

5. Environmental Analysis

5.2 AIR QUALITY

This section of the EIR evaluates the potential for implementation of the Proposed Project to impact air quality. This evaluation is based on the methodology recommended by the SCAQMD. The analysis focuses on air pollution from regional emissions and localized pollutant concentrations. The criteria air pollutant emissions modeling for the Proposed Project in this section is based on:

- *Air Quality and Greenhouse Gas Emissions Data*, prepared by PlaceWorks in July 2016 and updated in August 2017.

This data is included in Appendix F of this EIR.

Transportation-related air emission impacts are based on trip generation and vehicle miles traveled (VMT) data provided by Fehr & Peers (see Appendix M). Cumulative impacts related to air quality are based on the regional boundaries of the South Coast Air Basin (SoCAB).

5.2.1 Environmental Setting

5.2.1.1 REGULATORY SETTING

The Project Site, the SSPS Site, and the Vignes Lot are within the Los Angeles County portion of the SoCAB. Land use is subject to the rules and regulations imposed by SCAQMD, California ambient air quality standards (AAQS) adopted by CARB, and National AAQS adopted by the United States Environmental Protection Agency (EPA). Air pollutants for which the state and federal government have identified AAQS are known as criteria air pollutants. In addition to criteria air pollutants, both the state and federal government regulate the release of toxic air contaminants (TACs). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the Proposed Project are summarized below.

Federal and State Laws

Ambient Air Quality Standards

The Clean Air Act (CAA) was passed in 1963 by the U.S. Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

The National and California AAQS are the levels of air pollutants that provide a margin of safety in the protection of the public health and welfare. They are designed to protect “sensitive receptors” most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already

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weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 5.2-1, *Ambient Air Quality Standards for Criteria Pollutants*. These pollutants are ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), and lead (Pb). 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.

Table 5.2-1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard ¹	Federal Primary Standard ²	Major Pollutant Sources
Ozone (O ₃) ³	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	
Respirable Coarse Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	20 µg/m ³	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m ³	150 µg/m ³	
Respirable Fine Particulate Matter (PM _{2.5}) ⁴	Annual Arithmetic Mean	12 µg/m ³	12 µg/m ³	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m ³	
Lead (Pb)	30-Day Average	1.5 µg/m ³	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m ³	
	Rolling 3-Month Average	*	0.15 µg/m ³	

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Table 5.2-1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard ¹	Federal Primary Standard ²	Major Pollutant Sources
Sulfates (SO ₄) ⁵	24 hours	25 µg/m ³	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H ₂ S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hour	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Source: CARB 2016a.

Notes: ppm: parts per million; µg/m³: micrograms per cubic meter

* Standard has not been established for this pollutant/duration by this entity.

¹ California standards for O₃, CO (except 8-hour Lake Tahoe), SO₂ (1 and 24 hour), NO₂, 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 O₃, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O₃ standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three 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 three years, are equal to or less than the standard.

³ On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

⁴ 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.

⁵ On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. 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.

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards

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- Title 24, Part 6, CCR: Building and Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code

Tanner Air Toxics Act and Air Toxics Hots Information and Assessment Act

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California legislature enacted a program to identify the health effects of TACs and reduce exposure to them. The California Health and Safety Code defines a TAC as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health” (17 CCR § 93000). A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 U.S. Code § 7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency, acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics “Hot Spot” Information and Assessment Act of 1987). The Tanner Air Toxics Act set up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an “airborne toxics control measure” for sources that emit that TAC. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate “toxics best available control technology” to minimize emissions. To date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High-priority facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

CARB has promulgated the following specific rules to limit TAC emissions:

- **13 CCR Chapter 10, Section 2485**, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- **13 CCR Chapter 10, Section 2480**, Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- **13 CCR Section 2477 and Article 8**, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

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Air Pollutants of Concern

Criteria Air Pollutants

The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_x), sulfur dioxide (SO₂), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), and lead (Pb) are primary air pollutants. Of these, CO, SO₂, NO₂, PM₁₀, and PM_{2.5} are “criteria air pollutants,” which means that AAQS have been established for them. VOC and NO_x are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O₃) and nitrogen dioxide (NO₂) are the principal secondary pollutants.

A description of each of the primary and secondary criteria air pollutants and its known health effects is presented below.

Carbon Monoxide is a colorless, odorless gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (SCAQMD 2005; USEPA 2017a). The SoCAB is designated under the California and National AAQS as being in attainment of CO criteria levels (CARB 2016b).

Volatile Organic Compounds are composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of VOCs. Other sources include evaporative emissions from paints and solvents, asphalt paving, and household consumer products such as aerosols (SCAQMD 2005). There are no AAQS for VOCs. However, because they contribute to the formation of O₃, SCAQMD has established a significance threshold.

Nitrogen Oxides are a by-product of fuel combustion and contribute to the formation of ground-level O₃, PM₁₀, and PM_{2.5}. The two major forms of NO_x are nitric oxide (NO) and nitrogen dioxide (NO₂). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The principal form of NO_x produced by combustion is NO, but NO reacts quickly with oxygen to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. NO₂ is an acute irritant and more injurious than NO in equal concentrations. At atmospheric concentrations, however, NO₂ is only potentially irritating. NO₂ absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO₂ exposure concentrations near roadways are of particular concern for susceptible individuals, including asthmatics, children, and the elderly. Current scientific evidence links short-term NO₂ exposures, ranging from 30 minutes to 24 hours, with adverse respiratory effects, including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. Also, studies show a connection between elevated short-term NO₂ concentrations and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma (SCAQMD 2005; USEPA

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2017a). The SoCAB is designated an attainment area for NO₂ under the National and California AAQS (CARB 2016b).

Sulfur Dioxide is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and chemical processes at plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO₂. When sulfur dioxide forms sulfates (SO₄) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_x). Thus, SO₂ is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO₂ may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to SO₂, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects, including bronchoconstriction and increased asthma symptoms. These effects are particularly adverse for asthmatics at elevated ventilation rates (e.g., while exercising or playing.) At lower concentrations and when combined with particulates, SO₂ may do greater harm by injuring lung tissue. Studies also show a connection between short-term exposure and increased visits to emergency facilities and hospital admissions for respiratory illnesses, particularly in at-risk populations such as children, the elderly, and asthmatics (SCAQMD 2005; USEPA 2017a). The SoCAB is designated attainment under the California and National AAQS (CARB 2016b).

Suspended Particulate Matter consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM₁₀, include particulate matter with an aerodynamic diameter of 10 microns or less (i.e., ≤10 millionths of a meter or 0.0004 inch). Inhalable fine particles, or PM_{2.5}, have an aerodynamic diameter of 2.5 microns or less (i.e., ≤2.5 millionths of a meter or 0.0001 inch). Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. Both PM₁₀ and PM_{2.5} may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. The EPA's scientific review concluded that PM_{2.5}, which penetrates deeply into the lungs, is more likely than PM₁₀ to contribute to health effects and at far lower concentrations. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing) (SCAQMD 2005). There has been emerging evidence that ultrafine particulates, which are even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.000004 inch), have human health implications, because their toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (SCAQMD 2013). However, the EPA or CARB has yet to adopt AAQS to regulate these particulates. Diesel particulate matter is classified by CARB as a carcinogen (CARB 1998). Particulate matter can also cause environmental effects such as visibility impairment,¹ environmental damage,² and aesthetic

¹ PM_{2.5} is the main cause of reduced visibility (haze) in parts of the United States.

² Particulate matter can be carried over long distances by wind and then settle on ground or water, making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; and affecting the diversity of ecosystems.

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damage³ (SCAQMD 2005; USEPA 2017a). The SoCAB is a nonattainment area for PM_{2.5} under California and National AAQS, classified as an attainment area for PM₁₀ under the National AAQS, and a nonattainment area for PM₁₀ under the California AAQS (CARB 2016b).

Ozone is commonly referred to as “smog” and is a gas that is formed when VOCs and NO_x, both by-products of internal combustion engine exhaust, undergo photochemical reactions in sunlight. O₃ is a secondary criteria air pollutant. O₃ concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for its formation. O₃ poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O₃ can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O₃ also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O₃ also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O₃ harms sensitive vegetation during the growing season (SCAQMD 2005; USEPA 2017a). The SoCAB is designated extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2016b).

Lead is a metal found naturally in the environment as well as in manufactured products. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The effects of lead most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ (SCAMQD 2005; USEPA 2017a). The major sources of lead emissions have historically been mobile and industrial sources. As a result of the EPA’s regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. However, in 2008 the EPA and CARB adopted more strict lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.⁴ As a result of these violations, the Los Angeles County portion of the SoCAB is designated as nonattainment under the National AAQS for lead (SCAQMD 2012; CARB 2016b). Because emissions of lead are found only in projects that are permitted by SCAQMD, lead is not a pollutant of concern for the Proposed Project.

³ Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.

⁴ Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the SoCAB, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa Fe Springs; and Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 showed that the Trojan Battery Company and Exide Technologies exceed the federal standards (SCAQMD 2012).

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Toxic Air Contaminants

By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

Diesel Particulate Matter

In 1998, CARB identified diesel particulate matter as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs.

Air Quality Management Planning

SCAQMD is the agency responsible for improving air quality in the SoCAB and assuring that the National and California AAQS are attained and maintained. SCAQMD is responsible for preparing the AQMP for the SoCAB in coordination with SCAG. Since 1979, a number of AQMPs have been prepared.

2016 AQMP

On March 3, 2017, SCAQMD adopted the 2016 AQMP, which serves as an update to the 2012 AQMP. The 2016 AQMP addresses strategies and measures to attain the 2008 federal 8-hour ozone standard by 2031, the 2012 federal annual PM_{2.5} standard by 2025, the 2006 federal 24-hour PM_{2.5} standard by 2019, the 1997 federal 8-hour ozone standard by 2023, and the 1979 federal 1-hour ozone standard by year 2022. It is projected that total NO_x emissions in the SoCAB would need to be reduced to 150 tons per day (tpd) by year 2023 and to 100 tpd in year 2031 to meet the 1997 and 2008 federal 8-hour ozone standards. The strategy to meet the 1997 federal 8-hour ozone standard would also lead to attaining the 1979 federal 1-hour ozone standard by year 2022 (SCAQMD 2017), which requires reducing NO_x emissions in the SoCAB to 250 tpd. Reducing NO_x emissions would also reduce PM_{2.5} concentrations within the SoCAB. However, as the goal is to meet the 2012 federal annual PM_{2.5} standard no later than year 2025, SCAQMD is seeking to reclassify the SoCAB from “moderate” to “serious” nonattainment under this federal standard. A “moderate” nonattainment would require meeting the 2012 federal standard by no later than 2021. Overall, the 2016 AQMP is composed of stationary and mobile-source emission reductions from regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile-source strategies, and reductions from federal sources such as aircrafts, locomotives, and ocean-going vessels. Strategies outlined in the 2016 AQMP would be implemented in collaboration between CARB and the EPA (SCAQMD 2017).

Lead Implementation Plan

In 2008, the EPA designated the Los Angeles County portion of the SoCAB as a nonattainment area under the federal lead classification due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in the City of Vernon and the City of

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Industry that exceeded the new standard in the 2007-to-2009 period. The remainder of the SoCAB, outside the Los Angeles County nonattainment area, remains in attainment of the new 2008 lead standard. On May 24, 2012, CARB approved the State Implementation Plan (SIP) revision for the federal lead standard, which the EPA revised in 2008. Lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011. The SIP revision was submitted to the EPA for approval.

SCAQMD Rules and Regulations

All projects are subject to SCAQMD rules and regulations in effect at the time of activity, including the following:

- **Rule 401, Visible Emissions.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in visible emissions. Specifically, the rule prohibits the discharge of any air contaminant into the atmosphere by a person from any single source of emission for a period or periods aggregating more than three minutes in any one hour that is as dark or darker in shade than that designated No. 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines.
- **Rule 402, Nuisance.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in a public nuisance. Specifically, this rule prohibits any person from discharging quantities of air contaminants or other material from any source such that it would result in an injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public. Additionally, the discharge of air contaminants would also be prohibited where it would endanger the comfort, repose, health, or safety of any number of persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- **Rule 403, Fugitive Dust.** This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust, and requires best available control measures to be applied to earth moving and grading activities.
- **Rule 1113, Architectural Coatings.** This rule serves to limit the VOC content of architectural coatings used on projects in the SCAQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects in the SCAQMD must comply with the current VOC standards set in this rule.

5.2.1.2 EXISTING CONDITIONS

South Coast Air Basin

The SoCAB includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. The SoCAB is in a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean in the southwest, with high mountains forming the remainder of the

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perimeter. The general region lies in the semipermanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds (SCAQMD 2005).

Temperature and Precipitation

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s, measured in 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 nearest to the Project Site, the SSPS Site, and the Vignes Lot is the Los Angeles Downtown University of California (USC) Campus Monitoring Station (ID No. 045115). The average low is reported at 48.3°F in January, and the average high is 83.1°F in August (WRCC 2016).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from November through April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains. Rainfall averages 14.77 inches per year in the Project Area (WRCC 2016).

Humidity

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent. Low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SoCAB (SCAQMD 2005).

Wind

Wind patterns across the south coastal region are characterized by westerly or southwesterly onshore winds during the day and by easterly or northeasterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season.

Between periods of wind, air stagnation may occur, both in the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall months, surface high-pressure systems over the SoCAB, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the transport and diffusion of pollutants by inhibiting their eastward transport. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions (SCAQMD 2005).

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Inversions

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed. These are the marine/subsidence inversion and the radiation inversion. A marine/subsidence inversion can typically occur when cool onshore winds undercut a dome of warm sinking air, which creates a layer of warm air that traps pollution below. Radiation inversions are surface-based and can typically be formed during the nighttime when the ground cools, resulting in warmer air further away from the surface. The combination of winds and inversions are critical determinants in leading to the highly degraded air quality in summer and the generally good air quality in the winter in the Project Area (SCAQMD 2005).

SoCAB Nonattainment Designations

The AQMP provides the framework for air quality basins to achieve attainment of the California and National AAQS through the SIP. Areas are classified as attainment or nonattainment areas for particular pollutants depending on whether they meet the ambient air quality standards. Severity classifications for ozone nonattainment are marginal, moderate, serious, severe, and extreme. The attainment status for the SoCAB is shown in Table 5.2-2, *Attainment Status of Criteria Pollutants in the South Coast Air Basin*. The SoCAB is designated in attainment of the California AAQS for sulfates and designated a nonattainment area for lead (Los Angeles County only) under the National AAQS.

Table 5.2-2 Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
Ozone – 1-hour	Extreme Nonattainment	No Federal Standard
Ozone – 8-hour	Extreme Nonattainment	Extreme Nonattainment
PM ₁₀	Serious Nonattainment	Attainment
PM _{2.5}	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO ₂	Attainment	Attainment/Maintenance ¹
SO ₂	Attainment	Attainment
Lead	Attainment	Nonattainment (Los Angeles County only) ²
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB 2016b.

¹ A maintenance area is an area that was designated as nonattainment and has been re-designated in 40 CFR part 81 to attainment, meeting the provisions of section 107(d)(3) of the CAA and has a maintenance plan approved under Section 175A of the CAA (USEPA 2017b).

² In 2010, the Los Angeles portion of the SoCAB was designated nonattainment for lead under the new 2008 federal AAQS as a result of large industrial emitters. Remaining areas within the SoCAB are unclassified.

Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of the Project Area (i.e., Project Site, SSPS Site, and Vignes Lot) are best documented by measurements made by SCAQMD. The Project Site, SSPS Site, and Vignes Lot are in Source Receptor Area (SRA) 1 – Central Los Angeles County. The air quality monitoring station closest to the Proposed Project is the Los Angeles-North Main Street

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Monitoring Station. The most current five years of data monitored at this monitoring station are included in Table 5.2-3, *Ambient Air Quality Monitoring Summary*. The data show that the area regularly exceeds the state and federal O₃ standards, the state PM₁₀ standard, and the federal PM_{2.5} standard. The CO, NO₂, and SO₂ standards have not been exceeded in the last five years in the Project vicinity.

Table 5.2-3 Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Threshold Were Exceeded and Maximum Levels during Such Violations ¹				
	2012	2013	2014	2015	2016
Ozone (O₃)					
State 1-Hour ≥ 0.09 ppm	0	0	3	2	2
State 8-hour ≥ 0.07 ppm	2	0	7	6	4
Federal 8-Hour > 0.075 ppm	1	0	2	0	1
Max. 1-Hour Conc. (ppm)	0.093	0.081	0.113	0.104	0.103
Max. 8-Hour Conc. (ppm)	0.077	0.070	0.095	0.074	0.078
Carbon Monoxide (CO)					
State 8-Hour > 9.0 ppm	0	*	*	*	*
Federal 8-Hour ≥ 9.0 ppm	0	*	*	*	*
Max. 8-Hour Conc. (ppm)	1.91	*	*	*	*
Nitrogen Dioxide (NO₂)					
State 1-Hour ≥ 0.18 ppm	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.0773	0.0903	0.0821	0.0791	0.0647
Sulfur Dioxide (SO₂)					
State 1-Hour ≥ 0.04 ppm	0	0	*	*	*
Max. 1-Hour Conc. (ppm)	0.002	0.002	*	*	*
Coarse Particulates (PM₁₀)					
State 24-Hour > 50 µg/m ³	43	20	38	30	21
Federal 24-Hour > 150 µg/m ³	0	0	0	0	0
Max. 24-Hour Conc. (µg/m ³)	90.9	74.5	86.8	88.5	74.6
Fine Particulates (PM_{2.5})					
Federal 24-Hour > 35 µg/m ³	4	1	6	7	2
Max. 24-Hour Conc. (µg/m ³)	79.0	43.1	65.0	70.3	49.4

Source: CARB 2017. Data obtained from the Los Angeles-North Main Street Monitoring Station.

Notes: ppm = parts per million; ppb = parts per billion; µg/m³ = micrograms per cubic meter; * Data not available.

SoCAB Multiple Air Toxics Exposure Study IV

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on ambient concentrations of TACs and the potential health risks from air toxics in the SoCAB. In 2008, SCAQMD conducted its third update to the MATES study (MATES III) based on the Office of Environmental Health Hazards Assessment (OEHHA) 2003 Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (2003 HRA Guidance Manual). The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,200 in a million. The largest contributor to this risk was diesel exhaust, which accounted for 84 percent of the cancer risk (SCAQMD 2008a).

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SCAQMD recently released the fourth update (MATES IV), which was also based on OEHHA's 2003 HRA Guidance Manual. The results showed that the overall monitored risk for excess cancer from a lifetime exposure to ambient levels of air toxics decreased to approximately 418 in one million. Compared to the 2008 MATES III, monitored excess cancer risks decreased by approximately 65 percent. Approximately 90 percent of the risk is attributed to mobile sources, and 10 percent is attributed to TACs from stationary sources, such as refineries, metal processing facilities, gas stations, and chrome plating facilities. The largest contributor to this risk was diesel exhaust, which accounted for approximately 68 percent of the air toxics risk. Compared to MATES III, MATES IV found substantial improvement in air quality and associated decrease in air toxics exposure. As a result, the estimated basinwide population-weighted risk decreased by approximately 57 percent since MATES III (SCAQMD 2015a).

OEHHA updated the guidelines for estimating cancer risks on March 6, 2015 (OEHHA 2015). The new method uses higher estimates of cancer potency during early life exposures, which result in a higher calculation of risk. There are also differences in the assumptions on breathing rates and length of residential exposures. When combined together, SCAQMD estimates that risks for a given inhalation exposure level will be about 2.7 times higher than the risk identified in MATES IV using the 2015 OEHHA guidance methodology (e.g., 2.7 times higher than 418 in one million overall excess cancer risk) (SCAQMD 2015a).

Existing Emissions

The Project Site currently generates air pollutant emissions from operation of the existing MCJ and administrative facilities, including on-road transportation emissions (workers, inmate transfer buses, visitors, and deliveries), energy sources (natural gas), area sources (e.g., consumer products, aerosols, landscape fuel), and stationary equipment (periodic testing of emergency generators). An estimate of the existing emissions generated at the Project Site is in Table 5.2-4, *Existing Men's Central Jail Maximum Daily Regional Criteria Air Pollutant Emissions*.

Table 5.2-4 Existing Men's Central Jail Maximum Daily Regional Criteria Air Pollutant Emissions

Source of Existing Emissions	Criteria Air Pollutants (lbs/Day)					
	ROG (VOC)	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Area	26	<1	<1	<1	<1	<1
Energy	5	43	36	<1	3	3
Mobile	341	238	3,040	3	223	60
Stationary ¹	<1	1	1	<1	<1	<1
Total	372	282	3,077	3	226	64

Notes: CalEEMod, Version 2016.3.1. Highest winter or summer emissions are reported; Totals may not total to 100 percent due to rounding.

¹ Assumes two emergency generators for purposes of this analysis.

Spring Street Parking Structure Site (Option 1)

The SSPS Site is currently a paved parking lot with security lighting. While vehicles utilize the SSPS Site for parking, parking lots and structures are not considered to generate the actual vehicle trips (i.e., the parking lot/structure is not tied to the primary purpose of the trip). This site does not generate criteria air pollutant emissions.

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Vignes Lot (Option 2)

The proposed Vignes Lot is currently vacant with lighting and does not generate criteria air pollutant emissions.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, because the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public.

The nearest sensitive receptors to the Project Site, which encompasses the MCJ, are the William Mead Homes. Other nearby sensitive receptors to the Project Site include the Mozaic Union Station Apartments. Additionally, for air quality purposes, the inmates at the MCJ and TTCF are considered sensitive receptors because they are on-site for 24 hours a day.

Spring Street Parking Structure Site (Option 1)

The nearest sensitive receptors to the SSPS Site include the Metro at Chinatown Senior Lofts to the north at Alpine Street and Alameda Street.

Vignes Lot (Option 2)

The nearest sensitive receptors to the Vignes Lot are the residences at the Metro at Chinatown Senior Lofts.

5.2.2 Thresholds of Significance

According to Appendix G of the California Environmental Quality Act (CEQA) Guidelines, a project would normally have a significant effect on the environment if the project would:

- AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.
- AQ-2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

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- AQ-3 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- AQ-4 Expose sensitive receptors to substantial pollutant concentrations.
- AQ-5 Create objectionable odors affecting a substantial number of people.

The analysis of the Proposed Project’s air quality impacts follows the guidance and methodologies recommended in SCAQMD’s *CEQA Air Quality Handbook* and the significance thresholds on SCAQMD’s website (SCAQMD 1993).⁵ CEQA allows the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. SCAQMD has established regional thresholds of significance. In addition to the regional thresholds, projects are subject to the AAQS. These are addressed through an analysis of localized CO impacts and localized significance thresholds (LSTs).

SCAQMD Regional Significance Thresholds

SCAQMD has adopted regional construction and operational emissions thresholds to determine a project’s cumulative impact on air quality in the SoCAB. Table 5.2-5, *SCAQMD Regional (Cumulative) Significance Thresholds*, lists thresholds that are applicable for all projects uniformly regardless of size or scope. There is growing evidence that although ultrafine particulates contribute a very small portion of the overall atmospheric mass concentration, they represent a greater proportion of the health risk from PM. However, the EPA or CARB have not yet adopted AAQS to regulate ultrafine particulates; therefore, SCAQMD has not developed thresholds for them.

Table 5.2-5 SCAQMD Regional (Cumulative) Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
Reactive Organic Gases (ROGs)/ Volatile Organic Compounds (VOCs)	75 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Nitrogen Oxides (NO _x)	100 lbs/day	55 lbs/day
Sulfur Oxides (SO _x)	150 lbs/day	150 lbs/day
Particulates (PM ₁₀)	150 lbs/day	150 lbs/day
Particulates (PM _{2.5})	55 lbs/day	55 lbs/day

Source: SCAQMD 2015b.

Projects that exceed the regional significance threshold contribute to the nonattainment designation of the SoCAB. The attainment designations are based on the AAQS, which are set at levels of exposure that are

⁵ SCAQMD’s air quality significance thresholds are current as of March 2015 and can be found at: <http://www.aqmd.gov/ceqa/hdbk.html>.

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determined to not result in adverse health. Exposure to fine particulate pollution and ozone can cause myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Linked to increased cancer risk (PM_{2.5}, TACs)
- Aggravates respiratory disease (O₃, PM_{2.5})
- Increases bronchitis (O₃, PM_{2.5})
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O₃)
- Reduces resistance to infections and increases fatigue (O₃)
- Reduces lung growth in children (PM_{2.5})
- Contributes to heart disease and heart attacks (PM_{2.5})
- Contributes to premature death (O₃, PM_{2.5})
- Linked to lower birth weight in newborns (PM_{2.5}) (SCAQMD 2015c)

Exposure to fine particulates and ozone aggravates asthma attacks and can amplify other lung ailments such as emphysema and chronic obstructive pulmonary disease. Exposure to current levels of PM_{2.5} is responsible for an estimated 4,300 cardiopulmonary-related deaths per year in the SoCAB. In addition, University of Southern California scientists responsible for a landmark children's health study found that lung growth improved as air pollution declined for children aged 11 to 15 in five communities in the SoCAB (SCAQMD 2015d).

Mass emissions in Table 5.2-5 are not correlated with concentrations of air pollutants but contribute to the cumulative air quality impacts in the SoCAB. Therefore, regional emissions from a single project do not single-handedly trigger a regional health impact. SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the SoCAB. To achieve the health-based standards established by the EPA, SCAQMD prepares an AQMP that details regional programs to attain the AAQS.

CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to AAQS is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. With the turnover of older vehicles and introduction of cleaner fuels, as well as implementation of control technology on industrial facilities, CO concentrations in the SoCAB and the state have steadily declined.

Localized Significance Thresholds

SCAQMD identifies localized significance thresholds (LSTs), shown in Table 5.2-6, *Localized Significance Thresholds*. Emissions of NO₂, CO, PM₁₀, and PM_{2.5} generated at a project site (offsite mobile-source

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emissions are not included in the LST analysis) could expose sensitive receptors to substantial concentrations of criteria air pollutants. A project that generates emissions that trigger a violation of the AAQS when added to the local background concentrations would generate a significant impact.

Table 5.2-6 Localized Significance Thresholds

Air Pollutant (Relevant AAQS)	Concentration
1-Hour CO Standard (California AAQS) ¹	20 ppm
8-Hour CO Standard (California AAQS/ National AAQS)	9.0 ppm
1-Hour NO ₂ Standard (California AAQS)	0.18 ppm
Annual Average NO ₂ Standard ((California AAQS) ¹	0.03 ppm
24-Hour PM ₁₀ Standard – Construction (SCAQMD) ²	10.4 µg/m ³
24-Hour PM _{2.5} Standard – Construction (SCAQMD) ²	10.4 µg/m ³
24-Hour PM ₁₀ Standard – Operation (SCAQMD) ²	2.5 µg/m ³
24-Hour PM _{2.5} Standard – Operation (SCAQMD) ²	2.5 µg/m ³
Annual Average PM ₁₀ Standard (SCAQMD) ²	1.0 µg/m ³

Sources: SCAQMD 2015b.

ppm – parts per million; µg/m³ – micrograms per cubic meter

¹ Based on the more restrictive California AAQS for CO and NO₂.

² Threshold is based on SCAQMD Rule 403. As the SoCAB is nonattainment for PM₁₀ and PM_{2.5}, the threshold is the allowable change in concentration. Background concentration is irrelevant.

To assist lead agencies, SCAQMD developed screening-level LSTs to back-calculate the mass amount (lbs. per day) of emissions generated onsite that would trigger the levels shown in Table 5.2-6 for projects under five acres. These “screening-level” LSTs tables are the localized significance thresholds for all projects of five acres and less; however, they can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required by comparing concentrations of air pollutants generated by the Proposed Project to the localized concentrations shown in Table 5.2-6.

In accordance with SCAQMD’s LST methodology, the screening-level construction LSTs for NO₂, CO, PM₁₀, and PM_{2.5} are based on the acreage disturbed per day based on equipment use, on the ambient concentrations of the pollutants of concern within the source receptor area, and the distance to the nearest sensitive receptor.. The screening-level construction LSTs for the Project Site, SSPS Site, and Vignes Lot in SRA 1 are shown in Table 5.2-7, *SCAQMD Screening-Level Construction LSTs*, for receptors within 82 feet (25 meters).

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Table 5.2-7 SCAQMD Screening-Level Construction LSTs

Acreage Disturbed ¹	Threshold (lbs/day)			
	Nitrogen Oxides (NO _x)	Carbon Monoxide (CO)	Coarse Particulates (PM ₁₀)	Fine Particulates (PM _{2.5})
Project Site (CCTF) – Phase 1²				
SCAQMD ≤1.00-acre LST	74	680	5.00	3.00
SCAQMD 2.50-acre LST	117	1,183	9.33	5.50
SCAQMD 3.06-acre LST	127	1,336	10.83	6.06
SCAQMD 3.50-acre LST	135	1,454	11.99	6.50
Project Site (CCTF) – Phase 2²				
SCAQMD ≤1.00-acre LST	74	680	5.00	3.00
SCAQMD 2.63-acre LST	119	1,217	9.66	5.62
SCAQMD 3.00-acre LST	126	1,319	10.66	6.00
SCAQMD 3.62-acre LST	137	1,488	12.33	6.62
SCAQMD 4.50-acre LST	152	1,725	14.66	7.50
SCAQMD 5.00-acre LST	161	1,861	15.99	8.00
Spring Street Parking Structure Site³				
SCAQMD ≤1.00-acre LST	74	680	23.88	7.47
SCAQMD 1.44-acre LST	89	841	28.26	8.34
SCAQMD 1.66-acre LST	96	923	30.48	8.79
Vignes Lot⁴				
SCAQMD ≤1.00-acre LST	74	680	60.85	20.54
SCAQMD 1.44-acre LST	89	841	65.22	22.07
SCAQMD 1.66-acre LST	96	923	67.45	22.85

Source: SCAQMD 2008a; and SCAQMD 2011. Based on receptors in SRA 1.

¹ Per SCAQMD methodology, acreage disturbed represents the assumed amount of land that can be covered per day by construction equipment based on rate of ground coverage assumed for pieces of equipment, the daily hours of operation, the amount of equipment, and on the project site size.

² LSTs are based on receptors within 82 feet (25 meters).

³ LSTs are based on non-sensitive receptors within 82 feet (25 meters) and sensitive receptors at 245 feet (75 meters).

⁴ LSTs are based on non-sensitive receptors within 82 feet (25 meters) and sensitive receptors at 575 feet (175 meters).

Because the Proposed Project is not an industrial project that has the potential to emit substantial sources of stationary emissions, operational LSTs are not an air quality impact of concern associated with the Proposed Project. The operational LSTs in SRA 1 are shown in Table 5.2-8, *SCAQMD Screening-Level Operational LSTs*, and apply only to onsite, stationary, and area sources of emissions.

Table 5.2-8 SCAQMD Screening-Level Operational LSTs

Air Pollutant	Threshold (lbs/day)
	Operational ¹
Nitrogen Oxides (NO _x)	161
Carbon Monoxide (CO)	1,861
Coarse Particulates (PM ₁₀)	4.00
Fine Particulates (PM _{2.5})	2.00

Source: SCAQMD 2008a, Based on receptors in SRA 1.

¹ LSTs are based on receptors within 82 feet (25 meters) for a Project Site size of 5.0 acres for the Project Site.

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Health Risk Thresholds

Whenever a project would require use of chemical compounds that have been identified in SCAQMD Rule 1401, placed on CARB’s air toxics list pursuant to AB 1807, or placed on the EPA’s National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by the SCAQMD. Table 5.2-9, *Toxic Air Contaminants Incremental Risk Thresholds*, lists the TAC incremental risk thresholds for operation of a project. The purpose of this EIR is to identify the significant effects of the Proposed Project on the environment, not the significant effects of the environment on the Proposed Project. CEQA does not require an EIR to analyze the environmental effects of attracting development and people to an area. However, the EIR must analyze the impacts of environmental hazards on future users if the Proposed Project exacerbates an existing environmental hazard or condition. Residential, commercial, and office uses do not use substantial quantities of TACs and typically do not exacerbate existing hazards, so these thresholds are typically applied to new industrial projects. The proposed facility is not a major industrial project that would emit substantial sources of TAC, and therefore, does not have the potential to trigger the levels shown in this table.

Table 5.2-9 Toxic Air Contaminants Incremental Risk Thresholds

Maximum Incremental Cancer Risk	≥ 10 in 1 million
Cancer Burden (in areas ≥ 1 in 1 million)	> 0.5 excess cancer cases
Hazard Index (project increment)	≥ 1.0
Source: SCAQMD 2015b.	

5.2.3 Plans, Programs, and Policies

5.2.3.1 REGULATORY REQUIREMENTS

RR AIR-1 New buildings are required to achieve the current California Building Energy and Efficiency Standards (Title 24, Part 6) and California Green Building Standards Code (CALGreen) (Title 24, Part 11). The 2016 Building and Energy Efficiency Standards are effective starting on January 1, 2017. The Building Energy and Efficiency Standards and CALGreen are updated tri-annually with a goal to achieve net zero energy (NZE) for residential buildings by 2020 and non-residential buildings by 2030. The County’s green building standards which implement and exceed CALGreen are identified County Code, Title 31. The County has adopted the Voluntary Tier 1 standards for non-residential construction greater than or equal to 25,000 square feet (CALGreen Section 301.3.1, “Buildings greater than or equal to 25,000 square feet”).⁶

RR AIR-2 New buildings are required to adhere to the California Green Building Standards Code (CALGreen) requirement to provide bicycle parking for new non-residential buildings, or meet local bicycle parking ordinances, whichever is stricter (CALGreen Sections 5.106.4.1,

⁶ With the exception that high-rise non-residential construction would be subject to the mandatory (Table A4.106.5.1(3)), rather than the Tier 1 voluntary, measures for solar reflectance in Table A5.106.11.2.2.

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14.106.4.1, and 5.106.4.1.2). The Proposed Project would be required to provide anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of new visitor motorized vehicle parking spaces being added. For employees, long-term secured bicycle parking is required to be provided for 5 percent of the tenant-occupied (i.e., staff) motorized vehicle parking spaces being added. The Proposed Project is also required to designate parking for low-emitting, fuel-efficient, and carpool/vanpool spaces identified in CALGreen. As the County's Green Building Ordinance requires compliance with the Tier 1 voluntary measures in section A5.601.2.4, the Proposed Project will be required to provide low-emitting, fuel-efficient, and carpool/vanpool spaces for 10 percent of the total parking capacity.

- RR AIR-3 The Proposed Project will include an Employee Commute Reduction Plan (ECRP), commonly known as the Rideshare Plan, in accordance with Los Angeles County Code Chapter 5.9, Vehicle Trip Reduction. The ECRP will specify the measures to be implemented at the CCTF to achieve the target average vehicle ridership performance goal for employee vehicles subject to the Ordinance.
- RR AIR-4 Shuttle bus and vendor vehicle use will be conducted in compliance with 13 California Code of Regulations (CCR) Section 2485, which requires that non-essential idling for all diesel-fueled commercial motor vehicles must not exceed 5 consecutive minutes at any location.
- RR AIR-5 Construction activities will be conducted in compliance with 13 California Code of Regulations (CCR) Section 2499, which requires that nonessential idling of construction equipment is restricted to five minutes or less.
- RR AIR-6 Construction activities will be conducted in compliance with any applicable South Coast Air Quality Management District (SCAQMD) rules and regulations, including but not limited to the following:
- Rule 403, Fugitive Dust, for controlling fugitive dust and avoiding nuisance.
 - Rule 402, Nuisance, which states that a Project 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.”
 - Rule 1113, which limits the volatile organic compound content of architectural coatings.
 - Rules 201, 203 and 219, which regulate permits for installation and use of equipment that may generate air contaminants, such of commercial kitchen equipment and emergency generators.

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- RR AIR-7 Construction activities must comply with the standard County specifications for best management practices (BMPs) for construction activities. These BMPs may include, but are not limited to:
- Eroded sediments and other pollutants must be retained on site and may not be transported from the site via sheetflow, swales, area drains, natural drainage courses or wind.
 - Stockpiles of earth and other construction related materials must be protected from being transported from the site by the forces of wind or water.
 - Fuels, oils, solvents and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of in a proper manner. Spills may not be washed into the drainage system.
 - Excess or waste concrete may not be washed into the public way or any other drainage system. Provisions shall be made to retain concrete waste on sites until they can be disposed of as solid waste.
 - Trash and construction related solid wastes must be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind.
 - Sediments and other materials may not be tracked from the site by vehicle traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. Accidental depositions must be swept up immediately and may not be washed down by rain or other means.
 - Any slopes with disturbed soils or denuded of vegetation must be stabilized so as to inhibit erosion by wind and water.
- RR AIR-8 The County's Energy and Environmental Policy was adopted in 2016 requiring County buildings to achieve a minimum of U.S. Green Building Council's Leadership in Energy Efficiency and Design (LEED) "Gold" certification, exceeding the Executive Order B-18-12 for state buildings larger than 10,000 square feet to achieve the LEED "Silver" certification.

5.2.4 Environmental Impacts

Methodology

SCAQMD has published guidelines that are intended to provide local governments with guidance for analyzing and mitigating air quality impacts and that were used in this analysis (SCAQMD 1993; SCAQMD 2008b; SCAQMD 2015b; SCAQMD 2016). Industrial sources of emissions that require a permit from SCAQMD (permitted sources) are not included in the emissions forecast because they have separate emission

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reduction requirements. Modeling of criteria air pollutants was conducted using the California Emissions Estimator Model (CalEEMod), version 2016.3.12016.3.1 (see Appendix F to the EIR).

Because regional air quality impacts are cumulative, the impact assessment has been conducted for Option 1 (the Project Site and the SSPS Site combined) and Option 2 (the Project Site and the Vignes Lot combined). Separate air quality impact analyses for the Project Site and each of the two off-site parking options were not conducted.

Construction Phase

Option 1

Construction emissions modeling is based on the construction schedule and phasing provided by the County for the Project Site and the SSPS Site. The Proposed Project would be constructed in several Phases: SSPS Site, Phase 1 Project Site, and Phase 2 Project Site. Because preliminary information on the type and number of equipment is not available at this preliminary planning stage, the construction equipment mix was generated based on the CalEEMod defaults, which are based on construction surveys conducted by SCAQMD. Where necessary, the CalEEMod defaults were increased, as noted in Appendix F, to reflect the Project Site conditions. Modeling also includes up to 600,728 square feet of building demolition in Phase 1 and 1,191,641 square feet of building demolition in Phase 2. The SSPS Site would also require soil export associated with the subterranean parking level, which is estimated at 26,781 cubic yards during Phase 1. Modeling also assumes the potential need for soil export associated with the potential remediation of soils at the Project Site. However, based on the latest hazardous soils remediation plan, no soil export is required, and therefore modeling is conservative. Based on preliminary estimates provided by AECOM, modeling includes up to 90,000 cubic yards of soil export during Phase 2 construction.

Option 2

For purposes of this analysis, it is assumed that the phasing of development, construction, and other activities for Option 2 would generally be consistent with Option 1. However, under this option, the proposed Vignes Lot would be developed in lieu of the SSPS Site. It is assumed that it would require the same construction processes as the new onsite parking lot proposed under Option 1. However, for purposes of this analysis, it is assumed that up to 28,976 cubic yards of soil would be exported. In addition, the proposed onsite parking structure planned for development during Phase 2 under Option 1 would be eliminated. While building layout and design may change under Option 2 (e.g., elimination of an on-site parking structure), for the purposes of this analysis, it is assumed that overall total new building square footage would remain unchanged from Option 1.

Operational Phase

For long-term operational impacts, air quality modeling is based on the following factors. Unless otherwise noted, the assumptions described are applicable to the Proposed Project under both Options 1 and 2.

- **On-Road Transportation.** On-road transportation sources are based on trip generation rates and VMT provided by Fehr & Peers (see Appendix M to the EIR). Additionally, under the Option 1, during

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construction at the Project Site, visitors and employees would be transported from the SSPS Site to the Project Site by a shuttle. These temporary emissions were modeled using CARB's EMFAC2014 emission rates for medium-duty gasoline trucks in the Los Angeles portion of the SoCAB.

- **Energy Use.** Natural gas use is based on data provided by the County Internal Services Department, Energy Management Division for existing metered accounts at the Project Site. Heating and cooling at the Project Site is supplemented by the County's cooling plant and heating plant, which provides co-generation of energy and related air quality and GHG emissions benefits. For the Proposed Project, natural gas demand for the proposed CCTF is based on energy estimates provided by AECOM for operation of the 2.4 million square feet of structures.
- **Area Sources.** Area and stationary sources are based on the CalEEMod defaults for use of consumer products and cleaning supplies.
- **Stationary Sources.** Because the Proposed Project would include structures over 16 stories high, modeling includes occasional testing of emergency generators. Emergency generators require periodic (e.g., monthly) testing, which would occur for an hour a month. Due to the model limitations (i.e., estimates maximum daily emissions), the model run conservatively assumes up to one hour of operation of up to two emergency generators per day for existing conditions and four emergency generators per day for the Proposed Project conditions.

The following impact analysis addresses thresholds of significance for which the Notice of Preparation disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.2-1: The Proposed Project would conflict with the applicable Air Quality Management Plan because it could 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 ambient air quality standards. [Threshold AQ-1]

Impact Analysis: The following AQMP consistency analysis is applicable for both Options 1 and 2 of the Proposed Project.

A consistency determination with the AQMP plays an important role in local agency project review by linking local planning and individual projects to the AQMP. It fulfills the CEQA goal of informing decision makers of the environmental efforts of the proposed project under consideration early enough to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to the clean air goals in the AQMP.

The two principal criteria for conformance to an AQMP are:

- **Criterion #1.** Whether the project would exceed the assumptions in the AQMP.

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- **Criterion #2.** 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 air quality standards.

Criterion #1

SCAG is SCAQMD's partner in the preparation of the AQMP, providing the latest economic and demographic forecasts and developing transportation measures. The regional emissions inventory for the SoCAB is compiled by SCAQMD using demographic projections compiled by SCAG. The regional population, housing, and employment projections developed by SCAG are based, in part, on the underlying general plan land use designations. These projections form the foundation for the emissions inventory of the AQMP. These demographic trends are incorporated into the Regional Transportation Plan/Sustainable Communities Strategy, compiled by SCAG to determine priority transportation projects and VMT within the SCAG region. Because the AQMP strategy is based on projections from local general plans, projects that are consistent with the local general plan are considered consistent with the air quality-related regional plan. Changes in population, housing, or employment growth projections have the potential to affect SCAG's demographic projections and therefore the assumptions in SCAQMD's AQMP. Additionally, only large projects typically have the potential to substantially affect the demographic forecasts in the AQMP.

CEQA Guidelines Section 15206(b) states that the lead agency shall determine that a Proposed Project is of statewide, regional, or area-wide significance if a commercial office building project employs more than 1,000 persons or encompasses more than 250,000 square feet of floor area. The Proposed Project includes 2.4 million square feet of buildings plus parking structures. While the Proposed Project represents an increase of 1.2 million square feet of structures, it would result in the creation of only 50 new additional jobs. Thus, it would not be considered regionally significant by SCAG. Therefore, the Proposed Project would not have the potential to substantially affect SCAG's demographic forecast.

Criterion #2

With respect to the second criterion, the analyses in responses to Impact 5.2-2 and 5.2-3 describe construction impacts and operational impacts of the Proposed Project relative to SCAQMD's thresholds. Both the construction and operational phase impacts during Proposed Project operation are based on SCAQMD's regional significance thresholds, which were established to determine whether a project has the potential to cumulatively contribute to the SoCAB's nonattainment designations.⁷ As identified in Impact 5.2-3, long-term impacts (including temporary overlap of construction and operational activities) would result in emissions that exceed the SCAQMD's long-term regional significance thresholds. Consequently, the Proposed Project could 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.

⁷ Direct impacts are evaluated as localized impacts of the project and are addressed under Impact 5.2-4 for temporary construction activities and Impact 5.2-5 for long-term operation.

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Conclusion

The Proposed Project under both Options 1 and 2 has the potential to conflict with the AQMP under the second criteria and impacts are considered potentially significant.

Spring Street Parking Structure Site (Option 1) and Vignes Lot (Option 2)

As indicated above, because regional air quality impacts are cumulative, the impact assessment above are applicable to the Project Site and the SSPS Site under Option 1 and the Project Site and the Vignes Lot under Option 2.

Level of Significance before Mitigation: Impact 5.2-1 would be potentially significant.

Impact 5.2-2: Construction activities associated with the Proposed Project for both Options 1 and 2 would generate a substantial increase criteria air pollutant emissions that exceed the regional threshold criteria for VOC, and therefore would cumulatively contribute to the nonattainment designations of the SoCAB. [Thresholds AQ 2 and AQ 3]

Impact Analysis: A project would normally have a significant effect on the environment if it violates any air quality standard or contributes substantially to an existing or projected air quality violation. Construction activities produce combustion emissions from various sources, such as onsite heavy-duty construction vehicles, vehicles hauling materials to and from the site, and motor vehicles transporting the construction crew. Site preparation activities produce fugitive dust emissions (PM₁₀ and PM_{2.5}) from demolition and soil-disturbing activities, such as grading and excavation. Air pollutant emissions from construction activities onsite would vary daily as construction activity levels change. The following analyzes potential regional construction-related air quality impacts associated with development of Options 1 and 2 of the Proposed Project.

Spring Street Parking Structure Site (Option 1)

For purposes of this analysis, it is assumed that the Proposed Project would be constructed in two phases. Currently, the primary location for visitor parking is provided at the Project Site. Prior to construction of Phase 1, the Proposed Project involves creation of a new, temporary parking structure at the SSPS Site, which for purposes of this analysis is assumed would take approximately one year (summer 2018 to summer 2019). Because regional air quality impacts are cumulative, this impact assessment evaluates construction at both the Project Site and the SSPS Site. Once the Spring Street parking structure is built, demolition of the existing facilities on the western portion of the Project Site (arraignment court and two-story parking structure) would commence, followed by construction of the new CCTF housing towers, correctional treatment center, and inmate-patient reception center. For purposes of this analysis, Phase 1 construction at the CCTF is assumed to take approximately 5.2 years (summer 2019 to fall 2024). Once the new facility is constructed, Phase 2 would involve demolition of the existing 1960s- and 1970s-era MCJ buildings, potential remediation, and subsequent construction of the administration and court building, bus maintenance facility, and new visitor and staff parking structure. Phase 2 construction activities are assumed to take approximately 3 years (2024 to 2027) for purposes of this analysis.

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An estimate of the maximum daily construction emission for the Proposed Project is shown in Table 5.2-10, *Maximum Daily Regional Construction Emissions – Option 1*. As shown in the table, construction activities associated with the Proposed Project would generate VOC emissions that would exceed the SCAQMD regional significance threshold. Therefore, Proposed Project-related construction activities would result in potentially significant impacts.

Table 5.2-10 Maximum Daily Regional Construction Emissions – Option 1

Construction Phase	Construction-Related Regional Emissions (pounds/day) ¹					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Spring Street Parking Structure Site						
Demolition 2018	3	33	21	<1	3	2
Site Preparation 2018	3	61	17	<1	6	3
Building Construction 2018	4	23	21	<1	3	1
Building Construction 2019	3	21	20	<1	3	1
Building Construction + Coating 2019	6	24	23	<1	3	2
Maximum Emissions Spring Street Parking Structure	6	61	23	<1	6	3
Project Site – Phase 1						
Demolition + Trenching 2019	6	60	42	<1	6	3
Demolition 2019	4	46	29	<1	5	2
Site Preparation 2020	4	43	22	<1	10	6
Foundation 2020	3	27	17	<1	4	3
CCTF Building 2020	10	82	76	<1	13	5
CCTF Building 2021	9	75	72	<1	12	5
CCTF Building 2022	8	69	69	<1	12	4
CCTF Building 2023	7	58	66	<1	12	4
Paving + Coating 2024	106	12	22	<1	2	1
Maximum Emissions Project Site Phase 1	106	82	76	<1	13	6
Project Site – Phase 2						
Demolition 2024	3	28	32	<1	4	2
Demolition 2025	3	25	31	<1	4	1
Demolition + Site Preparation 2024	8	82	73	<1	16	8
Site Preparation 2024	5	58	43	<1	13	7
Foundation 2025	3	28	27	<1	5	3
CCTF Building 2025	4	34	43	<1	5	2
CCTF Building 2026	4	34	42	<1	5	2
CCTF Building 2027	4	34	42	<1	5	2
CCTF + Parking Demo 2027	6	55	62	<1	7	3
Parking Demo + Paving + Coating 2027	44	31	39	<1	3	2
Maximum Emissions Project Site Phase 2	44	82	73	<1	16	8

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Table 5.2-10 Maximum Daily Regional Construction Emissions – Option 1

Construction Phase	Construction-Related Regional Emissions (pounds/day) ¹					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Maximum Daily Emissions – All Phases						
Maximum Daily Emissions	106	82	76	<1	16	8
SCAQMD Regional Construction Threshold	75	100	550	150	150	55
Exceeds Threshold?	Yes	No	No	No	No	No

Source: CalEEMod Version 2016.3.1.

Notes: Totals may not total to 100 percent due to rounding.

¹ Includes implementation of fugitive dust control measures required by SCAQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186-compliant sweepers. Modeling also assumes a VOC content of 100 grams per liter for exterior paints pursuant to SCAQMD Rule 1113.

Vignes Lot (Option 2)

As stated previously, for purposes of this analysis, it is assumed that construction of the Proposed Project under the Option 2 scenario would generally be the same as under Option 1 with exception to the proposed parking structure. It is assumed that the proposed Vignes Lot parking structure would be constructed during Phase 0 under the same time frame assumed for Phase 0 under Option 1 (i.e., summer 2018 to summer 2019). Additionally, it is assumed that Phases 1 and 2 would also be developed under the same time frames under Option 2 as they would be under Option 1 (i.e., summer 2019 to fall 2024 and fall 2024 to fall 2027, respectively). However, under Option 2, the onsite parking structure would not be built as it would be replaced by the proposed offsite Vignes Lot parking structure, which would serve as the primary parking structure for the Proposed Project.

An estimate of the maximum daily construction emission for the Proposed Project is shown in Table 5.2-11, *Maximum Daily Regional Construction Emissions – Option 2*. As shown in the table, similar to Option 1, construction activities associated with the Proposed Project would generate VOC emissions that would exceed the SCAQMD regional significance threshold. Therefore, Proposed Project-related construction activities would potentially result in potentially significant impacts to the regional air quality.

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Table 5.2-11 Maximum Daily Regional Construction Emissions – Option 2

Construction Phase	Construction-Related Regional Emissions (pounds/day) ¹					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Vignes Lot						
Demolition 2018	5	56	42	<1	6	3
Site Preparation 2018	3	64	18	<1	6	3
Building Construction 2018	4	29	29	<1	4	2
Building Construction 2019	4	27	27	<1	4	2
Building Construction + Coating 2019	12	29	31	<1	5	2
Maximum Emissions Spring Street Parking Structure	12	64	42	<1	6	3
Project Site – Phase 1						
Demolition + Trenching 2019	6	60	42	<1	6	3
Demolition 2019	4	46	29	<1	5	2
Site Preparation 2020	4	43	22	<1	10	6
Foundation 2020	3	27	17	<1	4	3
CCTF Building 2020	10	82	76	<1	13	5
CCTF Building 2021	9	75	72	<1	12	5
CCTF Building 2022	8	69	69	<1	12	4
CCTF Building 2023	7	58	66	<1	12	4
Paving + Coating 2024	106	12	22	<1	2	1
Maximum Emissions Project Site Phase 1	106	82	76	<1	13	6
Project Site – Phase 2						
Demolition 2024	3	28	32	<1	4	2
Demolition 2025	3	28	32	<1	7	2
Demolition + Site Preparation 2024	8	82	73	<1	16	8
Site Preparation 2024	5	58	43	<1	13	7
Foundation 2025	3	28	27	<1	5	3
CCTF Building 2025	4	34	43	<1	5	2
CCTF Building 2026	4	34	42	<1	5	2
CCTF Building 2027	4	34	42	<1	5	2
CCTF + Parking Demo 2027	6	55	62	<1	7	3
Parking Demo + Paving + Coating 2027	42	31	39	<1	3	2
Maximum Emissions Project Site Phase 2	42	82	73	<1	16	8
Maximum Daily Emissions – All Phases						
Maximum Daily Emissions	106	82	76	<1	16	8
SCAQMD Regional Construction Threshold	75	100	550	150	150	55
Exceeds Threshold?	Yes	No	No	No	No	No

Source: CalEEMod Version 2016.3.1.

Notes: Totals may not total to 100 percent due to rounding.

¹ Includes implementation of fugitive dust control measures required by SCAQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186-compliant sweepers. Modeling also assumes a VOC content of 100 grams per liter for exterior paints pursuant to SCAQMD Rule 1113.

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Level of Significance before Mitigation: Impact 5.2-2 would be potentially significant.

Impact 5.2-3: Long-term operation of the Proposed Project under both Options 1 and 2 would generate a substantial increase in criteria air pollutant emissions that exceed the threshold criteria and would cumulatively contribute to the nonattainment designations of the South Coast Air Basin. [Thresholds AQ-2 and AQ-3]

Impact Analysis: Buildout of Proposed Project would result in direct and indirect criteria air pollutant emissions from on-road transportation (workers, inmate-patient buses, visitors), energy (natural gas use), and area sources (e.g., consumer produces, landscaping equipment, emergency generator testing). The following evaluates the potential long-term regional air quality impacts associated with Options 1 and 2 of the Proposed Project.

Spring Street Parking Structure Site (Option 1)

During Phase 1 and Phase 2 construction at the Project Site, the Proposed Project would result in a temporary increase in emissions from the shuttles from the SSPS Site to the Project Site. This would occur for approximately 9 years until the new parking structure is built in Phase 2. Because regional air quality impacts are cumulative, this impact assessment evaluates operational impacts at both the Project Site and the SSPS Site.

The majority of emissions generated at the Project Site are from on-road transportation sources. Transportation sources of criteria air pollutant emission at buildout are based on the traffic impact analysis conducted by Fehr & Peers (see Appendix M of this EIR). The Proposed Project would generate a net increase of 242 weekday average daily trips ends, resulting in 6,776 additional daily VMT at Project buildout. The second highest emissions are from energy (NO_x, CO, and PM) and area sources (VOCs). While the new buildings would more than double the existing square footage of the CCTF, the Proposed Project would replace existing 1960s and 1970s era structure, which were built prior to modern building codes, with newer more energy efficient structures. The results of the CalEEMod modeling are included in Table 5.2-12, *Maximum Daily Men's Central Jail/ Consolidated Correctional Facility Operational Phase Regional Emissions – Option 1*. Implementation of RR AIR-1 through RR AIR-8 would reduce criteria air pollutant emissions from transportation and energy use.

As shown in the table, the operation phase of Proposed Project would not generate air pollutant emissions that exceed the SCAQMD regional significance thresholds. However, construction emissions could temporarily overlap with operational phase activities during Phase 2, while temporary transport of visitors and employees from the SSPS Site to the Project Site would overlap during both Phase 1 and 2. Therefore, emissions from construction activities could add to the total emissions during Phase 2. Worst-case overlap from onsite emissions is also presented in the Table 5.2-12. As identified in the table, the temporary overlap of the construction emissions with operation of Phase 2 of the Proposed Project would result in a short-term exceedance of SCAQMD's NO_x regional emissions and contribute to the Proposed Project's exceedance of VOC.

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Emissions of VOC and NO_x that exceed the SCAQMD regional threshold would cumulatively contribute to the O₃ nonattainment designation of the SoCAB. Therefore, implementation of the Proposed Project would result in a temporary significant impact because it would significantly contribute to the nonattainment designations of the SoCAB during overlap of construction and operation-phase activities. Because development of the Proposed Project would exceed the regional significance thresholds, operation of the Proposed Project could contribute to cumulative air quality impacts in the basin.

Table 5.2-12 Maximum Daily Men's Central Jail/Consolidated Correctional Facility Operational Phase Regional Emissions – Option 1

Phase	Operation-Related Regional Emissions (pounds/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Existing - 2027						
Area	26	<1	<1	<1	<1	<1
Energy	5	43	36	<1	3	3
Transportation	307	154	2,308	2	222	60
Stationary	<1	1	1	0	0	0
Total	338	198	2,345	2	225	63
Proposed Project¹						
Area	54	<1	<1	<1	<1	<1
Energy	3	29	24	0	2	2
Transportation	315	158	2,362	2	227	61
Stationary	1	2	2	<1	<1	<1
Total	372	189	2,388	2	230	63
Net Change						
Project Less Existing Area	28	<1	<1	<1	<1	<1
Project Less Existing Energy	.2	-14	-11	<1	-1	-1
Project Less Existing Transportation	7	4	54	<1	5	1
Project Less Existing Stationary	<1	1	1	<1	<1	<1
Total Net Change	34	-9	44	<1	4	<1
SCAQMD Regional Threshold	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No
Combined Construction + Shuttle Buses + Operation (Worst-Case)						
Construction	44	82	73	<1	16	8
Shuttle Bus Travel and Idling	<1	<1	2	<1	<1	<1
Combined Temporary	44	82	75	<1	17	8
Combined Temporary + Operation	78	73	119	<1	21	8
SCAQMD Regional Threshold	55	55	550	150	150	55
Exceeds Threshold?	Yes	Yes	No	No	No	No

Source: CalEEMod Version 2016.3.12016.3.1. Based on highest winter or summer emissions using 2027 emission rates. Totals may not equal 100 percent due to rounding.

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Vignes Lot (Option 2)

As described, under Option 2, the proposed Vignes Lot parking structure would serve as the primary parking structure for the CCTF. For purposes of this analysis, it is assumed that shuttle service would not be offered as a transportation service between the Vignes Lot and the Project Site. As shown in Table 5.2-13, *Maximum Daily Men's Central Jail/Consolidated Correctional Facility Operational Phase Regional Emissions – Option 2*, similar to Option 1, the Proposed Project under Option 2 would also result in exceeding the SCAQMD regional significance thresholds from the temporary overlap of construction activities anticipated during Phase 2 with daily operations. Therefore, Option 2 under Impact 5.2-4 would also result in potentially significant temporary impacts.

Table 5.2-13 Maximum Daily Men's Central Jail/Consolidated Correctional Facility Operational Phase Regional Emissions – Option 2

Phase	Operation-Related Regional Emissions (pounds/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Existing - 2027						
Area	26	<1	<1	<1	<1	<1
Energy	5	43	36	<1	3	3
Transportation	307	154	2,308	2	222	60
Stationary	<1	1	1	0	0	0
Total	338	198	2,345	2	225	63
Proposed Project¹						
Area	54	<1	<1	<1	<1	<1
Energy	3	29	24	0	2	2
Transportation	315	158	2,362	2	227	61
Stationary	1	2	2	<1	<1	<1
Total	372	189	2,388	2	230	63
Net Change						
Project Less Existing Emissions Area	28	<1	<1	<1	<1	<1
Project Less Existing Energy	-2	-14	-11	<1	-1	-1
Project Less Existing Transportation	7	4	54	<1	5	1
Project Less Existing Stationary	<1	1	1	<1	<1	<1
Total Net Change	34	-9	44	<1	4	<1
SCAQMD Regional Threshold	55	55	550	150	150	55
Significant?	No	No	No	No	No	No
Combined Construction + Operation (Worst-Case)						
Construction	42	82	73	<1	16	8
Combined Temporary	42	82	73	<1	16	8
Combined Temporary + Operation	76	73	117	<1	21	8
SCAQMD Regional Threshold	55	55	550	150	150	55
Exceeds Threshold?	Yes	Yes	No	No	No	No

Source: CalEEMod Version 2016.3.12016.3.1. Based on highest winter or summer emissions using 2027 emission rates. Totals may not equal 100 percent due to rounding.

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Level of Significance before Mitigation: Impact 5.2-3 would be potentially significant.

Impact 5.2-4: The Proposed Project could expose sensitive receptors at the William Mead Homes and inmates at the Twin Towers Correctional Facility to substantial criteria air pollutant concentrations during construction activities under Options 1 and 2. [Threshold AQ-4]

Impact Analysis: The Proposed Project could expose sensitive receptors to elevated pollutant concentrations during construction if it would cause or contribute significantly to elevated pollutant concentration levels. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects.

Construction LSTs

LSTs are based on the California AAQS, which are the most stringent AAQS that have been established to provide a margin of safety in the protection of public health and welfare. They are designated to protect sensitive receptors most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and people engaged in strenuous work or exercise. Construction LSTs are based on the size of the Project Site, distance to the nearest sensitive receptor, and SRA. Air pollutant emissions generated by construction activities are anticipated to cause increases in air pollutant concentrations during the approximately 9-year construction period. The following evaluates potential localized construction-related air quality impacts under Options 1 and 2 of the Proposed Project.

Spring Street Parking Structure Site (Option 1)

Table 5.2-14, *Localized Construction Emissions – Option 1*, shows the maximum daily construction emissions (pounds per day) generated during onsite construction activities compared with the SCAQMD's LSTs.

Table 5.2-14 Localized Construction Emissions – Option 1

Source	Pollutants (pounds per day) ^{1,2}			
	NO _x	CO	PM ₁₀	PM _{2.5}
Spring Street Parking Structure Site¹				
Demolition 2018	29	20	2.76	1.83
1.66-Acre LST	96	923	30.48	8.79
Exceeds LST?	No	No	No	No
Site Preparation 2018	21	8	3.47	2.14
1.44-Acre LST	89	842	28.26	8.34
Exceeds LST?	No	No	No	No
Building Construction 2018	17	14	1.06	1.02
Building Construction 2019	16	13	0.92	0.88
Building Construction + Coating 2019	18	15	1.04	1.01
1.00-Acre LST	74	680	23.88	7.47
Exceeds LST?	No	No	No	No

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Table 5.2-14 Localized Construction Emissions – Option 1

Source	Pollutants (pounds per day) ^{1,2}			
	NO _x	CO	PM ₁₀	PM _{2.5}
Project Site – Phase 1²				
Demolition + Trenching 2019	54	40	4.92	3.10
Demolition 2019	40	26	4.04	2.25
Paving + Coating 2024	11	16	0.53	0.49
1.00-Acre LST	74	680	5.00	3.00
Exceeds LST?	No	No	No	Yes
Site Preparation 2020	42	22	9.92	6.27
3.50-Acre LST	135	1,454	11.99	6.50
Exceeds LST?	No	No	No	No
Foundation 2020	26	16	4.07	2.61
2.50-Acre LST	117	1,183	9.33	5.50
Exceeds LST?	No	No	No	No
CCTF Building 2020	39	34	2.23	2.10
CCTF Building 2021	35	33	1.92	1.80
CCTF Building 2022	31	33	1.62	1.52
CCTF Building 2023	29	32	1.40	1.32
3.06-Acre LST	127	1,336	10.83	6.06
Exceeds LST?	No	No	No	No
Project Site – Phase 2²				
Demolition 2024	24	30	3.45	1.40
Demolition 2025	21	29	3.29	1.23
Parking Demo + Paving + Coating 2027	29	36	2.29	1.37
1.00-Acre LST	74	680	5.00	3.00
Exceeds LST?	No	No	No	No
Demolition + Site Preparation 2025	61	64	13.67	7.15
5.00-Acre LST	161	1,861	15.99	8.00
Exceeds LST?	No	No	No	No
Site Preparation 2025	40	35	10.34	5.91
4.50-Acre LST	152	1,725	14.66	7.50
Exceeds LST?	No	No	No	No
Foundation 2025	28	26	4.84	2.58
3.00-Acre LST	126	1,319	10.66	6.00
Exceeds LST?	No	No	No	No
CCTF Building 2025	25	32	1.06	0.99
CCTF Building 2026	25	32	1.06	0.99
2.63-Acre LST	119	1,217	9.66	5.62
Exceeds LST?	No	No	No	No

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Table 5.2-14 Localized Construction Emissions – Option 1

Source	Pollutants (pounds per day) ^{1,2}			
	NO _x	CO	PM ₁₀	PM _{2.5}
CCTF + Parking Demo 2027	44	52	2.87	1.93
3.62-Acre LST	137	1,488	12.33	6.62
Exceeds LST?	No	No	No	No

Source: CalEEMod Version 2016.3.1., SCAQMD 2008b; and SCAQMD 2011.

In accordance with SCAQMD methodology, only onsite stationary sources and mobile equipment occurring on the Project Site are included in the analysis.

¹ LSTs are based on non-sensitive receptors within 82 feet (25 meters) and sensitive receptors at 245 feet (75 meters).

² LSTs are based on receptors within 82 feet (25 meters).

The SSPS would be constructed as Phase 0 of the Proposed Project under Option 1. As identified in the table, construction activities at the SSPS Site would not exceed the screening-level LSTs. Consequently, construction impacts at the SSPS Site would not expose sensitive receptors to substantial pollutant concentrations.

As shown in Table 5.2-14, the maximum daily NO_x, CO, PM₁₀ and construction emissions generated from onsite construction-related activities would be less than their respective SCAQMD LSTs. However, PM_{2.5} emissions generated during the overlapping Phase 1 building demolition and trenching phases would exceed the SCAQMD LSTs. Therefore, Project-related construction activities would expose sensitive receptors to substantial pollutant concentrations, and impacts would be potentially significant.

Vignes Lot (Option 2)

The Vignes Lot would be developed as Phase 0 of the Proposed Project under Option 2. Onsite construction-related emissions that would be generated under Option 2 are shown in Table 5.2-15, *Localized Construction Emissions – Option 2*. As identified in the table, construction activities at the Vignes Lot would not exceed the screening-level LSTs and the construction impacts at the Vignes Lot would not expose sensitive receptors to substantial pollutant concentrations. However, similar to Option 1, overlap of the anticipated demolition and trenching activities would exceed the screening level construction LST for PM_{2.5}. Therefore, Project-related construction activities under Option 2 would expose sensitive receptors to substantial concentrations and impacts would be potentially significant.

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Table 5.2-15 Localized Construction Emissions – Option 2

Source	Pollutants (pounds per day) ^{1, 2}			
	NO _x	CO	PM ₁₀	PM _{2.5}
Vignes Lot¹				
Demolition 2018	48	39	5.12	2.88
1.66-Acre LST	96	923	67.45	22.85
Exceeds LST?	No	No	No	No
Site Preparation 2018	21	8	3.47	2.14
1.44-Acre LST	89	842	65.22	22.07
Exceeds LST?	No	No	No	No
Building Construction 2018	17	14	1.06	1.02
Building Construction 2019	16	13	0.92	0.88
Building Construction + Coating 2019	18	15	1.04	1.01
1.00-Acre LST	74	680	60.85	20.54
Exceeds LST?	No	No	No	No
Project Site – Phase 1²				
Demolition + Trenching 2019	54	40	4.92	3.10
Demolition 2019	40	26	4.04	2.25
Paving + Coating 2024	11	16	0.53	0.49
1.00-Acre LST	74	680	5.00	3.00
Exceeds LST?	No	No	No	Yes
Site Preparation 2020	42	22	9.92	6.27
3.50-Acre LST	135	1,454	11.99	6.50
Exceeds LST?	No	No	No	No
Foundation 2020	26	16	4.07	2.61
2.50-Acre LST	117	1,183	9.33	5.50
Exceeds LST?	No	No	No	No
CCTF Building 2020	39	34	2.23	2.10
CCTF Building 2021	35	33	1.92	1.80
CCTF Building 2022	31	33	1.62	1.52
CCTF Building 2023	29	32	1.40	1.32
3.06-Acre LST	127	1,336	10.83	6.06
Exceeds LST?	No	No	No	No
Project Site – Phase 2²				
Demolition 2024	24	30	3.45	1.40
Demolition 2025	21	29	3.29	1.23
Parking Demo + Paving + Coating 2027	29	36	2.29	1.37
1.00-Acre LST	74	680	5.00	3.00
Exceeds LST?	No	No	No	No
Demolition + Site Preparation 2025	61	64	13.67	7.15
5.00-Acre LST	161	1,861	15.99	8.00
Exceeds LST?	No	No	No	No

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Table 5.2-15 Localized Construction Emissions – Option 2

Source	Pollutants (pounds per day) ^{1,2}			
	NO _x	CO	PM ₁₀	PM _{2.5}
Site Preparation 2025	40	35	10.34	5.91
4.50-Acre LST	152	1,725	14.66	7.50
Exceeds LST?	No	No	No	No
Foundation 2025	28	26	4.84	2.58
3.00-Acre LST	126	1,319	10.66	6.00
Exceeds LST?	No	No	No	No
CCTF Building 2025	25	32	1.06	0.99
CCTF Building 2026	25	32	1.06	0.99
2.63-Acre LST	119	1,217	9.66	5.62
Exceeds LST?	No	No	No	No
CCTF + Parking Demo 2027	44	52	2.87	1.93
3.62-Acre LST	137	1,488	12.33	6.62
Exceeds LST?	No	No	No	No

Source: CalEEMod Version 2016.3.1., SCAQMD 2008b; and SCAQMD 2011.

In accordance with SCAQMD methodology, only onsite stationary sources and mobile equipment occurring on the Project Site are included in the analysis.

¹ LSTs are based on non-sensitive receptors within 82 feet (25 meters) and sensitive receptors at 575 feet (175 meters).

² LSTs are based on receptors within 82 feet (25 meters).

Construction Health Risk Assessment

Construction activities would result in emissions of diesel particulate matter (DPM), which is a TAC. The exhaust of off-road heavy-duty diesel equipment would emit DPM during site preparation, grading, and other construction activities. Health risk assessment is based on risk accumulated over a 70-year lifetime.

SCAQMD currently does not require health risk assessments to be conducted for emissions from construction equipment. Emissions from construction equipment primarily consist of DPM. OEHHA has recently adopted new guidance for the preparation of health risk assessments issued in March 2015. OEHHA has developed a cancer risk factor and non-cancer chronic reference exposure level for DPM, but these factors are based on continuous exposure over a 30-year time frame. No short-term acute exposure levels have been developed for DPM. Nevertheless, the Proposed Project under both Options 1 and 2, would be developed in approximately 9 years, which is less than the 30-year exposure period for DPM, and risk accumulated over a 70-year lifetime, and which would limit the exposure to onsite and offsite receptors. For the reasons stated above, it is anticipated that construction emissions would not pose a threat to onsite and offsite receptors at or near the Project Site. Project-related construction health impacts would be less than significant.

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Spring Street Parking Structure Site (Option 1)

Similar to the analysis above for the Project Site, it is anticipated that construction emissions would not pose a threat to onsite and offsite receptors at or near the SSPS Site. Project-related construction health impacts would be less than significant.

Vignes Lot (Option 2)

Similar to the analysis above for the Project Site, it is anticipated that construction emissions would not pose a threat to onsite and offsite receptors at or near the Vignes Lot. Project-related construction health impacts would be less than significant.

Level of Significance before Mitigation: Impact 5.2-4 would be potentially significant.

Impact 5.2-5: The Proposed Project would not expose sensitive receptors to substantial pollutant concentrations during project operations. [Threshold AQ-4]

Impact Analysis: The Proposed Project could expose sensitive receptors to elevated pollutant concentrations during operation if it would cause or contribute significantly to elevated pollutant concentration levels. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects.

An EIR must analyze the impacts of environmental hazards on future users, if the Proposed Project exacerbates an existing environmental hazard or condition. Residential, commercial, and office uses do not use substantial quantities of TACs and typically do not exacerbate existing hazards, so these thresholds are typically applied to new industrial projects. Because the Proposed Project is not a major industrial project that would emit substantial sources of TAC; the Proposed Project does not have the potential to exacerbate existing hazards in this regard.

Operation LSTs

Operation of the Proposed Project under both options would not generate substantial quantities of emission from onsite, stationary sources. Land uses that have the potential to generate substantial stationary sources of emissions that would require a permit from SCAQMD include industrial land uses, such as chemical processing and warehousing operations where substantial truck idling could occur onsite. The Proposed Project does not fall within these categories of uses.

Operation of the CCTF under both Options 1 and 2 would result in the use of standard onsite mechanical equipment, and air pollutant emissions generated from these activities at buildout are shown in Table 5.2-16, *Localized Operation Emissions*. As shown, the emission would be below the SCAQMD screening level operation-phase LSTs. Therefore, localized air quality impacts related to stationary-source emissions would be less than significant for both Options 1 and 2.

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Table 5.2-16 Localized Operation Emissions

Source	Pollutants (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
CCTF				
Area	<1	<1	<0.01	<0.01
Stationary	2	2	0.08	0.08
Maximum Daily Onsite Operation Emissions	2	2	0.08	0.08
SCAQMD 5-Acre LST	161	1,861	4.00	2.00
Exceeds LST?	No	No	No	No

Source: CalEEMod Version 2016.3.1; SCAQMD 2008.

In accordance with SCAQMD methodology, only onsite stationary sources and mobile equipment occurring on the Project Site are included in the analysis. LSTs are based on sensitive receptors within 82 feet (25 meters) of the Project Site.

Spring Street Parking Structure Site (Option 1)

The onsite emissions shown in Table 5.2-16 represent total emissions that would be generated at the Project Site. Thus, it is reasonably assumed that operation of the SSPS would generate even less onsite criteria air pollutant emission. Idling emissions from shuttle buses are accounted for in the emissions shown in Table 5.2-16. Therefore, similar to the analysis above for the Project Site, operational activities at the SSPS Site would result in less than significant localized operational phase impacts.

Vignes Lot (Option 2)

The onsite emissions shown in Table 5.2-16 represent total emissions that would be generated at the Project Site. Thus, it is reasonably assumed that operation of the Vignes Lot parking structure would generate even less onsite criteria air pollutant emission. Therefore, similar to the analysis above for the Project Site, operational activities at the Vignes Lot would result in less than significant localized operational phase impacts.

Carbon Monoxide Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9.0 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds.

The SoCAB has been designated as attainment under both the national and California AAQS for CO. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—in order to generate a significant CO impact (BAAQMD 2017). The Proposed Project could generate a net increase of up to a total of 242 average daily trips under both

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options (see Appendix M to the EIR). Peak hour trip generations would be less than the total average daily trips and significantly less than the volumes cited above. Furthermore, the SoCAB has since been designated as attainment under both the National and California AAQS for CO. The Proposed Project would not have the potential to substantially increase CO hotspots at intersections in the vicinity of the Project Site. Localized air quality impacts related to mobile-source emissions would be less than significant.

Spring Street Parking Structure Site (Option 1)

Operation of the SSPS would not result in an increase in vehicle trips. Therefore, similar to the analysis above for the Project Site, operational activities at the SSPS would not result in CO hotspots at intersections in the vicinity of the SSPS Site. Localized air quality impacts related to mobile-source emissions would be less than significant.

Vignes Lot (Option 2)

Operation of the Vignes Lot parking structure would not result in an increase in vehicle trips. Therefore, similar to the analysis above for the Project Site, operational activities at the Vignes Lot would not result in CO hotspots at intersections in the vicinity of the Vignes Lot. Localized air quality impacts related to mobile-source emissions would be less than significant.

Health Risk Assessment

Option 1 and Option 2

Operation of the Proposed Project under Options 1 and 2 would not involve the operation of significant sources of TACs and, therefore, a health risk assessment is not warranted. New equipment which may require a permit from SCAQMD would require a health risk assessment prior to the issuance of any necessary air quality permits under SCAQMD's New Source Review to ensure that SCAQMD performance standards are achieved. Project-related operation health impacts would be less than significant.

Level of Significance before Mitigation: Impact 5.2-5 would be less than significant.

Impact 5.2-6: The Proposed Project would not create objectionable odors. [Threshold AQ-5]

Impact Analysis: The following discusses potential odor impacts from development of the Proposed Project under Options 1 and 2.

Options 1 and 2

Nuisance odors from land uses in the SoCAB 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

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persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

The type of facilities that are considered to have objectionable odors include wastewater treatments 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. The Proposed Project under both Options 1 and 2 would not entail operation of the aforementioned types of land uses. In addition, compliance with SCAQMD Rule 402 would further minimize any potential odor impacts from operation. Thus, it is not anticipated that operation of the Proposed Project would generate objectionable odors or exacerbate odor impacts. Emissions from construction equipment, such as diesel exhaust and volatile organic compounds from architectural coatings and paving activities, may generate odors. However, these odors would be low in concentration and temporary. Thus, implementation of the Proposed Project are not expected to result in increased odor impacts that would affect a substantial number of people. Therefore, odor impacts are considered to be less than significant.

Level of Significance before Mitigation: Impact 5.2-6 would be less than significant.

5.2.5 Cumulative Impacts

In accordance with the SCAQMD methodology, any project that produces a significant project-level regional air quality impact in an area that is in nonattainment contributes to the cumulative impact. Cumulative projects in the local area include new development and general growth within the Project area. The greatest source of emissions within the SoCAB is mobile sources. Due to the extent of the area potentially impacted from cumulative project emissions, SCAQMD considers a project cumulatively significant when project-related emissions exceed the SCAQMD regional emissions thresholds shown in Table 5.2-5, *SCAQMD Significance Thresholds*.

Short-Term Impact

The SoCAB is designated nonattainment for O₃ and PM_{2.5} under the California and National AAQS; nonattainment for PM₁₀ under the California AAQS; and nonattainment for lead (Los Angeles County only) under the National AAQS (CARB 2016b). Construction of cumulative projects would further degrade the regional and local air quality. Air quality would be temporarily impacted during construction activities. Implementation of mitigation measures for related projects would reduce cumulative impacts. RR AIR 5 through RR AIR-7 and MM AIR-1, MM AIR-5, and MM AIR-6 (see Section 5.2.7 *Mitigation Measures*, for Impact 5.2-2 and Impact 5.2-3) would reduce the Proposed Project's construction emissions. Mitigation Measure AIR-1 would require use of super-compliant paints to minimize VOC emissions. MM AIR-5 would require use of off-road construction equipment with EPA Tier 4 engines to reduce construction emissions during temporary overlap of the Proposed Project construction and operational activities while MM AIR-6 would require implementation of enhanced fugitive dust control measures beyond that required under SCAQMD Rule 403. As described in Section 5.2.8, *Level of Significance After Mitigation*, with incorporation of

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the aforementioned mitigation, the Proposed Project's contribution to cumulative air quality impacts from construction activities would be less than cumulatively considerable.

Long-Term Impact

For operational air quality emissions, any project that does not exceed or can be mitigated to less than the daily regional threshold values is not considered by SCAQMD to be a substantial source of air pollution and does not add significantly to a cumulative impact. The long-term impact analysis considers operational impacts. Operation of the Proposed Project would result in emissions in excess of the SCAQMD regional emissions thresholds for VOC. As a result, impacts were identified for both the long-term and temporary scenario and emissions associated with the Proposed Project would cumulatively contribute to the O₃ nonattainment designations. Implementation of RR AIR 3 through RR AIR-7 and MM AIR-1, MM AIR-4, and MM AIR-5 (see Section 5.2.7 *Mitigation Measures*) would reduce the Proposed Project's construction emissions. Additionally, RR AIR-1 through RR AIR-4, RR AIR-8, and MM AIR-2 through AIR-4 (see Section 5.2.7 *Mitigation Measures*) would reduce the Proposed Project's operational phase emissions. As described in Section 5.2.8, *Level of Significance After Mitigation*, implementation of the aforementioned mitigation measures would reduce VOC and NO_x emissions to below the SCAQMD regional significance threshold. Therefore, the Proposed Project's air pollutant emissions would be less than cumulatively considerable.

5.2.6 Level of Significance Before Mitigation

The following impacts would be less than significant:

- **Impact 5.2-5** The Proposed Project would not expose sensitive receptors to substantial pollutant concentrations during project operations.
- **Impact 5.2-6** The Proposed Project would not create objectionable odors.

Without mitigation, the following impacts would be **potentially significant**:

- **Impact 5.2-1** The Proposed Project would conflict with the applicable Air Quality Management Plan under both Options 1 and 2 because it could 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.
- **Impact 5.2-2** Construction activities under both Options 1 and 2 of the Proposed Project during Phase 1 construction activities would generate short-term criteria air pollutant emissions that would exceed the SCAQMD regional construction significance threshold for VOC.
- **Impact 5.2-3** Long-term operation of the Project under Options 1 and 2 would generate a substantial increase in criteria air pollutant emissions that exceed the threshold criteria and would cumulatively contribute to the nonattainment designations of the SoCAB.

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- **Impact 5.2-4** The Proposed Project under Option 1 and Option 2 could expose sensitive receptors at the William Mead Homes and inmates-patients at the CCTF to substantial criteria air pollutant concentrations during construction activities.

5.2.7 Mitigation Measures

Impact 5.2-1

See MM AIR-1 through MM AIR-6 below. Mitigation measures applied for Impact 5.2-2, Impact 5.2-3, and Impact 5.2-4 (i.e., MM AIR-1 through MM AIR-6) would reduce the Proposed Project's construction-related and operational-phase criteria air pollutant emissions to the extent feasible to minimize potential conflicts with the SCAQMD AQMP.

Impact 5.2-2

Options 1 and 2

MM AIR-1 The construction contractor for construction activities at the Project Site shall use interior paints and coatings with a volatile organic compound (VOC) content that meets the South Coast Air Quality Management District's "super compliant" standard of 10 grams per liter or less.

Impact 5.2-3

Options 1 and 2

Operation

MM AIR-2 The new Spring Street Parking Structure, or Vignes Lot parking structure, and the new parking structure at the Project Site shall be electrically wired to accommodate a Level 2 (240 volt) EV charging. A minimum of five percent of the total parking spaces shall be capable of supporting installation of EV supply equipment (EVSE), which is consistent with the Tier 2 requirements of CALGreen. The location of the EVSE shall be specified on building plans, and proper installation shall be verified by County Department of Public Works prior to issuance of a Certificate of Occupancy.

MM AIR-3 During long-term operation of the Proposed Project, the County shall use coatings and solvents with a volatile organic compound (VOC) content lower than required under South Coast Air Quality Management District Rule 1113 (i.e., super compliant paints).

MM AIR-4 Buses, vendor deliveries, and shuttle buses at the Project Site shall limit nonessential vehicle idling to no more than five (5) minutes at any one location. "No Idling" signs for loading area shall be posted at shuttle stops and loading bays.

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Construction and Operation Overlap

See MM AIR-1.

MM AIR-5 The construction contractor for construction activities at the Project Site shall use equipment that meets the US Environmental Protection Agency (EPA) Tier 4 emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower, unless it can be demonstrated to the County that such equipment is not available. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 4 diesel emissions control strategy for a similarly sized engine, as defined by the California Air Resources Board's regulations.

Prior to construction, the project engineer shall ensure that all demolition and grading plans clearly show the requirement for EPA Tier 4 or higher emissions standards for construction equipment over 50 horsepower. During construction, the construction contractor shall maintain a list of all operating equipment in use on the construction site for verification by the County. The construction equipment list shall state the makes, models, and numbers of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations.

Impact 5.2-4

Options 1 and 2

In addition to MM AIR-5, the following measure shall be implemented during construction at the Project Site.

MM AIR-6 The construction contractor for construction activities at the Project Site shall prepare a dust control plan and implement the following measures during ground-disturbing activities—in addition to the existing requirements for fugitive dust control under South Coast Air Quality Management District (SCAQMD) Rule 403—to further reduce PM₁₀ and PM_{2.5} emissions. The County shall verify that these measures have been implemented during normal construction site inspections.

- Following all grading activities, the construction contractor shall reestablish ground cover on the construction site through seeding and watering.
- During all construction activities, the construction contractor shall sweep streets with SCAQMD Rule 1186-compliant, PM₁₀-efficient vacuum units on a daily basis if silt is carried over to adjacent public thoroughfares or occurs as a result of hauling.
- During all construction activities, the construction contractor shall maintain a minimum 24-inch freeboard on trucks hauling dirt, sand, soil, or other loose materials and shall

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tarp materials with a fabric cover or other cover that achieves the same amount of protection.

- During all construction activities, the construction contractor shall water exposed ground surfaces and disturbed areas a minimum of every three hours on the construction site and a minimum of three times per day.
- During all construction activities, the construction contractor shall limit onsite vehicle speeds on unpaved roads to no more than 15 miles per hour.

5.2.8 Level of Significance After Mitigation

Impact 5.2-1

Options 1 and 2

Mitigation measures applied for Impact 5.2-2, Impact 5.2-3, and Impact 5.2-4 (i.e., MM AIR-1 through MM AIR-6) would reduce the Proposed Project's regional construction-related and operational-phase criteria air pollutant emissions to the extent feasible. During construction, MM AIR-1 would require super compliant interior paints and coatings with a VOC content of 10 grams per liter or less. Additionally, MM AIR-5 would require use of off-road construction equipment with EPA Tier 4 engines to reduce construction emissions during temporary overlap of the Proposed Project construction and operational activities. Furthermore, MM AIR-6 would require implementation of enhanced fugitive dust control measures beyond that required under SCAQMD Rule 403. During operation, MM AIR-2 would encourage the use of alternative fueled vehicles by providing electric vehicle parking spaces while MM AIR-4 would limit shuttle bus idling. MM AIR-3 would require the County to use low-VOC paints over the lifetime of the facility buildings. The reductions from the quantifiable mitigation measures are identified in the Impact 5.2-2 and Impact 5.2-3 discussions below. Incorporation of mitigation would reduce emissions to below the SCAQMD regional significance thresholds. Therefore, project-level and cumulative impacts identified under Impact 5.2-1 for both Options 1 and 2 would be reduced to less than significant.

Impact 5.2-2

Options 1 and 2

As shown in Table 5.2-17, *Maximum Daily Regional Construction Emissions – Options 1 and 2 with Mitigation*, implementation of MM AIR-1 would reduce VOC emissions associated with painting and coating of the new proposed buildings onsite to less than SCAQMD's regional significance threshold for VOC for both Options 1 and 2. Therefore, Impact 5.2-2 would be reduced to less than significant level.

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Table 5.2-17 Maximum Daily Regional Construction Emissions – Options 1 and 2 with Mitigation

Construction Phase	Construction-Related Regional Emissions (pounds/day) ¹					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Project Site – Phase 1						
Demolition + Trenching 2019	6	60	42	<1	6	3
Demolition 2019	4	46	29	<1	5	2
Site Preparation 2020	4	43	22	<1	10	6
Foundation 2020	3	27	17	<1	4	3
CCTF Building 2020	10	82	76	<1	13	5
CCTF Building 2021	9	75	72	<1	12	5
CCTF Building 2022	8	69	69	<1	12	4
CCTF Building 2023	7	58	66	<1	12	4
Paving + Coating 2024	35	12	22	<1	2	1
Maximum Emissions Project Site Phase 1	35	82	76	<1	13	6
SCAQMD Regional Construction Threshold	75	100	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Source: CalEEMod Version 2016.3.1.

Notes: Totals may not total to 100 percent due to rounding.

¹ Includes implementation of fugitive dust control measures required by SCAQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186-compliant sweepers. Modeling also assumes a VOC content of 100 grams per liter for exterior paints pursuant to SCAQMD Rule 1113.

Impact 5.2-3

Option 1

Buildout of the proposed land use plan would generate additional vehicle trips and area sources of criteria air pollutant emissions that exceed SCAQMD’s regional significance thresholds and would contribute to the nonattainment designations of the SoCAB and known health effects from poor air quality—including worsening of bronchitis, asthma, and emphysema; a decrease in lung function; premature death of people with heart or lung disease; nonfatal heart attacks; irregular heartbeat; decreased lung function; and increased respiratory symptoms. RR AIR-1 through RR AIR-8 would minimize criteria air pollutant emissions from transportation and energy use. MM AIR-2 would ensure that the parking structures support California’s efforts to electrify the vehicle fleet, which is consistent with the *Final Unincorporated Los Angeles County Community Climate Action Plan 2020* (CCAP) measure LUT-8. Incorporation of MM AIR-1 and AIR-3 would reduce operation-related criteria air pollutants generated from architectural coatings. MM AIR-4 would further limit commercial vehicle idling times at the Project Site, which is consistent with the CCAP measure LUT-9. MM AIR-5 would reduce construction emissions during overlap of the construction and operational phase. As shown in Table 5.2-18, *Maximum Daily Men’s Central Jail/Consolidated Correctional Facility Operational Phase Regional Emissions with Mitigation – Option 1*, use of Tier 4 construction equipment and use of super-compliant interior paints, incorporated as required mitigation, would ensure that overlap of Phase 2 construction plus operation of the Proposed Project would not exceed the SCAQMD regional significance thresholds for VOC and NO_x. Therefore, with incorporation of mitigation, project-level and cumulative impacts identified under Impact 5.2-3 under Option 1 would be reduced to less than significant.

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Table 5.2-18 Maximum Daily Men’s Central Jail/Consolidated Correctional Facility Operational Phase Regional Emissions with Mitigation – Option 1

Phase	Operation-Related Regional Emissions (pounds/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Combined Construction + Shuttle Buses + Operation (Worst-Case)						
Total Project Net Change	34	-9	44	<1	4	<1
Construction	16	6	45	<1	2	1
Shuttle Bus Travel and Idling	<1	<1	2	<1	<1	<1
Combined Temporary + Operation	50	-3	91	<1	6	1
SCAQMD Regional Threshold	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Source: CalEEMod Version 2016.3.1. Based on highest winter or summer emissions using 2027 emission rates. Totals may not equal 100 percent due to rounding. Includes implementation of Mitigation Measures AIR-1 and AIR-5 during construction, which requires use of Tier 4 construction equipment and interior paints with a VOC content of 10 g/L or less.

Option 2

As shown in Table 5.2-19, *Maximum Daily Men’s Central Jail/Consolidated Correctional Facility Operational Phase Regional Emissions with Mitigation – Option 2*, incorporation of mitigation as described above under Option 1 (i.e., MM AIR-1 through MM AIR-5) would reduce the combined VOC and NO_x emissions to below their respective SCAQMD regional significance threshold. Therefore, with incorporation of mitigation, project-level and cumulative impacts identified under Impact 5.2-3 under Option 2 would be reduced to less than significant.

Table 5.2-19 Maximum Daily Men’s Central Jail/Consolidated Correctional Facility Operational Phase Regional Emissions with Mitigation – Option 2

Phase	Operation-Related Regional Emissions (pounds/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Combined Construction + Shuttle Buses + Operation (Worst-Case)						
Total Project Net Change	34	-9	44	<1	4	<1
Construction	14	6	45	<1	2	<1
Combined Temporary + Operation	48	-4	88	<1	6	1
SCAQMD Regional Threshold	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Source: CalEEMod Version 2016.3.1. Based on highest winter or summer emissions using 2027 emission rates. Totals may not equal 100 percent due to rounding. Includes implementation of Mitigation Measures AIR-1 and AIR-5 during construction, which requires use of Tier 4 construction equipment and interior paints with a VOC content of 10 g/L or less.

Impact 5.2-4

Options 1 and 2

MM AIR-5 and MM AIR-6 would reduce the Proposed Project’s regional construction emissions and therefore also reduce the Proposed Project’s localized construction-related criteria air pollutant emissions. As shown in Table 5.2-20, *Localized Construction Emissions – Options 1 and 2 with Mitigation*, with implementation of

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mitigation, onsite construction emissions would be reduced to below the screening level LSTs. Accordingly, Impact 5.2-4 for both Options 1 and 2 would be reduced to less than significant with mitigation.

Table 5.2-20 Localized Construction Emissions – Options 1 and 2 with Mitigation

Source	Pollutants (pounds per day) ^{1,2}			
	NO _x	CO	PM ₁₀	PM _{2.5}
Project Site – Phase 1¹				
Demolition + Trenching 2019	5	41	1.93	0.49
1.00-Acre LST	74	680	5.00	3.00
Exceeds LST?	No	No	No	No

Source: CalEEMod Version 2016.3.1., SCAQMD 2008; and SCAQMD 2011. Includes implementation of Mitigation Measure 2-4 and 2-5, which requires use of Tier 4 construction equipment and enhanced fugitive dust control measures, such as use of non-toxic soil stabilizers and watering 3 times daily.
 In accordance with SCAQMD methodology, only onsite stationary sources and mobile equipment occurring on the Project Site are included in the analysis.
¹ LSTs are based on receptors within 82 feet (25 meters).

5.2.9 References

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