IV. Environmental Impact Analysis

A. Air Quality

1. Introduction

This section examines the degree to which the Proposed Project may result in significant environmental impacts with respect to air quality. Both short-term construction emissions occurring from activities such as demolition, site grading and haul truck trips, and long-term effects related to the ongoing operation of the Proposed Project are discussed in this section. The analysis contained herein focuses on air pollution from two perspectives: daily emissions and pollutant concentrations. As used in this study, the term "emissions" refers to the actual quantity of pollutant measured in pounds per day (ppd). The term "concentrations" refers to the amount of pollutant material per volumetric unit of air as measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter ($\mu g/m^3$).

The impact analysis considers the potential for the Proposed Project to conflict with or obstruct implementation of the applicable air quality plan, to result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is designated to be in non-attainment, or to expose sensitive receptors to substantial pollutant concentrations, or to result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. Documents and references used in the preparation of this section include, but are not limited to, the air quality modeling worksheets presented in Appendix C.1 (CalEEmod Air Quality Modeling Worksheets) to this Draft EIR, the South Coast Air Quality Management District (SCAQMD) CEQA Air Quality Handbook (1993), the 2016 Air Quality Management Plan (AQMP), as amended, as well as federal and state regulations and guidelines.

Also, as discussed below, the analysis explains the potential human health effects that could be associated with air emissions caused by the Proposed Project.

a) Air Pollutants

The Project Site is located within the South Coast Air Basin (Basin). This Basin includes all of Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties. The regional climate within the Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate

daytime onshore breezes, and moderate humidity. The air quality within the Basin is primarily influenced by a wide range of emissions sources – such as dense population centers, heavy vehicular traffic, and industry – and meteorology.

Air pollutant emissions within the Basin are generated by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at an identified location and are usually associated with manufacturing and industry. Examples of point sources include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and produce many small emissions. Examples of area sources include residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and consumer products such as lighter fluid and hair spray. Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, racecars, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when fine dust particles are pulled off the ground surface and suspended in the air during high winds.

The federal and state governments have authority under federal and state Clean Air Acts to regulate emissions of airborne pollutants and have established ambient air quality standards for outdoor concentrations of various pollutants in order to establish a margin of safety and to protect public health and welfare.[1] These pollutants are referred to as "criteria air pollutants" as a result of the specific standards, or criteria, that have been adopted for them. The national and state standards have been set at levels considered safe to protect public health, including the health of "sensitive" populations most susceptible to respiratory distress, such as children under the age of 14, the elderly (over the age of 65), persons engaged in strenuous work or exercise, and people with cardiovascular and chronic respiratory diseases, with a margin of safety; and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.[2]

To derive the federal standards, the United States Environmental Protection Agency (U.S. EPA) reviews data from integrated science assessments and risk/exposure assessments to determine the ambient pollutant concentrations at which human health impacts occur, then reduces these concentrations to establish a margin of safety that is protective of those segments of the public most susceptible to respiratory distress. As a result, human

[1] *U.S. EPA, Clean Air Act Title I – Section 109, U.S. Code 2013 Section 7409(b), Natural Primary and Secondary Ambient Air Quality Standards, accessed June 2019.*

[2] *South Coast Air Quality Management Plan, Final 2016 AQMP, Chapter 1 – Introduction, pg 1-6, accessed June 2019.*

health impacts caused by the air pollutants discussed below may affect people when the emission levels are at or above the concentrations established by the National Ambient Air Quality Standards (NAAQS). Accordingly, ambient air pollutant concentrations below the NAAQS are considered to be protective of human health.[3] The NAAQS and the underlying science that forms the basis of the NAAQS are reviewed every five years to determine whether updates are necessary to continue protecting public health with an adequate margin of safety.[4]

The State of California has established health-based ambient air quality standards for airborne pollutants, some of which are more stringent than the federal standards.[5]

The criteria air pollutants that are most relevant to current air quality planning and regulation in the Basin include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), sulfur dioxide (SO_2), and lead (Pb). In addition, toxic air contaminants (TACs) are of concern in the Basin. The characteristics of each of these pollutants are briefly described below.

- *O_3* is a highly reactive and unstable gas that is formed when reactive organic gases (ROGs) and nitrogen oxides (NO_x), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.

- *CO* is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike O_3, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

- *PM_{10}* and *$PM_{2.5}$* consist of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter, respectively. Some sources of particulate matter, like pollen and windstorms, are naturally occurring. However, in

[3] *U.S. EPA, Process of Reviewing the National Ambient Air Quality Standards, website: https://www.epa.gov/criteria-air-pollutants/process-reviewing-national-ambient-air-quality-standards accessed March 2020.*

[4] *U.S. EPA, Process of Reviewing the National Ambient Air Quality Standards, website: https://www.epa.gov/criteria-air-pollutants/process-reviewing-national-ambient-air-quality-standards accessed March 2020.*

[5] *California Air Resources Board, California Ambient Air Quality Standards, accessed June 2019.*

populated areas, most particulate matter is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities.

- *NO_2* is a nitrogen oxide compound that is produced by the combustion of fossil fuels, such as in internal combustion engines (both gasoline and diesel powered), as well as point sources, especially power plants. Of the seven types of nitrogen oxide (NO_x) compounds, NO_2 is the most abundant in the atmosphere. As ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO_2 than those indicated by regional monitors.

- *SO_2* is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms sulfates (SO_4). Collectively, these pollutants are referred to as sulfur oxides (SO_x).

- *Pb* occurs in the atmosphere as particulate matter. The combustion of leaded gasoline is the primary source of airborne Pb in the Basin. The use of leaded gasoline is no longer permitted for on road motor vehicles, so the majority of such combustion emissions are associated with off-road vehicles, such as racecars. However, because leaded gasoline was emitted in large amounts from vehicles when leaded gasoline was used for on-road motor vehicles, Pb is present in many urban soils and can be re-suspended in the air. Other sources of Pb include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, and the use of secondary lead smelters.

- *TACs* are air pollutants which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health (Health and Safety Code (HSC) Section 39655a). TACs refer to a diverse group of air pollutants that are capable of causing chronic (i.e., of long duration) and acute (i.e., severe but of short duration) adverse effects on human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. TACs are different than “criteria” pollutants in that ambient air quality standards have not been established for them, largely because there are hundreds of air toxics and their effects on health tend to be felt on a local scale rather than on a regional basis.

b) Health Effects of Criteria Pollutants

The health effects of the criteria pollutants (i.e., O_3, CO, PM_{10} and $PM_{2.5}$, NO_2, SO_2, and Pb) and TACs are described below.[6] In addition, a list of the harmful effects of each criteria pollutant is provided in Table IV.A-1, Summary of Health Effects of Criteria Pollutants.

Table IV.A-1
Summary of Health Effects of Criteria Pollutants

Pollutants	Primary Health and Welfare Effects
Ozone (O_3)	• Aggravation of respiratory and cardiovascular diseases • Reduced lung function • Increased cough and chest discomfort
Carbon Monoxide (CO)	• Aggravation of some heart disease (angina) • Reduced tolerance for exercise • Impairment of mental function • Impairment of fetal development • Death at high levels of exposure
Particulate Matter (PM_{10} and $PM_{2.5}$)	• Reduced lung function • Aggravation of respiratory and cardio-respiratory diseases • Increases in mortality rate • Reduced lung function growth in children
Nitrogen Dioxide (NO_2)	• Aggravation of respiratory illness
Sulfur Dioxide (SO_2)	• Aggravation of respiratory diseases (asthma, emphysema) • Reduced lung function
Lead (Pb)	• Behavioral and hearing disabilities in children • Nervous system impairment

Source: SCAQMD, Guidance Document for Air Quality Issues in General Plans and Local Planning, 2005.

[6] *The descriptions of the health effects of the criteria pollutants are taken from Appendix C (Health Effects of Ambient Air Pollutants) of SCAQMD's "Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning," accessed August 2018.*

(1) Ozone (O3)

Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for O_3 effects.

Short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated O_3 levels are also associated with increased school absences. In recent years, a correlation between elevated ambient O_3 levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in high O_3 communities.

O_3 exposure under exercising conditions is known to increase the severity of the above mentioned observed responses. Animal studies suggest that exposures to a combination of pollutants that include O_3 may be more toxic than exposure to O_3 alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

(2) Carbon Monoxide (CO)

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of worsening oxygen supply to the heart.

Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with oxygen transport by competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include patients with diseases involving heart and blood vessels, fetuses, and patients with chronic hypoxemia (oxygen deficiency) as seen in high altitudes.

Reduction in birth weight and impaired neurobehavioral development has been observed in animals chronically exposed to CO resulting in COHb levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels. These include pre-term births and heart abnormalities.

(3) Particulate Matter (PM_{10} and $PM_{2.5}$)

A consistent correlation between elevated ambient particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life-span, and lung cancer.

Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children and to increased medication use in children and adults with asthma. Recent studies show that lung function growth in children is reduced with long-term exposure to particulate matter.

The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of PM_{10} and $PM_{2.5}$.

(4) Nitrogen Dioxide (NO_2)

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposures to NO_2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy individuals. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.

In animals, exposure to levels of NO_2 considerably higher than ambient concentrations results in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of O_3 exposure increases when animals are exposed to a combination of O_3 and NO_2.

(5) Sulfur Dioxide (SO_2)

A few minutes of exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing

difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2.

Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically or whether one pollutant alone is the predominant factor.

(6) Sulfates (SO_x)

Most of the health effects associated with fine particles and SO_2 at ambient levels are also associated with SO_4. Thus, both mortality and morbidity effects have been observed with an increase in ambient SO_4 concentrations. However, efforts to separate the effects of SO_4 from the effects of other pollutants generally have not been successful.

Clinical studies of asthmatics exposed to sulfuric acid suggest that adolescent asthmatics are possibly a subgroup susceptible to acid aerosol exposure. Animal studies suggest that acidic particles such as sulfuric acid aerosol and ammonium bisulfate are more toxic than non-acidic particles like ammonium sulfate.

(7) Lead (Pb)

Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence levels. In adults, increased Pb levels are associated with increased blood pressure.

Pb poisoning can cause anemia, lethargy, seizures, and death. It appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early-age environmental exposure, and elevated blood Pb levels can occur due to the breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.

(8) Toxic Air Contaminants (TACs)

TACs are a broad class of compounds known to cause or contribute to cancer or non-cancer health effects, such as birth defects, genetic damage, and other adverse health effects. As discussed previously, effects from TACs may be both chronic and acute on human health. Acute health effects are attributable to sudden exposure to high quantities of air toxics. These effects include nausea, skin irritation, respiratory illness, and, in some cases, death. Chronic health effects can result from low-dose, long-term exposure from routine releases of air toxics. The effect of major concern for this type of exposure is cancer, which typically requires a period of 10 to 30 years after exposure to develop.

TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., benzene near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and federal level.

Diesel particulate matter is a predominant TAC and accounts for approximately 70 percent of total known cancer risk related to air toxins in California. Based on 2012 estimates of statewide exposure, diesel particulate matter is estimated to increase statewide cancer risk by 520 cancers per million residents exposed over a lifetime.[7] According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified by the CARB as TACs and are listed as carcinogens either under California's Proposition 65 or under the federal Hazardous Air Pollutants programs. The U.S. EPA has adopted Ultra Low Sulfur Diesel (ULSD) fuel standards to reduce diesel particulate matter. As of June 1, 2006, refiners and importers nationwide have been required by the U.S. EPA to ensure that at least 80 percent of the volume of the highway diesel fuel they produce or import would be ULSD-compliant. As of December 10, 2010, only ULSD fuel is available for highway use nationwide. In California, which was an early adopter of ULSD fuel and engine technologies, 100 percent of the diesel fuel sold – downstream from refineries, up to and including fuel terminals that store diesel fuel – has been ULSD fuel since July 15, 2006. Since September 1, 2006, all diesel fuel offered for sale at retail outlets in California has been ULSD fuel.

The Proposed Project would generate certain air pollutants during construction and operation. The criteria pollutants would include ROG/VOC's, NO_X, CO, SO_2, PM_{10}, and

[7] *CalEPA, Air Resources Board, Overview: Diesel Exhaust and Health, accessed: September 2018.*

$PM_{2.5}$ that can have adverse impacts on human health at certain levels of exposure. The impact analysis below attempts to characterize, to the extent feasible, the increase in emissions that the Proposed Project would generate and potential effects on human health, even though the state of environmental science modeling at this time is not capable of identifying precisely how pollutant concentrations correlate directly or indirectly to the level of human health impacts. It should also be noted that the Proposed Project's emissions are well below the applicable air emission thresholds of significance, which are created by the air districts, in part, to evaluate the potential impacts of criteria pollutants on human health.

2. Environmental Setting

a) Regulatory Framework

Air quality in the United States is governed by the federal Clean Air Act (CAA). In addition to being subject to the requirements of the CAA, air quality in California is also governed by more stringent regulations under the California Clean Air Act (CCAA).

Air quality within the Basin is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for improving the air quality within the Basin are discussed below.

(1) Federal Agencies

(a) The United States Environmental Protection Agency (U.S. EPA)

The U.S. EPA is responsible for setting and enforcing the federal ambient air quality standards for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The U.S. EPA also has jurisdiction over emissions sources outside state waters (outer continental shelf) and establishes various emissions standards for vehicles sold in states other than California.

The U.S. EPA administers the CAA. The CAA was first established in 1963 to control air pollution and expand research in monitoring, and control techniques. Major amendments were added in 1970, 1977, and 1990. The 1970 amendment allowed for federal and state regulations to limit emissions stationary and mobile sources and established major regulatory programs, including the National Ambient Air Quality Standards (NAAQS), State Implementation Plans, New Source Performance Standards, and National

Emissions Standards for Hazardous Air Pollutants (NESHAP). The 1977 amendment expanded these provisions, which included requirements for areas in attainment and non-attainment to NAAQS and established a permit review process to ensure attainment and maintenance of NAAQS. The 1990 amendments further expanded the authority and responsibility of the CAA, which included new programs and expanded existing programs governing acid rain, toxic air pollutants, other NAAQS standards, and O_3 protection.[8] Title I (provisions on non-attainment areas) and Title II (provisions on mobile sources) of the CAA would be most applicable to the Proposed Project. Table IV.A-2, below, indicates pollutants and areas of attainment and non-attainment relative to the NAAQS.

As part of its enforcement responsibilities, the U.S. EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP). The SIP is a plan for each state which identifies how that state will attain and/or maintain the primary and secondary NAAQS set forth in Section 109 of the CAA. These plans are developed through a public process, formally adopted by the state, and submitted by the Governor's designee to the U.S. EPA. The CAA requires the U.S. EPA to review each plan and any plan revisions and to approve the plan or plan revisions if consistent with the CAA.

(2) State Agencies

(a) California Air Resources Board (CARB)

The CCAA was signed into law in 1988 and requires the CARB to adopt and maintain air quality standards (i.e., California Ambient Air Quality Standards (CAAQS)). All areas of the state are required to meet the CAAQS. Table IV.A-2 below, indicates pollutants and areas of attainment and non-attainment, relative to the CAAQS.

The CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets CAAQS, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. The CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hair spray, aerosol paints,

[8] *U.S. EPA, Evolution of the Clean Air Act, accessed September 2018.*

Table IV.A-2
Ambient Air Quality Standards

Air Pollutant	Averaging Time	CAAQS		NAAQS	
		State Standard	Attainment Status	Federal Standard	Attainment Status
O_3	1 Hour	0.09 ppm	Non-attainment – Extreme	-- [a]	-- [a]
	8 Hour	0.07 ppm	Non-attainment	0.070 ppm [b]	Non-attainment - Extreme
CO	1 Hour	20.0 ppm	Attainment	35.0 ppm	Attainment
	8 Hour	9.0 ppm	Attainment	9.0 ppm	Attainment
NO_2	1 Hour	0.18 ppm	Attainment	0.10 ppm	Attainment
	Annual	0.030 ppm	Attainment	0.053 ppm	Attainment
SO_2 [c]	1 Hour	0.25 ppm	Attainment	0.075 ppm	Attainment
	24 Hour	0.04 ppm	Attainment	0.14 ppm (for certain areas)	Attainment
Pb	30 Day	1.5 µg/m^3	Attainment	-- [a]	-- [a]
	Calendar Quarter Year	-- [a]	-- [a]	1.5 µg/m^3	Non-attainment (partial)
	Rolling 3-Month Average	-- [a]	-- [a]	0.15 µg/m^3	Non-attainment (partial)
PM_{10}	24 Hour	50 µg/m^3	Non-attainment	150 µg/m^3	Attainment
	Annual	20 µg/m^3	Non-attainment	-- [a]	-- [a]
$PM_{2.5}$	24 Hour	-- [a]	-- [a]	35 µg/m^3	Non-attainment– Serious
	Annual	12 µg/m^3	Non-attainment-Serious	12 µg/m^3 [d]	Non-attainment-Serious

Notes:

[a] *Not applicable.*

[b] *On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.75 to 0.70 ppm.*

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

[d] *The national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12 µg/m^3 effective December 14, 2012.*

Sources: CARB, Ambient Air Quality Standards, May 4, 2016, accessed September 2018, CARB: State Area Designation Maps, current as of December 2018 (State and national), accessed June 2019.

and lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. In some cases, the state standards are more restrictive than the federal standards established under the CAA.

(i) Air Quality and Land Use Handbook: A Community Health Perspective

In April 2005, CARB published the Air Quality and Land Use Handbook: A Community Health Perspective. CARB's primary goal in developing this document was to provide information that will help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of air pollution. Air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California. Also, CARB community health risk assessments and regulatory programs have produced important air quality information about certain types of facilities that should be considered when siting new residences, schools, day care centers, playgrounds, and medical facilities (i.e., sensitive land uses). Sensitive land uses deserve special attention because children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the non-cancer effects of air pollution. There is also substantial evidence that children are more sensitive to cancer-causing chemicals.[9] As discussed below, this Draft EIR has assessed relevant portions of the handbook when considering the potential impacts of the Proposed Project on sensitive receptors.

The Air Quality and Land Use Handbook also discusses land use and planning strategies to protect sensitive receptors (such as children, pregnant women, the elderly, and those with existing health problems) from TAC emissions. This handbook serves as a general guide for local municipalities and agencies and is voluntary.[10] The recommendations provided therein do not constitute a requirement or mandate for either land use agencies or local air districts. Rather, the goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units

[9] *CARB, Air Quality and Land Use Handbook: A Community Health Perspective, April 2005.*
[10] *CARB, Air Quality and Land Use Handbook: A Community Health Perspective, April 2005.*

per day, or where transport refrigeration unit operations exceed 300 hours per week); (3) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines; and (4) avoid siting sensitive receptors within 300 feet of a large gasoline dispensing facility (3.6 million gallons per year or more) or 50 feet of a typical gasoline dispensing facility (less than 3.6 million gallons per year).

(ii) Toxic Air Contaminant Identification and Control Program

In 1983, the California Legislature adopted the Toxic Air Contaminant Identification and Control Program (AB 1807), which established a two-step process of risk identification and risk management to address the potential health effects from air toxic substances and protect the public health of Californians. In the first step (risk identification), the CARB and the Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified as a TAC in California. CARB has identified over 200 compounds as toxic air contaminants through a combination of the state process and U.S. EPA Hazardous Air Pollutants into the California list.[11] In the second step (risk management), the CARB reviews the emission sources of an identified TAC to determine if any regulatory action is necessary to reduce the risk. The analysis includes a review of controls already in place, the available technologies and associated costs for reducing emissions, and the associated risk. As part of this process, CARB develops proposals to manage those potential risks with statewide emission control regulations called Airborne Toxic Control Measures (ATCMs). ATCMs decrease public exposure through process changes, best available control devices, and/or product reformulation in consideration of cost and health risk.

(iii) Off-Road Diesel Emissions

Off-road diesel vehicles, which include construction equipment, are also regulated by the CARB for both in-use (existing) and new engines. CARB has set standards for four tiers of new off-road diesel engines. Tier 1 standards began in 1996. Tiers 2 and 3 were adopted in 2000 and were more stringent than the Tier 1 standards. Tier 2 and Tier 3 standards were completely phased in by 2006 and 2008, respectively. Tier 4 standards became effective in 2011. Tier 4 emission standards will reduce particulate matter and NO_X emissions of late model cars to 90 percent below current levels.

Since off-road vehicles that are used in construction and other related industries can last 30 years or longer, most of those that are in service today are still part of an older fleet that do not have emission controls. On July 26, 2007, the CARB approved the "In-Use

[11] *CARB/CAPCOA, Risk Management Guidance for Stationary Sources of Air Toxics, July 23, 2015.*

Off-Road Diesel Fueled Fleets Regulation" to reduce emissions from existing (in-use) off-road diesel vehicles that are used in construction and other industries. This regulation became effective on June 15, 2008, and sets an anti-idling limit of five minutes for all off-road vehicles 25 horsepower and up. It also establishes emission rates targets for the off-road vehicles that decline over time to accelerate turnover to newer, cleaner engines and require exhaust retrofits to meet these targets. Revised in October 2016, the regulation enforced off-road restrictions on fleets adding vehicles with older tier engines, and started enforcing beginning July 1, 2014. By each annual compliance deadline, a fleet must demonstrate that it has either met the fleet average target for that year, or has completed the Best Available Control Technology (BACT) requirements. Large fleets have compliance deadlines each year from 2014 through 2023, medium fleets each year from 2017 through 2023, and small fleets each year from 2019 through 2028. Reducing diesel particulate emissions is one of CARB's highest priorities and it has set a long-term goal to reduce diesel particulate emissions by 85 percent by 2020.[12]

(3) Regional Standards

(a) Southern California Association of Governments (SCAG)

The Southern California Association of Governments (SCAG) is a council of governments for Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. SCAG is a regional planning agency and forum for regional issues relating to transportation, the economy and community development, and the environment. Although SCAG is not an air quality management agency, it is responsible for developing transportation, land use, and energy conservation measures that affect air quality.

On September 1, 2020, SCAG's Regional Council adopted an updated Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) known as the 2020–2045 RTP/SCS or Connect SoCal. As with the 2016–2020 RTP/SCS, the purpose of the 2020–2045 RTP/SCS is to meet the mobility needs of the six-county SCAG region over the subject planning period through a roadmap identifying sensible ways to expand transportation options, improve air quality and bolster Southern California long-term economic viability.[13] The goals and policies of the 2020–2045 RTP/SCS are similar to, and consistent with, those of the 2016–2040 RTP/SCS. Hence, because the Proposed Project would be consistent with the 2016–2040 RTP/SCS as discussed later in this section, the Proposed Project would also be consistent with the 2020–2045 RTP

[12] *CARB, Air Quality and Land Use Handbook: A Community Health Perspective, April 2005.*
[13] *SCAG, News Release: SCAG Regional Council Formally Adopts Connect SoCal, September 3, 2020.*

/SCS.[14] Because the 2020–2045 RTP/SCS was adopted by SCAG subsequent to both circulation of the Notice of Preparation (NOP) for the Proposed Project on February 20, 2019 and approval by LADOT of the Transportation Assessment for the Project on March 26, 2020, this section and the balance of this Draft EIR provided detailed analysis of Project consistency with the 2016–2040 RTP/SCS.

(i) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016-2040 RTP/SCS)

The 2016-2040 RTP/SCS, adopted on April 7, 2016, is an update to the 2012-2035 RTP/SCS that further integrates land use and transportation in certain areas so that the region as a whole can grow smartly and sustainably. Between 2015 and 2040, the region is anticipated to experience increases in population, households and jobs. The 2016-2040 RTP/SCS includes land use strategies, based on local general plans, as well as input from local governments, to achieve the Assembly Bill (AB) 32 state-mandated reductions in greenhouse gas (GHG) emissions through decreases in regional per capita vehicle miles traveled (VMT). As part of the 2016-2040 RTP/SCS, transportation network improvements would be included, and more compact, infill, walkable and mixed-use development strategies to accommodate the region's growth would be encouraged to accommodate increases in population, households, employment, and travel demand.

Within the RTP, the SCS demonstrates the region's ability to attain and exceed the GHG emission reduction targets set forth by the CARB. The SCS outlines the region's plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. The SCS focuses the majority of new housing and job growth in high-quality transit areas and other opportunity areas in existing main streets, downtowns, and commercial corridors, resulting in an improved jobs-housing balance and more opportunity for transit-oriented development. This overall land use development pattern supports and complements the proposed transportation network that emphasizes system preservation, active transportation, and transportation demand management measures. SCAG's SCS provides specific strategies for successful implementation. These strategies include supporting projects that encourage diverse job opportunities for a variety of skills and education, recreation and culture and a full-range of shopping, entertainment, and services all within a relatively short distance; encouraging employment development

[14] *For example, the Proposed Project would be consistent with both the 2016–2040 RTP/SCS and the 2020–2045 RTP/SCS because it would increase urban density within an High Quality Transit Area (HQTA) located less than 0.5 miles from a planned Metro Purple light rail station and in close proximity to more than a dozen bus routes, would include transit-oriented development, and would implement TDM, all of which would reduce the City's per capita VMT and associated air emissions. Another example is that because the Proposed Project would be consistent with the City's existing General Plan land use designation and zoning of the Project Site, it has been accounted for in the regional growth projections in both the 2016–2040 RTP/SCS and 2020–2045 RTP/SCS.*

around current and planned transit stations and neighborhood commercial centers; encouraging the implementation of a "Complete Streets" policy that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and supporting alternative fueled vehicles.

(b) South Coast Air Quality Management District (SCAQMD)

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the Basin. To that end, the SCAQMD, a regional agency, works directly with SCAG, county transportation commissions and local governments, and cooperates actively with state and federal government agencies. The SCAQMD develops air quality related rules and regulations, establishes permitting requirements, inspects emissions sources, and provides regulatory enforcement through such measures as educational programs or fines, when necessary.

(i) Air Quality Management Plan (AQMP)

The SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources to meet federal and state ambient air quality standards (CAA and CCAA discussed above). SCAQMD has responded to this requirement by preparing a series of AQMPs. The most recent 2016 AQMP was adopted by the Governing Board of the SCAQMD on March 3, 2017.[15] The 2016 AQMP represents a thorough analysis of existing and potential regulatory control options, includes available, proven, and cost-effective strategies, and seeks to achieve multiple goals in partnership with other entities promoting reductions in greenhouse gases and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The 2016 AQMP recognizes the critical importance of working with other agencies to develop funding and incentives that encourage the accelerated transition to cleaner vehicles, and the modernization of buildings and industrial facilities to cleaner technologies in a manner that benefits air quality, local businesses and the regional economy.

The 2016 AQMP is composed of stationary and mobile source emission reduction strategies from traditional regulatory control measures, incentive-based programs, co-benefits from climate programs, furthering deployment of cleaner technologies, mobile source strategies and reductions from federal sources. These strategies are implemented in partnership with the CARB and the U.S. EPA. In addition, SCAG's 2016-2040 RTP/SCS includes transportation programs, measures, and strategies generally designed to reduce VMT, which are contained within baseline emissions inventory in the 2016 AQMP. The transportation strategy and transportation control measures (TCMs),

[15] *SCAQMD, Final 2016 Air Quality Management Plan, March 2017.*

included as part of the 2016 AQMP and SIP for the Basin, are based on SCAG's 2016 RTP/SCS and Federal Transportation Improvement Program (FTIP). Some of the control measures achieve emission reductions by continuing existing regulatory requirements and programs and extensions of those programs, while some control measures are not regulatory in form, but instead focus on incentives, outreach, and education to bring about emission reductions through voluntary participation and behavioral changes needed to complement regulations.

The future air quality levels projected in the 2016 AQMP are based on several assumptions. For example, the SCAQMD assumes that general new development within the Basin will occur in accordance with population growth and transportation projections identified by SCAG's 2016 RTP/SCS. The 2016 AQMP also assumes that general development projects will include feasible strategies (i.e., mitigation measures) to reduce emissions generated during construction and operation in accordance with SCAQMD and local jurisdiction regulations, which are designed to address air quality impacts and pollution control measures. The 2016 AQMP incorporates new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling. New scientific information on the health impacts of air pollution has led to progressively more stringent air quality standards to better protect public health.

In addition to the AQMP, the SCAQMD has prepared the *CEQA Air Quality Handbook* (1993) to assist lead agencies, as well as consultants, project proponents, and other interested parties, in evaluating potential air quality impacts of projects and plans proposed in the Basin.[16] The AQMD is in the process of developing an *"Air Quality Analysis Guidance Handbook"* to replace the CEQA Air Quality Handbook approved by the AQMD Governing Board in 1993.

(ii) Rules and Regulations

SCAQMD staff develops rules based on control measures identified in the AQMP and which are designed to reduce air pollution from specific sources. SCAQMD compliance staff conduct regular inspections of businesses to ensure equipment and processes are operating in compliance with applicant clean air rules and regulations. During the inspection process, it may become necessary to issue a compliance notice to a business either to provide information necessary to make the compliance determination or to document non-compliant items found during the inspection. Each day or part of a day that the violation continues is a separate violation and subject to daily penalties. The following SCAQMD-promulgated rules have been identified as being applicable to all or portions of

[16] *SCAQMD, CEQA Air Quality Handbook, April 1993.*

the Proposed Project's construction activities and/or operations and are thus applicable to the Proposed Project.

SCAQMD Rule 403 (Fugitive Dust)**.** The purpose of SCAQMD Rule 403 (Fugitive Dust) is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions. The provisions of Rule 403 shall apply to any activity of man-made condition capable of generation fugitive dust. Rule 403 specifies best available control measures that apply to the construction activities of the Proposed Project, especially the grading/excavation phase. Such control measures include:

- Backfilling
  - Stabilize backfill material when not actively handling;
  - Stabilize backfill material during handling; and
  - Stabilize soil at completion of activity
- Clearing and grubbing
  - Maintain stability of soil through pre-watering of site prior to clearing and grubbing;
  - Stabilize soil during clearing and grubbing activities; and
  - Stabilize soil immediately after clearing and grubbing activities.
- Cut and Fill
  - Pre-water soils prior to cut and fill activities; and
  - Stabilize soil during and after cut and fill activities.
- Demolition – Mechanical/Manual
  - Stabilize wind erodible surfaces to reduce dust;
  - Stabilize surface soil where support equipment and vehicles will operate;
  - Stabilize loose soil and demolition debris; and
  - Comply with AQMD Rule 1403.
- Disturbed Soil
  - Stabilize disturbed soil throughout the construction site; and
  - Stabilize disturbed soil between structures

- Earth Moving Activities
  - Pre-apply water to depth of proposed cuts;
  - Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and
  - Stabilize soils once earth-moving activities are complete.
- Importing/Exporting Bulk Materials
  - Stabilize material while loading to reduce fugitive dust emissions;
  - Maintain at least six inches of freeboard on haul vehicles;
  - Stabilize material while transporting to reduce fugitive dust emissions;
  - Stabilize material while unloading to reduce fugitive dust emissions; and
  - Comply with Vehicle Code Section 23114.
- Trenching
  - Stabilize surface soils where trencher or excavator and support equipment will operate; and
  - Stabilize soils at the completion of trenching activities.
- Truck Loading
  - Pre-water material prior to loading; and
  - Ensure that freeboard exceeds six inches (CVC 23114).

SCAQMD Rule 1166 (Volatile Organic Compound Emissions from Decontamination of Soil). The excavation or grading of soil at a site containing volatile organic compounds (VOC) material including gasoline, diesel, crude oil, lubricant, waste oil, adhesive, paint, stain, solvent, resin, monomer, and/or any other material containing VOCs is subject to Rule 1166, and would require a mitigation plan (1166 permit). Such a plan would require segregation of the soil during excavation based on the soil analytical data, and field vapor readings generated by a properly calibrated photo ionization detector (PID) conducted during excavation, compliance with SCAQMD VOC emissions mitigation requirements, and soil management and health and safety plans to ensure worker health and safety. Soil that shows vapors exceeding 50 ppm on the PID will need to properly disposed of or treated off-site, as required by Rule 1166. This rule

applies to the oil well abandonment activities during the construction grading and excavation phase.

SCAQMD Rule 1113 (Architectural Coatings)**.** Architectural coatings are any coatings applied to stationary structures or their appurtenances, or to fields and lawns. SCAQMD Rule 1113 (Architectural Coatings) is applicable to any person who supplies, sells, markets, offers for sale, or manufactures any architectural coating that is intended to be field applied within the District to stationary structures or their appurtenances, and to fields and lawns; as well as any person who applies, stores at a worksite, or solicits the application of any architectural coating within the District. The purpose of Rule 1113 is to limit the VOC content of architectural coatings used in the District. During the architectural coatings phase, the Proposed Project shall not add to such coating any colorant that contains VOC in excess of the corresponding applicable VOC limit specified in Rule 1113.

SCAQMD Rule 1108 (Cutback Asphalt)**.** Cutback asphalt is a liquid petroleum product produced by fluxing an asphaltic base with suitable distillate and is classed as medium or slow curing grade. The provisions of SCAQMD Rule 1108 (Cutback Asphalt) state that a person shall not sell or offer for sale or use in the SCAQMD, or use any cutback asphalt containing more than 0.5 percent by volume organic compounds which evaporate at 260 degrees Celsius (500 degrees Fahrenheit) or lower as determined by ASTM Method D402 or other test method as approved by the Executive Officer. This rule applies to the paving phase of the Proposed Project.

SCAQMD Rule 1138 (Control of Emissions from Restaurant Operations)**.** SCAQMD Rule 1138 applies to owners and operators of commercial cooking operations, preparing food for human consumption. Rule 1138 requirements currently apply to chain-driven charbroilers used to cook meat. All other commercial restaurant cooking equipment including, but not limited to, under-fired charbroilers, may be subject to future rule provision. Rule 1138 applies to the Proposed Project's restaurant uses.

SCAQMD Rule 1146.2 (Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters). The purpose of this rule is to reduce NO_X emissions from natural gas-fired water heaters, boilers, and process heaters. New on-site facility NO_X emissions will be minimized through the use of emission control measures (e.g., use of best available control technology for new combustion sources such as boilers and water heaters).

(4) Local Standards

(a) City of Los Angeles General Plan

Local jurisdictions, such as the City of Los Angeles (City), have the authority and responsibility to reduce air pollution through their police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City is also responsible for implementation of the transportation control measures in the AQMP, such as bus turnouts, energy-efficient streetlights, and synchronized traffic signals. The City approved a comprehensive update to the long-term growth strategy in its General Plan. The Framework Element sets policy direction for the City's 35 Community Plan areas, in which detailed land use plans are described, and 12 citywide Elements (e.g., Mobility Plan 2035 and Housing). The Framework Element supports land use and transportation policies and patterns that will assist the region in meeting air quality goals.

The Air Quality Element of the City's General Plan was adopted on November 24, 1992, and sets forth the goals, objectives and policies that guide the City in the implementation of its air quality improvement programs and strategies. The Air Quality Element acknowledges that numerous efforts are underway at the regional, county, and City levels addressing clean air concerns and that coordination of these various efforts and the involvement of the area's residents are crucial to the achievement of state and federal air quality standards. The Air Quality Element also acknowledges the interrelationships among transportation and land use planning in meeting the City's mobility and clean air goals. Mutually reinforcing strategies need to be developed to reduce the use of single occupant vehicles, vehicle trips, and vehicle miles traveled.

The Air Quality Element establishes six goals:

- Good air quality in an environment of continued population growth and healthy economic structure;
- Less reliance on single-occupant vehicles with fewer commute and non-work trips;
- Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand-management techniques;
- Minimize impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality;

- Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels, and the implementation of conservation measures including passive measures such as site orientation and tree planting; and

- Citizen awareness of the linkages between personal behavior and air pollution and participation in efforts to reduce air pollution.

In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation. The City utilizes the *CEQA Air Quality Handbook* as its guidance document for the environmental review of plans and development proposals within its jurisdiction.

b) Existing Conditions

(1) Existing Regional Air Quality

The Project Site is located within the South Coast Air Basin (Air Basin). As shown in Figure IV.A-1, SCAQMD Air Basin and Source Receptor Areas, the Air Basin is an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Air Basin consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside counties. Ambient air quality is determined primarily by the type and amount of pollutants emitted into the atmosphere, as well as the size, topography, and meteorological conditions of a geographic area. The Basin has low mixing heights and light winds, which help to accumulate air pollutants.

As detailed in the AQMP, the major sources of air pollution in the Air Basin are divided into four major source classifications: point, area, on-road, and off-road sources. Point and area sources are the two major subcategories of stationary sources. Point sources are permitted facilities that contain one or more emission sources at an identified location (e.g., power plants, refineries). Area sources consist of many small emission sources (e.g., residential water heaters, consumer products and permitted sources) which are distributed across the region. On-road sources and off-road sources are the two main subcategories of mobile sources, such as cars and trucks (on-road sources) and heavy construction equipment (off-road sources).

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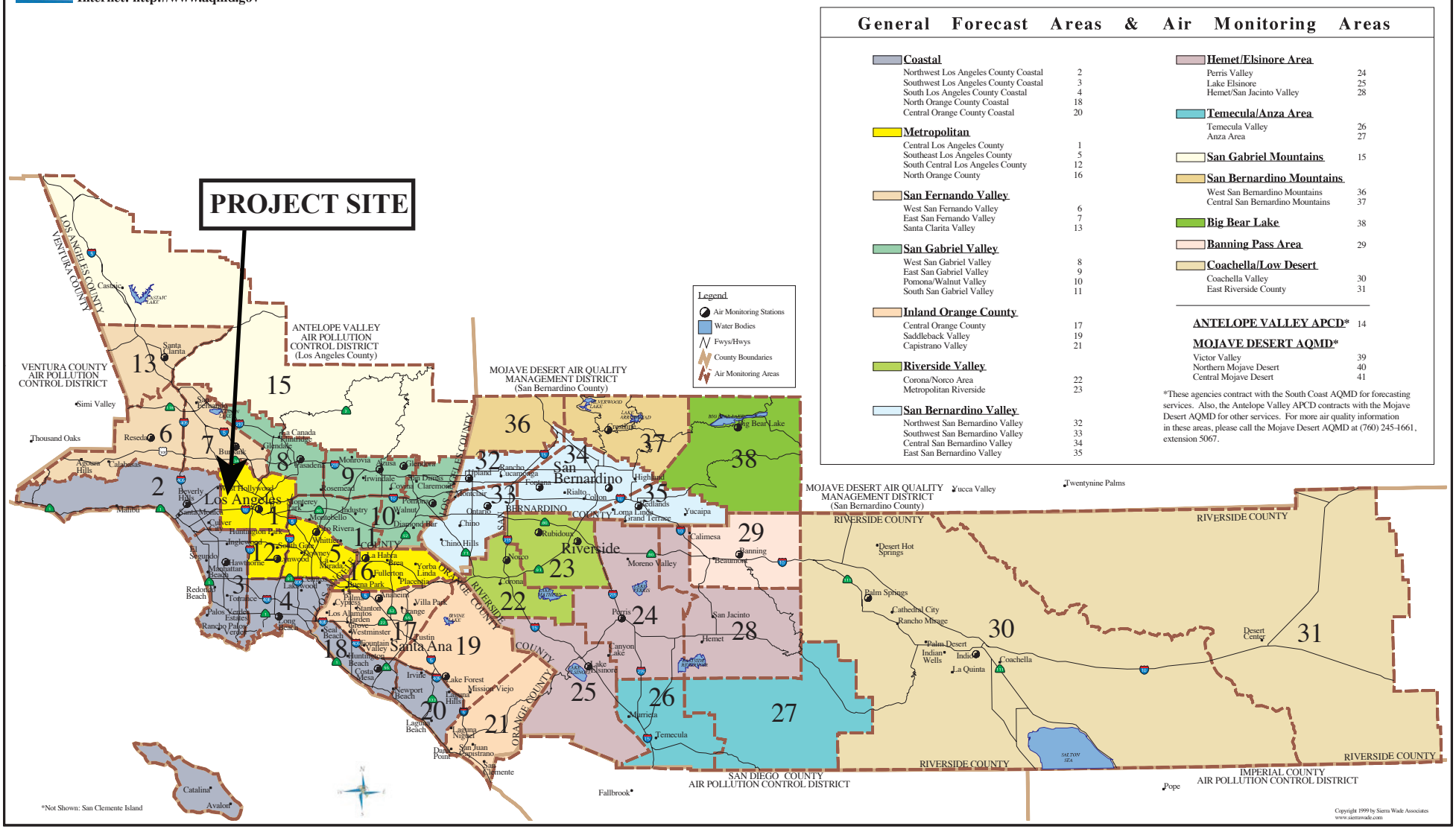


Source: South Coast Air Quality Management District, 1999.

Figure IV.A-1
SCAQMD Air Basin and Source Receptor Areas

(a) Criteria Pollutants

Measurements of ambient concentrations of the criteria pollutants are used by the U.S. EPA and CARB to assess and classify the air quality of each air basin, county, or, in some cases, a specific urbanized area. The classification is determined by comparing actual monitoring data with national and state standards. If a pollutant concentration in an area is lower than the standard, the area is classified as being in "attainment." If the pollutant exceeds the standard, the area is classified as a "non-attainment" area. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated "unclassified." The U.S. EPA and the CARB use different standards for determining whether the Basin is in attainment. Federal and state standards are summarized in Table IV.A-2, Ambient Air Quality Standards, above. The attainment status for the Los Angeles County portion of the Basin with regard to the NAAQS and CAAQS is also shown in Table IV.A-2. The CCAA designates air basins as either in attainment or non-attainment for each state air quality standard. The Basin is designated as a state and federal non-attainment area for O_3 and $PM_{2.5}$. In addition, the Basin is designated as a state non-attainment area for PM_{10}, and designated as a federal non-attainment area for lead in the Los Angeles County portion of the Basin.[17]

(b) Toxic Air Contaminants

In addition to criteria pollutants, the SCAQMD periodically assesses levels of toxic air contaminants (TACs) in the Air Basin. A TAC is defined by California Health and Safety Code Section 39655 as follows:

> *"'Toxic air contaminant' means 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. A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the federal act (42 U.S.C. Sec. 7412(b)) is a toxic air contaminant."*

The SCAQMD released the fourth round of its Basin-wide Multiple Air Toxics Exposure Study (MATES IV – Final Report) in May 2015.[18] MATES IV estimated the cancer risk from TAC emissions throughout the Basin by conducting a monitoring program, an updated emissions inventory of TACs, and a modeling effort to characterize health risks in the Basin. MATES IV focused on carcinogenic risk from TACs and did not estimate

[17] *As noted in the 2016 Final AQMP (at page 2-2), the Los Angeles County portion of the Basin is designated a non-attainment area for the federal lead standard on the basis of source-specific monitoring at two locations as determined by U.S. EPA using 2007–2009 data. However, all stations in the Basin, including the near-source monitoring in Los Angeles County, have remained below the lead NAAQS for the 2012 through 2015 period. The District will request that U.S. EPA re-designate the Los Angeles County portion of the Basin as attainment for lead.*

[18] *SCAQMD, Final Mates IV Report, May 2015.*

other health effects from particulate exposures.[19] Based on average measurements at ten fixed monitoring sites, the study estimated 70-year lifetime carcinogenic risk from TACs in the Basin to be approximately 320 to 480 per million at individual monitoring sites. Mobile sources (e.g., cars, trucks, trains, ships, aircraft, etc.) represented approximately 90 percent of the cancer risk with the remaining 10 percent attributing to toxics emitted from stationary sources including industrial operations such as refineries and metal processing facilities. Approximately 68 percent of the overall cancer risk in the Basin was attributed to diesel particulate emissions. The population-weighted risk in MATES IV shows a 57 percent reduction in modeled air toxics risk compared to the risks in MATES III period (2005).

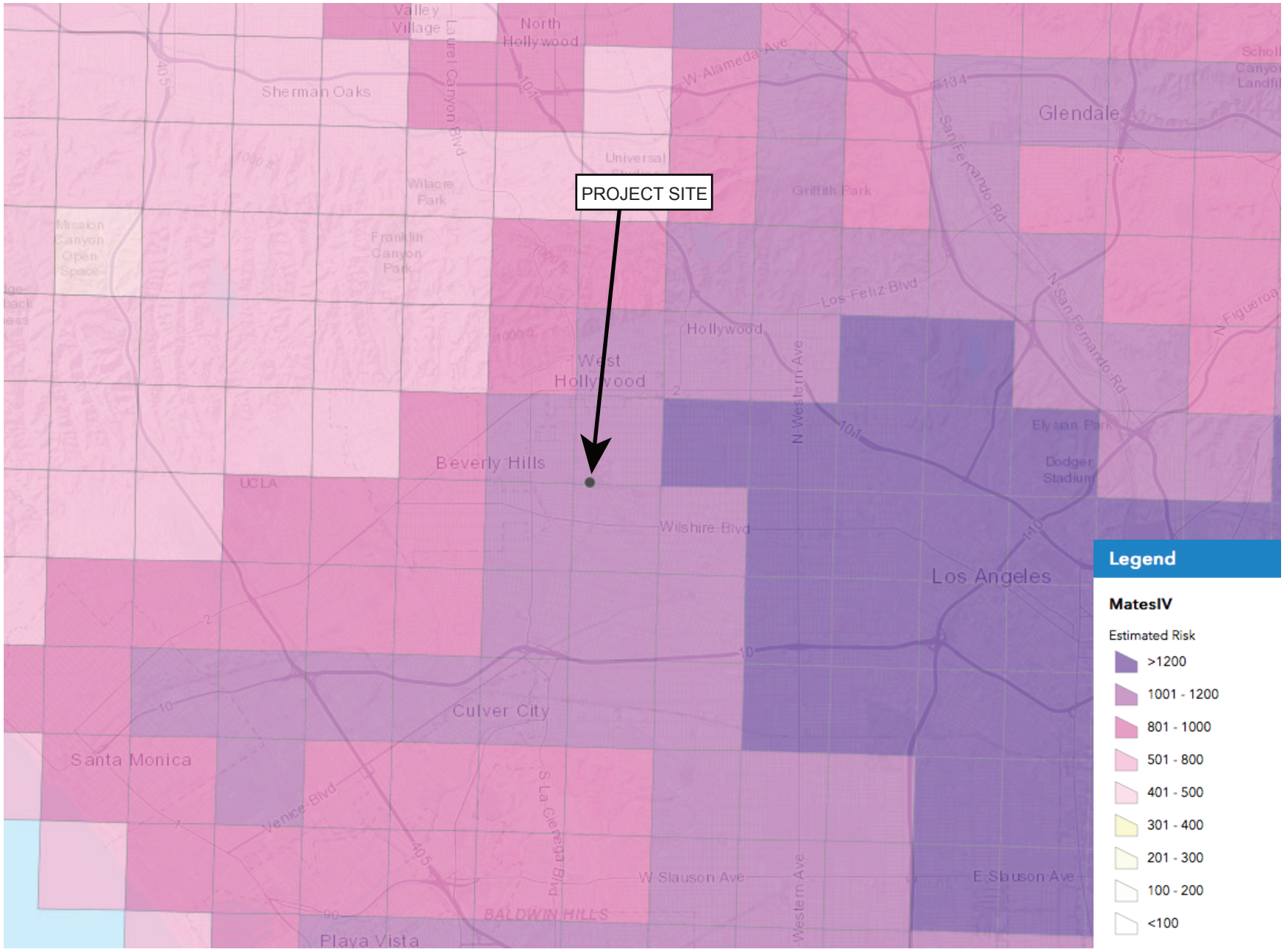
As part of MATES IV, the SCAQMD prepared an interactive map that shows estimates of cancer risks in the Basin from ambient levels of TACs based on the modeling effort to provide insight into relative risks. The map reports estimated cancer risks for discrete two-kilometer-by-two-kilometer grid cells. The cancer risk estimates reported there should not be interpreted as actual rates of disease in the exposed population, but rather as estimates of potential risk, based on a number of conservative assumptions. In general, MATES IV indicates that the highest cancer risks from TACs are found near shipping ports, goods movement sources, and near freeways and other transportation corridors.[20] The Central portion of Los Angeles falls in an estimated range of 1,001 to 1,200 risks per one million. The Project Site falls in an estimated range of 1,001-1,200 risks per one million. See Figure IV.A.2, MATES IV Total Cancer Risk for Project Site, below. Compared to previous studies of air toxics in the Basin, the MATES IV study found decreasing air toxics exposure from the analysis done in the MATES III time period.

(2) Existing Local Air Quality

The SCAQMD divides the Basin into 38 source receptor areas (SRAs) in which 38 monitoring stations operate to monitor the various concentrations of air pollutants in the region. As shown in Figure IV.A-1, SCAQMD Air Basin and Source Receptor Areas, the Project Site is located within SRA 1, which covers the Central Los Angeles area. SCAQMD Station No. 087 collects ambient air quality data for SRA 1. This station is

[19] *Mortality and other health effects form particulate exposure were conducted as part of the 2016 Air Quality Management Plan.*

[20] *MATES IV focuses on the carcinogenic risk from exposure to air toxics, and does not estimate mortality or other health effects from particulate exposures. SCAQMD, Final Mates IV Report, May 2015 (at page ES-1).*



Source: SCAQMD, MATES IV Carcinogenic Risk Interactive Map, accessed September 2018.

Figure IV.A-2
MATES IV Total Cancer Risk for Project Site

Table IV.A-3
Summary of Ambient Air Quality in the Project Vicinity

Air Pollutants Monitored Within SRA 1 Central Los Angeles Area	Year			
	2015	2016	2017	2018
O_3				
Maximum 1-hour concentration measured	0.104 ppm	0.103 ppm	0.116 ppm	0.098 ppm
Number of days exceeding State 0.09 ppm 1-hour standard	2	2	6	2
Maximum 8-hour concentration measured	0.074 ppm	0.078 ppm	0.086 ppm	0.073 ppm
Number of days exceeding national 0.070 ppm 8-hour standard	6	4	14	4
Number of days exceeding State 0.07 ppm 8-hour standard	6	4	14	4
CO				
Maximum 1-hour concentration measured	3.2 ppm	1.9 ppm	1.9 ppm	2.0 ppm
Number of days exceeding federal or State 1-hour standards	0	0	0	0
Maximum 8-hour concentration measured	1.8 ppm	1.4 ppm	1.6 ppm	1.7 ppm
Number of days exceeding federal or State 8-hour standards	0	0	0	0
NO_2				
Maximum 1-hour concentration measured	0.0791 ppm	0.0647 ppm	0.0806 ppm	0.0701 ppm
Annual average	0.0222 ppm	0.0208 ppm	0.0205 ppm	0.0185 ppm
Does measured annual average exceed national 0.0534 ppm annual average standard?	No	No	No	No
Does measured annual average exceed State 0.030 ppm annual average standard?	No	No	No	No
PM_{10}				
Maximum 24-hour concentration measured	88 µg/m^3	67 µg/m^3	96 µg/m^3	81 µg/m^3
Number of days exceeding national 150 µg/m^3 24-hour standard	0	0	0	0
Number of days exceeding State 50 µg/m^3 24-hour standard	26	18	41	31
Annual Average Concentration (Annual Arithmetic Mean (AAM))	33.1 µg/m^3	32.4 µg/m^3	34.4 µg/m^3	34.1 µg/m^3
Does measured AAM exceed State 20 µg/m^3 AAM standard?	Yes	Yes	Yes	Yes
$PM_{2.5}$				
Maximum 24-hour concentration measured	56.4 µg/m^3	44.4 µg/m^3	49.2 µg/m^3	43.80 µg/m^3
Number of days exceeding national 35.0 µg/m^3 24-hour standard	7	2	5	3
Annual Arithmetic Mean (AAM)	12.38 µg/m^3	11.83 µg/m^3	11.94 µg/m^3	12.58 µg/m^3
Does measured AAM exceed national 12 µg/m^3 AAM standard?	Yes	No	No	Yes
Does measured AAM exceed State 12 µg/m^3 AAM standard?	Yes	No	No	Yes
SO_2				
Maximum 1-hour concentration measured	0.0126 ppm	0.0134 ppm	0.0057 ppm	0.0179 ppm
Does measured 1-hour concentration exceed federal 0.075 ppm 1-hour standard or state 0.25 ppm standard?	No	No	No	No
99th Percentile Concentration (1 hour)	0.0063 ppm	0.0025 ppm	0.0026 ppm	0.0028 ppm
Pb				
Maximum monthly average concentration measured	0.013 µg/m^3	0.016 µg/m^3	0.017 µg/m^3	0.11 µg/m^3
Does measured average exceed State 1.5 µg/m^3 standard?	No	No	No	No
Maximum 3-month rolling averages	0.01 µg/m^3	0.01 µg/m^3	0.01 µg/m^3	0.011 µg/m^3
Does measured average exceed federal 0.15 µg/m^3 standard?	No	No	No	No

Note: ppm = parts by volume per million molecules of air, µg/m^3=micrograms per cubic meter
Source: SCAQMD, Historical Data by Year, accessed December 2019.

Located at 1630 North Main Street in Los Angeles and is located approximately 5 miles southeast of the Project Site. This station currently monitors emission levels of O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and Pb. Table IV.A-3, Summary of Ambient Air Quality in the Project Vicinity, identifies the national and state ambient air quality standards for the relevant air pollutants, along with the ambient pollutant concentrations that were measured at the SCAQMD Station No. 087 from 2015 to 2018.

According to the air quality data shown in Table IV.A-3, the state one-hour ozone standard was exceeded two days in 2015, two days in 2016, six days in 2017, and two days in 2018. The national eight-hour ozone standard was exceeded six days in 2015, four days in 2016, 14 days in 2017, and four days in 2018. The state eight-hour ozone standard was exceeded six days in 2015, four days in 2016, 14 days in 2017, and four days in 2018. The federal 24-hour PM_{10} standard has not been exceeded from 2015 through 2018, while the state 24-hour PM_{10} standard was exceeded 26 days in 2015, 18 days in 2016, 41 days in 2017, and 31 days in 2018. In addition, the state annual average standard for PM_{10} was exceeded each year from 2015 to 2018. The national 24-hour $PM_{2.5}$ standard was exceeded for seven days in 2015, two days in 2016, five days in 2017, and three days in 2018. The national and state annual average standards for $PM_{2.5}$ were exceeded in 2015 and 2018. Furthermore, neither national nor state standards for SO_2, CO, Lead (Pb), or NO_2 have been exceeded from 2015 to 2018.

(a) Existing Air Pollutant Sources in Local Vicinity

The general area surrounding the Project Site is characterized by urban development consisting of residential, retail, restaurant, office, educational, and open space. The Project Site is bound by W. 3rd Street to the north, S. Fairfax Avenue to the west, S. Ogden Drive to the east, and the Hancock Park Elementary School to the south. The proposed Development Site, where all of the construction activity will occur, is located in the eaternmost 3.15-acre portion of the Project Site.

Motor vehicles are the primary source of pollutants in the Project Site vicinity. Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed national and/or state standards for CO are termed “CO hotspots.” Chapter 5 of the SCAQMD’s *CEQA Air Quality Handbook* identifies CO as a localized problem requiring additional analysis when a project is likely to subject sensitive receptors to CO hotspots. The SCAQMD defines typical sensitive receptors as residences, schools, playgrounds, childcare centers, athletic facilities, hospitals, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

As shown in Table IV.A-2, the Basin is currently designated as a CO attainment area for both the CAAQS and NAAQS. As shown previously in Table IV.A-3, CO levels in the Project area are substantially below the federal and state standards. The maximum CO levels during the past four years shown in Table IV.A-3 are 3.2 ppm (one-hour average) and 2.0 ppm (eight-hour average), compared to the thresholds of 20 ppm (one-hour average) and 9.0 (eight-hour average).

(3) Existing Development Site Emissions

For puposes of estimating the Proposed Project's net air quality emissions, the baseline air quality emissions currently generated by the existing land uses within the Development Site were calculated. The Development Site is currently developed with commercial and retail buildings totaling 151,048 square feet with its associated surface parking lot. Air pollutant emissions are generated at the Development Site by stationary and area sources associated with the commercial uses, such as space and water heating, architectural coatings (paint), consumer products. Mobile vehicle traffic traveling to and from the Development Site also produces air emissions.

The average daily emissions generated by the existing uses at the Development Site were estimated utilizing the California Emissions Estimator Model (CalEEMod) *Version 2016.3.2* recommended by the SCAQMD. As shown in Table IV.A-4, Existing Daily Operational Emissions from the Development Site, motor vehicles are the primary source of air pollutant emissions associated with existing uses at the Development Site.

Table IV.A-4
Existing Daily Operational Emissions from the Development Site

Emissions Source	Emissions in Pounds per Day					
	ROG [a]	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area Source	3.38	<0.01	0.02	0.00	<0.01	<0.01
Energy	0.05	0.45	0.38	<0.01	0.03	0.03
Mobile (Vehicles)	14.76	64.09	154.37	0.43	30.93	8.62
Stationary Sources	1.64	7.34	4.18	<0.01	0.24	0.24
Total Emissions	***19.83***	***71.89***	***158.95***	***0.43***	***31.20***	***8.89***

[a] As noted in the CalEEMod User Guide, both VOC and ROGs are precursors to ozone so they are summed in the CalEEMod report under the header ROG. For the purposes of comparing the ROG value to a VOC significance threshold, the terms can be used interchangeably.
Calculation data are provided in Appendix C to this Draft EIR.
Source: Parker Environmental Consultants, 2020.

(4) Existing Sensitive Receptors in the Local Vicinity

For purposes of identifying air quality impacts, sensitive receptors are defined in several ways and for several purposes. Generally, the 2005 CARB Air Quality and Land Use Handbook considers sensitive individuals to be those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses where sensitive individuals are most likely to occur include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities.

With respect to sensitive receptors from regional air quality emissions, CARB considers residences, schools, day care centers, playgrounds, and medical facilities as sensitive land uses to air pollution. Under these definitions, the Hancock Park Elementary School and multi-family residences located further east and south of the Project Site are considered sensitive receptors and would be sensitive to regional construction and operational emissions from the Proposed Project.

With respect to localized emissions, SCAQMD considers a sensitive receptor to localized emissions be a receptor such as a residence, hospital, or convalescent facility where it is possible that an individual could remain for 24 hours.[21] Hancock Park Elementary School, which is adjacent to the Project Site, would not normally be considered a sensitive land use for localized air emissions since students and staff would not remain at the school for a period of 24 hours. However, out of an abundance of caution, even though Hancock Park Elementary School is not identified as a sensitive receptor under SCAQMD's definition, localized impacts for the land uses within 25 meters of the Project Site, which includes the Hancock Park Elementary School campus, have been evaluated for the purposes of localized significance threshold analysis.

3. Project Impacts

a) Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the Proposed Project would have a significant impact on air quality if it would:

Threshold (a): Conflict with or obstruct implementation of the applicable air quality plan;

Threshold (b): Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air

[21] *SCAQMD, Final Localized Significance Threshold Methodology, June 2003, Revised July 2008.*

quality standard;

Threshold (c): Expose sensitive receptors to substantial pollutant concentrations; or

Threshold (d): Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

For this analysis, the Appendix G Threshold questions are relied upon. Although the City of Los Angeles has not adopted a City-wide significance threshold for air quality impacts, this analysis utilizes factors and considerations identified in the L.A. CEQA Thresholds Guide (2006), and applicable criteria and thresholds identified by the SCAQMD, as appropriate in answering the Appendix G Threshold questions identified above.

(1) Construction Impacts

The L.A. CEQA Thresholds Guide identifies the following factors and considerations to evaluate construction air quality impacts:

Combustion Emissions from Construction Equipment

- Type, number of pieces and usage for each type of construction equipment;
- Estimated fuel usage and type of fuel (diesel, natural gas) for each type of equipment; and
- Emission factors for each type of equipment.

Fugitive Dust—Grading, Excavation, and Hauling

- Amount of soil to be disturbed on-site or moved off-site;
- Emission factors for disturbed soil;
- Duration of grading, excavation and hauling activities;
- Type and number of pieces of equipment to be used; and
- Projected haul route.

Fugitive Dust—Heavy-Duty Equipment Travel on Unpaved Road

- Length and type of road;
- Type, number of pieces, weight and usage of equipment; and
- Type of soil.

Other Mobile Source Emissions

- Number and average length of construction worker trips to Project Site, per day; and

- Duration of construction activities.

To assist in answering the Appendix G Threshold questions, the City of Los Angeles utilizes SCAQMD's CEQA Air Quality Handbook. Table IV.A-5, SCAQMD Air Quality Significance Thresholds, below, identifies the currently recommended supplemental thresholds by SCAQMD as published in the CEQA Air Quality Handbook. Based on the criteria set forth in SCAQMD's CEQA Air Quality Handbook, the Proposed Project may have a significant impact with regard to construction emissions if any of the following would occur:

- Regional emissions from both direct and indirect sources would exceed any of the SCAQMD prescribed threshold levels identified in Table IV.A-5, below.

- Maximum on-site daily localized emissions exceed the Localized Significance Thresholds (LST), resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for CO (20 ppm [23,000 µg/m^3] over a 1-hour period or 9.0 ppm [10,350 µg/m^3] averaged over an 8-hour period) and NO_2 (0.18 ppm [338.4 µg/m^3] over a 1-hour period, 0.1 ppm [188 µg/m^3] over a three-year average of the 98th percentile of the daily maximum 1-hour average, or 0.03 ppm [56.4 µg/m^3] averaged over an annual period).

- Maximum on-site localized PM_{10} or $PM_{2.5}$ emissions during construction exceed the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the Project Site to exceed the incremental 24-hr threshold of 10.4 µg/m^3 or 1.0 µg/m^3 PM_{10} averaged over an annual period.

(2) Operational Impacts

The L.A. CEQA Thresholds Guide identifies the following factors and considerations to evaluate operational air quality impacts:

- Operational emissions exceed the SCAQMD thresholds shown in Table IV.A-5, below;

Table IV.A-5
SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds		
Pollutant	**Construction**	**Operation**
NOx	100 pounds/day	55 pounds/day
VOC	75 pounds/day	55 pounds/day
PM_{10}	150 pounds/day	150 pounds/day
$PM_{2.5}$	55 pounds/day	55 pounds/day
SO_x	150 pounds/day	150 pounds/day
CO	550 pounds/day	550 pounds/day
Pb [c]	3 pounds/day	3 pounds/day
Toxic Air Contaminants and Odor Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants [a]		
NO_2 1-hour average annual arithmetic mean	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.03 ppm (state) and 0.534 ppm (federal)	
PM_{10} 24-hour average annual average	10.4 µg/m^3 (construction)[b] & 2.5 µg/m^3 (operation) 1.0 µg/m^3	
$PM_{2.5}$ 24-hour average	10.4 µg/m^3 (construction)[b] & 2.5 µg/m^3 (operation)	
SO_2 1-hour average 24-hour average	0.25 ppm (state) & 0.075 ppm federal – (99th percentile) 0.04 µg/m^3 (state)	
Sulfate 24-hour average	25 µg/m^3 (state)	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or Contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day Average Rolling 3-Month Average	1.5 µg/m^3 (state) 0.15 µg/m^3 (federal)	

Notes: ppm = parts per million by volume; µg/m^3 = micrograms per cubic meter

[a] *Ambient air quality thresholds for criteria pollutants based on SCQMD Rule 1303, Table A-2 unless otherwise stated.*

[b] *Ambient air quality threshold based on SCAQMD Rule 403.*

[c] *While the South Coast Air Quality Management District CEQA Air Quality Handbook contains significance thresholds for lead, Project construction and operation would not include sources of lead emissions and would not exceed the significance thresholds for lead. Unleaded fuel and unleaded paints have virtually eliminated lead emissions from commercial land use projects such as the Proposed Project. As a result, lead emissions are not further evaluated in this Draft EIR.*

Source: SCAQMD, Air Quality Significance Thresholds, Revision April 2019.

- Either of the following conditions would occur at an intersection or roadway within one-quarter mile of a sensitive receptor:
    - The Project causes or contributes to an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 ppm, respectively; or
    - The incremental increase due to the project is equal to or greater than 1.0 ppm for the California 1-hour CO standard, or 0.45 ppm for the 8-hour CO standard.
- The project creates an objectionable odor at the nearest sensitive receptor.

Additionally, based on the criteria set forth in SCAQMD's CEQA Air Quality Handbook, the Proposed Project may have a significant impact with regard to operational on emissions if any of the following would occur:

- Maximum on-site daily localized emissions exceed the Localized Significance Thresholds (LST), resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for CO (20 parts per million (ppm) over a 1-hour period or 9.0 ppm averaged over an 8-hour period) and NO_2 (0.18 ppm over a 1-hour period, 0.1 ppm over a 3-year average of the 98th percentile of the daily maximum 1-hour average, or 0.03 ppm averaged over an annual period).
- Maximum on-site localized operational PM_{10} and $PM_{2.5}$ emissions exceed the incremental 24-hr threshold of 2.5 µg/m^3 or 1.0 µg/m^3 PM_{10} averaged over an annual period.[22]

(3) Toxic Air Contaminants

In accordance with the L.A CEQA Thresholds Guide, the determination of significance related to toxic air contaminants shall be made on a case-by-case basis, considering the following factors:

(a) The regulatory framework for the toxic material(s) and process(es) involved;

(b) The proximity of the toxic air contaminants to sensitive receptors;

(c) The quantity, volume and toxicity of the contaminants expected to be emitted;

(d) The likelihood and potential level of exposure; and

[22] *SCAQMD, Final-Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds, October 2006.*

(e) The degree to which project design will reduce the risk of exposure.

Based on criteria set forth by the SCAQMD[23], the Project would expose sensitive receptors to substantial concentrations of toxic air contaminants if any of the following would occur:

- The Project results in the exposure of sensitive receptors to carcinogenic or toxic air contaminants that exceed the maximum incremental cancer risk of 10 in one million or an acute or chronic hazard index of 1.0.[24] For projects with a maximum incremental cancer risk between 1 in one million and 10 in one million, a project would result in a significant impact if the cancer burden exceeds 0.5 excess cancer cases.

(4) Consistency with the Applicable General Plan and AQMP Policies

Section 15125(d) of the State CEQA Guidelines requires an analysis of project consistency with applicable general plan, specific plan, and regional plans, including but not limited to the applicable air quality attainment or maintenance plan, or State Implementation Plan. As discussed further below, this analysis evaluates consistency with the Air Quality Element of the City's General Plan, regional plans and the 2016 AQMP in accordance with SCAQMD's CEQA Air Quality Handbook.

(a) Methodology

This analysis focuses on the nature and magnitude of the change in the air quality environment due to the development of the Proposed Project. This analysis is informed by applicable guidance documents from regulatory agencies. The SCAQMD published the CEQA Air Quality Handbook in November 1993 to assist lead agencies, as well as consultants, project proponents, and other interested parties, in evaluating potential air quality impacts of projects proposed in the Air Basin. The CEQA Air Quality Handbook provides standards, methodologies, and procedures for conducting air quality analyses in EIRs and was used in the preparation of this analysis. The SCAQMD is currently in the process of replacing the CEQA Air Quality Handbook with the Air Quality Analysis Guidance Handbook.

In addition, supplemental guidance/information to assist lead agencies is provided on the SCAQMD website (www.aqmd.gov/ceqa/hdbk.html) and includes: (1) EMFAC on-road

[23] *SCAQMD, CEQA Air Quality Handbook, Chapter 6 (Determining the Air Quality Significance of a project) and Chapter 10 (Assessing Toxic Air Pollutants), April 1993.*

[24] *The hazard index is the ratio of a toxic air contaminant's concentration divided by its Reference Concentration, or safe exposure level. If the hazard index exceeds one, people are exposed to levels of TACs that may pose noncancer health risks.*

vehicle emission factors; (2) background CO concentrations; (3) localized significance thresholds; (4) mitigation measures and control efficiencies; (5) mobile source toxics analysis; (6) off-road mobile source emission factors; (7) $PM_{2.5}$ significance thresholds and calculation methodology; and (8) updated SCAQMD Air Quality Significance Thresholds.

The SCAQMD also recommends using approved models to calculate emissions from land use projects, such as the California Emissions Estimator Model (CalEEMod), as discussed in further detail below. These recommendations were followed in the preparation of this analysis.

In summary, the net increase in Development Site emissions generated by construction and operational activities have been quantitatively estimated and compared to applicable thresholds of significance.

(1) Plan Consistency

(a) Consistency with General Plan Air Quality Element

As discussed previously, the City's General Plan Air Quality Element includes Citywide goals, objectives, and policies that guide the City in the implementation of its air quality improvement programs and strategies. Goals, objectives, and polices of the Air Quality Element that are relevant to the Proposed Project include minimizing traffic congestion and increasing energy efficiency, as well as reducing air pollutant emissions consistent with the AQMP. The analysis below provides a side-by-side comparison of each of the relevant provisions in the Air Quality Element with the Proposed Project to determine whether the Proposed Project would be consistent with those provisions.

(b) Consistency with Air Quality Management Plan

The SCAQMD is required, pursuant to the CAA, to reduce emissions of criteria pollutants for which the Air Basin is in non-attainment of the NAAQS (e.g., ozone and PM2.5). The SCAQMD's 2016 AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving five NAAQS related to these pollutants, including transportation control strategies from SCAG's 2016 RTP/SCS designed to focus growth near High Quality Transit Areas (HQTAs) and to reduce VMT. The 2016 AQMP control strategies were developed, in part, based on regional growth projections prepared by SCAG. As the AQMP control strategy is based on projections from local General Plans, projects which are consistent with local General Plans are considered consistent with the growth assumptions of the air quality related regional plans and their emissions are assumed to be accounted for in the AQMP emissions inventory. Projects which include amendments to General or Specific Plans, or are considered significant projects, undergo

further scrutiny for AQMP consistency. As noted above, the 2016 AQMP has been adopted by the SCAQMD and CARB. Therefore, this analysis considers the Project's consistency with the 2016 AQMP. The Proposed Project's consistency with the 2016 AQMP is evaluated based on consistency with its applicable growth projections and emission control strategies.

(2) California Emissions Estimator Model (CalEEMod)

The Proposed Project's construction and operatonal emisssions were calculated using CalEEMod *Version 2016.3.2*. The CalEEMod program was developed in collaboration with the air districts of California as a statewide land use emissions computer model designed to provide a uniform platform for government agencies to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod utilizes widely accepted methodologies for estimating emissions combined with default data that can be used when site-specific information is not available. Sources of these methodologies and default data include but are not limited to the U.S. EPA AP-42 emission factors, CARB vehicle emission models, studies commissioned by California agencies such as the California Energy Commission (CEC) and CalRecycle.

The CallEEMod program calculates both the daily maximum and annual average for criteria pollutants as well as annual greenhouse gas (GHG) emissions. Ozone emissions are not directly calculated in the CalEEMod program. Instead, ozone precursors are quantified as reactive organcic gasses (ROG). Both VOC and ROGs are precursors to ozone so they are summed in the CalEEMod report under the header ROG. For the purposes of comparing the ROG value to a VOC significance threshold, the terms are used interchangeably.

(3) Construction Emissions

Construction of the Proposed Project has the potential to generate temporary pollutant emissions through the use of heavy-duty construction equipment, such as excavators and cranes, and through vehicle trips generated from workers and haul and delivery trucks traveling to and from the Project Site. In addition, fugitive dust emissions would result from certain non-enclosed demolition activities and various soil-handling activities. Mobile source emissions, primarily NO_x, would result from the use of construction equipment. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of construction activity, and prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources.

(a) Regional Emissions

Construction activities associated with pre-demolition/abatement activities, demolition, grading/excavation, building construction, architectural coating/finishing and paving would generate pollutant emissions and have been modeled to analyze the potential impacts from these activities. Specifically, these construction activities would temporarily create emissions of dusts, fumes, equipment exhaust, and other air contaminants. Some activities, such as demolition inside of existing structures would be enclosed and thereby limit dust or other related emissions. The activities would also occur in compliance with all regulatory requirements to control emissions during construction. The Proposed Project's construction emissions were compared to the thresholds established by the SCAQMD as shown in Table IV.A-5, SCAQMD Air Quality Significance Thresholds. It was assumed that all of the construction equipment used would be diesel-powered. For a discussion on the assumptions regarding project construction and scheduling, including estimated quantities of demolition debris, soil export, construction worker and haul trips, and duration of construction activities, see Section II, Project Description.

As noted above, with respect to regional emissions, CARB considers residences, schools, day care centers, playgrounds, and medical facilities as sensitive land uses to air pollution. The Hancock Park Elementary School and multi-family residences further east and south of the Project Site are identified as sensitive receptors for purposes of addressing regional construction and operational emissions from the Proposed Project.

(b) Localized Emissions

In addition to the SCAQMD's regional significance thresholds, the SCAQMD has established localized significance criteria in the form of ambient air quality standards for criteria pollutants (see Table IV.A-2). To minimize the need for detailed air quality modeling to assess localized impacts, SCAQMD developed mass-based localized significance thresholds (LSTs). Lead agencies may use the LST mass rate look-up tables as a screening analysis. If a project exceeds any applicable LST when the mass rate look-up tables are used as a screening analysis, then project specific air quality modeling may be performed. These localized thresholds, which are found in the mass rate look-up tables in the "Final Localized Significance Threshold Methodology" document prepared by the SCAQMD,[25] apply to projects that are less than or equal to five acres in size and are only applicable to the following criteria pollutants: NO_x, CO, PM_{10}, and $PM_{2.5}$. The Development Site encompasses approximately 3.15 acres. Since thresholds are provided for 1-, 2-, or 5- acre sites only, the localized emissions threshold for an approximate 3.15-acre site was estimated for the Developmment Site, using linear regression, as

[25] *SCAQMD, Final Localized Significance Threshold Methodology, June 2003, Revised July 2008.*

recommended by the SCAQMD. Thus, the localized thresholds for all phases of the Proposed Project are based on a receptor distance of 25 meters in SCAQMD's SRA 1 for a project site of 3.15 acres.

LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards and are developed based on the ambient concentrations of that pollutant for each SRA. In terms of NO_x emissions, the two principal forms of NO_x are nitric oxide (NO) and NO_2, with the vast majority (95 percent) of the NO_x emissions being comprised of NO. However, because adverse health effects are associated with NO_2, the analysis of localized air quality impacts associated with NO_x emissions is focused on NO_2 levels. NO is converted to NO_2 by several processes, the two most important of which are (1) the reaction of NO with O_3, and (2) the photochemical reaction of NO with hydrocarbons. When modeling NO_2 emissions from combustion sources, the SCAQMD assumes that the conversion of NO to NO_2 is complete at a distance of 5,000 meters from the source.

For PM_{10} LSTs, the thresholds were derived based on requirements in SCAQMD Rule 403 — Fugitive Dust. For $PM_{2.5}$ LSTs, the thresholds were derived based on a general ratio of $PM_{2.5}$ to PM_{10} for both fugitive dust and combustion emissions. As described in more detail below, the resulting on-site construction emissions generated for each construction phase were analyzed against the applicable LST for each phase.

As stated above, for the purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor for localized emissions to be land uses such as a residence, hospital, or convalescent facility where it is possible that an individual could remain for 24 hours.[26] According to the SCAQMD, the LSTs for PM_{10} and $PM_{2.5}$, which are based on a 24-hour averaging period, would be appropriate to evaluate the localized air quality impacts of a project on nearby sensitive receptors. Figure IV.A-3, Air Quality Sensitive Receptors, show the locations of nearby sensitive receptors that may be affected by the Proposed Project's localized emissions during the construction phase. The sensitive receptors surrounding the Project area includes the multi-family residential buildings located further east and south of the Project Site.

With respect to the Hancock Park Elementary School, which is adjacent to the Development Site, this land use would not normally be identified as a sensitive land use to localized emissions since students and staff would not remain at the school for a period of 24 hours. However, out of an abundance of caution, the City has elected to evaluate the Hancock Park Elementary School as a sensitive receptor for the purposes of localized

[26] *SCAQMD, Final Localized Significance Threshold Methodology, Revised July 2008, page 3-2.*

significance threshold analysis. Per SCAQMD's LST mass rate look-up tables, the most stringent criteria is for sensitive receptors within 25 meters of the Development Site, which are therefore used to evaluate the localized air quality emisisons impact at the elementary school.

(4) Operational Emissions

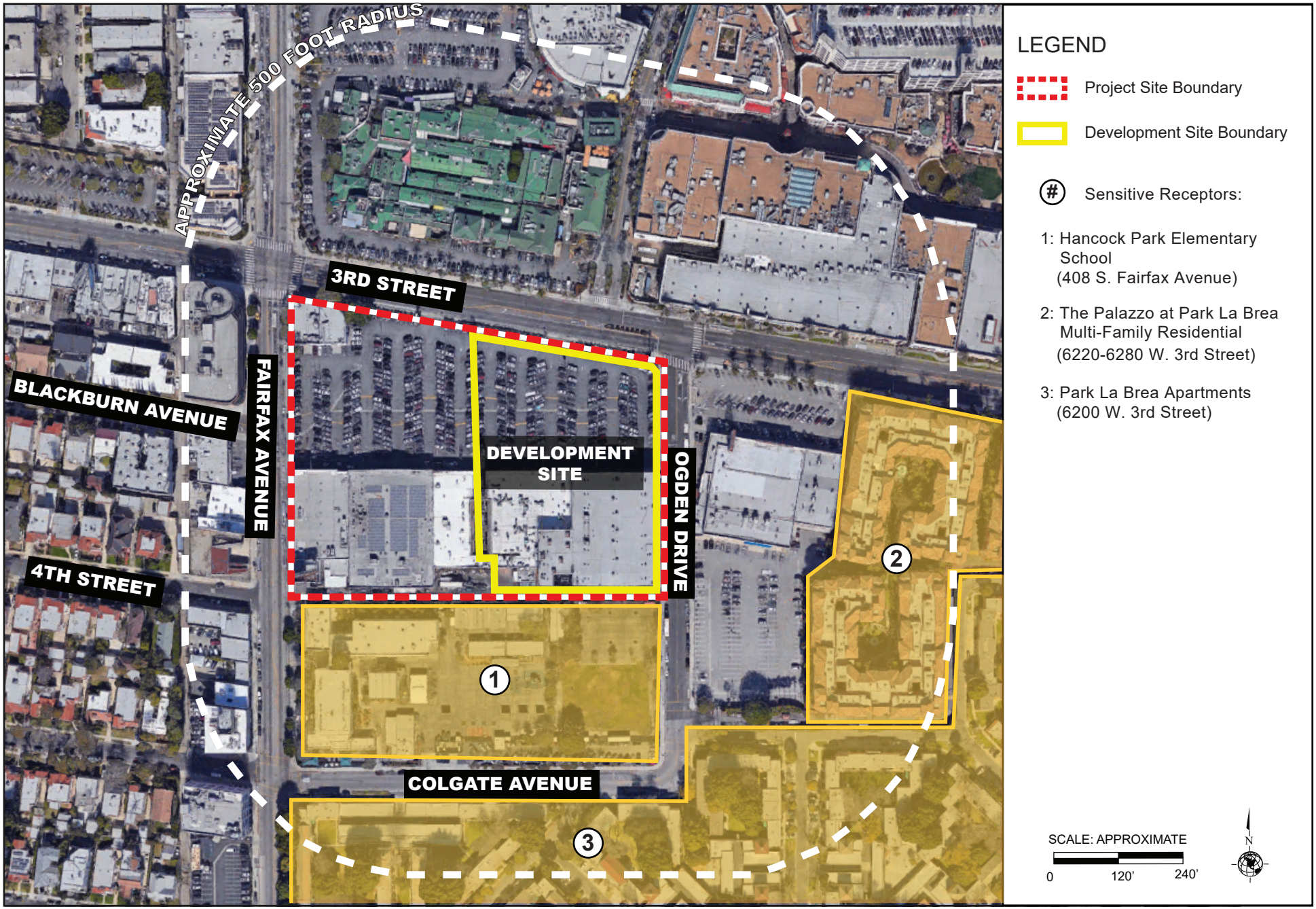
(a) Regional Emissions

Operational emissions associated with the Proposed Project were calculated using CalEEMod *Version 2016.3.2* and the information provided in the traffic study prepared for the Proposed Project. Operational emissions associated with the Proposed Project would be comprised of mobile source emissions and area source emissions. Mobile source emissions are generated by the increase in motor vehicle trips to and from the Project Site associated with operation of the Proposed Project. Area source emissions are generated by natural gas consumption for space and water heating, and landscape maintenance equipment. To determine if a regional air quality impact would occur, the increase in emissions is compared with the SCAQMD's recommended regional thresholds for operational emissions as shown in Table IV.A-5.

(b) Localized Emissions

(i) On-Site Emissions

Localized impacts from Proposed Project operations include calculation of on-site emissions (using SCAQMD's recommended CalEEMod program) and evaluation of these emissions consistent with the SCAQMD's LST methodology.



Source: Google Earth, Aerial View, 2018; Parker Environmental Consultants.

Figure IV.A-3
Air Quality Sensitive Receptors

(ii) Off-Site Emissions

Potential localized CO concentrations from induced traffic at nearby intersections are also addressed, consistent with the methodologies and assumptions used in the consistency analysis provided in the 2003 AQMP.

The analysis prepared for CO attainment in the Air Basin by the SCAQMD can be used to assist in evaluating the potential for CO exceedances in the Air Basin. CO attainment was thoroughly analyzed as part of the 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan). In the 2003 AQMP, the SCAQMD conducted CO modeling for the four worst-case intersections in the Basin, including the intersections of: (a) Wilshire Boulevard and Veteran Avenue; (b) Sunset Boulevard and Highland Avenue; (c) La Cienega Boulevard and Century Boulevard; and (d) Long Beach Boulevard and Imperial Highway. The SCAQMD noted that the intersection of Wilshire Boulevard and Veteran Avenue was the most congested intersection in Los Angeles County, with an average daily traffic volume of about 100,000 vehicles per day.[27] This intersection is located near the on- and off-ramps to Interstate 405 in West Los Angeles. The emission data provided in Table 4-10 of Appendix V of the 2003 AQMP demonstrates that the peak modeled CO concentration due to vehicle emissions at these four intersections was 4.6 ppm (one-hour average) and 3.2 (eight-hour average) at Wilshire Boulevard and Veteran Avenue.[28] When added to the existing background CO concentrations, the worst-case CO levels in the Basin would be 7.6 ppm (one-hour average) and 5.6 ppm (eight-hour average), which is well under the SCAQMD's thresholds of significance of 20 ppm (one-hour average), and 9.0 ppm (eight-hour average), respectively. Based on the ratio of the one-hour CO standard (20.0 ppm) and the modeled worse-case emission value (4.6 ppm) the CO threshold of significance would likely not be exceeded until the daily traffic at the intersection exceeded more than 400,000 vehicles per day. Thus, if a study intersection impacted by a project is below 400,000 vehicles a day, it can reasonably be concluded that the project would not generate a significant CO hotspot impact and no further analysis is warranted. If a study intersection impacted by the Proposed Project exceeds 400,000 vehicles per day, further CO hotspot analysis is recommended.

(5) Toxic Air Contaminants (Construction and Operation)

Potential impacts from TACs were analyzed qualitatively to determine whether a more detailed analysis was necessary (i.e., Health Risk Assessment). Impacts from TAC emissions during construction were evaluated based on the length of construction and

[27] *SCAQMD, 2003 Air Quality Management Plan, Appendix V, 2003.*
[28] *SCAQMD, 2003 Air Quality Management Plan, Appendix V, 2003.*

the amount of diesel particulate matter emissions. The greatest potential for TAC emissions during construction would be from diesel particulate emissions associated with heavy equipment operations. Impacts from TAC emissions from operation were based on the type of land uses and activities proposed by the Proposed Project. Land uses that involve the use, storage, or processing of carcinogenic or non-carcinogenic TACs include truck stops and warehouse distribution facilities.

(6) Human Health Impacts

The standards for each criteria air pollutant provide protection for the nation's public health and the environment. The thresholds are set for health reasons and establish a margin of safety. The standards and significance thresholds are established through evaluation of the most policy-relevant science and from quantitative characterizations of exposures and associated risks to human health or the environment associated with recent air quality conditions. New scientific information on the health impacts of air pollution has led to progressively more stringent air quality standards to better protect public health.

Using the methodology above, the construction and operational emissions of criteria pollutants were estimated using CalEEMod, and compared to the SCAQMD regional thresholds for construction and operational emissions. If criteria pollutant concentrations exceed the SCAQMD thresholds, impacts to human health can result. If criteria pollutant concentrations are not exceeded, it is assumed that air quality impacts are well within the margin of safety established to protect human health.

The methodology in this report also makes a reasonable effort to substantively connect the Proposed Project's air quality impacts to the likely health consequences. Given the state of environmental science modeling in use at this time, the correlation between air quality impacts and human health cannot be technically perfect or based on scientific certainty. Hence, the analysis in this report functions to provide details sufficient to enable those who did not participate in its preparation to understand and consider meaningfully the potential air quality impacts associated with the Proposed Project. In addition, the methodology used herein produces impact analysis that connects the levels of pollutants that would be emitted by the Project to potential adverse health effects. This provides the public with an idea of the health consequences that could result when more pollutants are added to the basin, particularly for non-attainment pollutants. Therefore, the analysis herein either informs the public how the bare numbers translate to create potential adverse impacts or explains what the agency does know, and why, given existing scientific constraints, it cannot translate potential health impacts further.

(7) Cumulative Impacts

Based on SCAQMD guidance, individual construction projects that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also cause a cumulatively considerable increase in emissions for those pollutants for which the Air Basin is in non-attainment. As discussed in the SCAQMD's White Paper on Potential Control Strategies to Address Cumulative Impacts From Air Pollution (August 2003):

> *As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR.... Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.*[29]

The cumulative analysis of air quality impacts within this Draft EIR follows SCAQMD's guidance such that construction or operational Project emissions will be considered cumulatively considerable if Project-specific emissions exceed an applicable SCAQMD recommended daily threshold.

The following Project Design Features are applicable to the Proposed Project.

- **PDF-AQ-1**: Where power poles are available, electricity from power poles and/or solar-powered generators rather than temporary diesel or gasoline generators will be used during construction.

Additionally, the Proposed Project would incorporate PDF-GHG-1, which is aimed at reducing GHG emissions, as further discussed in Section IV.C. Greenhouse Gas Emissions. Although those features incorporated in the Project design avoid or minimize GHG emissions, these sustainability features would also reduce criteria air pollutants.

[29] *SCAQMD, White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. Appendix D, South Coast Air Quality Management District, August 2003.*

b) Analysis of Project Impacts

(1) Project Impacts

(a) Construction Activities

As discussed in Section II, Project Description, the Proposed Project would include the demolition of the two eastern buildings on-site (approximately 151,048 square feet of total building area) and site clearance of the eastern paved surface parking lot (1,300 cubic yards of asphalt to be exported from the Project Site[30]) and would include the construction of a mixed-use development with 331 residential dwelling units and 83,994 square feet of new commercial/retail space. The Proposed Project's total building floor area would be approximately 426,994 square feet, including 331 residential dwelling units (343,000 square feet) and 83,994 square feet of new commercial uses (includes restaurant and retail).

In addition, site earthwork, excavation and the associated export of soil would be required in order to cut and fill the land to ensure the proper base and slope for the building pads and foundations and to construct two levels of subterranean parking within the mixed-use building. It is estimated that the proposed earthwork and excavation activities would generate a total of approximately 110,000 cubic yards of excavated soil, which would be exported to off-site fill sites or inert landfills.

Threshold (a) Would the Project conflict with or obstruct implementation of the applicable air quality plan?

(1) Consistency with the 2016 AQMP

This analysis evaluates two criteria for consistency with regional plans and the regional AQMP adopted by the SCAQMD:

1) Would the Project increase the frequency or severity of existing air quality violations, cause or contribute to new air quality violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMD?

2) Would the Project exceed the assumptions utilized in preparing the AQMP?

Criterion 1

[30] *Cubic yards of asphalt (1,300 cy) was estimated by assuming approximately 70,000 square feet of asphalt parking, excavating approximately 0.5 feet deep, and converting to cubic yards, resulting in approximately 1,296 cy, and rounding up to the nearest hundred, as a conservative estimate.*

The Proposed Project is an infill development near transit within an existing urbanized area that would concentrate new residential uses within a SCAG-designated High Quality Transit Area (HQTA).[31] Thus, the Proposed Project advances regional goals to reduce VMT and related air emissions. Moreover, the Proposed Project would not exceed any SCAQMD significance thresholds for air quality emissions, and thus would not increase the frequency of air quality violations.

This Draft EIR quantitatively analyzed regional emmissions of ROG, NO_X, CO, SO_2, PM_{10} and $PM_{2.5}$ and localized concentrations of NO_2 as NO_X, CO, PM_{10}, and $PM_{2.5}$ for daily emissions during construction to ascertain potential effects and to determine if there is a potential for such emissions to cause or affect a violation of an applicable ambient air quality standard. As shown in Table IV.A-7 and Table IV.A-9 below, neither regional nor localized construction emissions would exceed the applicable significance thresholds.

In addition, this Draft EIR also quantitively analyzed potential regional operational emmissions and localized operational emissions from on-site activities. As shown in Table IV.A-8 and Table IV.A-10, neither regional operational nor localized operational impacts would exceed the applicable thresholds of significance. As such, the Proposed Project would not increase the frequency or severity of existing air quality violations, cause or contribute to new air quality violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMD.

The Proposed Project would not introduce substantial stationary sources of emissions. CO is the preferred benchmark pollutant for assessing local area air quality impacts from post-construction motor vehicle operations. Because the Basin is currently in attainment for CO, and existing intersections around the Project Site would not require a CO hotspot analysis, impacts would be less than significant.

Criterion 2

With respect to the second criterion, the AQMP was prepared to achieve national and state air pollution standards within the region. Projects that are consistent with the projections of employment, population, and housing forecasts identified in SCAG's 2016-2040 RTP/SCS are considered consistent with the AQMP growth projections. This is primarily because the forecast assumptions used by SCAG form the basis of the land use and transportation control portions of the AQMP.

Determining whether or not a project exceeds the assumptions reflected in the AQMP involves the evaluation of three criteria: (1) consistency with applicable population, housing, and employment growth projections; (2) project mitigation measures; and (3)

[31] *SCAG, Final 2016-2040 RTP/SCS, April 2016, Exhibit 5.1, High Quality Transit Areas In The Scag Region For 2040 Plan, at page 77.*

appropriate incorporation of AQMP land use planning strategies. The following discussion provides an analysis with respect to each of these criteria.

Regarding consistency with population, housing, and growth projections, a project is consistent with the AQMP, in part, if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. In the case of the 2016 AQMP, two sources of data form the basis for the projections of air pollutant emissions: the City's General Plan and SCAG's 2016–2040 RTP/SCS.

As discussed in Sections IV.E, Land Use Planning, and IV.G, Population and Housing, the Proposed Project would not exceed the population and housing projections of the 2016-2040 RTP/SCS for the Los Angeles subregion, and would therefore be consistent with the assumptions utilized in preparing the AQMP.

Regarding feasible air quality mitigation measures, the Proposed Project does not have significant impacts that require mitigation. Additionally, the Proposed Project would comply with applicable regulatory measures enforced by the SCAQMD. SCAQMD enforces stationary and mobile source compliance with respect to both operational and construction emissions. The Proposed Project would adhere to current and applicable regulatory compliance measures (including SCAQMD Rule 403: Fugitive Dust, Rule 1113: Architectural Coating, Rule 1108: Cutback Asphalt, Rule 1138: Control of Emissions from Restaurant Operations, and Rule 1146.2: Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters). As such, the Proposed Project is consistent with this criterion.

With respect to land use policies set forth in the AQMP, the Proposed Project would implement several land use policies and strategies listed in the RTP/SCS and the AQMP. Such land use strategies set forth in the 2016 AQMP that are applicable to the Proposed Project include planning for growth around livable corridors, providing more options for short trips/neighborhood mobility areas, expanding electric vehicle charging stations, supporting local sustainability planning, and balancing growth distribution between 500-foot buffer areas and High Quality Transit Areas. The Proposed Project would provide a variety of land uses, including multi-family residential and commercial/retail space, which would help reduce vehicle miles traveled by promoting pass-by and internal capture trips and would balance growth distribution within HQTAs. The Project Site is developed with existing retail uses and is surrounded by multi-familty residential uses to the east and Hancock Park Elementary School and multi-familty residential uses to the south. Thus, the introduction of a mixed use project with retail and multi-family land uses would be compatible with the existing established land uses in the Project area. Additionally, the Proposed Project would include sustainability features that are further discussed in Section IV.C, Greenhouse Gas Emissions. Sustainability features of the Proposed Project

include replacing existing commercial retail uses with a more efficient mixed-use residential retail building that exceeds California's Building Energy Efficiency Standards (Title 24). The Proposed Project would be designed to meet the minimum energy efficiency standards of the Los Angeles Green Building Code and will demonstrate that it meets the City's standard of sustainability by meeting the intent of the criteria for certification at the U.S. Green Building Council's (USGBC) Leadership in Energy Efficiency and Design (LEED) certified level or equivalent. In accordance with LAMC Sections 99.04.106.4.2 and 99.05.106.5.3.3, the Proposed Project would provide thirty (30) percent of the total number of multi-family residential and commercial parking spaces as electric vehicle charging spaces (EV spaces) capable of supporting future electric vehicle supply equipment (EVSE). Additionally, in accordance with LAMC Section 99.04.106.4.4 and 99.05.106.5.3.6, 10% of the total number of parking spaces provided for all new multi-family dwelling units and commercial uses will be be equipped with EV charging stations.

In addition, regarding land use developments, such as the Proposed Project, SCAG's 2016–2040 RTP/SCS land use goals and policies focus on the reduction of vehicle trips and VMT. As discussed in Section IV.C, Greenhouse Gas Emissions, of this Draft EIR, the 2016–2040 RTP/SCS includes, for the SCAG region as a whole, a daily 22.8 Total VMT per capita for the 2012 Base Year, and a daily 20.5 Total VMT per capita for the 2040 Plan Year. For Los Angeles County, the 2012 Base Year projected daily Total VMT per capita is 21.5 and 18.4 daily Total VMT per capita for the 2040 Plan Year. To analyze the Proposed Project's consistency with this aspect of the 2016–2040 RTP/SCS, the Proposed Project's Total Daily VMT was divided by the Proposed Project's service population to arrive at the daily VMT per capita. As shown in Table IV.I-5 of Section IV.I, Transportation, of this Draft EIR, the Project VMT per capita of 5.8 VMT per day for residents would be well below the Los Angeles County goals provided in the 2016–2040 RTP/SCS.[32] Additionally, it should be noted that the goals and policies of the recently adopted 2020–2045 RTP/SCS are similar to, and consistent with, those of the 2016–2040 RTP/SCS. Hence, because the Proposed Project would be consistent with the 2016–2040 RTP/SCS as discussed above, the Proposed Project would also be consistent with the 2020–2045 RTP/SCS.

The Project Site is transit accessible and is close to many bus transit lines, rail lines, and local shuttle service. Public transit service within the vicinity of the Project Site is currently provided by the Los Angeles County Metropolitan Transportation Authority's (Metro) and LADOT DASH. Metro bus lines, including local and rapid lines, as well as LADOT's DASH

[32] *As discussed in Section IV.I, Transportation, work related VMTs related to the retail and restaurant uses are not applicable to the VMT Threshold criteria as these land uses are neighborhood serving land uses and tend to reduce regional VMT.*

lines, run along 3rd Street, Fairfax Avenue, Wilshire Boulevard, and La Brea Avenue. These bus lines connect passengers to the Project Site from various locations across the City and throughout Los Angeles County.

The Proposed Project would also provide required short- and long-term bicycle parking spaces in compliance with the requirements of the Los Angeles Municipal Code (LAMC). The increase in transit accessibility and the bicycle parking spaces provided on-site would further reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. The Proposed Project design would also provide pedestrian access that minimizes barriers and links the Project Site with external streets to encourage people to walk instead of drive. The Proposed Project would provide a 15-foot sidewalk on W. 3rd Street and a minimum 12-foot wide sidewalk along S. Ogden Drive, in compliance with the Mobility Element standards. Additionally, the ground floor level provides a pedestrian paseo with through pedestrian access linking S. Ogden Drive to the retail Center. The Proposed Project trip-generation estimates account for these features by taking a credit for transit and walking for future residents and employees. Accounting for these sustainability features would contribute to a Project daily per capita VMT of 5.8 miles for residents, which represents a reduction of 18 percent for residents in daily per capita VMT when compared to the SCAG regional 2012 Base Year of 22.8 daily per capita VMT. This reduction in VMT is also consistent with the goals of the 2016–2040 RTP/SCS of an estimated 18 percent decrease in per capita GHG emissions (as compared to the RTP/SCS's 2005 Base Year) from passenger vehicles by 2035 and 21 percent decrease in per capita GHG emissions (as compared to the RTP/SCS's 2005 Base Year) from passenger vehicles by 2040. Accordingly, the Proposed Project would support AQMP and RTP/SCS objectives of reducing VMT and the related vehicular air emissions.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of the Proposed Project on air quality in the Air Basin. The Proposed Project is an infill development near transit within an existing urbanized area that would concentrate new residential uses within an HQTA, thus reducing VMT. The Proposed Project would not have a significant long-term impact on the region's ability to meet State and federal air quality standards. As discussed above, the Proposed Project's would be consistent with the growth assumptions, goals, and policies of the AQMP and, therefore, would not conflict with or obstruct implementation of the SCAQMD's AQMP.

As such, the Proposed Project would support the SCAQMD and SCAG's objectives of reducing VMT, would be consistent with AQMP land use strategies, and would be consistent with the growth projections in the 2016 AQMP. Therefore, the Proposed Project would be consistent with, and would not conflict with the implementation of the 2016 AQMP.

(2) Consistency with General Plan Air Quality Element

The City's Air Quality Element sets forth the goals, objectives, and policies that guide the City in the implementation of its air quality improvement programs and strategies. A detailed analysis of the consistency of the Proposed Project with relevant policies in the City's General Plan Air Quality Element is presented in Table IV.A-6, Project Consistency with Applicable Policies of the General Plan Air Quality Element.

Table IV.A-6
Project Consistency with Applicable Policies of the General Plan Air Quality Element

Policy	Consistency Analysis
Goal 1: Good air quality and mobility in an environment of continued population growth and healthy economic structure.	**Consistent.** Discussed in more detail below, the Proposed Project would not exceed any regional air quality standards during operation. The Proposed Project would place dwelling units and ground-floor commercial space in a Transit Priority Area, thereby minimizing demands for vehicles and reducing regional vehicle miles traveled. The Proposed Project would thereby encourage walking from the new residential units to the on-site and nearby commercial uses. The Project Site's location near mass transit and proximity to services, retail stores, and employment opportunities promotes a pedestrian-friendly environment. The Proposed Project would improve the public sidewalks in accordance with the Mobility Plan standards adjacent to Project Site on W. 3rd Street and S. Ogden Drive and would include active ground floor uses to enhance the pedestrian experience and promote walkabilty. The Proposed Project would provide a 15-foot sidewalk on W. 3rd Street (with a 13-foot dedication) and a minimum 12-foot wide sidewalk along S. Ogden Drive. Additionally, the ground floor level provides a pedestrian paseo with through pedestrian access linking S. Ogden Drive to the retail Center. In addition, the Proposed Project would provide 257 bicycle spaces to promote travel by bicycle. Thus, the Proposed Project would be consistent with this goal.
Objective 1.1: It is the objective of the City of Los Angeles to reduce air pollutants consistent with the Regional Air Quality Management Plan (AQMP), increase traffic mobility, and sustain economic growth citywide.	**Consistent.** As discussed herein, the Proposed Project would be consistent with the 2016 AQMP and would not exceed regional air quality standards during operation. Additionally, the Project Site's location in proximity to transit, services, retail stores, and employment opportunities promotes the use of a variety of transportation options, which includes walking, biking, and the use of public transportation.
Objective 1.3: It is the objective of the City of Los Angeles to reduce particulate air pollutants	**Consistent.** The Proposed Project would adhere to SCAQMD Rules that regulate particulate

Table IV.A-6
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Air Quality Element

emanating from unpaved areas, parking lots, and construction sites.	emissions. Contruction workers would not utilize any unpaved roads, but may utilize the western parking lot during construction to avoid parking on the surrounding streets. During the earthwork phases of construction, the Proposed Project would comply with SCAQMD Rule 403, which requires dust control measures that would reduce particulate air pollutants from construction activity. The Project Site would be watered to suppress dust emissions as required through SCAQMD Rule 403.
Policy 1.3.1: Minimize particulate emissions from construction sites.	**Consistent.** Construction activities associated with the Proposed Project would be required to comply with CARB's In-Use Off-Road Diesel Regulation, which controls the construction fleet engine fuel efficiency, and with CARB's Airborne Toxic Control Measure (ATCM), which also sets requirements for construction fleet engines and horsepower. Further, the Proposed Project would comply with SCAQMD Rule 403—Fugitive Dust, which requires appropriate dust control measures to be implemented during each phase of development. Accordingly, particulate emissions at the Project Site during construction of the Proposed Project would be minimized. During pre-demolition abatement activities, the Proposed Project would use a negative pressure system to seal the building before removing all potentially present ACMs and LBP and ensure no emissions are released into the air. Furthermore, it is conservatively anticipated that 5,500 cubic yards of potentially impacted soil from the on-site oil well would be excavated during construction and would be disposed of at a licensed soil recycling or disposal facility permitted to accept such soil. The excavation of VOC-impacted soil and disposal activities would be subject to SCAQMD Rule 1166, which would reduce potential impacts associated with handling and export of contaminated soils. Therefore, the Proposed Project would be consistent with this policy.
Policy 1.3.2: Minimize particulate emissions from unpaved roads and parking lots which are associated with vehicular traffic.	**Consistent.** The Proposed Project would not utilize any unpaved roads, but may utilize the western parking lot during construction to avoid construction workers parking on the surrounding streets. During the earthwork phases of construction, the Proposed Project would incorporate measures that would reduce particulate air pollutants from construction activity. The Project Site would be watered to suppress dust emissions as required through SCAQMD Rule 403. Therefore, the Proposed Project would be

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	consistent with this policy. See also description under Policy 1.3.1.
Goal 2: Less reliance on single-occupant vehicles with fewer commute and non-work trips.	**Consistent.** The Proposed Project would place new dwelling units and ground-floor commercial space in a Transit Priority Area and HQTA, thereby minimizing demands for vehicles and reducing regional vehicle miles traveled. The Proposed Project would thereby encourage walking from the new residential units to the on-site and nearby commercial uses. The Project Site's location near mass transit and proximity to services, retail stores, and employment opportunities promotes a pedestrian-friendly environment. Additionally, the Proposed Project would include bicycle parking on-site to encourage travel by bicycle. Therefore, the Proposed Project would promote other modes of travel besides single-occupant vehicles and would be consistent with this goal.
Objective 2.1: It is the objective of the City of Los Angeles to reduce work trips as a step towards attaining trip reduction objectives necessary to achieve regional air quality goals.	**Consistent.** As mentioned above, the Project Site's location near mass transit options and proximity to services, retail stores, and employment opportunities promotes other modes of transportation, such as walking and bicycling. This option for future residents and employees of the Project Site would serve to reduce trips and VMT. As such, the Proposed Project would be consistent with this objective.
Goal 4: Minimal impact of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality.	**Consistent.** The Proposed Project would provide a variety of land uses, including multi-family residential and commercial/retail space, which are consistent with the surrounding land uses. The Project Site is developed with existing retail uses and is surrounded by multi-familty residential uses to the east and the Hancock Park Elementary School and multi-familty residential uses to the south. Thus, the introduction of a mixed-use project with retail and multi-family land uses would be compatible with the existing established land uses in the project area and would provide a transition from retail center to residential neighborhood. The Proposed Project would also provide direct bicycle and pedestrian access to W. 3rd Street and S. Fairfax Avenue, which connect to major transit lines in the Los Angeles area. Thus, this would reduce vehicles-per-miles traveled, promote alternatives to driving, and aim to improve air quality. The Project Site is located within ¼ mile of a Metro Rapid bus stop (Metro Rapid 705). Accordingly, a 15% trip reduction for transit trips has been applied to the residential and commercial

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	components of the project based on the "LADOT Transportation Impact Study Guidelines," (December 2016) for developments within a ¼ mile walking distance of a transit station or a Rapid Bus Stop. Additionally, due to the mixed-use nature of the Proposed Project, an internal capture reduction was applied for the commercial, restaurant, and supermarket uses based on the synergy between all the land uses provided within the Project Site. The land uses proposed and the location of the Project Site would promote an efficient land use pattern that would be served by public transportation and would overall reduce air quality impacts. Further, as discussed in detail below, the Proposed Project would result in less than significant impacts with regard to regional and localized air quality emissions. Thus, based on the above, the Proposed Project would minimize impacts from future land use development by addressing the relationship between land use, transportation, and air quality, and would be consistent with this goal.
Objective 4.2: It is the objective of the City of Los Angeles to reduce vehicle trips and vehicle miles traveled associated with land use patterns.	**Consistent.** The Proposed Project would provide a mix of residential and commercial land uses in an area with a variety of entertainment, restaurant, retail, and employment services that would allow residents and employees to live and work in close proximity. The availability of diverse land uses within close promiximity and with transit options would promote other modes of transportation such as walking, biking, and public transportation. This would serve to reduce vehicle trips and VMTs associated with the proposed and surrounding land uses. See also description under Goal 4, above.
Policy 4.2.2: Improve accessibility for the City's residents to places of employment, shopping centers, and other establishments.	**Consistent.** The Proposed Project would include a mix of residential and commercial uses located in the Wilshire Community Plan Area within the City of Los Angeles. The Proposed Project would provide accessibility to mass transit, jobs, and shopping centers along 3rd Street and Fairfax Avenue. Additionally, due to the variety of mixed uses proposed by the Project on site, the residents would have access to a variety of commercial/retail uses, which would provide access to places of employment and shopping. Therefore, the Proposed Project would be consistent with this policy.
Policy 4.2.3: Ensure that new development is compatible with pedestrians, bicycles, transit, and alternative fuel vehicles.	**Consistent.** The design of the Proposed Project would encourage patrons to walk and bike to and from the Project Site. The Proposed Project would provide pedestrian-oriented connectivity between

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	3rd Street and Fairfax Avenue, which would provide direct street frontage and pedestrian access to the Project Site, compared to the existing surface parking lot that buffers commercial uses and the sidewalks. In addition, through the implementation of the L.A. Green Building Code, the Proposed Project would be required to provide the necessary infrastructure for electric vehicle charging stations, and on-site bicycle parking to promote the use of bicycle transportation as an alternative to the vehicle. The Proposed Project would also include a bicycle repair workstation and shower facilities to further encourage bicycle travel among residents and employees. Thus, the Proposed Project would be consistent with this policy.
Policy 4.2.5: Emphasize trip reduction, alternative transit and congestion management measures for discretionary projects.	**Consistent.** The Proposed Project is an infill mixed-use residential and commercial development. The Proposed Project would include neighborhood-serving commercial retail and restaurant uses that would serve Project residents and the Project vicinity, thereby reducing VMT that would otherwise be generated to travel to similar commercial and retail uses elsewhere in the community. In addition, the Proposed Project would include on-site bicycle parking to encourage alternate modes of transportation. Therefore, the Proposed Project would be consistent with this policy.
Policy 5.1.2: Effect a reduction in energy consumption and shift to non-polluting sources of energy in its buildings and operations.	**Consistent.** As discussed in more detail in Section IV.C, Greenhouse Gas Emissions of this EIR, the implementation of the Project Design Features together with the requirements established by the City's Green Building Code would reduce energy consumption for the Proposed Project. The Proposed Project would be required to meet the Title 24 2016 Standards which includes stringent Building Energy Efficiency Standards. Therefore, the Proposed Project would be consistent with this policy.
Policy 5.1.4: Reduce energy consumption and associated air emissions by encouraging waste reduction and recycling.	**Consistent.** As stated above, compliance with the City's Green Building Code would reduce energy consumption for the Proposed Project. Furthermore, operations on the Project Site would continue to be subject to requirements set forth in AB 939 requiring each city and county to divert 50 percent of its solid waste from landfill disposal through source reduction, recycling, and composting. Additionally, as required by the California Solid Waste Reuse and Recycling Access Act of 1991, the Applicant would be required to provide adequate storage areas for the

Table IV.A-6
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	collection and storage of recyclable waste materials, which would reduce air emissions associated with said waste. Therefore, the Proposed Project would be consistent with this policy.

Source: Policies applicable to the Project were derived from the City's General Plan Air Quality Element, Adopted November 1992; Project consistency analysis by Parker Environmental Consultants, 2018.

As shown in Table IV.A-6, the Proposed Project would be consistent with the applicable goals, objectives, and policies set forth in the City's General Plan Air Quality Element. Therefore, impacts related to consistency with the applicable air quality policies in the General Plan would be less than significant. ***In summary, the Proposed Project would be consistent with applicable local and regional plans pertaining to air quality including the City of Los Angeles Air Quality Element and the AQMP. Therefore, the Proposed Project would not conflict with or obstruct implementation of the applicable air quality plan, and impacts associated with plan consistency would be less than significant.***

(3) Mitigation Measures

(a) Construction

Project-level and cumulative construction-related impacts with regard to consistency with applicable local and regional plans pertaining to air quality would be less than significant. Therefore, no mitigation measures are required.

(b) Operational

Project-level and cumulative construction-related impacts with regard to with regard to consistency with applicable local and regional plans pertaining to air quality would be less than significant. Therefore, no mitigation measures are required.

(4) Level of Significance After Mitigation

(a) *Construction*

As discussed above, impacts would be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

(b) *Operation*

As discussed above, impacts with regard to with regard to consistency with applicable local and regional plans pertaining to air quality would be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

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

The Basin is currently in State non-attainment for ozone, PM_{10}, and $PM_{2.5}$. The SCAQMD neither recommends quantified analyses of construction and/or operational emissions from multiple development projects nor provides methodologies or thresholds of significance to be used to assess the cumulative emissions generated by multiple cumulative projects. Instead, the SCAQMD recommends that a project's potential contribution to cumulative impacts should be assessed utilizing the same significance criteria as those for project specific impacts.[33] Furthermore, SCAQMD states that if an individual development project generates less than significant construction or operational emissions, then the development project would not generate a cumulatively considerable increase in emissions for those pollutants for which the Basin is in non-attainment. As such, a project may have a significant impact where project-related emissions would exceed federal, State, or regional standards or thresholds, or where project-related emissions would cumulatively contribute to an existing or projected air quality violation.

(1) Regional Construction Impacts

(a) Construction Schedule and Phasing

For purposes of analyzing construction impacts associated with air quality, this analysis assumes a Project construction schedule of approximately 32 months, with construction beginning in 2021 and final buildout occurring in 2023. Construction activities associated with the Proposed Project would be undertaken in six main activities: (1) pre-construction abatement activities, (2) demolition/site clearing; (3) grading/excavation; (4) building construction; (5) architectural coatings/finishing; and (6) paving.

Prior to commencement of the building demolition and site clearing phase, the Applicant will engage a State certified and approved Asbestos Abatement Contractor and Hazardous Waste Hauler to perform asbestos abatement and decontamination, and

[33] *SCAQMD, White Paper on Potential Control Strategies to Address Cumulative Impacts From Air Pollution August 2003, at Appendix D-3.*

transport to a State-approved landfill. Any pre-existing hazardous building materials will be properly removed prior to disturbance by renovation or demolition related activities in accordance with California Code of Regulations Title 22, 66261-66265, Health and Safety Code 25910-25929 and all additional pertinent environmental and OSHA regulations. During this phase, the building envelope and (including all doors, vents, and windows) would be sealed and vacuum pressurized to create a negative pressure system to prevent asbestos, dust, and other particulates from being released into the atmosphere during abatement activities. The pre-demolition removal/abatement of potentially hazardous building materials would occur over a period of four to six three weeks. It is estimated that pre-demolition abatement activities would generate approximately 100 cy of waste material resulting in approximately 10 haul trips.

The demolition/site clearance phase would include the demolition of approximately 151,048 square feet of the two existing eastern buildings and the removal of the asphalt paved parking lot (1,300 cubic yards asphalt)[34] on the Project Site. In addition, the demolition/site clearance phase would include the removal of street trees, walls, fences, and other parking lot related debris. The demolition and site clearance would be completed in approximately two months.

After the completion of demolition and site clearance, the grading/excavation phase for the Proposed Project would occur for approximately 3 months and would involve the excavation for two subterranean parking levels and the cut and fill of land to ensure the proper base and slope for the building foundations. The Proposed Project would require approximately 110,000 cubic yards of soil to be hauled off-site in order to ensure a proper base for the building foundations and subterranean levels. To provide additional flexibility during the earthwork and grading phases and the potential for unsuitable fill materials to be encountered during construction, the emissions from construction haul trucks were conservatively based on 110,000 cubic yards of soil export. Haul trips would occur outside of the peak hours and during the permissible hauling hours. In accordance with Section 2485 in Title 13 of the California Code of Regulations (CCR), the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location. Additionally, in accordance with Section 93115 in Title 17 of the CCR, operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

After the grading phase, the building construction phase includes the construction of the proposed buildings, connection of utilities to the buildings, installation of irrigation systems

[34] *Cubic yards of asphalt (1,300 cy) was estimated by assuming approximately 70,000 square feet of asphalt parking, excavating approximately 0.5 feet deep, and converting to cubic yards, resulting in approximately 1,296 cy, and rounding up to the nearest hundred, as a conservative estimate.*

for landscaping, and landscaping the Project Site. The building construction phase also consists of construction of the subterranean parking levels, building foundations, basement walls and residential/commercial structures. This phase consists of above grade structures and is expected to occur for approximately 22 months.

Upon completion of the structures, architectural coating, finishing, and paving would occur. The architectural finishing phase would involve installation of windows, doors, cabinetry, appliances, and would also involve the application of interior and exterior paint and finish-coating materials. The Proposed Project would comply with SCAQMD Rule 1113, limiting the VOC content of architectural coatings. Paving involves the laying of concrete and asphalt for the parking lots, driveways, and sidewalks. It is estimated that architectural coatings and paving would occur over the last four and one-half months of the construction phase.

Haul Route

Construction and demolition debris would be recycled to the maximum extent feasible. Demolition debris and soil materials from the Project Site that cannot be recycled or diverted would be hauled to the Sunshine Canyon landfill, which accepts construction and demolition debris and inert waste from areas within the City of Los Angeles. The Sunshine Canyon Landfill is approximately 24 miles northwest of the Project Site (approximately 48 miles round trip). For recycling efforts, the Waste Management Downtown Diversion facility accepts construction waste for recycling and is located approximately 11 miles east of the Project Site (approximately 22 miles round trip).

For purposes of analyzing the construction-related impacts, it is anticipated that demolition/site clearance would involve approximately 13,986 cy of demolition debris and 1,300 cy of asphalt export. Additionally, the grading/excavation phase would involve approximately 110,000 cy of soil export. Hauling emissions were based on the respective hauling distances to the destination facilities for soil and asphalt export and demolition and construction debris disposal as decribed in Section II, Project Description.

Haul truck staging would occur on-site or at designated off-site locations and radioed into the site to be filled. Haul truck staging would not be permitted along S. Ogden Drive or Colgate Avenue in front of the Hancock Park Elementary School. It is anticipated that export soil material will be transported to a designated fill site or regional landfill which accepts inert soil material. It is anticipated that clean soil and asphalt materials would be hauled to the Sunshine Canyon Landfill. Any potentially contaminated soil materials, if encountered, would be required to be transported to the Simi Valley Waste Management Landfill, which is a State-authorized landfill facility that accepts petroleum and VOC-impacted soil. Concrete material would be transported to United Rock facility in Irwindale and the remainder of the construction and demolition debris would be hauled to Waste

Management's Downtown Diversion Facility. The proposed haul route to and from regional landfill facilities would involve accessing the Project Site from S. Ogden Drive, and traveling either east on W. 3rd Street to Highland Avenue, and proceeding north on Highland Avenue to access the 101 Freeway, or east on W. 3rd Street and south on La Brea Avenue to access the 10-Freeway. The proposed haul route maps are provided in Section II, Project Description (see Figure II-20, Haul Route to and from the I-10 Freeway and Figure II-21, Haul Route to and from the US-101 Freeway, respectively). No haul trucks would be permitted to use Colgate Avenue. The haul route may be modified in compliance with City policies and in consultation with the Department of City Planning, LADOT, and the Department of Building and Safety, as applicable to the Proposed Project.

(b) Construction Emissions

The analysis of regional daily construction emissions has been prepared utilizing the CalEEMod computer model recommended by the SCAQMD. Table IV.A-7, Estimated Peak Daily Regional Construction Emissions, identifies daily emissions that are estimated to occur on the peak construction day for each of the construction phases, although construction time frames and day-to-day construction activities may vary.

For regional air quality impact analysis, sensitive receptors are defined in several ways and for several purposes. Generally, the 2005 CARB Air Quality and Land Use Handbook considers sensitive individuals to be those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses where sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities. As discussed above under the Methodology subheading, the Hancock Park Elementary School and multi-family residences further east and south of the Project Site are identified as sensitive receptors for purposes of addressing regional construction and operational emissions from the Proposed Project. As shown in Table IV.A-7, the peak daily regional emissions generated for ROG, NO_X, CO, SO_2, PM_{10} and $PM_{2.5}$ during the construction phases of the Proposed Project would not exceed the regional emission thresholds. Therefore, impacts to sensitive receptors, including the Hancock Park Elementary School and nearby residential uses would be less than significant.

The calculations of PM_{10} and $PM_{2.5}$ presented in Table IV.A-7 assume that the Proposed Project would comply with the applicable dust control measures contained in SCAQMD Rule 403 regarding fugitive dust during each phase of development. Rule 403 requirements include, but are not limited to, the following:

Table IV.A-7
Estimated Peak Daily Regional Construction Emissions

Construction Year	Emissions (pounds per day) [a]					
	VOC [b]	NO_x	CO	SO2	PM_{10}	$PM_{2.5}$
2021	5.55	98.41	42.35	0.25	9.57	4.41
2022	2.98	28.55	27.00	0.08	3.36	1.57
2023	35.45	24.65	26.24	0.08	3.22	1.44
Maximum Unmitigated Construction Emissions [c]	**35.45**	**98.41**	**42.35**	**0.25**	**9.57**	**4.41**
SCAQMD Daily Significance Thresholds	75	100	550	150	150	55
Over (Under)	(39.55)	(1.59)	(507.65)	(149.75)	(140.43)	(50.59)
Exceed Threshold?	No	No	No	No	No	No

Notes:
[a] Calculations assume compliance with SCAQMD Rule 403 – Fugitive Dust and Rule 1113 – Architectural Coatings.
[b] As noted in the CalEEMod User Guide, both VOC and ROGs are precursors to ozone so they are summed in the CalEEMod report under the header ROG. For the purposes of comparing the ROG value to a VOC significance threshold, the terms can be used interchangeably.
[c] The CalEEMod worksheets are provided in Appendix C to this EIR.
Source: Parker Environmental Consultants, 2020.

- Water shall be applied to disturbed soil in sufficient quantities to prevent the generation of visible dust plumes;
- A wheel washing system would be utilized to remove bulk material from tires and vehicle undercarriages before vehicles exit the Project Site;
- All clearing, earth moving, or excavation activities would be discontinued during periods of high winds (i.e., greater than 25 miles per hour (mph)), so as to prevent excessive amounts of dust;
- All dirt/soil loads would be secured by trimming, watering or other appropriate means to prevent spillage and dust;
- All dirt/soil materials transported off-site would be either sufficiently watered or securely covered to prevent excessive amount of dust;
- General contractors would maintain and operate construction equipment so as to minimize exhaust emissions; and
- Trucks having no current hauling activity would not idle but be turned off.

As shown in Table IV.A-7, the peak daily regional emissions generated for ROG, NO_X, CO, SO_2, PM_{10} and $PM_{2.5}$ during the construction phases of the Proposed Project would not exceed the regional emission thresholds. Accordingly, the emissions generated by

construction activities are well within the margin of safety established to protect human health. Furthermore, it is anticipated that 5,500 cubic yards of impacted soil from the on-site oil well would be excavated during construction and would be disposed of at a licensed soil recycling or disposal facility permitted to accept such soil. The excavation of VOC-impacted soil and disposal activities would be subject to SCAQMD Rule 1166, which would reduce potential impacts associated with handling and export of contaminated soils. Therefore, regional air quality impacts associated with construction emissions would be less than significant.

(2) Regional Operational Impacts

Operational emissions generated by both stationary and mobile sources would result from normal day-to-day activities on the Development Site after occupancy. As stated previously, emissions would be generated by motor vehicles traveling to and from the Development Site, energy use, occasional architectural coatings, consumer products, and the operation of landscape maintenance equipment. The analysis of daily operational emissions from the Proposed Project has been prepared utilizing CalEEMod. The results of these calculations, and associated SCAQMD thresholds, are presented in Table IV.A-8, Proposed Project Estimated Daily Regional Operational Emissions. As shown in Table IV.A-8, the operational emissions associated with the Proposed Project would not exceed the established SCAQMD threshold levels.

Table IV.A-8
Proposed Project Estimated Daily Regional Operational Emissions

Emissions Source	Emissions in Pounds per Day					
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area Source	10.26	0.32	27.42	<0.01	0.15	0.15
Energy	0.18	1.62	1.04	<0.01	0.13	0.13
Mobile (Vehicle) Sources	16.82	70.13	166.73	0.61	49.74	13.59
Stationary	3.28	14.68	8.37	0.02	0.48	0.48
Total Project Emissions	***30.54***	***86.75***	***203.56***	***0.63***	***50.50***	***14.35***
Less Existing Development Site	*(19.83)*	*(71.89)*	*(158.95)*	*(0.43)*	*(31.20)*	*(8.89)*
Net Project Emissions	**10.71**	**14.86**	**44.61**	**0.20**	**19.30**	**5.46**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Potentially Significant Impact?	**No**	**No**	**No**	**No**	**No**	**No**

Note: Calculation worksheets are provided in Appendix C to this Draft EIR.
Source: Parker Environmental Consultants, 2020.

The Proposed Project would meet the energy efficiency requirements of the L.A. Green Building Code. Specifically, the Proposed Project would be designed to meet Title 24 2016 Standards, reduce potable water consumption through the use of low-flow water

fixtures, and provide ENERGY STAR labeled residential grade equipment and appliances in all new residential units. New on-site facility NO_X emissions will be minimized through the use of emission control measures (e.g., use of best available control technology for new combustion sources such as boilers and water heaters) as required by SCAQMD Rule 1146.2, Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters. Accordingly, the operational emissions are well within the margin of safety established to protect human health. Therefore, impacts associated with regional operational emissions from the Proposed Project would be less than significant.

In conclusion, the Proposed Project's regional construction and operational emissions would not exceed the established SCAQMD thresholds as shown in Table IV.A-7 and Table IV.A-8, above. Therefore, the Proposed Project would not generate a cumulatively considerable increase in emissions of the pollutants for which the Basin is in non-attainment, and impacts would be less than significant.

Threshold (c) Would the project expose sensitive receptors to substantial pollutant concentrations?

(1) Localized Construction Air Quality Impacts

(a) Localized On-Site Construction Emissions

This Draft EIR analyzes the daily on-site construction emissions generated by the Proposed Project based on the SCAQMD's localized significance thresholds to determine whether the emissions would cause or contribute to adverse localized air quality that impacts sensitive receptors.

The area surrounding the Project Site consists of an existing elementary school, retail commercial uses, and residential land uses. There are also multi-family residential buildings located to the east and south of the Project Site that are considered sensitive receptors, as shown in Figure IV.A-3, Air Quality Sensitive Receptors. The SCAQMD identifies sensitive receptors to localized emissions such as a residence, hospital, or convalescent facility, where it is possible that an individual could remain for 24 hours. Schools are not normally identified as sensitive to localized emissions since students and staff would not remain on-site for 24 hours. However, out of an abundance of caution the City has elected to evaluate the Hancock Park Elementary School as a sensitive receptor for the purposes of localized significance threshold analysis

The closest receptor distance provided in the SCAQMD's Mass Rate LST Look-up Tables is within 82 feet (25 meters). The Proposed Project would involve a grading area of approximately 3.15 acres. Therefore, the localized significance threshold for sensitive receptors within 25 meters for a 3.15-acre site was applied for the Proposed Project. As

shown in Table IV.A-9, Localized On-Site Maximum Daily Construction Emissions, on-site emissions generated by the Proposed Project would not exceed the established SCAQMD localized significance thresholds. Accordingly, the emissions generated by construction activities are below the thresholds of significance for localized emissions and thus are well within the margin of safety established to protect human health. ***Therefore, the localized air quality impacts resulting from construction emissions associated with the Proposed Project would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant.***

Table IV.A-9
Localized On-Site Maximum Daily Construction Emissions

Construction Year	Emissions (pounds per day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
2021	37.11	26.35	4.26	2.82
2022	18.04	19.38	0.93	0.89
2023	16.65	19.26	0.81	0.77
Maximum Unmitigated Localized Construction Emissions [a]	**37.11**	**26.35**	**4.26**	**2.82**
SCAQMD Localized Significance Thresholds	128	1,360	11	6
Over (Under)	(90.89)	(1,333.65)	(6.74)	(3.18)
Exceed Threshold?	No	No	No	No

Notes:
[a] *Calculations assume compliance with SCAQMD Rule 403 – Fugitive Dust and Rule 1113 – Architectural Coatings.*
[b] *The localized thresholds for all phases are based on a receptor distance of 25 meters in SCAQMD's SRA 1 for a Development Site of 3.15 acres. Thresholds for a 3.15-acre site were estimated using linear regression.*
[c] *The localized thresholds listed for NOx in this table takes into consideration the gradual conversion of NO_X to NO_2. The analysis of localized air quality impacts associated with NOx emissions is focused on NO_2 levels as they are associated with adverse health effects.*
Source(s): SCAQMD, Final LST Methodology Document, Appendix C – Mass Rate LST Look-Up Tables, October 21, 2009; Sample Construction Scenarios for Projects Less than Five Acres in Size, Appendix K; CalEEMod worksheets are provided in Appendix C to this EIR. Parker Environmental Consultants, 2020.

(a) Off-Site Construction Activities (Toxic Air Contaminants)

The greatest potential for TAC emissions during construction would be from diesel particulate emissions associated with heavy equipment operations. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person continuously exposed to concentrations of TACs over a 70-year lifetime will contract cancer based on the use of standard risk assessment methodology. Given the short-term construction schedule of approximately 32 months, the Proposed Project would not result

in a long-term (i.e., 70-year) source of TAC emissions. Additionally, the SCAQMD CEQA guidance does not require a health risk assessment (HRA) for short-term construction emissions. It is, therefore, not necessary to evaluate long-term cancer impacts from construction activities which occurs over a relatively short duration. In addition, there would be no residual emissions or corresponding individual cancer risk after construction. ***As such, Project-related TAC impacts during construction would be less than significant.***

(2) Localized Operational Air Quality Impacts

(a) Localized On-Site Operational Emissions

Operation of the Proposed Project would not introduce any major new sources of air pollution within the Development Site. Operation of the Proposed Project would replace existing retail commercial uses on the Development Site with similar retail commercial and residential land uses. None of the proposed land uses would generate substantial localized emissions that exceed SCAQMD thresholds. The Proposed Project would not introduce significantly new sources of localized emissions to the area such as large commercial or industrial facilities, which are typically associated with high sources of localized emissions. Nevertheless, the Proposed Project would emit criteria pollutants in the local vicinity during operation.

As noted above, the Development Site is approximately 3.15 acres and the localized significance threshold was applied accordingly. Table IV.A-10, below, shows the net amount of on-site emissions from the operation of the Proposed Project. As shown, the Proposed Project's on-site localized emissions would not exceed any of the localized thresholds. Accordingly, the operational emissions are well within the margin of safety established to protect human health. ***Therefore, localized on-site operational emissions would be less than significant.***

Table IV.A-10
Localized On-Site Peak Daily Operational Emissions

Emissions Source [a, b]	Total On-site Emissions (Pounds per Day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	0.32	27.42	0.15	0.15
Energy	1.62	1.04	0.13	0.13
Stationary	14.68	8.37	0.48	0.48
Total On-Site Emissions on Development Site:	***16.62***	***36.83***	***0.76***	***0.76***
Less Existing Emissions on Development Site:	*(0.45)*	*(0.40)*	*(0.03)*	*(0.03)*
NET On-Site Emissions *on Development Site*:	**16.17**	**36.43**	**0.73**	**0.73**
SCAQMD Localized Thresholds	**121**	**1,661**	**7**	**2**
Over (Under) Thresholds	*-104.83*	*-1,624.57*	*-6.27*	*-1.27*
Potentially Significant Impact?	***No***	***No***	***No***	***No***

[a] *The localized thresholds for all sources are based on a receptor distance of 25 meters in SCAQMD's SRA 1 for a Development Site of 3.15 acres.*
[b] *Emissions from area, energy, and stationary sources were analyzed, since mobile sources are off-site localized emissions. Area, energy, and stationary emissions are the same for winter and summer months.*
Source: CalEEMod 2016.3.2, Calculation sheets are provided in Appendix C to this EIR.

(b) Localized Mobile Source Emissions (CO "Hot Spots" Analysis)

With regard to localized emissions from motor vehicle travel, traffic congested roadways and intersections have the potential to generate localized high levels of CO. As specified in the methodology subsection above, if a project intersection affected by the project does not exceed 400,000 vehicles per day, then it can reasonably be concluded that the localized CO emissions would not exceed the SCAQMD's thresholds of significance.

At buildout of the Proposed Project, the highest average daily trips at an intersection would be approximately 58,700 at the intersection of 3rd Street and La Brea Avenue[35], which is significantly below the daily traffic volumes that would be expected to generate CO exceedances as evaluated in the 2003 AQMP. This daily trip estimate is based on the peak hour conditions of the intersection. There is no reason unique to the Air Basin meteorology to conclude that the CO concentrations at the 3rd Street and La Brea Avenue intersection would exceed the 1-hour CO standard if modeled in detail, based on the studies undertaken for the 2003 AQMP. Therefore, the Proposed Project does not trigger the need for a detailed CO hotspots model and would not cause any new or exacerbate

[35] *The highest average ADT was estimated based on highest peak hour trips identified in the Traffic Impact Study under the "Future With Project Scenario" (See Appendix H, Traffic Impact Study, prepared by the Linscott, Law & Greenspan Engineers, July 9, 2019.) The Traffic Impact Study is solely for informational purposes. However, data collected as part of the traffic analysis is used in the CEQA document to evaluate certain potential environmental impacts of project-generated vehicular travel (e.g., vehicle air emissions, vehicle noise generation).*

any existing CO hotspots. As a result, impacts related to localized mobile-source CO emissions are considered less than significant. The supporting data for this analysis is included in the SCAQMD's 2003 Air Quality Management Plan, Appendix V (2003).[36]

Accordingly, the localized emissions from motor vehicles are well within the margin of safety established to protect human health. ***Therefore, the Proposed Project would not expose sensitive receptors to substantial pollutant concentrations from localized operational emissions from mobile sources. Impacts would be less than significant.***

(c) Toxic Air Contaminants Impacts

When considering potential air quality impacts under CEQA, consideration is given to the location of sensitive receptors within close proximity of land uses that emit TACs. CARB has published and adopted the Air Quality and Land Use Handbook: A Community Health Perspective, which provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities). The SCAQMD adopted similar recommendations in its Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. Together, the CARB and SCAQMD guidelines recommend siting distances for both the development of sensitive land uses in proximity to TAC sources and the addition of new TAC sources in proximity to existing sensitive land uses.

Additionally, as noted in CAPCOA's *Health Risk Assessments for Proposed Land Use Projects* (2009), the SCAQMD recommends that Health Risk Assessments (HRAs) be conducted for substantial sources of diesel particulate matter for developments that include truck stops and warehouse distribution facilities that generate more than 100 trucks per day or more than 40 trucks with operating transport refrigeration units,[37] which does not apply to the Proposed Project. Therefore, no significant toxic airborne emissions would result from the operation of the Proposed Project**.** Based on AQMD guidance, an HRA is not recommended for the Proposed Project since its operational land uses are not considered a substantial source of diesel particulate matter.

The Proposed Project consists of a mixed-use development containing multi-family residential units and commercial uses that would not support any land uses or activities that would involve the use, storage, or processing of carcinogenic or non-carcinogenic TACs. The primary sources of potential air toxics associated with project operations include diesel particulate matter from delivery trucks (e.g., truck traffic on local streets and

[36] *SCAQMD, 2003 Air Quality Management Plan, Appendix V, 2003.*
[37] *CAPCOA Planning Managers, Health Risk Assessments for Proposed Land Use Projects, July 2009.*

idling on adjacent streets) and, to a lesser extent, facility operations (e.g., natural gas fired boilers). However, these activities, and the land uses associated with the Proposed Project, are not considered land uses that generate substantial TAC emissions. Therefore, no significant toxic airborne emissions would result from the operation of the Proposed Project**.** Based on AQMD guidance, an HRA is not recommended for the Proposed Project since its operational land uses are not considered a substantial source of diesel particulate matter.

In conclusion, on-site localized emissions from the Proposed Project's construction and operational would not exceed the established SCAQMD localized thresholds. Therefore, localized construction and operational related air quality impacts would be considered less than significant without mitigation. Additionally, potential air toxic impacts to sensitive receptors from Project TAC emissions would also be less than significant. Therefore, the Proposed Project would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

(2) Mitigation Measures

(a) Construction

Project-level and cumulative construction-related impacts with regard to air quality would be less than significant with adherence to all applicable SCAQMD rules and regulations. Therefore, no mitigation measures are required.

(b) Operational

Project-level and cumulative construction-related impacts with regard to air quality would be less than significant with adherence to all applicable SCAQMD rules and regulations. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

(a) Construction

Impacts were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

(b) Operation

Impacts were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

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

(1) Project Impacts

As discussed in the Initial Study (Appendix A to this Draft EIR), the Proposed Project would not result in other emissions that adversely affect a substantial number of people and the potential odor impact during construction and operation of the Proposed Project would be less than significant. The Proposed Project does not include any of the uses identified by the SCAQMD as being associated with odors (such as agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, or fiberglass molding). In addition, SCAQMD BACT Guidelines would limit potential objectionable odor impacts during the Proposed Project's long-term operations phase.

Potential sources that may emit odors during construction activities include the use of architectural coatings and solvents, as well as asphalt paving. SCAQMD Rules 1108 and 1113 limit the amount of volatile organic compounds from cutback asphalt and architectural coatings and solvents, respectively. Based on mandatory compliance with SCAQMD rules, no construction activities or materials that would create a significant level of objectionable odors are proposed.

The Proposed Project would not create objectionable odors affecting a substantial number of people during construction or long-term operation. The Proposed Project's residential uses would not generate a source of odors. Odors from garbage chutes and enclosed refuse containers would be controlled through standard best management practices and ongoing building maintenance procedures. While restaurant-related uses have the potential to generate odors from cooking and disposal of organic waste, restaurant operators would be subject to SCAQMD Rule 1138, which requires the installation of odor-reducing equipment. Therefore, a less-than-significant impact would occur with respect to the creation of objectionable odors.

In conclusion, the Proposed Project's adherence to SCAQMD Rules 1108,1113, and 1138, as well as the SCAQMD BACT Guidelines would limit potential objectionable odor impacts during the Proposed Project's short-term construction and long-term operations phases. Therefore, construction and operation of the Proposed Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people, and impacts would be less than significant.

(2) Mitigation Measures

(a) Construction

Project-level and cumulative construction-related impacts with regard to objectionable odors would be less than significant. Therefore, no mitigation measures are required.

(b) Operational

Project-level and cumulative construction-related impacts with regard to objectionable odors would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

(a) Construction

As discussed above, construction impacts related to objectionable odors would be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

(b) Operation

As discussed above, operational impacts with regard to objectionable odors would be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

c) Cumulative Impacts

The SCAQMD recommends evaluating cumulative impacts for individual projects based on whether the project exceeds the SCAQMD's recommended daily thresholds for project-specific impacts for those pollutants for which the Air Basin is in non-attainment. Thus, the cumulative analysis of air quality impacts follows SCAQMD's guidance such that construction or operational Project emissions will be considered cumulatively considerable if Project-specific emissions exceed an applicable SCAQMD recommended significance threshold.

As shown in Table IV.A-7 and in Table IV.A-8, respectively, construction and operational daily emissions from the Development Site would not exceed any of the SCAQMD's regional thresholds, respectively. Further, construction and operation of the Proposed Project would have a less-than-significant impact on localized emissions and TACs, as shown in Table IV.A-9 and Table IV.A-10, respectively.

Accordingly, regional, localized, and TAC emissions during construction and operation of the Proposed Project would not be cumulatively considerable.

(1) Mitigation Measures

Cumulative impacts with regard to air quality would be less than significant during construction and operation of the Proposed Project. Therefore, no mitigation measures are required.

(2) Level of Significance After Mitigation

Cumulative impacts related to air quality during both construction and operation of the Proposed Project were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.