management District. The SCAQMD has jurisdiction over most air quality matters in the South Coast Air Basin. This area includes all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the

¹⁰ CARB. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB Handbook). April.

western and Coachella Valley portions of Riverside County. Los Angeles County is a subregion of the SCAQMD jurisdiction. The SCAQMD is the agency principally responsible for comprehensive air pollution control in the Basin and is tasked with implementing certain programs and regulations required by the FCAA and the CCAA. The SCAQMD prepares plans to attain CAAQS and NAAQS. 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 through educational programs or fines, when necessary.

- **Regulation IV – Prohibitions:** This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air pollutant emissions, fuel contaminants, start-up/shutdown exemptions, and breakdown events.
 - **Rule 402 – Nuisance:** This rule restricts the discharge of any contaminant in quantities that cause or have a natural ability to cause injury, damage, nuisance, or annoyance to businesses, property, or the public. The proposed Project will be required to comply with Rule 402.
 - **Rule 403 – Fugitive Dust:** This rule requires the prevention, reduction, or mitigation fugitive dust emissions from a project site. Rule 403 restricts visible fugitive dust to a project property line, restricts the net PM₁₀ emissions to less than 50 micrograms per cubic meter (µg/m³), and restricts the tracking out of bulk materials onto public roads. Additionally, Rule 403 requires an applicant to utilize one or more of the best available control measures (identified in the tables within the rule). Control measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers, and/or ceasing all activities. Finally, Rule 403 requires that a contingency plan be prepared if so determined by the USEPA. In addition, SCAQMD Rule 403(e), Additional Requirements for Large Operations, includes requirements to provide Large Operation Notification Form 403 N, appropriate signage, additional dust control measures, and employment of a dust control supervisor that has successfully completed the Dust Control training class in the South Coast Air Basin. The proposed Project will be required to comply with Rule 403.
- **Regulation XI – Source Specific Standards:** Regulation XI sets emissions standards for different sources.
 - **Rule 1113 – Architectural Coatings:** This rule limits the amount of VOCs from architectural coatings and solvents, which lowers the emissions of odorous compounds. The proposed Project will be required to comply with Rule 1113.

The SCAQMD is responsible for demonstrating regional compliance with ambient air quality standards but has limited direct involvement in reducing emissions from fugitive, mobile, and natural sources. To that end, the SCAQMD works cooperatively with the CARB, Southern California Association of Governments (SCAG), county transportation commissions, local governments, and other federal and State government agencies. It has responded to this requirement by preparing a series of Air Quality Management Plans (AQMPs) to meet the CAAQS and NAAQS. SCAQMD and SCAG are responsible for formulating and implementing the AQMP for the South Coast Air Basin. The main purpose of an AQMP is to bring the area into compliance with federal and State air quality standards. Every several years, SCAQMD prepares a new AQMP, updating the previous plan and the

20-year horizon.¹¹ The Final 2022 Air Quality Management Plan is the currently adopted AQMP. Key elements of the Final 2022 AQMP include the following:

- Calculating and taking credit for co-benefits from other planning efforts (e.g., climate, energy, and transportation)
- A strategy with fair-share emission reductions at the federal, State, and local levels
- Investment in strategies and technologies meeting multiple air quality objectives
- Seeking new partnerships and significant funding for incentives to accelerate deployment of zero-emission and near-zero emission technologies
- Enhanced socioeconomic assessment, including an expanded environmental justice analysis
- Attainment of the 24-hour PM_{2.5} standard in 2019 with no additional measures
- Attainment of the annual PM_{2.5} standard by 2025 with implementation of a portion of the O₃ strategy
- Attainment of the 1-hour O₃ standard by 2022 with no reliance on “black box” future technology (FCAA Section 182(e)(5) measures)

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.

Southern California Association of Governments. 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. SCAG is the federally designated Metropolitan Planning Organization (MPO) for the majority of the Southern California region and is the largest MPO in the nation. With regard to air quality planning, SCAG prepares the Regional Transportation Plan (RTP) and 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 the 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.

¹¹ South Coast Air Quality Management District (SCAQMD). 2022. Final 2022 Air Quality Management Plan. December 2.

Although SCAG is not an air quality management agency, it is responsible for developing transportation, land use, and energy conservation measures that affect air quality. SCAG's 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.

SCAG adopted the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS, Connect SoCal) on September 3, 2020. Connect SoCal is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal is an important planning document for the region, allowing project sponsors to qualify for federal funding, and takes into account operations and maintenance costs, to ensure reliability, longevity, and cost effectiveness.

Using growth forecasts and economic trends, the RTP provides a vision for transportation throughout the region for the next 20 years. It considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address mobility needs. The SCS is a required element of the RTP, which integrates land use and transportation strategies to achieve CARB emissions reduction targets. The inclusion of the SCS is required by Senate Bill (SB) 375, which was enacted to reduce GHG emissions from automobiles and light trucks through integrated transportation, land use, housing, and environmental planning. The RTP/SCS would successfully achieve and exceed the GHG emission-reduction targets set by the CARB by achieving an 8 percent reduction by 2020, an 18 percent reduction by 2035, and a 21 percent reduction by 2040 compared to the 2005 level on a per capita basis. This RTP/SCS also meets criteria pollutant emission budgets set by the USEPA.

4.3.5.4 Local Regulations

City of Menifée General Plan. The City of Menifée addresses air quality in the Open Space and Conservation Element of the City's General Plan. The Open Space and Conservation Element contains goals, policies, and implementing actions that works toward reducing impacts to air quality at the local level by minimizing pollution and particulate matter. The following goals, policies, and implementing actions related to air quality are presented in the Conservation Element¹² and are applicable to the proposed Project:

Policy OCS-9.1: Meet State and federal clean air standards by minimizing particulate matter emissions from construction activities.

¹² Menifée, City of. 2013. Menifée General Plan, Open Space and Conservation Element. Website: <https://www.cityofmenifée.us/250/Open-Space-Conservation-Element> (accessed December 2022).

Policy OCS-9.2: Buffer sensitive land uses, such as residences, schools, care facilities, and recreation areas from major air pollutant emission sources, including freeways, manufacturing, hazardous materials storage, wastewater treatment, and similar uses.

Policy OCS-9.3: Comply with regional, state, and federal standards and programs for control of all airborne pollutants and noxious odors, regardless of source.

Policy OCS-9.4: Support the Riverside County Regional Air Quality Task Force, the Southern California Association of Government's Regional Transportation Plan/Sustainable Communities Strategy, and the South Coast Air Quality Management District's Air Quality Management Plan to reduce air pollution at the regional level.

Policy OCS-9.5: Comply with the mandatory requirements of Title 24 Part 1 of the California Building Standards Code (CALGreen) and Title 24 Part 6 Building and Energy Efficiency Standards.

4.3.6 Thresholds of Significance

The City has not established local CEQA significance thresholds as described in Section 15064.7 of the *State CEQA Guidelines*. Therefore, significance determinations utilized in this section are from Appendix G of the *State CEQA Guidelines*. According to Section VIII of Appendix G to the *State CEQA Guidelines*, the proposed Project would result in a significant impact associated with air quality if the proposed Project or any proposed 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 nonattainment 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: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

4.3.6.1 Regional Emissions Thresholds

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.E lists the CEQA significance thresholds for construction and operational emissions established for the Basin.

Table 4.3.E: 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: Air Quality Significance Thresholds (South Coast Air Quality Management District 2023).

CO = carbon monoxide
lbs/day = pounds per day

NO_x = nitrogen oxides

PM₁₀ = 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

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.

4.3.6.2 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 parts per million (ppm)
- California State 8-hour CO standard of 9 ppm

4.3.7 Project Impacts

The proposed Project proposes the approval of the Menifee Valley Specific Plan, which would facilitate the development of a 590.3-acre master planned community, consisting of 202.3 acres of residential uses, 44.5 acres of open space uses, 311.1 acres of commercial, business park, and public facility uses, and 32.4 acres of infrastructure.¹³ Refer to **Section 3.3** for descriptions of the proposed number of residential units and the square footages of anticipated building space in the civic node, business/commercial park, and commercial planning areas.

In addition to certifying the EIR, the proposed Project includes a General Plan Amendment (GPA)¹⁴ that proposes to change the existing SP 301 designation of the site to Menifee Valley Specific Plan; a Change of Zone (CZ)¹⁵ that proposes to change the existing SP 301 designation to its own specific

¹³ Refer to Table 3.A in Section 3.3 Project Characteristics.

¹⁴ A GPA is an application that modifies the text, figures, or graphics contained within the General Plan. This may include, but is not limited to, changes from one General Plan designation to another designation for property within the city.

¹⁵ A CZ is a resolution that changes the zoning district classification of a particular parcel of land.

Plan zoning designation; a Specific Plan Amendment (SPA)¹⁶ that proposes to remove the project site from the existing SP 301 area; adoption of the Menifee Valley Specific Plan; approval of subdivision maps; and a Development Agreement.¹⁷

The Project includes 59 acres of off-site improvements to support the operation and construction of the proposed Project. These improvements include roadway improvements and subsurface utility line installations and connections along Briggs Road, Menifee Road, and State Route 74 (SR-74); the installation of subsurface utility lines in the alignment of Matthews Road along segments of the Project site's southern boundary; and the installation of a nonvehicular bridge across Matthews Road and railroad tracks southwest of and parallel to Matthews Road to connect the Project site with the Heritage Lake community to the south.

In addition, the Project includes off-site roadway improvements to address traffic impacts in conflict with the General Plan Circulation Element policies that strive to maintain desired LOS. These roadway improvements, which include widening and additional turn lanes as required, include Matthews Road/Case Road (between McLaughlin Road and Ethanac Road), McLaughlin Road (between Matthews Road/Case Road and Menifee Road), and McCall Boulevard (between Encanto Drive and Menifee Road).

4.3.7.1 Air Quality Management Plan Consistency

Threshold 4.3-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the air quality plans. A consistency determination fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review due to the air quality plan strategies being based on projections from local General Plans.

Consistency with the 2022 AQMP would be achieved if the project is consistent with the goals, objectives, and assumptions in this plan to achieve the federal and State air quality standards. Per the SCAQMD *CEQA Air Quality Handbook*, there are two main indicators of a project's consistency with the AQMP:

- **Indicator 1:** Whether the Project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the AAQS or emission reductions in the AQMP.

¹⁶ A SPA is like a GPA but for changing one Specific Plan designation to another designation for an area within the city.

¹⁷ A Development Agreement executed between the City and the Specific Plan sponsor. The agreement refers to the proposed Specific Plan for the allowable land uses in the Specific Plan area and outlines other terms and conditions of approval associated with the Specific Plan's approval and implementation.

- **Indicator 2:** Whether the Project would exceed the assumptions in the AQMP. The AQMP strategy is, in part, based on projections from local general plans.

On-Site Improvements. Consistency of the proposed Project on-site improvements with the AQMP is evaluated below.

Indicator 1. As demonstrated under Threshold 4.3-2 below, the proposed Project would result in significant and unavoidable long-term operational pollutant emissions. As such, the proposed Project would not be consistent with Indicator 1.

Indicator 2. The *CEQA Air Quality Handbook* indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities. As identified above, the proposed Project includes a GPA to change the existing SP 301 designation of the site to Menifee Valley Specific Plan. As such, this analysis evaluates whether the Project would exceed the 2022 AQMP’s assumptions for 2045 or yearly increments based on the year of Project build out and phasing.

With respect to determining the proposed Project consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG’s RTP/SCS regarding population, housing, and growth trends. According to SCAG’s 2020–2045 RTP/SCS, the city’s population, households, and employment are forecast to increase by approximately 40,200 residents, 29,600 households, and 15,400 jobs, respectively, between 2016 and 2045.¹⁸

The Project proposes the approval of the Menifee Valley Specific Plan (MVSP), which would facilitate the development of the Project site as a mixed-use, master planned community. The MVSP would establish guidelines for the future development of the planned community, which would consist of a residential area for single-family and multi-family residential units as well as green spaces and a potential elementary school site, recreation areas including a public sports park, greenbelts, and the preservation of Granite Hill, an area for public facilities which may include a fire station, transit stop, and other civic uses, a commercial area, business park, and commercial business park to provide commercial and retail uses as well as provide opportunities for employment.

As discussed further in **Section 4.14**, the Specific Plan uses on the Project site would result in direct population growth in the city through development of up to 1,718 units. Using a rate of 3.12 persons per single-family residential household and 2.48 persons per multi-family household, as determined by the California Government Code Section 66477 (a) and as stated in

¹⁸ Southern California Association of Governments (SCAG). 2020. *Connect SoCal 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy*. Website: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial-plan_0.pdf?1606001176 (accessed December 2022).

the City Municipal Code, American Community Survey 2015–2019 5-Year Estimates,¹⁹ the proposed single-family and multi-family residential units have the potential to increase the population in Menifee by up to approximately 5,220 persons.²⁰ The currently proposed amendment to SP 301 would remove the Project site from SP 301, thereby creating a new Specific Plan which encompasses the Project site. As detailed in **Chapter 3.0**, SP 301 was approved for an overall development of 4,407 dwelling units, with 1,718 of those units within the boundary of the Project site. The Project proposes the development of up to 1,718 units; therefore, the Project would not reduce the intensity of residential land uses on the Project site in accordance with SB 330. Additionally, the Project would not induce unplanned population growth from residential uses on the Project site.

In addition, as described in **Section 4.14**, commercial, business park, commercial business park, and public facility uses on the Project site would provide employment to 6,225 people at Specific Plan build out. As of June 2022, the city had a labor force of 42,700, and the county had a labor force of 1,146,300, with approximately 1,700 and 45,300 people unemployed, respectively.²¹ The June 2022 unemployment rate was 4.0 percent for the city and 4.0 percent for the county.²² These elevated unemployment figures reflect the economic slowdown associated with the widespread shelter-in-place orders in effect throughout much of 2020 and 2021 due to the ongoing COVID-19 pandemic. Although there is a great deal of uncertainty regarding the pandemic's effect on the economy, it has resulted in reduced business activity and related higher unemployment in the area. This suggests an ample available local and regional labor pool to serve the long-term employment opportunities offered by the proposed Project and makes it unlikely that the Project's labor demand would need to draw a substantial number of employees from outside the region to meet the need for employees resulting from development of the Project site. The Project would provide jobs close to home for current and future city residents, and thus the Project would serve to improve the housing-jobs balance in the northeastern portion of the city.

As such, future development allowed under the proposed Project would accommodate planned regional housing and employment growth. The proposed Project is intended to provide economic development and jobs to the city and improve the ratio of jobs to housing in Menifee while delivering a mix of uses that would establish a sense of place for the community. Thus, the

¹⁹ United States Census Bureau. 2019. 2015-2019 5-Year Estimates. Table DP02. <https://data.census.gov/cedsci/table?q=persons%20per%20household&t=Family%20Size%20and%20Type%3AHousehold%20and%20Family&g=1600000US0646842&tid=ACSDP1Y2019.DP02&moe=false> (accessed December 2022).

²⁰ 87.2 percent of residential development is single-family; 12.8 percent of residential development is multi-family (per the MVSP).
♦ $87.2\% * 1,718 = 1,498$ single-family units; $12.8\% * 1,718 = 220$ multi-family units
♦ 3.12 persons per unit * $1,498$ units = $4,674$ persons (single-family households)
♦ 2.48 persons per unit * 220 units = 546 persons (multi-family households)
♦ $4,674 + 546 = 5,220$ persons

²¹ California Employment Development Department, Labor Market Information Division, Monthly Labor Force Data for Cities and Census Designated Places June 2022. <https://www.labormarketinfo.edd.ca.gov/data/unemployment-and-labor-force.html> (accessed July 31, 2022).

²² Ibid.

proposed Project would not substantially increase population, households, or employment in the city. As such, since the purpose of the proposed Project is to accommodate planned regional housing and employment growth in the city, the proposed Project would not exceed the growth assumptions in the SCAG's RTP/SCS or the AQMP and is considered consistent with Indicator 2.

Based on the discussion above, the proposed Project would have the potential to conflict or obstruct implementation of applicable air quality plans under Indicator 1 because the proposed Project would result in significant and unavoidable long-term operational pollutant emissions. As discussed in Threshold 4.3.2 below, although there is no feasible mitigation to reduce operational pollutant emissions to a less than significant level, **Mitigation Measure AIR-2** (see Threshold 4.3.2) would require the implementation of all feasible measures to reduce operational impacts associated with the proposed Project. Impacts would be **significant and unavoidable**.

Off-Site Improvements. The proposed Project also includes 59 acres of off-site improvement areas along Menifee Road, SR-74, Matthews Road, and Briggs Road. Off-site improvements include widening public roadways in conformance with the City's General Plan Circulation Element. Therefore, roadway improvements within SR-74, Menifee, and Briggs Roads are consistent with the City's planned roadway network and would not result in indirect unplanned growth within the city. The proposed roadway improvements and utility connections would not include housing or employment growth that would exceed growth assumptions in the SCAG's RTP/SCS or the AQMP; therefore, impacts would be **less than significant**.

Off-Site Roadway Improvements. Implementation of the Project would also result in off-site roadway improvements to address traffic impacts in conflict with the General Plan Circulation Element policies that strive to maintain desired LOS. These roadway improvements, which include widening and additional turn lanes as required, include Matthews Road/Case Road (between McLaughlin Road and Ethanac Road), McLaughlin Road (between Matthews Road/Case Road and Menifee Road), and McCall Boulevard (between Encanto Drive and Menifee Road). These roadway improvements were identified in the General Plan Circulation Element and included in the Final General Plan Environmental Impact Report (EIR) certified by the City on December 18, 2013 (Certified 2013 EIR).

The Certified 2013 EIR found that implementation of the General Plan, which includes the off-site roadway improvements, would not be consistent with the AQMP because air pollutant emissions associated with buildout of the City of Menifee would cumulatively contribute to the nonattainment designations in the South Coast Air Basin. As such, off-site roadway improvement impacts would be significant and unavoidable. However, it should be noted that this significance determination discussed in the 2013 Certified EIR includes all aspects of the General Plan Circulation Element buildout, and the off-site roadway improvements along Matthews Road (Case Road), McCall Boulevard, and McLaughlin Road represent improvements to already existing roadways and a small component of implementation of the General Plan. Similar to the off-site improvements along Menifee Road, SR-74, Matthews Road, and Briggs Road discussed above, these off-site roadway improvements would not include housing or employment growth that would exceed growth assumptions in the SCAG's RTP/SCS or the AQMP; therefore, impacts would be **less than significant**.

Level of Significance Prior to Mitigation: Potentially Significant Impact

Regulatory Compliance Measures and Mitigation Measures: Refer to Mitigation Measures AIR-1 and AIR-2 below.

Level of Significance After Mitigation: Significant and Unavoidable

4.3.7.2 Increase in Criteria Pollutants (Regional Construction and Operation)

Threshold 4.3-2: **Would the proposed 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 O₃ and PM_{2.5}. In addition, the Basin is in nonattainment for the PM₁₀ standard. The Basin's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. 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 cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is not necessary.

The following analysis assesses the potential Project-level air quality impacts associated with construction and operation of the proposed Project.

Construction. During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by 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 PM₁₀), 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. PM₁₀ emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM₁₀ 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 (PM₁₀). 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 PM₁₀ emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO₂, NO_x, VOCs, and some soot particulate (PM_{2.5} and PM₁₀) 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.

On-Site Improvements. As stated in **Section 4.3.3**, construction emissions were estimated for the Project using CalEEMod, consistent with SCAQMD recommendations. As discussed in **Chapter 3.0**, the Project site would be mass graded in one phase, with fine grading and implementing development to follow in three phases. This analysis assumes that Phase 1 would include the following: Planning Areas 1 and 2 (Residential); Planning Areas 7A, 7B, and 8A (Open Space-Recreation, Open Space-Conservation, and Greenbelts); Planning Area 11 (Business Park); Planning Area 12 (Commercial Business Park); Residential Spine Street; Briggs Road (along Planning Areas 1, 7A, and 7B); Menifee Road (along Planning Area 11); McLaughlin Road and Malaga Road (from SR-74 to McLaughlin Road); and Pedestrian and Bike-Only Bridge. In addition, this analysis assumes that Phase 2 would include the following: Planning Areas 3, 4, 5 (Residential); Planning Area 6 (School); Planning Area 8B (Open Space-Greenbelt); Planning Area 9 (Public Facilities); Planning Area 10 (Business Park); and Briggs Road (along Planning Areas 3 and 5) and Menifee Road (along Planning Area 9 and 10). This analysis assumes that Phase 3 would include the following: Planning Area 13 (Commercial Retail) and SR-74 (along Planning Area 13).

The construction schedule for each phase was based on information provided by the Project Applicant, which assumes that mass grading would occur from the fourth quarter of 2023 through the third quarter of 2024, construction of Phase 1 would occur from the fourth quarter of 2024 through the second quarter of 2030, construction of Phase 2 would occur from the third quarter of 2026 through the second quarter of 2031, and construction of Phase 3 would occur from the third quarter of 2027 through the first quarter of 2029, which was included in CalEEMod. This analysis utilized default construction equipment in CalEEMod, except for the utility trenching and finishing/landscaping phases, which assume the use of a backhoe during utility trenching and use of a skiploader during finishing/landscaping. The grading operation is anticipated to be balanced on the site and would not require import or export of materials. Approximately 5.5 million cubic yards (cy) of material are estimated to be cut and filled to achieve a balanced site including remedial grading. This analysis assumes the use of Tier 2 construction equipment. Other construction details are not yet known; therefore, default assumptions (e.g., construction worker and truck trips and fleet activities) from CalEEMod were

used. Construction-related emissions are presented in **Table 4.3.F**. CalEEMod output sheets are included in **Appendix C**.

Table 4.3.F: Unmitigated On-Site Improvements Construction Emissions

Construction Year	Maximum Pollutant Emissions (lbs/day)					
	VOCs	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2023	1.9	51.3	37.5	0.1	1.7	3.0
2024	13.0	164.4	183.1	0.5	11.6	15.6
2025	36.2	131.2	157.6	0.5	9.9	13.3
2026	64.1	116.7	165.5	0.5	12.5	15.4
2027	63.4	112.8	157.5	0.5	12.5	15.3
2028	62.9	112.2	152.9	0.5	36.7	15.3
2029	62.2	108.7	135.7	0.5	36.5	13.8
2030	61.9	108.3	132.8	0.5	36.5	13.8
2031	34.4	98.0	111.0	0.3	32.7	11.2
SCAQMD Threshold	75.0	100.0	550.0	150.0	150.0	55.0
Exceeds Threshold?	No	Yes	No	No	No	No

Source: Compiled by LSA (December 2022).

CO = carbon monoxide

lbs/day = pounds per day

NO_x = nitrogen oxides

PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = 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.G 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.

Table 4.3.G: Mitigated On-Site Improvements Construction Emissions

Construction Year	Maximum Pollutant Emissions (lbs/day)					
	VOCs	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2023	0.8	3.3	33.7	0.1	4.5	1.8
2024	10.6	43.2	174.8	0.5	39.7	12.2
2025	35.1	40.2	153.4	0.5	35.8	10.4
2026	62.0	40.1	161.4	0.5	45.3	13.0
2027	61.4	39.1	153.3	0.5	45.2	13.0
2028	60.9	38.5	148.7	0.5	45.2	13.0
2029	60.2	37.2	131.6	0.4	40.2	11.7
2030	59.9	36.8	128.7	0.5	40.2	11.7
2031	32.5	26.5	106.9	0.3	30.5	9.0
SCAQMD Threshold	75.0	100.0	550.0	150.0	150.0	55.0
Exceeds Threshold?	No	No	No	No	No	No

Source: Compiled by LSA (December 2022).

CO = carbon monoxide

lbs/day = pounds per day

NO_x = nitrogen oxides

PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = particulate matter less than 10 microns in size

SCAQMD = South Coast Air Quality Management District

SO_x = sulfur oxides

VOCs = volatile organic compounds

As indicated in **Table 4.3.G**, with implementation of **Mitigation Measure AIR-1**, the short-term construction emissions associated with construction of the on-site improvements would not exceed the SCAQMD's thresholds for VOCs, NO_x, CO, SO_x, PM_{2.5}, or PM₁₀ emissions. Therefore,

with implementation of **Mitigation Measure AIR-1**, construction of the on-site improvements would result in a less than significant impact related to a cumulatively considerable net increase of any criteria pollutant for which the Project region is in nonattainment under an applicable federal or State ambient air quality standard. Impacts would be **less than significant with mitigation incorporated**.

Off-Site Improvements. The proposed Project also includes 59 acres of off-site improvement areas along Menifee Road, SR-74, Matthews Road, and Briggs Road. As discussed in **Section 4.3.3**, a separate CalEEMod analysis was used to evaluate construction emissions associated with the off-site improvements. The construction schedule for the off-site improvements was also based on information provided by the Project Applicant, which assumes that construction activities would occur from the third quarter of 2024 through the third quarter of 2025, which was included in CalEEMod. As described above, this analysis utilized default construction equipment in CalEEMod, except for the utility trenching and finishing/landscaping phases, which assume the use of a backhoe during utility trenching and use of a skiploader during finishing/landscaping. This analysis assumes the use of Tier 2 construction equipment. Other construction details are not yet known; therefore, default assumptions (e.g., construction worker and truck trips and fleet activities) from CalEEMod were used. Construction-related emissions are presented in **Table 4.3.H**. CalEEMod output sheets are included in **Appendix C**.

Table 4.3.H: Unmitigated Off-Site Improvements Construction Emissions

Construction Year	Maximum Pollutant Emissions (lbs/day)					
	VOCs	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2024	2.0	20.1	17.8	<0.1	0.8	0.7
2025	2.0	20.1	17.8	<0.1	0.8	0.7
Peak Emissions	2.0	20.1	17.8	<0.1	0.8	0.7
SCAQMD Threshold	75.0	100.0	550.0	150.0	150.0	55.0
Exceeds Threshold?	No	No	No	No	No	No

Source: Compiled by LSA Associates, Inc. (December 2022).

CO = carbon monoxide

lbs/day = pounds per day

NO_x = nitrogen oxides

PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = particulate matter less than 10 microns in size

SCAQMD = South Coast Air Quality Management District

SO_x = sulfur oxides

VOCs = volatile organic compounds

As shown in **Table 4.3.H**, the maximum daily emissions of VOCs, NO_x, CO, SO_x, PM_{2.5}, or PM₁₀ that would result from construction of the off-site improvements would not exceed the SCAQMD regional significance thresholds. However, when these off-site improvements construction emissions are combined with the on-site improvements construction emissions, emissions would exceed SCAQMD’s thresholds. With implementation of **Mitigation Measure AIR-1**, the short-term construction emissions associated with construction of the on-site improvements would not exceed the SCAQMD’s thresholds for VOCs, NO_x, CO, SO_x, PM_{2.5}, or PM₁₀ emissions. Therefore, with implementation of **Mitigation Measure AIR-1**, construction of the on-site and off-site improvements would result in a less than significant impact related to a cumulatively considerable net increase of any criteria pollutant for which the Project region is in nonattainment under an applicable federal or State ambient air quality standard. Impacts would be **less than significant with mitigation incorporated**.

Off-Site Roadway Improvements. Implementation of the Project would also result in off-site roadway improvements to address traffic impacts in conflict with the General Plan Circulation Element policies that strive to maintain desired LOS. These roadway improvements, which include widening and additional turn lanes as required, include Matthews Road/Case Road (between McLaughlin Road and Ethanac Road), McLaughlin Road (between Matthews Road/Case Road and Menifee Road), and McCall Boulevard (between Encanto Drive and Menifee Road) and would include a total of 84.16 acres of improvements. As discussed in **Section 4.3.3**, a separate CalEEMod analysis was used to evaluate construction emissions associated with the off-site roadway improvements. The construction schedule for the off-site roadway improvements was also based on information provided by the Project Applicant, which assumes that construction activities would occur from 2024 and occur for approximately 18 months. This analysis assumes construction activities associated with the off-site roadway improvements would include site preparation, grading, paving, and architectural coating activities. In addition, as described above, this analysis utilized default construction equipment in CalEEMod, except for removal of the building construction phase. This analysis assumes the use of Tier 2 construction equipment. In addition, this analysis assumes that there would be 12 construction workers per day. Other construction details are not yet known; therefore, default assumptions (e.g., construction worker and truck trips and fleet activities) from CalEEMod were used. Construction-related emissions are presented in **Table 4.3.I**. CalEEMod output sheets are included in **Appendix C**.

Table 4.3.I: Unmitigated Off-Site Roadway Improvements Construction Emissions

Construction Year	Maximum Pollutant Emissions (lbs/day)					
	VOCs	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2024	1.9	51.3	37.1	0.1	10.1	5.5
2025	10.3	51.3	37.1	0.1	1.7	3.0
2026	10.3	2.4	2.2	<0.1	<0.1	0.1
Peak Emissions	10.3	51.3	37.1	0.1	10.1	5.5
SCAQMD Threshold	75.0	100.0	550.0	150.0	150.0	55.0
Exceeds Threshold?	No	No	No	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

PM₁₀ = particulate matter less than 10 microns in size

SCAQMD = South Coast Air Quality Management District

SO_x = sulfur oxides

VOCs = volatile organic compounds

As shown in **Table 4.3.I**, the maximum daily emissions of VOCs, NO_x, CO, SO_x, PM_{2.5}, or PM₁₀ that would result from construction of the off-site roadway improvements would not exceed the SCAQMD regional significance thresholds. However, when these off-site roadway improvements construction emissions are combined with the other off-site improvements and on-site improvements construction emissions, emissions would exceed SCAQMD’s thresholds. With implementation of **Mitigation Measure AIR-1**, the short-term construction emissions associated with construction of the on-site improvements would not exceed the SCAQMD’s thresholds for VOCs, NO_x, CO, SO_x, PM_{2.5}, or PM₁₀ emissions. Therefore, with implementation of **Mitigation Measure AIR-1**, construction of the on-site and off-site improvements would result in a less than significant impact related to a cumulatively considerable net increase of any criteria pollutant

for which the Project region is in nonattainment under an applicable federal or State ambient air quality standard. Impacts would be *less than significant with mitigation incorporated*.

Operation. 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., natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment).

PM₁₀ 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 PM₁₀ 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 particulate matter emission 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 natural gas is used. The quantity of emissions is the product of usage intensity (i.e., the amount of natural gas) and the emission factor of the fuel source.

Typically, area source emissions consist of emissions from the use of architectural coatings, consumer products, and landscaping equipment.

On-Site Improvements. Long-term operational emissions associated with the on-site improvements were calculated using CalEEMod. Trip generation rates used in CalEEMod for the Project were based on the Project's trip generation estimates, which assume that Phase 1 would typically generate approximately 19,094 average daily trips, Phase 2 would typically generate approximately 20,750 average daily trips, and Phase 3 would typically generate approximately 20,726 average daily trips (refer to **Appendix K-1** for trip generation and trip length estimates). As such, build out of the proposed Project would generate a total of approximately 60,570 average daily trips. In addition, trip lengths in CalEEMod were based on information provided in **Section 4.17**. In addition, CalEEMod assumes that the proposed Project would utilize low VOC paint as required by SCAQMD Rule 113, would only include natural gas hearths, and would include drought-tolerant plants, efficient irrigation systems, and low-flow fixtures. When Project-specific data were not available, default assumptions (e.g., energy usage, water usage, and solid waste generation) from CalEEMod were used to estimate Project emissions.

The primary emissions associated with the proposed Project are regional in nature, meaning that air pollutants are rapidly dispersed on release or, in the case of vehicle emissions associated with the proposed Specific Plan, emissions are released in other areas of the Air Basin. The maximum daily emissions associated with operational trips, energy, and area sources are identified in **Table 4.3.J** for VOCs, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}. CalEEMod output sheets are included in **Appendix C**.

Table 4.3.J: Unmitigated On-Site Improvements Operational Emissions

	Maximum Pollutant Emissions (lbs/day)					
	VOCs	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Phase 1						
Phase 1 Area Emissions	75.4	11.8	66.1	0.1	1.2	1.2
Phase 1 Energy Emissions	0.9	8.3	4.7	0.1	0.7	0.7
Phase 1 Mobile Emissions	43.6	93.5	392.6	1.0	109.6	29.9
Total Phase 1 Emissions	120.0	113.5	463.4	1.2	111.5	31.8
Phase 2						
Phase 2 Area Emissions	87.5	15.5	86.8	0.1	1.6	1.6
Phase 2 Energy Emissions	0.9	8.0	4.4	0.1	0.6	0.6
Phase 2 Mobile Emissions	46.0	83.2	415.6	1.0	117.6	32.0
Total Phase 2 Emissions	134.4	106.7	503.8	1.2	119.9	34.2
Phase 3						
Phase 3 Area Emissions	12.4	<0.1	0.1	0.0	<0.1	<0.1
Phase 3 Energy Emissions	0.0	0.3	0.3	<0.1	<0.1	<0.1
Phase 3 Mobile Emissions	39.4	34.7	237.6	0.5	50.6	13.7
Total Phase 3 Emissions	51.8	35.0	237.9	0.5	50.6	13.8
Total Project Emissions						
Total Project Area Emissions	200.6	27.3	153.0	0.2	2.9	2.9
Total Project Energy Emissions	1.9	16.6	9.4	0.1	1.3	1.3
Total Project Mobile Emissions	125.1	207.8	1,037.9	2.5	284.7	77.4
Total Project Emissions	327.7	251.7	1,200.3	2.8	288.9	81.6
SCAQMD Threshold	75.0	100.0	550.0	150.0	150.0	55.0
Exceeds Threshold?	Yes	Yes	Yes	No	Yes	Yes

Source: Compiled by LSA (December 2022).

CO = carbon monoxide

lbs/day = pounds per day

NO_x = nitrogen oxides

PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = particulate matter less than 10 microns in size

SCAQMD = South Coast Air Quality Management District

SO_x = sulfur oxides

VOCs = volatile organic compounds

As indicated in **Table 4.3.J**, operational emissions associated with implementation of the proposed Project would not exceed the SCAQMD’s threshold for SO_x; however, emissions of VOCs, NO_x, CO, PM₁₀, and PM_{2.5} would exceed SCAQMD thresholds.

In addition, as discussed in **Chapter 3.0**, given the size of the property, grading and implementing development activities within the Project site may occur concurrently. Various land uses may be under development at the same time and constructed in response to market demands and according to a logical and orderly extension of roadways, public utilities, and infrastructure. Planning Areas may be developed out of the expected sequence, or in smaller increments, provided the required infrastructure and services are available at the time of development to provide adequate access to and from the Project site and ensure public health and safety.

The exact timing of implementation and phasing for any Planning Area may vary based on a number of factors, including market and economic demands, as well as physical constraints or timing of infrastructure improvements. The final phasing for the development will be determined through future implementing projects and any phasing requirements specified in a Development Agreement that accompanies this Specific Plan. As such, it is possible that construction activities would still be underway while parts of the proposed Project become

operational. Since the Project is a programmatic level document and the timing of projects that would be developed under the Specific Plan are unknown at this time, the precise combination of emissions that would occur is unknown. However, since operational emissions would exceed SCAQMD thresholds, it is assumed that combined emissions would also exceed the significance threshold established by the SCAQMD for daily project emissions.

Mitigation Measure AIR-2 would require the implementation of all feasible measures to reduce operational impacts associated with the proposed Project. **Mitigation Measure TRA-1** identified in **Section 4.17** would further reduce impacts; however, the emission reduction associated with some measures, including those that would reduce Project-related VMT, cannot be quantified. With implementation of **Mitigation Measure AIR-2**, operation of the proposed Project would result in a significant impact related to a cumulatively considerable net increase of any criteria pollutant for which the Project region is in nonattainment under an applicable federal or State ambient air quality standard. Impacts would be **significant and unavoidable**.

While **Mitigation Measure AIR-2** would significantly reduce criteria air pollutant emissions generated during operational activities associated with the on-site improvements, there is currently not enough information to quantify emissions of specific project development that may occur under the proposed Project. Without quantification to guarantee a less than significant finding, future development projects may still exceed the SCAQMD regional significance thresholds. Therefore, operational activities would be considered **significant and unavoidable**.

Off-Site Improvements. As discussed above, the proposed Project also includes 59 acres of off-site improvement areas along Meniffee Road, SR-74, Matthews Road, and Briggs Road. As discussed in **Section 4.3.3**, a separate CalEEMod analysis was used to evaluate operational emissions associated with the off-site improvements. The off-site improvements model run assumed 59 acres of *Other Asphalt Surfaces* and assumed that the off-site improvements would not generate any vehicle trips. When Project-specific data were not available, default assumptions (e.g., energy usage, water usage, and solid waste generation) from CalEEMod were used to estimate Project emissions. Operational off-site improvements emissions are presented in **Table 4.3.K**. CalEEMod output sheets are included in **Appendix C**.

Table 4.3.K: Unmitigated Off-Site Improvements Operational Emissions

	Maximum Pollutant Emissions (lbs/day)					
	VOCs	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Off-Site Area Emissions	1.1	<0.1	<0.1	0.0	<0.1	<0.1
Off-Site Energy Emissions	0.0	0.0	0.0	0.0	0.0	0.0
Off-Site Mobile Emissions	0.0	0.0	0.0	0.0	0.0	0.0
Total Off-Site Emissions	1.1	<0.1	<0.1	0.0	<0.1	<0.1
SCAQMD Threshold	75.0	100.0	550.0	150.0	150.0	55.0
Exceeds Threshold?	No	No	No	No	No	No

Source: Compiled by LSA (December 2022).

CO = carbon monoxide
lbs/day = pounds per day

NO_x = nitrogen oxides

PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = particulate matter less than 10 microns in size

SCAQMD = South Coast Air Quality Management District

SO_x = sulfur oxides

VOCs = volatile organic compounds

As shown in **Table 4.3.K**, Project operational emissions associated with the off-site improvements would be minimal and would not exceed the SCAQMD's thresholds for VOCs, NO_x, CO, SO_x, PM_{2.5}, or PM₁₀ emissions. However, when these emissions are combined with the on-site emissions, emissions would exceed SCAQMD's thresholds.

Mitigation Measure AIR-2 would require the implementation of all feasible measures to reduce operational impacts associated with the proposed Project. **Mitigation Measure TRA-1** identified in **Section 4.17** would further reduce impacts; however, the emission reduction associated with some measures, including those that would reduce Project-related VMT, cannot be quantified.

While **Mitigation Measure AIR-2** would significantly reduce criteria air pollutant emissions generated during operational activities associated with the on-site improvements, there is currently not enough information to quantify emissions of specific project development that may occur under the proposed Project. Without quantification to guarantee a less than significant finding, future development projects may still exceed the SCAQMD regional significance thresholds. Therefore, operational activities would be considered **significant and unavoidable**.

Off-Site Roadway Improvements. Implementation of the Project would also result in off-site roadway improvements to address traffic impacts in conflict with the General Plan Circulation Element policies that strive to maintain desired LOS. These roadway improvements, which include widening and additional turn lanes as required, include Matthews Road/Case Road (between McLaughlin Road and Ethanac Road), McLaughlin Road (between Matthews Road/Case Road and Menifee Road), and McCall Boulevard (between Encanto Drive and Menifee Road). As discussed in **Section 4.3.3**, a separate CalEEMod analysis was used to evaluate operational emissions associated with the off-site roadway improvements. The off-site roadway improvements model run assumed 84.16 acres of *Other Asphalt Surfaces* and assumed that the off-site roadway improvements would not themselves generate any vehicle trips. When Project-specific data were not available, default assumptions (e.g., energy usage, water usage, and solid waste generation) from CalEEMod were used to estimate Project emissions. Operational off-site roadway improvements emissions are presented in **Table 4.3.L**. CalEEMod output sheets are included in **Appendix C**.

As shown in **Table 4.3.L**, Project operational emissions associated with the off-site roadway improvements would be minimal and would not exceed the SCAQMD's thresholds for VOCs, NO_x, CO, SO_x, PM_{2.5}, or PM₁₀ emissions. However, similar to the off-site improvements along Menifee Road, SR-74, Matthews Road, and Briggs Road discussed above, when these emissions are combined with the on-site and other off-site emissions, emissions would exceed SCAQMD's thresholds.

Table 4.3.L: Unmitigated Off-Site Roadway Operational Emissions

	Maximum Pollutant Emissions (lbs/day)					
	VOCs	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Off-Site Area Emissions	1.6	<0.1	<0.1	0.0	0.0	0.0
Off-Site Energy Emissions	0.0	0.0	0.0	0.0	0.0	0.0
Off-Site Mobile Emissions	0.0	0.0	0.0	0.0	0.0	0.0
Total Off-Site Roadway Emissions	1.6	<0.1	<0.1	0.0	0.0	0.0
SCAQMD Threshold	75.0	100.0	550.0	150.0	150.0	55.0
Exceeds Threshold?	No	No	No	No	No	No

Source: Compiled by LSA (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

PM₁₀ = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides
VOCs = volatile organic compounds

Mitigation Measure AIR-2 would require the implementation of all feasible measures to reduce operational impacts associated with the proposed Project. **Mitigation Measure TRA-1**, identified in **Section 4.17**, would further reduce impacts; however, the emission reduction associated with some measures, including those that would reduce Project-related VMT, cannot be quantified.

While **Mitigation Measure AIR-2** would significantly reduce criteria air pollutant emissions generated during operational activities associated with the on-site improvements, there is currently not enough information to quantify emissions of specific project development that may occur under the proposed Project. Without quantification to guarantee a less than significant finding, similar to the finding for the on-site project operations, future development may still exceed the SCAQMD regional significance thresholds. Therefore, operational activities would be considered **significant and unavoidable**.

Total Project Operational Emissions. Table 4.3.M below shows the total Project emissions, including on-site improvements, off-site improvements, and off-site improvements.

Table 4.3.M: Unmitigated Total Project Operational Emissions

	Maximum Pollutant Emissions (lbs/day)					
	VOCs	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Total On-Site Emissions	327.7	251.7	1,200.3	2.8	288.9	81.6
Total Off-Site Emissions	1.1	<0.1	<0.1	0.0	<0.1	<0.1
Total Off-Site Roadway Emissions	1.6	<0.1	<0.1	0.0	0.0	0.0
Total Project Emissions	330.1	251.7	1,200.3	2.8	288.9	81.6
SCAQMD Threshold	75.0	100.0	550.0	150.0	150.0	55.0
Exceeds Threshold?	Yes	Yes	Yes	No	Yes	Yes

Source: Compiled by LSA (October 2022).

CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides
VOCs = volatile organic compounds

As indicated in **Table 4.3.M**, operational emissions associated with implementation of the proposed Project would not exceed the SCAQMD's threshold for SO_x; however, emissions of VOCs, NO_x, CO, PM₁₀, and PM_{2.5} would exceed SCAQMD thresholds. **Mitigation Measure AIR-2** would require the implementation of all feasible measures to reduce operational impacts associated with the proposed Project. **Mitigation Measure TRA-1** identified in **Section 4.17** would further reduce impacts; however, the emission reduction associated with some measures, including those that would reduce Project-related VMT, cannot be quantified.

While **Mitigation Measure AIR-2** would significantly reduce criteria air pollutant emissions generated during operational activities associated with the on-site improvements, there is currently not enough information to quantify emissions of specific project development that may occur under the proposed Project. Without quantification to guarantee a less than significant finding, future development projects may still exceed the SCAQMD regional significance thresholds. Therefore, operational activities would be considered **significant and unavoidable**.

Significance Determination Prior to Mitigation: Potentially Significant Impact

Regulatory Compliance Measures and Mitigation Measures: The following mitigation measures would be required for the proposed Project.

Mitigation Measure AIR-1

During construction of the on-site improvements associated with the proposed 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, except where the Project Applicant establishes to the satisfaction of the City of Menifee (City) that Tier 4 Final equipment is not available. An exemption from these requirements may be granted by the City if the City documents that equipment with the required tier is not reasonably available within Southern California and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment to the extent feasible.

Mitigation Measure AIR-2

Prior to issuance of building permits, the City of Menifee shall identify Project design details and specifications, where feasible, to document implementation and compliance with the following emission reduction measures. Implementation of the following measures is considered to be applicable, feasible, and effective in reducing criteria pollutant emissions generated by the Project:

- All Project Applicants shall consider all feasible alternatives to minimize emissions from diesel equipment (e.g., trucks, construction equipment, and generators).

- For high density and mixed-use developments, Project Applicants shall consult with the local transit agency and incorporate all appropriate and feasible transit amenities into the plans, consistent with Section 3.1.4 Bus Rail and Transit Options in the Menifee Valley Specific Plan.
- All Project Applicants shall implement walkable neighborhoods by siting parks and community centers near residential areas, consistent with Section 2 Land Use Designations and Planning Areas in the Menifee Valley Specific Plan. All Project Applicants shall incorporate fuel-efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces, boiler units, and low or zero-emitting architectural coatings. Project Applicants shall utilize only Energy Star heating, cooling, and lighting devices, and appliances, consistent with CALGreen requirements applicable at time of development applications.
- All Project Applicants shall utilize energy-efficient design features, including appropriate site orientation, use of lighter color roofing and building materials, and use of deciduous shade trees and windbreak trees to reduce fuel consumption for heating and cooling.
- All Project Applicants shall provide bicycle parking/storage facilities on site. Bicycle parking facilities should be near destination points and easy to find. At least one bicycle parking space for every 20 vehicle parking spaces should be provided.
- All Project Applicants shall install Class I or II bike lanes on arterial/collector streets, or where a suitable route exists, consistent with Figure 3-7 Bicycle Mobility Plan of the Menifee Valley Specific Plan.
- All Project Applicants shall provide building access and paths which are physically separated from street parking lot traffic and that eliminate physical barriers such as walls, berms, landscaping and slopes that impede the use of pedestrians, bicycle facilities, or public transportation vehicles.
- All Project Applicants shall provide continuous sidewalks separated from the roadway by landscaping and on-street parking where provided, consistent with Section 3.1.1, Roadway Design Standards, Section 3.2.1, Pedestrian Mobility, and Figure 3-7 Bicycle Mobility Plan of the Menifee Valley Specific Plan.

- All Project Applicants shall link cul-de-sacs and dead-end streets to encourage pedestrian and bicycle travel.
- All Project Applicants shall provide traffic reduction modifications to residential roads, such as: narrower streets, speed platforms, bulb-outs, and intersection modifications designed to reduce vehicle speeds and to encourage pedestrian and bicycle travel.
- For all parking lots, Project Applicants shall provide a parking lot design that includes clearly marked and shaded pedestrian pathways between transit facilities and building entrances.
- All Project Applicants shall provide pedestrian access between bus service and major transportation points and to destination points within the Project.
- For all high-density residential, mixed-use, business/commercial park, and commercial uses, Project Applicants shall provide a display case or kiosk displaying transportation information, such as bike route maps, bus schedules, and carpooling and car sharing in a prominent area accessible to employees, residents, or visitors.
- All Project Applicants shall design street block patterns consistent with the Menifee Valley Specific Plan and City of Menifee Standards and Ordinances.
- For all mixed-use, business/commercial park, and commercial uses, Project Applicants shall provide preferential parking spaces near the entrance of buildings for those who carpool/vanpool/rideshare and provide signage.
- All Project Applicants shall improve the thermal integrity/efficiency of buildings and reduce the thermal load with automated and timed temperature controls or occupant sensors.
- Project Applicants for manufacturing and light industrial uses that require refrigerated vehicles, shall install an adequate number of electrical service connections at loading docks for plugging in the anticipated number of refrigerated trailers to reduce idling time and emissions.
- Project Applicants for manufacturing and light industrial uses shall consider energy storage and combined heat and power in

appropriate applications to optimize renewable energy generation systems and avoid peak energy use.

- Project Applicants for manufacturing and light industrial uses with truck delivery and loading areas and truck parking spaces shall include signage as a reminder to limit idling of vehicles while parked for loading/unloading in accordance with CARB Rule 2845 (13 California Code of Regulations [CCR] Chapter 10, Section 2485).
- Project Applicants shall install 240-volt electrical outlets or Level 3 chargers in parking lots that would enable charging of neighborhood electric vehicles (NEVs) and/or battery powered vehicles.
- Project Applicants shall maximize use of solar energy including solar panels, including installing the maximum possible number of solar energy arrays on the building roofs to generate solar energy.
- Project Applicants shall maximize the planting of trees in landscaping and parking lots, consistent with the Menifee Valley Specific Plan and City of Menifee Standards and Ordinances.
- Project Applicants shall use light-colored paving and roofing materials.
- Project Applicants shall install outdoor electrical outlets to promote the use of electric lawn mowers and leaf blowers.

Mitigation Measure TRA-1

Prior to issuance of building permits/occupancy permits, each Project Applicant shall prepare a Transportation Demand Management (TDM) strategy report for review and approval by the City Traffic/Transportation Manager. The TDM strategy shall include the following project design features as identified in the Specific Plan to reduce project VMT, including but not limited to:

- Construction of 44.8 miles of sidewalks within and adjacent to the project. As each applicant submits development plans, they would include construction of these sidewalks as applicable for their development application. CAPCOA transportation measure “T-18: Provide Pedestrian Network Improvement” was deemed applicable to estimate the VMT reduction due to project pedestrian features. Based on CAPCOA estimates, the pedestrian features have a potential to reduce 6.4% of the project VMT which is the cap or maximum for the measure.

- Construction of interconnecting Class I, Class II, and Class III bike lanes throughout the interior and perimeter of the Project site, as applicable for each development application, as described in Section 3 of the draft Meniffee Valley Specific Plan (Figure 3-7). Specific Plan uses would also provide appropriate bicycle facilities (i.e., racks and lockers) as required by the City's standards and the latest California Green Building Standards (CALGreen Code 5.106.4 Bicycle Parking).
 - CAPCOA transportation measure "T-19A: Construct or Improve Bike Facility" was deemed applicable to estimate the VMT reduction due to project bicycle features. Based on CAPCOA estimates, the project bicycle design features have a potential to reduce 0.5% of the project VMT for all the bicycle facilities combined.
 - CAPCOA transportation measure "T-10: Provide End-of-Trip Bicycle Facilities", was deemed applicable to estimate the VMT reduction due to end-of-trip bike facilities. A total of 6 facilities were assumed to be included as part of the project. Based on CAPCOA estimates, the project end-of-trip bicycle facilities at all 6 locations have a combined potential to reduce 0.4% of the project VMT. The 6 locations are:
 - One facility in Planning Area 6 for the proposed school site;
 - One facility each for the Business Park uses in Planning Areas 10, 11, and 12; and
 - Two facilities in Planning Area 13 for Commercial uses (both sides of Malaga Rd).

Level of Significance After Mitigation: Significant and Unavoidable

4.3.7.3 Exposure of Sensitive Receptors

Threshold 4.3-3: Would the proposed Project expose sensitive receptors to substantial pollutant concentrations?

Sensitive receptors are defined as people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential dwelling units.

On-Site Improvements.

Localized Significance Thresholds. The SCAQMD recommends the evaluation of localized air quality impacts to sensitive receptors such as residential land uses in the immediate vicinity of

the Project site as a result of construction activities. The thresholds are based on standards established by the SCAQMD in its Localized Significance Thresholds (LST) Methodology²³ and are measured against construction and operational emissions that occur on a specific project site. These emissions are primarily generated from heavy-duty construction equipment and grading and trenching activities. However, the LSTs are applicable to projects at the project-specific level and are not applicable to programmatic documents, such as the proposed Project. Construction and operational emissions associated with future individual projects developed under the proposed Project would, however, have the potential to cause or contribute to significant localized air quality impacts to nearby residential land uses within the planning area. Localized construction impacts of future residential development could potentially exceed the LSTs, particularly for construction of areas larger than 5 acres or areas with more intense construction activities. To address this, regulatory measures (e.g., SCAQMD Rule 201 for a permit to operate, Rule 403 for fugitive dust control, Rule 1113 for architectural coatings, Rule 1403 for new source review, and CARB's Airborne Toxic Control Measures) are currently in place, and mitigation would be imposed at the project level, which may include use of special equipment.

It should be noted that the amount of emissions from a project does not necessarily correspond to the concentrations of air pollutants. A dispersion modeling analysis would be necessary to calculate health risk from Project implementation. However, since it is not possible to translate the amount of an unknown future specific project's emissions to a particular concentration, it is not possible to calculate the risk factor for a particular health effect at the time of this analysis.

Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Particulate matter can also lead to a variety of health effects in people. These include premature death of people with heart or lung disease, heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Regional emissions of criteria pollutants contribute to these known health effects. The SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals and that they are not exposed to elevated concentrations of criteria pollutants in the Basin. To achieve the health-based standards established by the USEPA, the SCAQMD prepares an AQMP that details regional programs to attain the ambient air quality standards.

Although the analysis for the proposed Project identifies that with implementation of **Mitigation Measure AIR-1** construction emissions associated with the Project would not exceed the SCAQMD's thresholds for VOCs, NO_x, CO, SO_x, PM_{2.5}, or PM₁₀ emissions and operational emissions would exceed the SCAQMD's thresholds, it should be noted that exceeding the SCAQMD's numeric regional mass daily thresholds does not necessarily correspond to significant health risk impacts to sensitive receptors. This is because the mass daily thresholds are in pounds per day emitted into the air, whereas health effects are determined based on the concentration of emissions in the air at a particular receptor (e.g., parts per million [ppm] by volume of air, or micrograms per cubic meter [$\mu\text{g}/\text{m}^3$] of air). State and federal ambient air quality standards were developed to protect the most susceptible population groups from

²³ SCAQMD. 2021. Localized Significance Thresholds. Website: <http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds> (accessed November 2022).

adverse health effects and were established in terms of parts per million or micrograms per cubic meter for the applicable emissions.

The SCAQMD acknowledges that it has only been able to correlate potential health outcomes for very large emissions sources. As part of its rulemaking activity, specifically 6,620 pounds per day (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 O₃. As identified in **Tables 4.3.F through 4.3.M** above, the proposed Project is not expected to generate 6,620 lbs/day of NO_x or 89,190 lbs/day of VOC emissions.

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

Current scientific, technological, and modeling limitations prevent the relation of expected adverse air quality impacts to likely health consequences. For this reason, this discussion explains why it is not feasible to provide such an analysis. However, individual projects would still be required to conduct a site-specific localized impact analysis that evaluates potential health impacts at a project level to immediately adjacent land uses.

Additionally, refer to the analysis provided under Threshold 4.3-2 for a discussion of potential construction and operational impacts relating to criteria air pollutants. With implementation of **Mitigation Measure AIR-1** and **Mitigation Measure AIR-2**, the potential health impacts associated with construction of the proposed Project would be less than significant. However, operational emissions would be *significant and unavoidable*.

Construction Health Risk Assessment. A construction HRA, which evaluates construction-period health risk to the surrounding off-site existing receptors was performed for the proposed on-site improvements. To estimate the potential cancer risk associated with construction of the proposed on-site improvements from equipment exhaust (including diesel particulate matter [DPM]), a dispersion model was used to translate an emission rate from the source location to a concentration at the existing receptor location of interest (i.e., a surrounding residences, schools, and worksites). Dispersion modeling varies from a simpler, more conservative screening-level analysis to a more complex and refined detailed analysis. This refined assessment was conducted using the CARB exposure methodology with the air dispersion modeling performed using the USEPA dispersion model AERMOD. The model provides a detailed estimate of exhaust concentrations based on site and source geometry, source emissions strength, distance from the source to the receptor, and meteorological data.

Table 4.3.N, below, identifies the results of the results of the analysis assuming the use of Tier 2 construction equipment, at the maximally exposed individual (MEI), which is the nearest existing sensitive receptor. Model snap shots of the sources are shown in **Appendix D**.

Table 4.3.N: Unmitigated Health Risks from Project Construction to Existing Receptors

	Carcinogenic Inhalation Health Risk in One Million	Chronic Inhalation Hazard Index	Acute Inhalation Hazard Index
Existing Residential Receptor Risk	4.15	0.008	0.000
Existing School Receptor Risk	5.87	0.012	0.000
Existing Worker Receptor Risk	0.59	0.012	0.00
SCAQMD Significance Threshold	10.0 in one million	1.0	1.0
Significant?	No	No	No

Source: LSA (January 2023).
SCAQMD = South Coast Air Quality Management District

As shown in **Table 4.3.N**, the maximum cancer risk for the existing school receptor MEI would be 5.87 in one million and the existing residential receptor MEI would be 4.15 in one million, which would both be below the SCAQMD cancer risk threshold of 10 in one million. The existing worker receptor risk would be lower at 0.59 in one million, which would also not exceed the threshold. The total chronic hazard index would be 0.012 for both the existing school receptor MEI and worker receptor MEI and 0.008 for the existing residential receptor MEI, which would be below the threshold of 1.0. In addition, the total acute hazard index would be nominal (0.000), which would also not exceed the threshold of 1.0. Therefore, construction of the proposed Project would not exceed SCAQMD thresholds and would not expose nearby existing residential receptors to substantial pollutant concentrations.

Although construction of the proposed on-site improvements would not result in a significant construction health risk impact, as demonstrated in **Threshold 4.3.7.2**, implementation of **Mitigation Measure AIR-1** would be required to ensure the Project contractors will utilize Tier 4 Final construction equipment to reduce construction criteria pollutant emissions, which would also reduce construction-related health risk impacts. As such, **Table 4.3.O** identifies the results of the analysis with implementation of **Mitigation Measure AIR-1**.

Table 4.3.O: Mitigated Health Risks from Project Construction to Existing Receptors

Location	Carcinogenic Inhalation Health Risk in One Million	Chronic Inhalation Hazard Index	Acute Inhalation Hazard Index
Existing Residential Receptor Risk	0.43	0.001	0.000
Existing School Receptor Risk	0.49	0.001	0.000
Existing Worker Receptor Risk	0.05	0.001	0.000
SCAQMD Significance Threshold	10.0 in one million	1.0	1.0
Significant?	No	No	No

Source: LSA (January 2023).
SCAQMD = South Coast Air Quality Management District

As shown in **Table 4.3.O**, the mitigated cancer risk for the existing school receptor MEI would be 0.49 in one million and the existing residential receptor MEI would be 0.43 in one million, which would both be below the SCAQMD cancer risk threshold of 10 in one million. The existing

worker receptor risk would be lower at 0.05 in one million, which would also not exceed the threshold. The total chronic hazard index would be 0.001 for the existing school receptor MEI, worker receptor MEI, and residential receptor MEI, which would be below the threshold of 1.0. In addition, the total acute hazard index would be nominal (0.000), which would also not exceed the threshold of 1.0. Therefore, construction of the proposed project would not exceed SCAQMD thresholds and would not expose nearby existing residential receptors to substantial pollutant concentrations. Impacts would be ***less than significant with mitigation incorporated***.

Operational Health Risk Assessment. As described in **Chapter 3.0**, the Project provides for the Business Park (BP) land use as represented in Planning Areas 10 and 11 consisting of 215.5 acres. The Business Park use can accommodate up to 4,360,000 square feet of development at a maximum of 0.5 Floor Area Ratio (FAR). Land uses that are expected in this planning area include a mix of light industrial, manufacturing, warehouse/storage, and e-commerce operations. Building sizes will vary and will be determined as part of future implementing development projects.

The Commercial-Business Park (C-BP) land use consists of 47.7 acres within Planning Area 12. Up to 1,150,000 square feet of development is anticipated at a maximum of 0.50 FAR. Buildings are anticipated to accommodate business park, commercial, retail, incubator, and small-scale light industrial uses. General light industrial, manufacturing, warehouse/storage, fulfillment center, and e-commerce operations are permitted except within distances specified in Specific Plan Section 4.0 to residential uses and Heritage High School. Section 4.0 of the Specific Plan specifies that no truck court accommodating diesel-fueled trucks or equipment shall operate within 250 feet of a residential property line or within 100 feet of a school property line, measured from the edge of pavement where a diesel truck or equipment could park or operate to the residential or school property line.

Various commercial and industrial processes associated with the BP and C-BP land uses (e.g., industrial, manufacturing, warehouse/storage, fulfillment center, and e-commerce) allowed under the proposed Project would be expected to release TACs. Industrial land uses have the potential to be substantial stationary sources that would require a permit from SCAQMD for emissions of TACs. Emissions of TACs would be controlled through permitting issued by SCAQMD and would be subject to further study and health risk assessment prior to the issuance of any necessary air quality permits under SCAQMD Rule 1401.

In addition to stationary/area sources of TACs, commercial and industrial operations could generate a substantial amount of diesel particulate matter emissions from off-road equipment use and truck idling. DPM accounts for approximately 84 percent of the excess cancer risk in the Basin.²⁴ New land uses that use diesel trucks, including trucks with transport refrigeration units, could generate an increase in DPM that would contribute to cancer and noncancer health risk in the Basin. Furthermore, trucks would travel on regional transportation routes throughout the Basin, contributing to near-roadway DPM concentrations. Land use projects are required to comply with AB 2588, SCAQMD Rule 1401, and CARB standards for diesel engines.

²⁴ SCAQMD. 2008. *Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES III)*. September.

To determine the potential health risk to surrounding off-site sensitive receptors and proposed future sensitive receptors associated with the proposed project, an operational HRA was conducted. This HRA has been conducted using three models: (1) EMFAC2021 for on-road vehicle emissions factors and percentages of fuel type within the overall vehicle fleet; (2) the USEPA 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 (3) CARB's HARP2 model to translate the pollutant concentrations from AERMOD into individual health risks at any sensitive receptor locations surrounding the project site.

The first step of an HRA is to characterize the project-related emissions of TACs. Truck trip generation estimates used in this analysis were based on the Project's trip generation estimates, which assume that industrial uses associated with Phase 1 would generate approximately 10,380 total average daily trips with 8,197 passenger vehicle trips, 555 two-axle truck trips, 392 three-axle truck trips, and 1,236 four-axle truck trips and industrial uses associated with Phase 2 would generate approximately 7,434 total average daily trips with 5,872 passenger vehicle trips, 396 two-axle truck trips, 280 three-axle truck trips, and 886 four-axle truck trips (refer to **Appendix K-1** for trip generation estimates). These truck trips would be a source of TAC emissions. This analysis assumes that proposed commercial and industrial projects would provide multiple loading docks; therefore, off-site queuing of trucks is not anticipated. While the TAC emissions from gasoline-powered vehicles have a small health effect compared to DPM, this HRA includes both gasoline- and diesel-powered vehicle emissions. For the diesel exhaust emissions, it is sufficient to only consider the DPM (PM₁₀ and PM_{2.5}) portions of the exhaust; all the TACs for the gasoline exhaust emissions are contained in the ROG emissions. Using speciation data from CARB, the emission rates of the TAC components are derived from the total ROG emissions. These data are included in **Appendix D**.

Project trucks would operate in two modes: stationary idling and moving on and off the site. The emissions from trucks while idling result in a much higher concentration of TACs at nearby sensitive receptors compared to the emissions from moving trucks. This is due to the dispersion of emissions that occurs with distance and with travel of the vehicle. For this HRA, the truck travel emissions were modeled as a series of volume sources along the on-site and off-site roadways. LSA assumed vehicles traveling within proposed commercial and industrial project sites would maneuver slowly, averaging approximately 5–15 miles per hour (mph), and that vehicles traveling on roadways would average 5–55 mph.

The idling emissions of trucks operating on the project site were modeled as point sources within the area sources representing the planned loading docks. EMFAC2021 was used to determine the emissions factors of idling and operating diesel trucks to determine the total emissions of DPM. While it is expected that the truck emissions rate will continue to reduce over time, an HRA only allows for a single emission rate to represent the entire 30-year exposure period. The use of emissions factors for the year 2029 was used as a conservative estimate of emissions, although the on-site improvements are not expected to be fully built out until 2031.

The carcinogenic and chronic health risks from the proposed on-site improvements are shown in **Table 4.3.P**. 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 HRA model snapshots and outputs are included in **Appendix D**.

Table 4.3.P: Unmitigated Health Risks from Project Operation to Proposed and Existing Receptors

Location	Carcinogenic Inhalation Health Risk in One Million	Chronic Inhalation Hazard Index	Acute Inhalation Hazard Index
Phase 1			
Proposed Residential Receptor Risk	11.51	0.004	0.000
Existing Residential Receptor Risk	2.17	0.000	0.000
Proposed School Receptor Risk	0.75	0.000	0.000
Existing School Receptor Risk	1.27	0.001	0.000
SCAQMD Significance Threshold	10.0 in one million	1.0	1.0
Significant?	Yes	No	No
Phase 2			
Proposed Residential Receptor Risk	6.09	0.002	0.000
Existing Residential Receptor Risk	2.02	0.001	0.000
Proposed School Receptor Risk	0.75	0.000	0.000
Existing School Receptor Risk	0.74	0.000	0.000
SCAQMD Significance Threshold	10.0 in one million	1.0	1.0
Significant?	No	No	No

Source: LSA (January 2023).
SCAQMD = South Coast Air Quality Management District

Results of the analysis indicated that the MEI inhalation cancer risk associated with the various commercial and industrial processes associated with the BP and C-BP land uses (e.g., industrial, manufacturing, warehouse/storage, fulfillment center, and e-commerce) associated with Phase 1 of the on-site improvements would be 11.51 in one million at the nearest on-site proposed residential receptor, 2.17 in one million at the nearest existing residential receptor, 0.75 in one million at the nearest proposed school receptor, and 1.27 in one million at the nearest existing school receptor. In addition, as shown in **Table 4.3.P**, the total chronic hazard index and total acute hazard index would all be below the threshold of 1.0. The maximum cancer risk of 11.50 in one million at the nearest proposed residential receptor MEI would exceed the SCAQMD cancer risk threshold of 10 in one million. Therefore, implementation of **Mitigation Measure AIR-3**, that requires heating, ventilation, and air conditioning (HVAC) systems to include controls that reduce particulates, would be required to reduce substantial pollutant concentrations during project operation to reduce TACs and particulate matter indoors to a level sufficient to achieve compliance with SCAQMD health risk thresholds.

In addition, results of the analysis indicated that the MEI inhalation cancer risk associated with the various commercial and industrial processes associated with the BP and C-BP land uses (e.g., industrial, manufacturing, warehouse/storage, fulfillment center, and e-commerce) associated

with Phase 2 of the on-site improvements would be 6.09 in one million at the nearest proposed residential receptor, 2.02 in one million at the nearest existing residential receptor, 0.75 in one million at the nearest proposed school receptor, and 0.74 in one million at the nearest existing school receptor. In addition, as shown in **Table 4.3.P**, the total chronic hazard index and total acute hazard index would all be below the threshold of 1.0.

Table 4.3.Q identifies the results of the analysis with implementation of **Mitigation Measure AIR-3**.

Table 4.3.Q: Mitigated Health Risks from Project Operation to Proposed and Existing Receptors

Location	Carcinogenic Inhalation Health Risk in One Million	Chronic Inhalation Hazard Index	Acute Inhalation Hazard Index
Phase 1			
Proposed Residential Receptor Risk	1.23	0.004	0.000
Existing Residential Receptor Risk	0.24	0.000	0.000
Proposed School Receptor Risk	0.08	0.000	0.000
Existing School Receptor Risk	0.14	0.001	0.000
SCAQMD Significance Threshold	10.0 in one million	1.0	1.0
Significant?	No	No	No
Phase 2			
Proposed Residential Receptor Risk	0.67	0.002	0.000
Existing Residential Receptor Risk	0.22	0.001	0.000
Proposed School Receptor Risk	0.08	0.000	0.000
Existing School Receptor Risk	0.08	0.000	0.000
SCAQMD Significance Threshold	10.0 in one million	1.0	1.0
Significant?	No	No	No

Source: LSA (January 2023).

SCAQMD = South Coast Air Quality Management District

As shown in **Table 4.3.Q**, with implementation of **Mitigation Measure AIR-3**, the MEI inhalation cancer risk associated with Phase 1 of the on-site improvements would be 1.23 in one million at the nearest on-site proposed residential receptor, 0.24 in one million at the nearest existing residential receptor, 0.08 in one million at the nearest proposed school receptor, and 0.14 in one million at the nearest existing school receptor, which would all be below the SCAQMD cancer risk threshold of 10 in 1 million.

In addition, as shown in **Table 4.3.Q**, with implementation of **Mitigation Measure AIR-3**, the MEI inhalation cancer risk associated with Phase 2 of the on-site improvements would be 0.67 in one million at the nearest proposed residential receptor, 0.22 in one million at the nearest existing residential receptor, 0.08 in one million at the nearest proposed school receptor, and 0.08 in one million at the nearest existing school receptor, which would all be below the SCAQMD cancer risk threshold of 10 in one million.

Therefore, with implementation of **Mitigation Measure AIR-3**, residential receptors would not be exposed to substantial pollutant concentrations associated with implementation of the on-site improvements. Impacts would be *less than significant with mitigation*.

Off-Site Improvements. The proposed Project also includes 59 acres of off-site improvement areas along Menifee Road, SR-74, Matthews Road, and Briggs Road. Construction of the off-site improvements 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 the SCAQMD Rule 403 dust control measures. In addition, construction emissions associated with the off-site improvements would be below the SCAQMD significance thresholds. Once the off-site improvements are constructed, the proposed off-site improvements would not be a significant source of long-term operational emissions. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations associated with implementation of the off-site improvements. Impacts would be *less than significant with mitigation*.

Off-Site Roadway Improvements. Implementation of the Project would also result in off-site roadway improvements to address traffic impacts in conflict with the General Plan Circulation Element policies that strive to maintain desired LOS. These roadway improvements, which include widening and additional turn lanes as required, include Matthews Road/Case Road (between McLaughlin Road and Ethanac Road), McLaughlin Road (between Matthews Road/Case Road and Menifee Road), and McCall Boulevard (between Encanto Drive and Menifee Road). Similar to the off-site improvements along Menifee Road, SR-74, Matthews Road, and Briggs Road discussed above, construction contractors would be required to implement measures to reduce or eliminate emissions by following the SCAQMD Rule 403 dust control measures. Once the off-site roadway improvements are constructed, the proposed off-site roadway improvements would not be a significant source of long-term operational emissions. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations associated with implementation of the off-site roadway improvements. Impacts would be *less than significant with mitigation*.

Significance Determination Prior to Mitigation: Potentially Significant Impact

Regulatory Compliance Measures and Mitigation Measures: The following mitigation measure would be required for the proposed Project.

Mitigation Measure AIR-3 Prior to issuance of building permits, Project Applicants/Developers shall provide plans that indicate a heating, ventilation, and air conditioning (HVAC) system with a control efficiency sufficient to result in a reduction of a minimum 89 percent of particulates of 10 microns or less, such as Minimum Efficiency Reporting Value (MERV)-13 filters or greater, for indoor air filtration systems. The ventilation system shall be certified to achieve the stated performance effectiveness from indoor areas.

Level of Significance After Mitigation: Less than Significant

4.3.7.4 Odors

Threshold 4.3-4: Would the proposed Project create objectionable odors affecting a substantial number of people?

On-Site Improvements. Growth associated with the proposed Project could generate new sources of odors and place sensitive receptors near existing sources of odors. Nuisance odors from land uses in the Basin are regulated under 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.

Industrial land uses have the potential to generate objectionable odors. Examples of odor-generating industrial projects are wastewater treatment plants, compost facilities, landfills, solid-waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. Industrial land uses associated with the proposed Project would be required to comply with SCAQMD Rule 402, which would ensure potential odors would be less than significant.

Residential, school, and commercial land uses could result in generation of odors such as exhaust from landscaping equipment. However, unlike industrial land uses, these are not considered potential generators of odor that could affect a substantial number of people. Therefore, impacts from potential odors generated from residential, school, and commercial land uses associated with the Project are considered less than significant.

During construction activities, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. Any construction-related odor emissions would be temporary and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment and unlikely to affect a substantial number of people. In addition, by the time such emissions reached any sensitive receptor sites, they would be diluted to well below any level of air quality concern. Furthermore, short-term construction-related odors are expected to cease upon the drying or hardening of the odor-producing materials. Therefore, impacts associated with construction-generated odors are considered less than significant.

While odor sources are present within the city, the odor policies enforced by the SCAQMD, including Rule 402, prohibit nuisance odors and identify enforcement measures to reduce odor impacts to nearby receptors. Development of land uses consistent with the proposed Project that would have the potential to result in nuisance odors would be required to comply with these regulations. Therefore, implementation of the proposed Project would not create objectionable odors affecting a substantial number of people, and impacts would be **less than significant**. No mitigation is required.

Off-Site Improvements. The proposed Project also includes 59 acres of off-site improvement areas along Menifee Road, SR-74, Matthews Road, and Briggs Road. During construction, the various diesel-powered vehicles and equipment in use would create localized odors. These odors would be temporary and are not likely to be noticeable for extended periods of time. Once construction is finished, the proposed off-site improvements are not expected to produce any offensive odors that would result in frequent odor complaints. Therefore, implementation of the proposed Project would not create objectionable odors affecting a substantial number of people, and impacts would be **less than significant**. No mitigation is required.

Off-Site Roadway Improvements. Implementation of the Project would also result in off-site roadway improvements to address traffic impacts in conflict with the General Plan Circulation Element policies that strive to maintain desired LOS. These roadway improvements, which include widening and additional turn lanes as required, include Matthews Road/Case Road (between McLaughlin Road and Ethanac Road), McLaughlin Road (between Matthews Road/Case Road and Menifee Road), and McCall Boulevard (between Encanto Drive and Menifee Road). Similar to the off-site improvements along Menifee Road, SR-74, Matthews Road, and Briggs Road discussed above, these off-site roadway improvements would create localized odors due to various diesel-powered vehicles and equipment in use. These odors would be temporary and are not likely to be noticeable for extended periods of time. Once construction is finished, the proposed off-site roadway improvements are not expected to produce any offensive odors that would result in frequent odor complaints. Therefore, implementation of the proposed Project would not create objectionable odors affecting a substantial number of people, and impacts would be **less than significant**. No mitigation is required.

Level of Significance Prior to Mitigation: Less Than Significant Impact

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

Level of Significance After Mitigation: Less Than Significant Impact

4.3.8 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for air quality. The cumulative study area analyzed for potential air quality impacts is the Basin. Each project in the Basin is required to comply with SCAQMD rules and regulations and is subject to independent review.

The Basin is currently designated as a nonattainment area for the federal O₃ standard and PM_{2.5} standard and as a nonattainment area for the State O₃, PM₁₀, and PM_{2.5} standard. Thus, the Basin has not met the federal and State standards for these air pollutants. Future development that may occur with implementation of the Project would contribute criteria pollutants to the area during Project construction and operation.

Air pollution is inherently a cumulative type of impact measured across an air basin. The discussion under Threshold 4.3-2, above, includes an analysis of the proposed Project's contribution to

cumulative air impacts. Since the combination, number, and size of projects that could be under construction at any one time are unknown, even with implementation of **Mitigation Measure AIR-1**, the proposed Project would result in significant cumulative construction emissions from criteria pollutants. Additionally, even with implementation of **Mitigation Measure AIR-2**, operational impacts from criteria pollutant emissions would exceed SCAQMD thresholds, which could hinder the attainment of air quality standards. With implementation of **Mitigation Measure AIR-1**, construction of the proposed project would not exceed SCAQMD thresholds and would not expose nearby existing residential receptors to substantial pollutant concentrations. In addition, with implementation of **Mitigation Measure AIR-2, which** requires HVAC systems to include controls that reduce particulates, would reduce substantial pollutant concentrations during project operation to reduce TACs and particulate matter indoors to a level sufficient to achieve compliance with SCAQMD health risk threshold. However, cumulative growth within the city could result in potential TAC health risks exceeding 10 in one million and could cumulatively contribute to elevated health risks in the Basin. Therefore, air quality emissions associated with future development that may occur under the proposed Project could result in cumulatively considerable impacts, even with implementation of mitigation. Impacts would be ***significant and unavoidable***.