

5.0 Environmental Impact Analysis



5.0 ENVIRONMENTAL IMPACT ANALYSIS

1. AIR QUALITY

1. INTRODUCTION

This section of the Supplemental Environmental Impact Report (SEIR) analyzes the Modified Project's impacts on air quality resulting from development of the Entrada South and Valencia Commerce Center (VCC) Planning Areas. The Modified Project reflects changes compared to the 2017 Project, as described in **Section 3.0**, Project Description, of this SEIR. This analysis focuses on the incremental change in pollutant emissions associated with the Modified Project as compared to the estimated emissions disclosed in the State-certified EIR for the 2017 Project. The information presented herein is based, in part, on RAMBOLL's *Air Quality Technical Report* (Air Quality Report) dated March 2024, included in **Appendix 5.1** of this SEIR.

2. ENVIRONMENTAL SETTING

a. Air Quality Background

The Modified Project is located within the South Coast Air Basin (Air Basin), 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 includes all of Orange County and the non-desert portions of Los Angeles County (County) and Riverside and San Bernardino Counties, in addition to the Coachella Valley area in Riverside County. The regional climate within the Air 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 Air Basin is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, heavy vehicular traffic, and industry.

Air pollutant emissions within the Air Basin are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point sources and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to 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, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment such as when high winds suspend fine dust particles.

Both the federal government and California have established ambient air quality standards for outdoor concentrations of various air pollutants in order to protect the public health and welfare. These pollutants are referred to as “criteria air pollutants” as a result of the specific standards, or criteria, which have been adopted for them. The National Ambient Air Quality Standards (NAAQS) primary standards and the California Ambient Air Quality Standards (CAAQS) have been set at levels considered safe to protect public health, including the health of sensitive populations, such as asthmatics, children, and the elderly with an adequate margin of safety. The national secondary standards have been set at levels to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. The national and California criteria pollutants and the applicable ambient air quality standards are summarized in **Table 5.1-1**, National and California Ambient Air Quality Standards, on page 5.1-3.

b. Air Pollution and Potential Health Effects

Certain air pollutants have been recognized to cause health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated to prevent further deterioration and facilitate improvement in air quality within the Air Basin. The criteria air pollutants for which national and California ambient air quality standards have been promulgated and which are most relevant to current air quality planning and regulation in the Air Basin include ozone (O₃), respirable particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), lead (Pb), and vinyl chloride (VC). In addition, toxic air contaminants (TACs) in the Air Basin have the potential to cause health effects. Each of these is briefly described below.

(1) Criteria Pollutants

(a) Ozone (O₃)

Ozone is a gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_x)—both byproducts of internal combustion engine exhaust—undergo photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. An elevated level of ozone irritates the eyes, lungs and breathing passages, causing coughing and pain in the chest and throat, thereby increasing

**Table 5.1-1
National and California Ambient Air Quality Standards**

Pollutant	Averaging Period	California Standard ^{a,b}	Federal Standard ^{a,b}	SCAQMD Attainment Status ^c	
				California Standard ^d	Federal Standard ^d
Ozone (O ₃)	1 hour	0.09 ppm (180 µg/m ³)	—	Non-Attainment	—
	8 hour	0.07 ppm (137 µg/m ³)	0.070 ppm (137 µg/m ³)	Non-Attainment	Non-Attainment (Extreme)
Respirable Particulate Matter (PM ₁₀)	24 hour	50 µg/m ³	150 µg/m ³	Non-Attainment	Attainment
	Annual	20 µg/m ³	—		
Fine Particulate Matter (PM _{2.5})	24 hour	—	35 µg/m ³	Non-Attainment	Non-Attainment (Serious)
	Annual	12 µg/m ³	12 µg/m ³		
Carbon Monoxide (CO)	1 hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	Attainment	Attainment
	8 hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)		
Nitrogen Dioxide (NO ₂)	1 hour	0.18 ppm (339 µg/m ³)	0.10 ppm (188 µg/m ³)	Attainment	Unclassified/ Attainment
	Annual	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)		
Sulfur Dioxide (SO ₂)	1 hour	0.25 ppm (655 µg/m ³)	0.075 ppm (196 µg/m ³)	Attainment	Unclassified/ Attainment
	3 hour	—	0.5 ppm (1,300 µg/m ³)		
	24 hour	0.04 ppm (105 µg/m ³)	0.14 ppm (365 µg/m ³)		
	Annual	—	0.03 ppm (80 µg/m ³)		
Lead (Pb)	30-day average	1.5 µg/m ³	—	Attainment	Partial Non- Attainment ^e
	Rolling 3-month average	—	0.15 µg/m ³		
Sulfates	24 hour	25 µg/m ³	—	Attainment	—
Hydrogen Sulfide (H ₂ S)	1 hour	0.03 ppm (42 µg/m ³)	—	Unclassified	—

ppm = parts per million by volume

µg/m³ = micrograms per cubic meter

^a An ambient air quality standard is a concentration level expressed in either parts per million or micrograms per cubic meter and averaged over a specific time period (e.g., one hour). The different averaging times and concentrations are meant to protect against different exposure effects. Some ambient air quality standards are expressed as a concentration that is not to be exceeded. Others are

Table 5.1-1 (Continued)
National and California Ambient Air Quality Standards

Pollutant	Averaging Period	California Standard ^{a,b}	Federal Standard ^{a,b}	SCAQMD Attainment Status ^c	
				California Standard ^d	Federal Standard ^d
<p><i>expressed as a concentration that is not to be equaled or exceeded.</i></p> <p>^b <i>Ambient Air Quality Standards based on the 2016 Air Quality Management Plan.</i></p> <p>^c <i>“Attainment” means that the regulatory agency has determined based on established criteria, that the Air Basin meets the identified standard. “Non-attainment” means that the regulatory agency has determined that the Air Basin does not meet the standard. “Unclassified” means there is insufficient data to designate an area, or designations have yet to be made.</i></p> <p>^d <i>California and Federal standard attainment status based on SCAQMD’s 2016 AQMP.</i></p> <p>^e <i>An attainment re-designation request is pending.</i></p> <p><i>Source: Eyestone Environmental, 2024.</i></p>					

susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower lung efficiency.

(b) Particulate Matter (PM₁₀, PM_{2.5}, and Ultrafine)

Particulate matter is a complex mixture of extremely small particles and liquid droplets. PM₁₀ is PM measuring 10 microns or less in diameter; PM_{2.5} is fine PM measuring 2.5 microns in diameter or less. Suspended particulates are mostly dust particles, nitrates, and sulfates. Both PM₁₀ and PM_{2.5} are by-products of fuel combustion and wind erosion of soil and unpaved roads and are directly emitted into the atmosphere through these processes. Suspended particulates are also created in the atmosphere through chemical reactions. Some particles, known as primary particles are emitted directly from a source, such as construction sites, unpaved roads, smokestacks or fires.

The human body naturally prevents the entry of larger particles into the body. However, small particles, with an aerodynamic diameter equal to or less than 10 microns (PM₁₀) and even smaller particles, with an aerodynamic diameter equal to or less than 2.5 microns (PM_{2.5}), can enter the body and become trapped in the nose, throat, and upper respiratory tract. These materials can damage health by interfering with the body’s mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, as well as coughing, bronchitis and respiratory illnesses in children. Recent mortality studies have shown an association between morbidity and mortality and daily concentrations of PM in

the air. Lung impairment can persist for two to three weeks after short-term exposure to high levels of particulate matter.

Ultrafine particles are particles that are 0.1 micron or less in diameter. These particles have the potential to be more easily inhaled and can be deposited deeper into the lungs. Because of their size they can rapidly penetrate into lung tissue and other organs in the body. Ultrafine particles are associated with death from heart disease caused by blocked arteries.

(c) Carbon Monoxide (CO)

CO is primarily emitted from combustion processes and motor vehicles due to the incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease, chronic lung disease, or anemia. This results in reduced oxygen reaching the brain, heart, and other body tissues. Inhalation of carbon monoxide can cause nausea, dizziness, and headaches at moderate concentrations and can be fatal at high concentrations.

The incomplete combustion of petroleum fuels in on-road vehicles and at power plants is a cause of CO. CO is also produced during the winter from wood stoves and fireplaces. CO tends to dissipate rapidly into the atmosphere; consequently, violations of the State CO standards are generally associated with major roadway intersections during peak-hour traffic conditions. Hotspots can be created where the local CO concentration exceeds the NAAQS of 35.0 parts per million (ppm) or the CAAQS of 20.0 ppm.

(d) Nitrogen Dioxide (NO₂)

NO₂ is a byproduct of fuel combustion and major sources include power plants, large industrial facilities, and motor vehicles. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), which reacts quickly to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. NO₂ absorbs blue light and results in a brownish-red cast to the atmosphere and reduced visibility. The principal concern of NO_x is as a precursor to the formation of ozone. NO₂ also contributes to the formation of PM₁₀. Nitrogen oxides irritate the nose and throat, and increase one's susceptibility to respiratory effects and infections, especially in people with asthma. A relationship between NO₂ and chronic pulmonary fibrosis may exist, and an increase in bronchitis may occur in young children at concentrations below 0.3 ppm.

(e) Sulfur Dioxide (SO₂)

Major sources of SO₂ include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of sulfur dioxide aggravate lung diseases,

especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. SO₂ potentially causes wheezing, shortness of breath, and coughing. High levels of particulates appear to worsen the effect of sulfur dioxide, and long-term exposures to both pollutants leads to higher rates of respiratory illness.

(f) Lead (Pb)

Pb is a metal found in the environment and in manufacturing products. The major sources of Pb emissions historically have been mobile and industrial sources. In the early 1970s, the United States Environmental Protection Agency (USEPA) set national regulations to gradually reduce the Pb content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The USEPA completed the ban prohibiting the use of leaded gasoline in highway vehicles in December 1995. As a result of the USEPA's regulatory efforts to remove Pb from gasoline, atmospheric Pb concentrations have declined substantially over the past several decades. The most dramatic reductions in Pb emissions occurred prior to 1990 due to the removal of Pb from gasoline sold for most highway vehicles. Pb emissions were further reduced substantially between 1990 and 2008, with reductions occurring in the metals industries at least in part because of national emissions standards for hazardous air pollutants. Because of phasing out leaded gasoline, metal processing is now the primary source of Pb emissions. The highest level of Pb in the air is found generally near Pb smelters. Other stationary sources include waste incinerators, utilities, and Pb-acid battery manufacturers.

The South Coast Air Quality Management District (SCAQMD) has found that the highest stationary source emitter of Pb is from the lead-acid battery recycling industry, and this is the only known stationary source category that has the potential to violate the lead NAAQS. The Modified Project does not include a lead-acid battery recycling facility or other uses that emit material amounts of Pb, and therefore would not be a source of Pb that has the potential to exceed the NAAQS or pose a health issue to the local environment.

There are also strict regulations in place that governs the handling of LBP during removal, including but not limited to the California Occupational Safety and Health Administration's (Cal/OSHA's) Construction Lead Standard, Title 8 California Code of Regulations (CCR) Section 1532.1 and Department of Health Services Regulation 17 CCR Sections 35001– 36100, as may be amended.

Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body. Pb has been well below ambient air quality standards for decades and is still below the regulatory thresholds for the project area. Construction

related removal of LBP is regulated by existing laws to eliminate the risk to nearby receptors. Further, the Modified Project is not an air-based source of Pb. Additionally, LBP removal occurs in the Air Basin on a daily basis and has yet to result in an increase in the regional ambient air emissions for Pb to near or above the threshold. Therefore, implementation of the Modified Project will not result in an environmental impact with respect to Pb and therefore is not analyzed further in the impact analysis below.

(g) Volatile Organic Compounds (VOCs)

VOCs¹ are typically formed from combustion of fuels and/or released through evaporation of organic liquids. Some VOCs are also classified by the State as TACs. While there are no specific VOC air standards, VOC is a prime component (along with NO_x) of the photochemical processes by which criteria pollutants, particularly ozone, nitrogen dioxide, and certain fine particles, are formed. They are thus regulated as “precursors” to formation of those criteria pollutants.

(h) Vinyl Chloride (VC)

VC is a chemical building block, or monomer, used in the production of polyvinyl chloride (PVC). PVC is used to make materials, including pipes, used in the construction, packaging, electrical, and transportation industries. Major sources of VC include PVC production and fabrication facilities and, at the other end of PVC’s life cycle, as PVC deteriorates, landfills and publicly-owned treatment works. VC is carcinogenic. Exposure to VC has been associated with a rare cancer, liver angiosarcoma, in workers, and with tumors of the liver, lungs, mammary glands and the nervous system in animals. The state air standard reflects the limit of detection for VC in ambient air when the standard was promulgated, in 1978. By 1990, when state staff prepared the technical support document for identifying VC as a TAC, VC had not been detected in ambient air at any of the samplers in the California Air Resources Board’s (CARB) TAC monitoring network, although ambient hot spot sampling had detected VC at levels up to 150 percent of the standard. VC is primarily of concern as a carcinogenic TAC at hot spots. It is regulated as

¹ *Organic compound precursors of O₃ are routinely described by a number of variations of three terms: hydrocarbons (HC), organic gases (OG), and organic compounds (OC). These terms are often modified by adjectives such as total, reactive, or volatile, and result in an array of acronyms: HC, THC (total hydrocarbons), RHC (reactive hydrocarbons), TOG (total organic gases), ROG (reactive organic gases), TOC (total organic compounds), ROC (reactive organic compounds), and VOC (volatile organic compounds). While most of these differ in some way from a chemical perspective, two groups are important from an air quality perspective: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (HC, RHC, ROG, and VOC).*

a TAC to allow implementation of health-protective control measures at levels below the state air standard.²

(i) Hydrogen Sulfide (H₂S)

H₂S is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation. Breathing H₂S at levels above the state air standard can result in exposure to a disagreeable odor.

(2) Toxic Air Contaminants (TACs)

TACs refer to a diverse group of “non-criteria” air pollutants that can affect human health but have not had air standards established for them. This is not because they are fundamentally different from the pollutants discussed above, but because their effects tend to be local rather than regional. TACs are classified as carcinogenic and noncarcinogenic, where carcinogenic TACs can cause cancer and noncarcinogenic TACs can cause acute and chronic impacts to different target organ systems (e.g., eyes, respiratory, reproductive, developmental, nervous, and cardiovascular).

CARB and the Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified, or “listed,” as a TAC in California. The complete list of such substances is located at ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants.

Diesel PM (DPM), which is emitted in the exhaust from diesel engines, was listed by the State as a TAC in 1998. DPM has historically been used as a surrogate measure of exposure for all diesel exhaust emissions. DPM consists of fine particles (fine particles have a diameter less than 2.5 µm), including a subgroup of ultrafine particles (ultrafine particles have a diameter less than 0.1 µm). Collectively, these particles have a large surface area which makes them an excellent medium for absorbing organics. The visible emissions in diesel exhaust include carbon particles or “soot.” Diesel exhaust also contains a variety of harmful gases and cancer-causing substances.

Exposure to DPM may be a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. DPM levels

² CARB, *Proposed Identification of Vinyl Chloride as a Toxic Air Contaminant. Staff Report/Executive Summary, October 1990.*

and resultant potential health effects may be higher in close proximity to heavily traveled roadways with substantial truck traffic or near industrial facilities. According to CARB, DPM exposure may lead to the following adverse health effects: (1) aggravated asthma; (2) chronic bronchitis; (3) increased respiratory and cardiovascular hospitalizations; (4) decreased lung function in children; (5) lung cancer; and (6) premature deaths for people with heart or lung disease.^{3,4}

To provide perspective on the contribution that DPM has on the overall statewide average ambient air toxics potential cancer risk, CARB evaluated risks from specific compounds using data from CARB's ambient monitoring network. (CARB maintains a 21-site air toxics monitoring network which measures outdoor ambient concentration levels of approximately 60 air toxics.) CARB determined that, of the top ten inhalation risk contributors, DPM contributes approximately 68 percent of the total potential cancer risk.⁵

(3) Health Consequences of Ozone and Particulate Matter

As stated above, air pollution is a major public health concern, and the adverse health effects associated with air pollution are diverse. O₃ is a pungent, colorless, toxic gas with direct health effects on humans, including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to O₃ include children, the elderly, persons with respiratory disorders, and people who exercise strenuously outdoors.

The adverse effects reported with short-term O₃ exposure are greater with increased activity, because activity increases the breathing rate and the volume of air reaching the lungs, resulting in an increased amount of O₃ reaching the lungs. Children may be a particularly vulnerable population to air pollution effects, because they spend more time outdoors, are generally more active, and have a higher ventilation rate than adults. A number of adverse health effects associated with ambient O₃ levels and PM levels have been identified from laboratory and epidemiological studies. These include increased respiratory symptoms, damage to cells of the respiratory tract, decreases in lung function, increased susceptibility to respiratory infection, and increased risk of hospitalization.

The Children's Health Study, conducted by researchers at the University of Southern California, followed a cohort of children that live in 12 communities in southern California

³ CARB, *Overview: Diesel Exhaust & Health*, <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>, accessed March 11, 2024.

⁴ CARB, *Fact Sheet: Diesel Particulate Matter Health Risk Assessment Study for the West Oakland Community: Preliminary Summary of Results*, March 2008.

⁵ SCAQMD, *MATES IV Final Report*, 2015.

with differing levels of air pollution for several years. A publication from this study found that school absences in fourth graders for respiratory illnesses were associated with ambient O₃ levels and 24-hour PM₁₀ values. An increase of 20 parts per billion of O₃ was associated with an 83 percent increase in illness-related absence rates, and change of 10 micrograms per meter in PM was associated with a 5.7 percent increase in illness-related absences.⁶ In addition, long-term exposure to elevated levels of PM can affect acute response to O₃. The number of hospital admissions and emergency room visits for all respiratory causes (infections, respiratory failure, chronic bronchitis, etc.), including asthma, show a consistent increase as ambient O₃ levels increase in a community. These excess hospital admissions and emergency room visits are observed when hourly O₃ concentrations are as low as 0.08 to 0.10 ppm.

Numerous recent studies have found positive associations between increases in O₃ levels and excess risk of mortality. These associations persist even when other variables including season and levels of PM are accounted for. This indicates that O₃ mortality effects are independent of other pollutants.⁷ Several population-based studies suggest that asthmatics are more adversely affected by ambient O₃ levels, as evidenced by increased hospitalizations and emergency room visits. Laboratory studies have attempted to compare the degree of lung function change seen in age and gender-matched healthy individuals versus asthmatics and those with chronic obstructive pulmonary disease. While the degree of change evidenced did not differ significantly, that finding may not accurately reflect the true impact of exposure on these respiration-compromised individuals. Since the respiration-compromised group may have lower lung function to begin with, the same degree of change may represent a substantially greater adverse effect overall.

A publication from the Children's Health Study focused on children and outdoor exercise. In communities with high O₃ concentrations, the relative risk of developing asthma in children playing three or more sports was found to be over three times higher than in children playing no sports.⁸ These findings indicate that new cases of asthma in children are associated with heavy exercise in communities with high levels of O₃. The susceptibility to O₃ observed under ambient conditions could be due to the combination of pollutants that coexist in the atmosphere or O₃ may actually sensitize these subgroups to the effects of other pollutants. A study of birth outcomes in southern California found an

⁶ Gilliland FD, Berhane K, Rappaport EB, Thomas DC, Avol E, Gauderman WJ, London SJ, Margolis HG, McConnell R, Islam KT, Peters JM. 2004. "The Effects of Ambient Air Pollution on School Absenteeism Due to Respiratory Illnesses." *Epidemiology*, 12(1):43-54.

⁷ Bell ML, McDermott A, Zeger SL, Samet, JM, Dominici, F. 2004. "Ozone and Short-Term Mortality in 95 US Urban Communities, 1987–2000." *JAMA* 292:2372-2378.

⁸ McConnell R, Berhane K, Gilliland F, London SJ, Islam T, Gauderman WJ, Avol E, Margolis HG, Peters JM. 2002. "Asthma in exercising children exposed to ozone: a cohort study." *Lancet*, 359:386-91.

increased risk for birth defects in the aortic and pulmonary arteries associated with O₃ and PM exposure in the second month of pregnancy.⁹ In summary, acute adverse effects associated with O₃ exposures have been well documented, although the specific causal mechanism is still somewhat unclear. Additional research efforts are required to evaluate the long-term effects of air pollution and to determine the role of O₃ in influencing chronic effects.

The evidence linking these effects to air pollutants is derived from population based observational and field studies (epidemiological) as well as controlled laboratory studies involving human subjects and animals. There have been an increasing number of studies focusing on the mechanisms (that is, on learning how specific organs, cell types, and biochemicals are involved in the human body's response to air pollution) and specific pollutants responsible for individual effects. Yet the underlying biological pathways for these effects are not always clearly understood. Although individuals inhale pollutants as a mixture under ambient conditions, the regulatory framework and the control measures developed are mostly pollutant-specific. This is appropriate, in that different pollutants usually differ in their sources, their times and places of occurrence, the kinds of health effects they may cause, and their overall levels of health risk. Different pollutants, from the same or different sources, may sometimes act together to harm health more than they would acting separately. Nevertheless, as a practical matter, health scientists, as well as regulatory officials, usually must deal with one pollutant at a time in determining health effects and in adopting air quality standards. To meet the air quality standards, comprehensive plans are developed such as SCAQMD's AQMP.

c. Regulatory Setting

An overview of the regulatory setting is provided in **Table 5.1-2**, Air Quality Regulatory Overview, on page 5.1-12, and a detailed discussion is provided below.

(1) Criteria Pollutants

(a) Federal Regulations

(i) Federal Clean Air Act—Title I and Title II

At the federal level, the USEPA is responsible for implementing portions of the Federal Clean Air Act (CAA). Other portions of the CAA (e.g., stationary source requirements) are implemented by state and local agencies.

⁹ Ritz B, Yu F, Chapa G, Fruin S. 2000. "Effect of Air Pollution on Preterm Birth Among Children Born in Southern California between 1989 and 1993." *Epidemiology*, 11(5)502-11.

**Table 5.1-2
Air Quality Regulatory Overview**

Issue Area and Relevant Legislation	Applicable Agency
Federal Regulations	
<p>Federal Clean Air Act—Title I and Title II</p> <p>At the federal level, the USEPA is responsible for implementing portions of the Federal Clean Air Act (CAA). Other portions of the CAA (e.g., stationary source requirements) are implemented by state and local agencies.</p> <p>The CAA identifies specific emission reduction goals for areas that do not meet the National Ambient Air Quality Standards (national air standards) and requires both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most applicable to the Modified Project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions).</p>	USEPA
<p>Construction Equipment Standards</p> <p>The USEPA sets emission standards for construction equipment. The first federal standards (Tier 1) were adopted in 1994 for all off-road engines over 50 horsepower and were phased in by 2000. A new standard was adopted in 1998 that introduced Tier 1 for all equipment below 50 horsepower and established the Tier 2 and Tier 3 standards. The Tier 2 and Tier 3 standards were phased in by 2008 for all equipment. The current iteration of emissions standards for construction equipment are the Tier 4 efficiency requirements are contained in 40 Code of Federal Regulations Parts 1039, 1065, and 1068 (originally adopted in 69 Federal Register 38958 [June 29, 2004], and most recently updated in 2014 [79 Federal Register 46356]). Emissions requirements for new off-road Tier 4 vehicles were completely phased in by the end of 2015.</p>	USEPA
<p>Corporate Average Fuel Economy Standards</p> <p>The Corporate Average Fuel Economy (CAFE) standards are federal rules established by the National Highway Traffic Safety Administration (NHTSA) that set fuel economy and GHG emissions standards for all new passenger cars and light trucks sold in the U.S. It is, however, legally infeasible for individual municipalities/counties to adopt more stringent fuel efficiency standards. The CAA (42 United States Code [USC] Section 7543[a]) states that “no state or any political subdivision therefore shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this part.”</p>	NHTSA
State Regulations	
<p>California Clean Air Act</p> <p>The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the State to achieve and maintain the California Ambient Air Quality Standards (state air standards) by the earliest practicable date. CARB, a part of the California Environmental Protection Agency (Cal EPA), is responsible for the coordination and administration of both state and federal air pollution control programs within California. In this capacity, CARB conducts research, sets state air standards, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products, and various types of commercial equipment. It also sets</p>	CARB

Table 5.1-2 (Continued)
Air Quality Regulatory Overview

Issue Area and Relevant Legislation	Applicable Agency
fuel specifications to further reduce vehicular emissions.	
<p>Pavley I and II AB 1493 (“the Pavley Standard” or AB 1493) provided the nation’s first GHG standards for automobiles. AB 1493 required CARB to adopt vehicle standards that will lower GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards (referred to previously as Pavley II and now referred to as the Advanced Clean Cars [ACC] measure) was adopted for vehicle model years 2017–2025 in 2012.</p>	CARB
<p>Executive Order B-48-18: Zero-Emission Vehicles On January 26, 2018, Governor Jerry Brown signed Executive Order B-48-18 requiring all State entities to work with the private sector to have at least 5 million zero-emission vehicles (ZEVs) on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle (EV) charging stations by 2025. It specifies that 10,000 of the EV charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure.</p>	Governor’s Office
<p>Executive Order N-79-20 Governor Gavin Newsom signed Executive Order N-79-20 in September 2020, which sets a statewide goal that 100 percent of all new passenger car and truck sales in the State will be zero-emissions by 2035. It also sets a goal that 100 percent of statewide new sales of medium- and heavy-duty vehicles will be zero emissions by 2045, where feasible, and for all new sales of drayage trucks to be zero emissions by 2035. Additionally, the Executive Order targets 100 percent of new off-road vehicle sales in the State to be zero emission by 2035. CARB is responsible for implementing the new vehicle sales regulation.</p>	CARB
Regional Regulations	
<p>SCAQMD Air Quality Management Plan SCAQMD shares responsibility with CARB for ensuring that all national and state air standards are achieved and maintained throughout all of Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino counties. SCAQMD has jurisdiction over an area of approximately 10,743 square miles. In order to meet the national and state air standards, SCAQMD has adopted a series of Air Quality Management Plans (AQMPs). Each AQMP provides emissions inventories, ambient measurements, meteorological episodes, and air quality modeling tools. The AQMP also provides policies and measures to guide responsible agencies in achieving national air standards for healthful air quality in the Air Basin. Further, it incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources, and area sources.</p>	SCAQMD
<p>SCAQMD Rules and Regulations SCAQMD adopts rules and regulations to implement portions of the AQMP. All projects are subject to SCAQMD rules and regulations in effect at the time of construction. A list of rules applicable to the Modified Project is provided</p>	SCAQMD

Table 5.1-2 (Continued)
Air Quality Regulatory Overview

Issue Area and Relevant Legislation	Applicable Agency
below.	
<p>SCAQMD CEQA Air Quality Handbook and Supplemental Guidance/Information</p> <p>SCAQMD published the <i>CEQA Air Quality Handbook</i> 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 <i>CEQA Air Quality Handbook</i> provides standards, methodologies, and procedures for conducting air quality analyses in EIRs and was used in the preparation of this analysis.</p>	SCAQMD
<p>Southern California Association of Governments</p> <p>SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG coordinates with various air quality and transportation stakeholders in southern California to ensure compliance with the federal and state air quality requirements. In addition, SCAG is a co-producer, with SCAQMD, of the transportation strategy and transportation control measure sections of the AQMP for the Air Basin. With regard to future growth, SCAG has prepared the Regional Transportation Plan (RTP), which provides population, housing, and employment projections for cities under its jurisdiction. The growth projections in the RTP are based on projections originating under County and City General Plans. The RTP growth projections are used in the preparation of the air quality forecasts and consistency analysis included in SCAQMD's AQMP. The current RTP is the 2020-2045 RTP/SCS discussed in detail below.</p>	SCAG
County Regulations	
<p>OurCounty: Los Angeles Countywide Sustainability Plan</p> <p>OurCounty: Los Angeles Countywide Sustainability Plan (OurCounty Plan) is a regional sustainability plan that outlines what local governments and stakeholders can do to enhance the well-being of every community in Los Angeles County while reducing damage to the environment and adapting to climate change. The plan is organized around 12 goals, of which the most pertinent to air quality are Goal 7: A fossil-free L.A. County; and Goal 8: A convenient, safe, clean, and affordable transportation system that enhances mobility and quality of life while reducing car dependency. In particular, while focused on reducing greenhouse gas (GHG) emissions and energy usage, Strategies 7A and 7B, which are aimed at creating a zero-carbon energy system and zero-emission transportation system, respectively, would have the co-benefit of reducing air emissions. Additionally, Strategy 8A is designed to reduce vehicle miles traveled by prioritizing alternatives to single occupancy vehicles. The OurCounty Plan is not a binding plan, although the County utilizes it as a guide to facilitate sustainability planning.</p>	County of Los Angeles
<p>Source: <i>Eyestone Environmental, 2024.</i></p>	

The CAA identifies specific emission reduction goals for areas that do not meet the National Ambient Air Quality Standards (national air standards) and requires both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most applicable to the Modified Project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions).

The purpose of Title I of the CAA is to attain national air standards. **Table 5.1-1, National and California Ambient Air Quality Standards**, shows the national air standards currently in effect for each criteria pollutant and the County's relative attainment status.

On June 11, 2007, the USEPA reclassified the Air Basin as a federal "attainment" area for CO and approved the Air Basin's CO maintenance plan. The Air Basin fails to meet national air standards for O₃ and PM_{2.5} and, therefore, is considered a federal "non-attainment" area for these pollutants. In addition, the County fails to meet the national air standard for lead based upon source-specific monitoring at two locations in Vernon and the City of Industry and, therefore, is considered a federal partial "non-attainment" area for lead. However, all stations in the Air Basin, including the near-source monitoring in Los Angeles County, have remained below the Pb NAAQS for the 2012 through 2020 period.

Title II of the CAA pertains to mobile sources, such as cars, trucks, buses, and planes. Title II requires implementation of various mechanisms, such as reformulated gasoline and automobile pollution control devices to regulate mobile air emission sources. These provisions have strengthened tailpipe emission standards for vehicles to improve air quality. For example, the standards for NO_x emissions have been lowered substantially and the specification requirements for cleaner burning gasoline are more stringent.

(ii) Construction Equipment Standards

The USEPA sets emission standards for construction equipment. The first federal standards (Tier 1) were adopted in 1994 for all off-road engines over 50 horsepower and were phased in by 2000. A new standard was adopted in 1998 that introduced Tier 1 for all equipment below 50 horsepower and established the Tier 2 and Tier 3 standards. The Tier 2 and Tier 3 standards were phased in by 2008 for all equipment. The current iteration of emissions standards for construction equipment are the Tier 4 efficiency requirements contained in 40 Code of Federal Regulations (CFR) Parts 1039, 1065, and 1068 (originally adopted in 69 Federal Register 38958 [June 29, 2004], and most recently updated in 2014 [79 Federal Register 46356]). Emissions requirements for new off-road Tier 4 vehicles were completely phased in by the end of 2015.

CARB is also charged with developing air pollution control regulations based upon the best available control measures and implementing every feasible control measure under the State and federal CAA. (Health & Safety Code, §§ 39602.5, 39667, 43013, subds. (a) and (h), 43018, 40600, 40601, 40612(a)(2) and (c)(1)(A). Pursuant to these directives, stringent emission standards were adopted in 2004 for off-road construction equipment (i.e., “Tier 4” standards) (40 CFR Parts 1039, 1065, and 1068; Cal. Code Regs., tit. 13, § 2025; AR 2854). CARB also adopted emission standards for on-road heavy duty diesel vehicles (i.e., haul trucks). (Cal. Code Regs., tit. 13, § 1956.8.) These haul truck regulations mandate fleet turn-over to ensure that by January 1, 2023 nearly all on-road diesel trucks will have 2010 model year engines or equivalent [i.e., Tier 4]. In addition, interim steps are incorporated into the regulations (e.g., vehicles older than 1999 will be replaced with newer engines by 2020).

(iii) Corporate Average Fuel Economy Standards

The Corporate Average Fuel Economy (CAFE) standards are federal rules established by the National Highway Traffic Safety Administration (NHTSA) that set fuel economy and GHG emissions standards for all new passenger cars and light trucks sold in the United States. It is, however, legally infeasible for individual municipalities/counties to adopt more stringent fuel efficiency standards. The CAA (42 United States Code [USC] Section 7543[a]) states that “no state or any political subdivision therefore shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this part.”

In October 2012, the USEPA and the NHTSA, on behalf of the Department of Transportation, issued final rules to further reduce GHG emissions and improve CAFE standards for light-duty vehicles for model years 2017 and beyond (77 Federal Register 62624). NHTSA’s CAFE standards have been enacted under the Energy Policy and Conservation Act since 1978. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. The current CAFE standards for model years 2024-2026 require new passenger and light duty vehicles sold in the US to average at least 40 miles per gallon (mpg). This is a nearly 43 percent increase from the previous standard of approximately 28 mpg. Current proposals seek to increase this to 49 mpg after 2026. Furthermore, the rate of electric vehicle adoption rate is occurring faster than anticipated. California has reached 1.5 million electric vehicle sales 2 years ahead of its planned 2025 target for the sales milestone. At the end of 2023, approximately 25 percent of new car sales in California were electric vehicles.

(b) State Regulations**(i) California Clean Air Act**

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the State to achieve and maintain the California Ambient Air Quality Standards (state air standards) by the earliest practicable date. CARB, a part of the California Environmental Protection Agency (Cal EPA), is responsible for the coordination and administration of both state and federal air pollution control programs within California. In this capacity, CARB conducts research, sets state air standards, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products, and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

Table 5.1-1, National and California Ambient Air Quality Standards, includes the state air standards currently in effect for each of the criteria pollutants as well as other pollutants recognized by the State. As shown therein, the state air standards include more stringent standards than the national air standards. As also shown, the State is designed as in “non-attainment” for O₃, PM₁₀, and PM_{2.5}.

(ii) Pavley I and II

AB 1493 (“the Pavley Standard” or AB 1493) provided the nation’s first GHG standards for automobiles. AB 1493 required CARB to adopt vehicle standards that will lower GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards (referred to previously as Pavley II and now referred to as the Advanced Clean Cars [ACC] measure) was adopted for vehicle model years 2017–2025 in 2012.

(iii) Executive Order B-48-18: Zero-Emission Vehicles

On January 26, 2018, Governor Jerry Brown signed Executive Order B-48-18 requiring all State entities to work with the private sector to have at least 5 million zero-emission vehicles (ZEVs) on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle (EV) charging stations by 2025. It specifies that 10,000 of the EV charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor’s Office of Business and Economic Development is required to publish a Plug-in Charging Station Design Guidebook and update the 2015 Hydrogen Station Permitting Guidebook (Eckerle and Jones 2015) to aid in these efforts. All State entities are required to participate in updating

the 2016 Zero-Emissions Vehicle Action Plan, along with the 2018 ZEV Action Plan Priorities Update, which includes and extends the 2016 ZEV Action Plan (Governor's Interagency Working Group on Zero-Emission Vehicles 2016, 2018), to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities.

(iv) Executive Order N-79-20

Governor Gavin Newsom signed Executive Order N-79-20 in September 2020, which sets a statewide goal that 100 percent of all new passenger car and truck sales in the State will be zero-emissions by 2035. It also sets a goal that 100 percent of statewide new sales of medium- and heavy-duty vehicles will be zero emissions by 2045, where feasible, and for all new sales of drayage trucks to be zero emissions by 2035. Additionally, the Executive Order targets 100 percent of new off-road vehicle sales in the State to be zero emission by 2035. CARB is responsible for implementing the new vehicle sales regulation.

(c) Regional Regulations

(i) South Coast Air Quality Management District

SCAQMD Air Quality Management Plan

SCAQMD shares responsibility with CARB for ensuring that all national and state air standards are achieved and maintained throughout all of Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino counties. SCAQMD has jurisdiction over an area of approximately 10,743 square miles.

In order to meet the national and state air standards, SCAQMD has adopted a series of Air Quality Management Plans (AQMPs). Each AQMP provides emissions inventories, ambient measurements, meteorological episodes, and air quality modeling tools. The AQMP also provides policies and measures to guide responsible agencies in achieving national air standards for healthful air quality in the Air Basin. Further, it incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources, and area sources.

SCAQMD and the Southern California Association of Governments (SCAG) are jointly responsible for preparing the AQMP for the Air Basin. In particular, the 2016

AQMP¹⁰ is based on demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industry) developed by SCAG for their 2016 Regional Transportation Plan, which forms part of SCAG's 2016—2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Thus, consistency with the planning assumptions contained within the RTP/SCS demonstrates consistency with SCAQMD's 2016 AQMP. SCAG's 2016—2040 RTP/SCS was adopted in April 2016.¹¹ On September 3, 2020, SCAG's Regional Council adopted an updated 2020—2045 RTP/SCS, also known as Connect SoCal, as discussed below.¹² The 2022 AQMP was adopted in December 2022, and utilizes population projection assumptions from the 2020-2045 RTP/SCS.¹³

SCAQMD Rules and Regulations

SCAQMD adopts rules and regulations to implement portions of the AQMP. All projects are subject to SCAQMD rules and regulations in effect at the time of construction. Summarized rules include the following¹⁴ (additional SCAQMD rules relevant to other resource areas are described in other chapters of this SEIR):

Rule 53—Sulfur Compounds—Concentration (Los Angeles County): A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge 0.2 percent by volume calculated as sulfur dioxide (SO₂).

Rule 401—Visible Emissions: A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour that is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of

¹⁰ The 2016 AQMP for the South Coast Air Basin is available at www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf, accessed August 19, 2024.

¹¹ SCAG, 2016—2040 Regional Transportation Plan/Sustainable Communities Strategy, <https://scag.ca.gov/sites/main/files/file-attachments/f2016rtpscs.pdf?1606005557>, accessed March 11, 2024.

¹² SCAG, 2016—2040 Regional Transportation Plan/Sustainable Communities Strategy, https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial-plan_0.pdf?1606001176, accessed March 11, 2024.

¹³ SCAQMD, 2022 Air Quality Management Plan (AQMP), www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan, accessed March 11, 2024.

¹⁴ Rule 53 can be found at www.aqmd.gov/docs/default-source/rule-book/rule-iv/reg-iv-addendum.pdf?sfvrsn=6; Rules 401, 402, 403, 475 can be found at www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-iv; Rule 1113 can be found at www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xi, accessed March 11, 2024.

Mines; or of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in the rule.

Rule 402—Nuisance: A person shall not discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

Rule 403—Fugitive Dust: This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust, and identifies measures to reduce fugitive dust. This includes soil treatment for exposed soil areas. Treatment shall include, but not necessarily limited to, periodic watering, application of environmentally safe, non-toxic soil stabilization materials, and/or roll compaction as appropriate. As indicated in SCAQMD's Drought Management Resolution they are "increasing reliance on non-toxic chemical dust suppressants to stabilize soils".¹⁵

Rule 404—Particulate Matter—Concentration: A person shall not discharge into the atmosphere from any source, particulate matter in excess of the concentration at standard conditions, shown in Table 404(a) in Rule 404. A person is also prohibited from discharging into the atmosphere from any source, particulate matter in excess of 450 milligrams per cubic meter (0.196 grain per cubic foot) in discharged gas calculated as dry gas at standard conditions.

Rule 405—Solid Particulate Matter—Weight: A person shall not discharge into the atmosphere from any source, solid particulate matter including lead and lead compounds in excess of the rate shown in Table 405(a) in Rule 405. A person is also prohibited from discharging into the atmosphere in any one hour from any source, solid particulate matter including lead and lead compounds in excess of 0.23 kilogram (0.5 pound) per 907 kilograms (2000 pounds) of process weight.

Rule 473—Disposal of Solid and Liquid Wastes: A person shall not burn any combustible refuse in any incinerator except in a multiple-chamber incinerator or in

¹⁵ SCAQMD. *Proposal to Approve Proposed SCAQMD Drought Management & Water Conservation Plan. Governing Board Meeting Agenda, June 2014.*

equipment found by the Air Pollution Control Officer to be equally effective for the purpose of air pollution control. A person is also prohibited from discharging into the atmosphere from any incinerator or other equipment except as allowed by the rule.

Rule 475—Electric Power Generating Equipment: A person shall not discharge into the atmosphere from any equipment having a maximum rating of more than 10 net megawatts used to produce electric power, for which a permit to build, erect, install or expand is required after May 7, 1976, air contaminants that exceed the provisions in the rule.

Rule 1113—Architectural Coatings: No person shall apply or solicit the application of any architectural coating (e.g., paint) within the SCAQMD with VOC content in excess of the values specified in a table incorporated in the rule.

Rule 1138—Control of Emissions from Restaurant Operations: This rule applies to owners and operators of commercial cooking operations, preparing food for human consumption. The rule 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 provisions.

Rule 1186—PM₁₀ Emissions from Paved and Unpaved Roads and Livestock Operations: The purpose of this rule is to reduce the amount of particulate matter entrained in the ambient air as a result of vehicular travel on paved and unpaved public roads, and at livestock operations. The provisions of this rule shall apply to specified land uses and activities conducted within the SCAQMD which result in fugitive dust.

Rule 1186.1—Less-Polluting Sweepers: The purpose of this rule is to reduce air toxic and criteria pollutant emissions, this rule requires certain public and private sweeper fleet operators to acquire and operate alternative-fuel or otherwise less-polluting sweepers when purchasing or leasing these vehicles for sweeping operations undertaken by or for governments or governmental agencies in the jurisdiction of the SCAQMD.

Rule 1403—Asbestos Emission from Demolition/Renovation Activities: The purpose of this rule is to specify work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials (ACM). The requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials (ACWM). All operators are required to maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings.

SCAQMD CEQA Air Quality Handbook and Supplemental Guidance/Information

SCAQMD published the *CEQA Air Quality Handbook* 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.

In order to assist CEQA practitioners, supplemental guidance/information also is provided on SCAQMD's website (www.aqmd.gov/ceqa/hdbk.html) and includes: (1) EMFAC on-road 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 significance thresholds. SCAQMD also recommends using approved models to calculate emissions from land use projects, such as CalEEMod. These recommendations were followed in the preparation of this analysis.

(ii) Southern California Association of Governments

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG coordinates with various air quality and transportation stakeholders in southern California to ensure compliance with the federal and state air quality requirements. In addition, SCAG is a co-producer, with SCAQMD, of the transportation strategy and transportation control measure sections of the AQMP for the Air Basin. With regard to future growth, SCAG has prepared the Regional Transportation Plan (RTP), which provides population, housing, and employment projections for cities under its jurisdiction. The growth projections in the RTP are based on projections originating under County and City General Plans. The RTP growth projections are used in the preparation of the air quality forecasts and consistency analysis included in SCAQMD's AQMP.

On September 3, 2020, SCAG's Regional Council unanimously voted to approve and fully adopt Connect SoCal (the 2020–2045 RTP/SCS), and the addendum to the Connect SoCal Program Environmental Impact Report. Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. It charts a path toward a more mobile, sustainable, and prosperous region by making connections between transportation networks, between planning strategies, and between the people whose collaboration can improve the quality of

life for Southern Californians. Connect SoCal outlines more than \$638 billion in transportation system investments through 2045. It was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses, and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura.

(d) County Regulations

(i) County of Los Angeles General Plan

As discussed in more detail in **Section 5.9**, Land Use and Planning, of this SEIR, the Los Angeles County General Plan 2035 (General Plan) directs future growth and development in the County's unincorporated areas and establishes goals, policies, and objectives that pertain to the entire County. The General Plan includes an Air Resources Element that addresses air quality and related issues. Relevant goals encourage mixed-use development, the use of "green building" principles, energy and water efficiency, reducing vehicle miles traveled and vehicle trips, and promoting alternative modes of transportation.

(ii) Santa Clarita Valley Plan: One Valley One Vision 2012

As discussed in greater detail in **Section 5.9**, Land Use and Planning, of this SEIR, the Santa Clarita Valley Area Plan: One Valley One Vision 2012 (Area Plan), serves as a long-term guide for development in the Santa Clarita Valley (Valley) Planning Area over the next 20 years. The Area Plan ensures consistency between the General Plans of the County and the City of Santa Clarita (City) in order to achieve common goals. The Area Plan includes several policies related to air quality within its Circulation and Conservation and Open Space Elements. These policies address the use of smart growth concepts to reduce vehicle miles traveled, trip reduction measures such as carpools and flexible work schedules/telecommuting, and alternative travel modes, including alternative fuel vehicles.

(iii) OurCounty: Los Angeles Countywide Sustainability Plan

OurCounty: Los Angeles Countywide Sustainability Plan (OurCounty Plan) is a regional sustainability plan that outlines what local governments and stakeholders can do to enhance the well-being of every community in Los Angeles County while reducing damage to the environment and adapting to climate change. The plan is organized around 12 goals, of which the most pertinent to air quality are Goal 7: A fossil-free L.A. County; and Goal 8: A convenient, safe, clean, and affordable transportation system that enhances mobility and quality of life while reducing car dependency. In particular, while focused on reducing greenhouse gas (GHG) emissions and energy usage, Strategies 7A and 7B,

which are aimed at creating a zero-carbon energy system and zero-emission transportation system, respectively, would have the co-benefit of reducing air emissions. Additionally, Strategy 8A is designed to reduce vehicle miles traveled by prioritizing alternatives to single occupancy vehicles. The OurCounty Plan is not a binding plan, although the County utilizes it as a guide to facilitate sustainability planning.

(2) Toxic Air Contaminants

(a) State Regulations

(i) California Air Toxics Program

The California Air Toxics Program was established when the California Legislature adopted Assembly Bill (AB) 1807. The Air Toxics Program establishes a two-step process for risk identification and risk management of potential health effects from exposure to toxic substances in the air.¹⁶ In the risk identification step, CARB and OEHHA determine if a substance should be formally identified or “listed” as a TAC in California. Today, 189 federal hazardous air pollutants are identified as TACs.

In the risk management step, CARB reviews emission sources of an identified TAC to determine whether regulatory action is needed to reduce the risk associated with the TAC pollutant. Based on results of that review, CARB may promulgate airborne toxic control measures, both for mobile and stationary sources of the pollutant.¹⁷

For example, in 2004, CARB adopted an airborne toxic control measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to DPM and other TACs. The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given time.

In addition, CARB promulgated emission standards for off-road diesel construction equipment such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles. This regulation aims to reduce emissions through diesel particulate filters and encouraging the replacement of older, dirtier engines with

¹⁶ CARB, *Airborne Toxics*, ww2.arb.ca.gov/our-work/topics/airborne-toxics, accessed March 11, 2024.

¹⁷ CARB, *Airborne Toxic Control Measures*, ww2.arb.ca.gov/resources/documents/airborne-toxic-control-measures, accessed March 11, 2024.

newer emission-controlled models. Implementation is staggered based on fleet size, with the largest operators beginning compliance in 2014.¹⁸

The Air Toxics Program is supplemented by the AB 2588 Air Toxics “Hot Spots” Program. Under this Program, facilities are required to report their air toxics emissions, assess health risks, and notify nearby residents and workers of significant risks if present. The Hot Spots Program was amended by Senate Bill (SB) 1731 to require facilities that pose a significant health risk to the community to reduce their risk through implementation of a risk management plan.

CARB has published the *Air Quality and Land Use Handbook* (CARB Handbook) to serve as a general guide for considering health effects associated with siting sensitive receptors proximate to sources of TAC emissions. The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. 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 per day, or where transport refrigeration unit operations exceed 300 hours per week); and (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.

(b) Regional Regulations

(i) South Coast Air Quality Management District

Pursuant to California AB 1807, which directs CARB to identify substances as TACs and adopt airborne toxic control measures to control such substances, the SCAQMD has adopted numerous rules (primarily in Regulation XIV) that specifically address TAC emissions. SCAQMD has adopted two rules to limit cancer and non-cancer health risks from facilities located within its jurisdiction. Rule 1401 (New Source Review of Toxic Air Contaminants) regulates new or modified facilities, and Rule 1402 (Control of Toxic Air Contaminants from Existing Sources) regulates facilities that are already operating. Rule 1402 incorporates requirements of the AB 2588 program, including implementation of risk reduction plans for significant risk facilities. Significant risk facilities are those facilities

¹⁸ CARB, *In-Use Off-Road Diesel Vehicle Regulation*, ww2.arb.ca.gov/resources/fact-sheets/use-road-diesel-vehicle-regulation, accessed March 11, 2024.

which have an increased cancer risk exceeding 10 in 1 million or a total hazard index exceeding 1.0. Examples include landfills, refineries, and oil production facilities.

SCAQMD has also adopted land use planning guidelines in the *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, which considers impacts to sensitive receptors from facilities that emit TAC emissions. SCAQMD's siting distance recommendations are the same as those provided by CARB (e.g., a 500-foot siting distance for sensitive land uses proposed in proximity of freeways and high-traffic roads, and the same siting criteria for distribution centers and dry cleaning facilities). SCAQMD's document also introduces land use-related policies that rely on design and distance parameters to minimize emissions and lower potential health risk. SCAQMD's guidelines are voluntary initiatives recommended for consideration by local planning agencies.

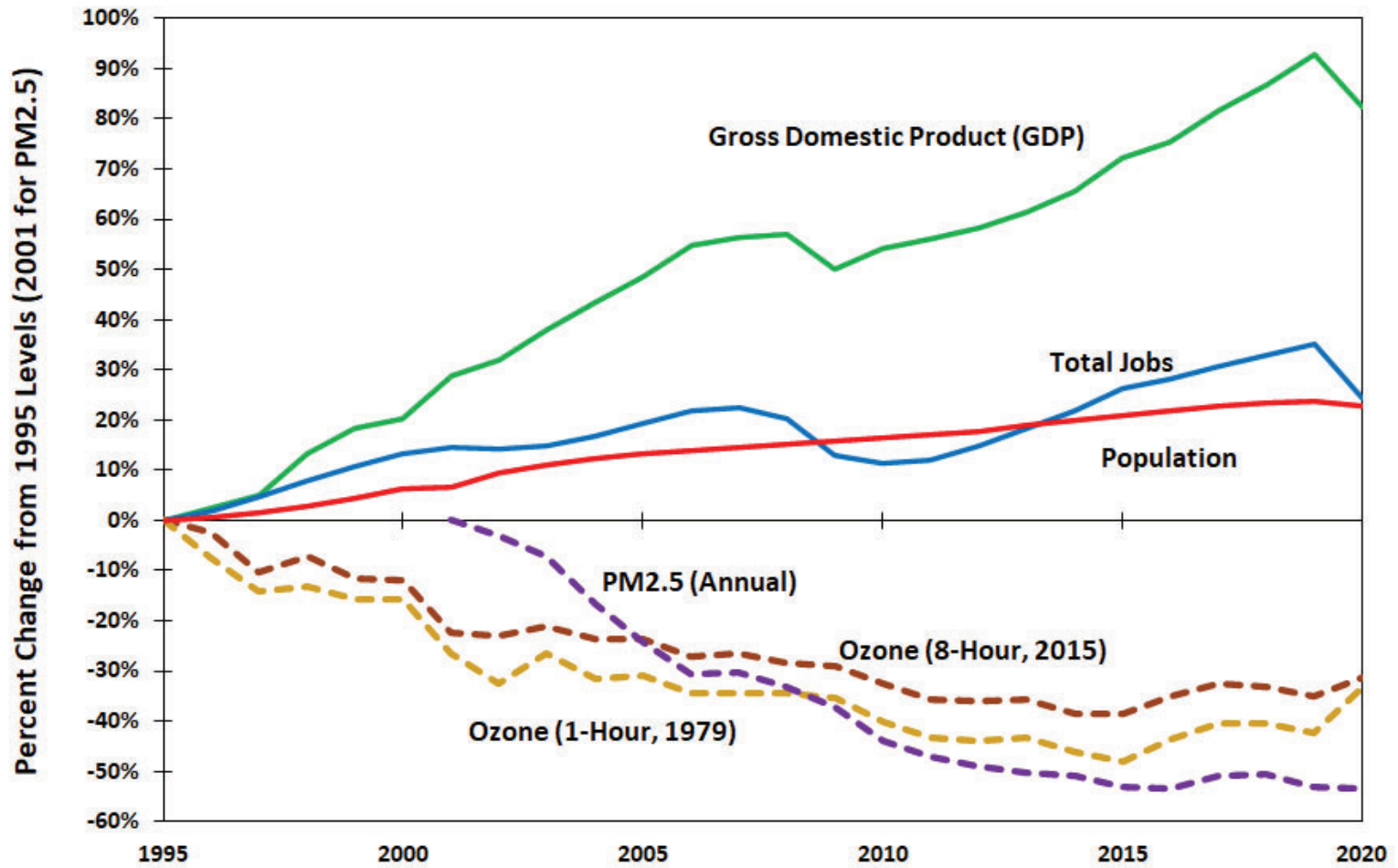
d. Existing Conditions

(1) Regional Air Quality

The southern California region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Air Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and dispersion of pollutants throughout the Air Basin, making it an area of high pollution potential.

Pollutant concentrations in the Air Basin vary with location, season, and time of day. The greatest air pollution impacts throughout the Air Basin occur from June through September. This condition is generally attributed to the large amount of pollutant emissions, light winds, and shallow vertical atmospheric mixing, which frequently reduce pollutant dispersion, thus causing elevated air pollution levels. Also, ozone concentrations tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Air Basin and adjacent desert. Over the past 30 years, substantial progress has been made in reducing air pollution levels in southern California.

Despite this population growth, air quality has improved significantly over the years, primarily due to air quality control programs at the federal, State, and local levels, as shown in **Figure 5.1-1**, Percent Change in Air Quality Along with Demographic Data, on page 5.1-27. Over the past several decades O₃ and PM levels have been reduced significantly as the size of the economy and population increased. To identify and assess the risks



(Economic set back in 2019 and 2020 due to COVID-19 pandemic)

Figure 5.1-1
Percent Change in Air Quality Along with Demographic Data

associated with exposure to toxic air pollutants in the AirBasin, SCAQMD has published several iterations of the Multiple Air Toxics Exposure Study (MATES). MATES relies on a combination of monitoring data, a toxics emissions inventory, and air modeling to characterize risk from toxic exposure, particularly in highly impacted areas including environmental justice communities. In August 2021, SCAQMD released the final MATES-V report which showed that estimated Basin-wide population weighted cancer risk has decreased approximately 54 percent since MATES IV (the previous iteration of the MATES study, which was released in 2015).¹⁹ The report concludes that DPM still dominates the overall cancer risk from air toxics, and the highest risks occur near ports and transportation corridors. Based on MATES-V, an interactive map showing model-calculated cancer risks estimates that TAC-related cancer risk in the Modified Project area ranges from 239 to 316 in a million.²⁰

(2) Local Air Quality

Air pollutant emissions in the local vicinity are generated by stationary and area-wide sources, such as commercial and industrial activity, space and water heating, landscape maintenance, consumer products, and mobile sources primarily consisting of automobile traffic. Motor vehicles are the primary source of pollutants in the local vicinity.

(a) Existing Pollutant Levels at Nearby Monitoring Stations

SCAQMD maintains a network of air quality monitoring stations located throughout the Air Basin and has divided the Air Basin into 27 source receptor areas in which 31 monitoring stations operate. **Figure 5.1-2**, SCAQMD Source Receptor Areas, on page 5.1-29 shows the locations of the source receptor areas located within the vicinity of the Project Site. The Project Site is located within source receptor area 13, which covers the Santa Clarita Valley area. The Valley air monitoring station is the station closest to the Project Site and considered representative of existing conditions at the project site, located at 22224 Placerita Canyon Road in Santa Clarita, approximately 4 miles southeast of the Project Site. The Valley air monitoring station measures CO, NO₂, O₃, and PM₁₀ levels in the ambient air. Criteria pollutants not reported at this station include PM_{2.5} and SO₂. The nearest upwind monitoring station for these other pollutants is the East San Fernando Valley (Burbank) station, which is located approximately 21 miles southeast of the Project Site and considered representative of the project site.

¹⁹ SCAQMD, *MATES V Final Report, 2021* www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v, accessed March 11, 2024.

²⁰ SCAQMD, "Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-V)," *MATES-V Data Visualization Dashboard Interactive Cancer Risk Map, 2021*. https://experience.arcgis.com/experience/79d3b6304912414bb21ebdde80100b23/page/Main-Page/?data_id=dataSource_105-a5ba9580e3aa43508a793fac819a5a4d%3A225&views=Click-tabs-for-other-data%2CCancer-Risk, accessed August 19, 2024.

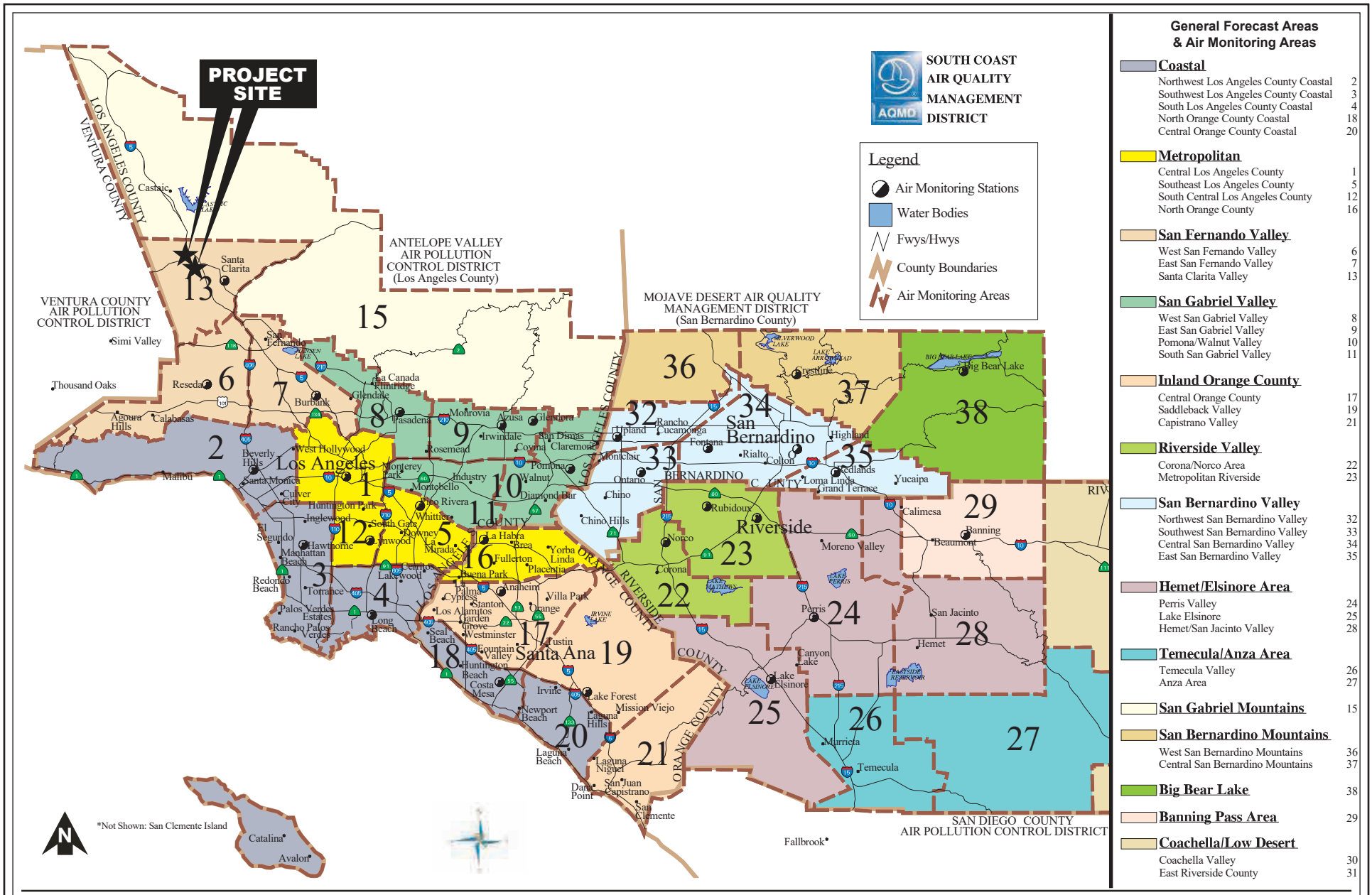


Figure 5.1-2
SCAQMD Source Receptor Areas

Table 5.1-3, Summary of Ambient Air Quality in the Project Vicinity, on page 5.1-31 identifies the national and state air standards for relevant air pollutants along with the ambient pollutant concentrations that have been measured at the two stations during the period of 2017–2020.

(b) Existing Health Risk in the Surrounding Area

As shown in **Figure 5.1-3**, MATES-IV Total Cancer Risk for Modified Project Area, on page 5.1-33, based on the MATES-V Final Report, the Modified Project Site is located within a cancer risk zone of 239 to 316 in one million over a 70-year duration; the risk in this particular zone is substantially lower than the average carcinogenic risk from air pollution in the Air Basin of approximately 454 in one million. The cancer risk in this area is predominately related to nearby sources of diesel particulate (e.g., vehicular traffic on Interstate 5). Note that as described in the MATES-V Final Report, “the assumptions [made in the Study] are consistent with current scientific knowledge and are designed to be conservative and health protective...Thus, the risk estimates should not be interpreted as actual rates of disease in the exposed population, but rather as estimates of potential risk, based on current knowledge and several assumptions.”²¹ In general, the risk of the Modified Project Site is lower than other urbanized areas in the central Los Angeles area that are near large diesel sources (e.g., freeways, airports, and ports).²²

(c) Surrounding Uses

As shown in **Figure 5.1-4**, Air Quality Sensitive Receptors Locations, on page 5.1-34, Six Flags Magic Mountain and the proposed Entrada North community are located north of the Entrada South Planning Area (partially separated by Six Flags Magic Mountain), and the community of Westridge is located to the immediate south. West of Entrada South is the community of Mission Village within the Newhall Ranch Specific Plan area, which is currently under construction. Additionally, the proposed Legacy Village community is located to the southwest. Sensitive uses surrounding the VCC Planning Area include the Live Oak community to the north and the proposed Entrada North community to the south, which is separated by Highway 126. The City of Santa Clarita is located east of the Modified Project Site, separated by The Old Road and I-5. The Piru community is approximately 10 miles to the west.

²¹ SCAQMD, *MATES V Final Report*, August 2021.

²² SCAQMD, “Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-V),” *MATES V Data Visualization Dashboard Interactive Cancer Risk Map*, 2021. https://experience.arcgis.com/experience/79d3b6304912414bb21ebdde80100b23/page/Main-Page/?data_id=dataSource_105-a5ba9580e3aa43508a793fac819a5a4d%3A225&views=Click-tabs-for-other-data%2CCancer-Risk accessed August 19, 2024.

**Table 5.1-3
Summary of Ambient Air Quality in the Project Vicinity**

Pollutant	Year			
	2017	2018	2019	2020
Ozone (O₃)—Santa Clarita Valley				
Maximum 1-hour Concentration (ppm)	0.151	0.132	0.128	0.148
Days exceeding CAAQS (0.09 ppm)	45	21	34	44
Maximum 8-hour Concentration (ppm)	0.128	0.106	0.106	0.122
Days exceeding NAAQS (0.07 ppm)	73	52	56	73
Days exceeding CAAQS (0.070 ppm)	73	52	56	73
Respirable Particulate Matter (PM₁₀)—Santa Clarita Valley				
Maximum 24-hour Concentration (µg/m ³)	66	49	62	48
Days exceeding NAAQS (150 µg/m ³)	0	0	0	0
Days exceeding CAAQS (50 µg/m ³)	2	0	1	0
Annual Arithmetic Mean (µg/m ³)	23.6	23.4	18.3	22.5
Does measured AAM exceed CAAQS (20 µg/m ³)?	Yes	Yes	No	Yes
Fine Particulate Matter (PM_{2.5})—West San Fernando Valley				
Maximum 24-hour Concentration (µg/m ³)	35.2	31.0	30.0	27.6
98th Percentile 24-hour Concentration (µg/m ³)	20.7	22.6	26.3	26.4
Days exceeding NAAQS (35 µg/m ³)	0	0	0	0
Annual Arithmetic Mean (µg/m ³)	9.7	10.3	9.2	10.1
Does measured AAM exceed NAAQS (12 µg/m ³)?	No	No	No	No
Does measured AAM exceed CAAQS (12 µg/m ³)?	No	No	No	No
Carbon Monoxide (CO)—Santa Clarita Valley				
Maximum 1-hour Concentration (ppm)	1.3	1.0	1.5	1.2
Days exceeding NAAQS (35.0 ppm)	0	0	0	0
Days exceeding CAAQS (20.0 ppm)	0	0	0	0
Maximum 8-hour Concentration (ppm)	0.8	0.8	1.2	0.8
Days exceeding NAAQS and CAAQS (9 ppm)	0	0	0	0
Nitrogen Dioxide (NO₂)—Santa Clarita Valley				
Maximum 1-hour CAAQS Concentration (ppm)	0.058	0.059	0.046	0.046
Days exceeding CAAQS (0.25 ppm)	0	0	0	0
Maximum 1-hour NAAQS Concentration (98th Percentile) (ppm)	0.038	0.038	0.035	0.036
Days exceeding NAAQS (0.10 ppm)	0	0	0	0

Table 5.1-3 (Continued)
Summary of Ambient Air Quality in the Project Vicinity

Pollutant	Year			
	2017	2018	2019	2020
Annual Arithmetic Mean (ppm)	0.011	0.011	0.009	0.009
Does measured AAM exceed NAAQS (0.053 ppm)?	No	No	No	No
Does measured AAM exceed CAAQS (0.03 ppm)?	No	No	No	No
Sulfur Dioxide (SO₂)— Central LA				
Maximum 1-hour Concentration (ppm)	0.006	0.018	0.010	0.004
Days exceeding CAAQS (0.25 ppm)	0	0	0	0
Maximum 24-hour concentration (ppm)	—	—	—	—
Days exceeding CAAQS (0.04 ppm)	—	—	—	—
Days exceeding NAAQS (0.14 ppm)	0	0	0	0
Annual Arithmetic Mean (ppm)	—	—	—	—
Does measured AAM exceed NAAQS (0.030 ppm)?	—	—	—	—
Lead (Pb)—Santa Clarita Valley^b				
Maximum 30-day Average Concentration (µg/m ³)	—	—	—	—
Does measured concentration exceed NAAQS (1.5 µg/m ³)	—	—	—	—
Maximum Calendar Quarter Concentration (µg/m ³)	—	—	—	—
Does measured concentration exceed CAAQS (1.5 µg/m ³)	—	—	—	—
Sulfate—Santa Clarita Valley				
Maximum 24-hour Concentration (µg/m ³)	4.5	3.5	—	—
Does measured concentration exceed CAAQS (25 µg/m ³)	No	No	—	—
<p><i>ppm = parts per million by volume</i> <i>µg/m³ = micrograms per cubic meter</i> <i>NAAQS = National Ambient Air Quality Standard</i> <i>CAAQS = California Ambient Air Quality Standard</i> <i>AAM = annual arithmetic mean</i> <i>— = not available</i></p> <p>^a Table 2-1 of the Air Quality Report provides ambient air quality data for 2017 through 2020; refer to Appendix 5.1 of this SEIR.</p> <p>^b Lead is not measured at SCAQMD monitoring stations near the Project Site as the only exceedance of the NAAQS is at the downtown Los Angeles monitoring station as the result of a large lead-acid battery recycling facility near downtown Los Angeles.</p> <p>Source: SCAQMD, <i>Historical Data by Year</i>, www.aqmd.gov/home/air-quality/historical-air-quality-data/historical-data-by-year, accessed March 11, 2024.</p>				

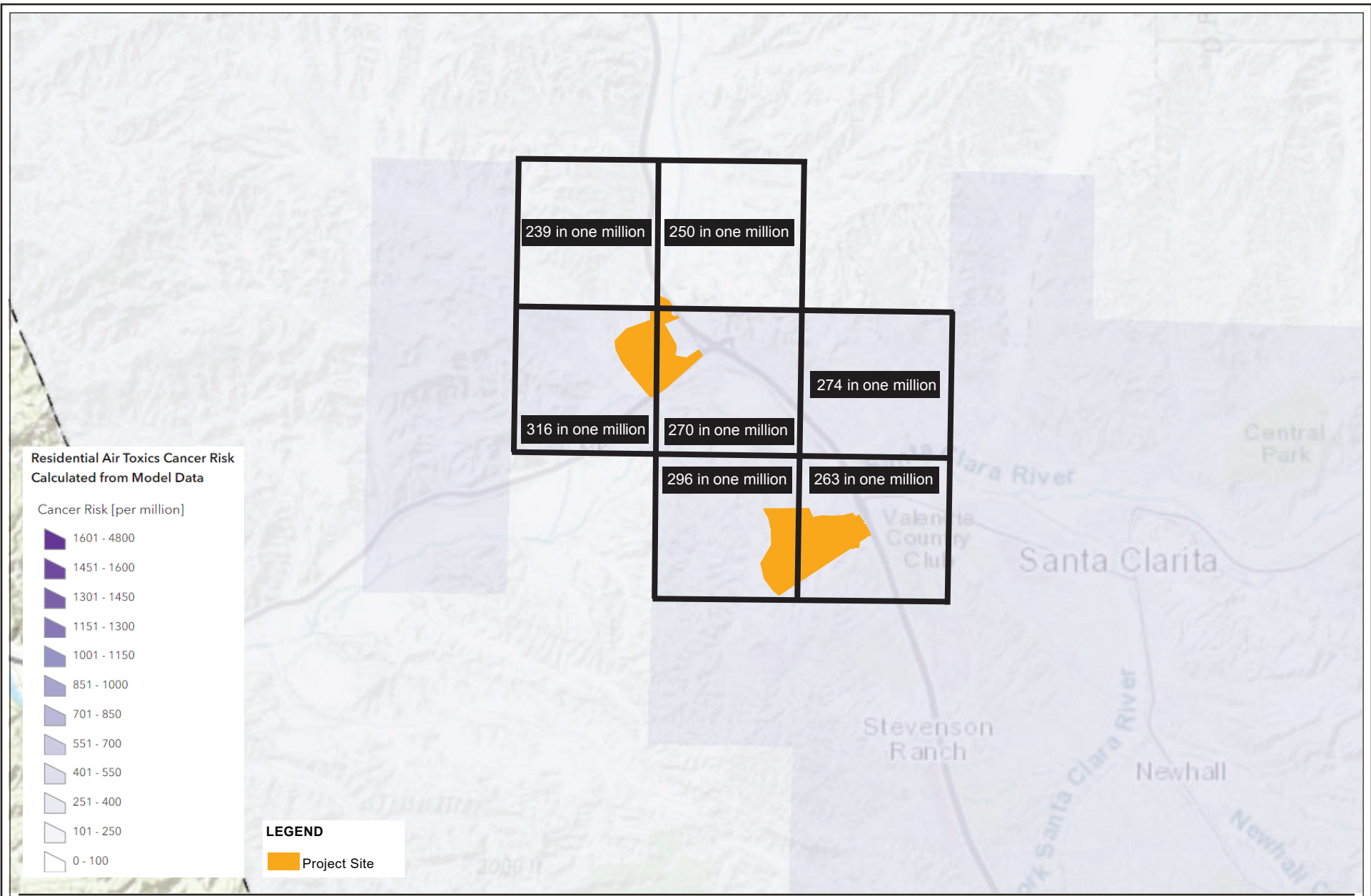


Figure 5.1-3
MATES Cancer Risk



Figure 5.1-4
Sensitive Receptors

Some population groups including children, elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases) are considered more sensitive to air pollution than others. Sensitive land uses in the Modified Project vicinity discussed above are shown in **Figure 5.1-4**, Air Quality Sensitive Receptors Locations.

(d) Existing Project Site and Associated Emissions

Entrada South Planning Area

The Entrada South Planning Area is generally comprised of vacant land, plus several abandoned oil wells and associated access roads. In addition, the southern boundary of the Entrada South Planning Area is developed with Southern California Edison (SCE) electric transmission lines and towers, and a Southern California Gas (SoCalGas) natural gas transmission pipeline traverses the southernmost portion of the Entrada South Planning Area from east to west.

Development of the approved Mission Village community, located immediately west of the Entrada South Planning Area, is underway and includes grading and construction of the Magic Mountain Parkway extension through the northern portion of the Entrada South Planning Area. Related to those activities, former grazing uses within the Entrada South Planning Area ceased and a small plant nursery used by the adjacent Six Flags Magic Mountain was removed.

VCC Planning Area

The VCC Planning Area represents an undeveloped portion of the partially completed VCC non-residential (industrial/business/office park) center and is generally comprised of vacant land with some agricultural and vehicle storage uses, as well as limited infrastructure such as a sewer pump lift station and water wells. The site is bisected by Hasley Creek and Castaic Creek.

3. SUMMARY OF IMPACTS FOR THE 2017 PROJECT

Entrada South and VCC Planning Areas²³

The State-certified EIR determined that construction in the Entrada South and VCC Planning Areas would generate emissions of volatile organic compounds (VOC), nitrogen oxides (NO_x), respirable particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}) that

²³ Where impacts associated with both planning areas are similar or identical, the summary of impacts from the State-certified EIR may be combined to reduce redundancy.

exceed the SCAQMD thresholds of significance. Thus, construction-related air quality impacts would be significant, as concluded in the State-certified EIR. Mitigation Measures RMDP/SCP-AQ-1 through RMDP/SCP-AQ-12 and measure VCC-AQ-1 for VCC construction would reduce construction-related emissions to some extent; however, the State-certified EIR determined that such impacts would remain significant and unavoidable within each planning area. The State-certified EIR also found that cumulative impacts related to these pollutants also would be significant and unavoidable. Similarly, the State-certified EIR concluded localized construction emissions of NO₂, PM₁₀, and PM_{2.5} would be significant and unavoidable. The State-certified EIR, Section 4.7, relied upon OFFROAD2007 emission factors and other parameters provided in URBEMIS2007.²⁴ Even with implementation of the mitigation measures RMDP/SCP-AQ-12 and -12A as described in the State-certified EIR, construction equipment was assumed by the State-certified EIR to include Tier 1 and Tier 2 equipment.

The State-certified EIR indicated operation of the land uses proposed within the Entrada South and VCC Planning Areas would generate operational emissions of VOC, NO_x, CO, PM₁₀, and PM_{2.5} that exceed the thresholds of significance, and as such operational air quality impacts would be significant. The State-certified EIR assumed air emissions associated with the daily operations using URBEMIS2007. Mitigation Measures RMDP/SCP-AQ-13 through RMDP/SCP-AQ-16 and measure VCC-AQ-2 for VCC operations would reduce emissions, but operational air quality impacts would remain significant and unavoidable, as determined by the State-certified EIR. Impacts related to the exposure of sensitive receptors to substantial pollutant concentrations and cumulative impacts likewise would be significant and unavoidable, as concluded in the State-certified EIR.

With respect to health risk, the State-certified EIR concluded that health impacts associated with construction of the 2017 Project would be less than significant for both cancer and noncancer risks. Moreover, implementation of air quality Mitigation Measures RMDP/SCP-AQ-1, RMDP/SCP-AQ-3 through RMDP/SCP-AQ-7, RMDP/SCP-AQ-10, and RMDP/SCP-AQ-11, which were recommended to mitigate criteria pollutant impacts, would further reduce health risk impacts.

As also evaluated in the State-certified EIR, development of the Entrada South and VCC Planning Areas would not conflict with or obstruct implementation of the SCAQMD's AQMP. In addition, no odor-generating activities would result from construction or

²⁴ *Impact Sciences, Revised Localized Significance Threshold Analysis for the Newhall Ranch Resource Management and Development Plan and Specific Plan, March 2010, <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=21507> (Section 2.0 Emission Estimation Methodology), accessed March 11, 2024.*

operation of the Entrada and South VCC Planning Areas, nor from the creation of the spineflower preserve within Entrada South. Therefore, such impacts were determined in the State-certified EIR to be less than significant.

4. REGULATORY REQUIREMENTS AND PROJECT DESIGN FEATURES ASSUMED

The modeling of the Modified Project assumed the following regulatory requirements, as applicable:

a. Regulatory Measures—Construction

- In accordance with SCAQMD Rule 403 for Large Operations, the Modified Project shall incorporate fugitive dust control measures, such as watering active construction areas (or using soil stabilizers) and limiting vehicle speeds to 15 miles per hour or less in staging areas and on on-site haul roads.
- The Modified Project shall comply with SCAQMD Rule 1113 limiting the volatile organic compound content of architectural coatings.

b. Regulatory Measures—Operation

- The Modified Project shall install odor-reducing equipment where applicable in accordance with SCAQMD Rule 1138.
- The Modified Project shall meet the Statewide 2019 Building Energy Code, formally known as CCR Title 24, Part 6. (The Modified Project shall currently meet the 2019 Title 24 standards. However, the Title 24 standards are revisited by the California Energy Commission (CEC) on a three-year cycle and are becoming increasingly efficient, particularly in light of the expressed desire of the CEC and CARB to achieve zero net energy by 2020 for residential buildings and by 2030 for commercial buildings. Should an updated version of the Title 24 standards be adopted prior to the filing of building permit applications, the standards in effect at that time shall apply.)²⁵
- The Modified Project shall comply with the Pavley regulation mandating higher fuel efficiency standards for cars and light-duty vehicles and the Advanced Clean Cars (ACC) regulation, as included in the USEPA-approved EMFAC2017 model.²⁶

²⁵ Use of the 2019 Building Energy Code standards is conservative for purposes of this analysis because subsequent code cycles require greater energy efficiency.

²⁶ These benefits have been adjusted to account for the USEPA's SAFE rule, November 2019.

- The Modified Project shall comply with the current Heavy-duty Engines and Vehicles Fuel Efficiency Standards adopted by the USEPA and the National Highway Traffic Safety Administration (NHTSA). On September 27, 2019, the USEPA and NHTSA published the SAFE Vehicles Rule Part One.²⁷ The SAFE rule (Part One) went into effect in November 2019, and revoked California's authority to set its own GHGs standards and set zero emission vehicle mandates in California. In December 2021, the National Highway Traffic Safety Administration repealed the SAFE rule and its withdrawal of California's Clean Air Act preemption waiver.²⁸ The Modified Project shall conform with the federal government's revocation of the SAFE rule.

c. Project Design Features

The following Project Design Features (PDFs) related to air quality would be implemented as part of the Modified Project, consistent with modern air quality regulations:

ES/VCC-PDF-AQ-1: During the Project's grading phase, 2010 or newer diesel haul trucks shall be used to transport on-site soil to the extent available.

ES/VCC-PDF-AQ-2: All off-road diesel-powered construction equipment greater than 50 horsepower shall meet Tier 4 emission standards, where available. At a minimum, all off-road diesel-powered construction equipment greater than 50 horsepower shall meet the Tier 3 emission standards for non-road diesel engines promulgated by the U.S. Environmental Protection Agency.

In addition, all off-road diesel-powered construction equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by the California Air Resources Board (CARB), provided those devices are commercially available and: (1) achieve the standards of the California Division of Occupational Safety and Health (also known as Cal/OSHA); (2) are consistent with the construction equipment warranty requirements; (3) are compatible with equipment specifications of the construction equipment manufacturer; and (4) do not otherwise interfere with the proper functioning of the construction equipment. Any BACT devices used shall achieve emissions reductions that are equal to or greater than a Level 3 diesel emissions control strategy for a similarly-sized engine, as defined by CARB regulations, provided that the devices are commercially available and satisfy the four requirements enumerated above.

²⁷ *One National Program*. (84 Fed. Reg. 51,310 (Sept. 27, 2019.) www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-one-national-program-federal-preemption-state, accessed March 11, 2024.

²⁸ *US Department of Transportation. Corporate Average Fuel Economy (CAFE) Preemption (49 CFR Parts 531 and 533)*, <https://perma.cc/RKK2-F7ZR>, accessed March 11, 2024.

ES/VCC-PDF-AQ-3: During the Project's construction contract bidding phase, each construction contractor shall be provided with informational materials regarding the South Coast Air Quality Management District's Surplus Off-Road Opt-In for NO_x (SOON) Program.

ES/VCC-PDF-AQ-4: During the Project's construction phase, only street sweepers that are certified under Rule 1186 and Rule 1186.1 of the South Coast Air Quality Management District shall be used.

ES/VCC-PDF-AQ-5: During the Project's construction phase, electricity from on-site power poles shall be utilized where available (i.e., where accessible relative to the area of construction activity). In the event of an emergency or during a power outage, the use of generators shall be permissible.

ES/VCC-PDF-AQ-6: The Project shall install high-efficiency public street and area lighting. Area lighting is defined to include any private common space lighting (e.g., within or along parks, sidewalks, and landscaping) that is not otherwise regulated by the California Building Energy Efficiency Standards (Title 24). For purposes of this measure, the Project also may use solar-powered lighting in lieu of high-efficiency lighting.

ES/VCC-PDF-AQ-7: When residential appliances are offered by homebuilders, the Project shall install Energy Star appliances (specifically, clothes washers, clothes dryers, dish washers, fans, and refrigerators) in the single-family and multi-family residences.

5. THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines and other relevant criteria, the Los Angeles County Department of Regional Planning has determined that a project would have a potentially significant impact related to air quality based on the following criteria:

Threshold 5.1-1: Would the Project conflict with or obstruct implementation of applicable air quality plans of South Coast AQMD (SCAQMD)?

Threshold 5.1-2: 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?

Threshold 5.1-3: Would the Project expose sensitive receptors to substantial pollutant concentrations?

Threshold 5.1-4: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

As evaluated in the Initial Study (see **Appendix 1** of this SEIR), the Modified Project would not result in new or more severe significant impacts than the 2017 Project with

respect to other emissions (such as those leading to odors) adversely affecting a substantial number of people per Threshold 5.1-4. Accordingly, the Initial Study analysis concluded no further analysis of this issue is required. Please refer to the Initial Study for this discussion related to Threshold 5.1-4. As such, Threshold 5.1-4 is not analyzed any further in this SEIR section.

6. ENVIRONMENTAL IMPACTS OF THE MODIFIED PROJECT

a. Methodology

As described further below and in accordance with CEQA, the analysis herein focuses on the incremental change in pollutant emissions associated with the Modified Project as compared to the 2017 Project, as evaluated in the State-certified EIR. Emissions assumed in the State-certified EIR are presented below in Section 6.b and are used as for the point of comparison for evaluating Modified Project air quality impacts in this SEIR.

A project may be inconsistent with the AQMP under threshold 5.1-1 if it would generate population, housing, or employment growth exceeding forecasts used in the development of the AQMP and would obstruct attainment of the overall goals of the AQMP. The 2022 AQMP, the most recent AQMP adopted by the SCAQMD, incorporates general plans and SCAG's 2020-2045 RTP/SCS socioeconomic forecast projections of regional population, housing, and employment growth.

(1) Construction Emissions Methodology

As discussed within the Air Quality Report provided in **Appendix 5.1** of this SEIR, the Modified Project's overall development footprint within both the Entrada South and VCC Planning Areas would not change from that of the 2017 Project. There would be no overall increase in grading or soil movement needed for the Modified Project, as compared to the 2017 Project, and the Modified Project would use substantially the same types and amount of construction equipment as the 2017 Project as assumed in the State-certified EIR.

Accordingly, construction emissions are analyzed using a two-pronged approach. First, this SEIR section qualitatively evaluates whether construction emissions from horizontal construction activities (e.g., site preparation, grading, demolition, and utilities installation, etc.) and vertical construction activities (e.g., residential and non-residential structures) are expected to increase for the Modified Project compared to the emissions disclosed in the State-certified EIR for the 2017 Project. Second, this SEIR section evaluates the relative reductions in construction emissions associated with the substantial improvements in construction equipment emission factors and the construction-related PDFs that will be implemented by the Modified Project as compared to the emissions

disclosed in the State-certified EIR for the 2017 Project (see Section 4 above for PDFs applicable to the Modified Project).

(2) Operational Emissions Methodology

To evaluate air quality impacts, this SEIR section analyzes the incremental changes in estimated emissions resulting from the changes in land use proposed under the Modified Project as compared to the land use mix and associated estimated emissions disclosed in the State-certified EIR. This analysis discloses the estimated incremental emissions related to both regional and localized air quality impacts.

For Entrada South, because the Modified Project includes changes in the mix of residential and non-residential uses, the incremental emissions resulting from those changes are calculated based upon the trip rates, trip length, and internal trip capture rates provided in Appendix 5.11, using current methodologies consistent with SCAQMD and Los Angeles County guidance to use the California Emissions Estimator Model® (CalEEMod) (Version 2022.1).²⁹ The calculation of the incremental change in mitigated emissions takes into account the mitigation measures set forth below as well as the air quality co-benefits of the Net Zero Newhall mitigation measures, as discussed in the Air Quality Report. Details of these emissions reductions due to implementation of the proposed mitigation measures are also discussed below.

For the VCC Planning Area, because the non-residential (industrial/business/commercial park) uses would not change compared to the analysis in the State-certified EIR, no changes between the 2017 Project and the Modified Project's operational emissions are expected; however, this SEIR describes how actual mitigated emissions are expected to be reduced by improvements in vehicle fleets over time (i.e., as less polluting vehicles come to market) and the air quality co-benefits associated with the Net Zero Newhall mitigation measures. Details of these emissions reductions are discussed below.

²⁹ The State-certified EIR utilized the Urban Emissions (URBEMIS) model to estimate emissions but the SCAQMD and County no longer recommend the use of URBEMIS. The CalEEMod model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with SCAQMD and received input from other California air districts and is currently used by the County and numerous lead agencies in the Los Angeles area and within the State for quantifying the emissions associated with development projects undergoing environmental review. CalEEMod is based on outputs from the Off-road Emissions Inventory Program model (OFFROAD) and Emission FACtor model (EMFAC), which are emissions estimation models developed by CARB. CalEEMod also relies upon emissions data associated with certain activities or equipment (often referred to as "default" data, values, or factors) that can be used if site-specific information is not available that are specific to local air district regions, such as the South Coast Air Basin. Emissions data and default values within CalEEMod were obtained from existing data or surveys conducted by the SCAQMD. Additional information on CalEEMod and assumptions are provided in the user manual and associated appendices at www.aqmd.gov/caleemod/user's-guide.

The maximum daily incremental emissions (after mitigation) resulting from the changes in land use for the Modified Project are compared to the maximum daily mitigated emissions disclosed in the State-certified EIR for the Entrada South and VCC Planning Areas. The resulting net change for Entrada South and VCC was then compared to the SCAQMD operational mass emissions thresholds (see Table 5.1-3 below) to determine whether the net changes constitute a new significant impact or a substantial increase³⁰ in the severity of a previously identified significant impact.

Air districts, such as SCAQMD, base their significance thresholds on the federal and California CAAs. The federal and State CAAs regulate emissions of airborne pollutants and have established AAQS for the protection of public health. An air quality standard is defined as “the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harming public health.”³¹ Pursuant to Section 109(b) of the federal CAA, the NAAQS established at the federal level are designed to be protective of public health with an adequate margin of safety. To derive these standards, the USEPA 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.³² In addition, the State of California has established health-based AAQS for these and other pollutants, some of which are more stringent than the federal standards.^{33,34} SCAQMD’s thresholds for evaluating VOC, NO_x, and CO emissions are consistent with the federal CAA de minimis thresholds. The de minimis thresholds are used in the USEPA’s general conformity process and are the emission levels at which an activity would not cause or contribute to a violation of the NAAQS, worsen an existing violation of the NAAQS, or delay attainment of the NAAQS.³⁵

³⁰ Per a communication with SCAQMD on September 27, 2018, a substantial increase is defined as one that would result in an emissions increase greater than SCAQMD mass emissions significance thresholds. The SCAQMD uses this same approach for projects when they are the lead agency; see SCAQMD, Addendum to the April 2007 Final MND for Southern California Edison: Mira Loma Peaker Project, Ontario, Section 5.1, May 2019.

³¹ CARB, National Ambient Air Quality Standards, ww2.arb.ca.gov/resources/national-ambient-air-quality-standards, accessed August 19, 2024.

³² USEPA, Process of Reviewing the National Ambient Air Quality Standards, www.epa.gov/criteria-air-pollutants/process-reviewing-national-ambient-air-quality-standards, last updated July 24, 2024.

³³ CARB, National Ambient Air Quality Standards, ww2.arb.ca.gov/resources/national-ambient-air-quality-standards, accessed March 11, 2024.

³⁴ CARB, National Ambient Air Quality Standards, ww2.arb.ca.gov/resources/national-ambient-air-quality-standards, accessed March 11, 2024.

³⁵ USEPA, Frequent Questions about General Conformity, www.epa.gov/general-conformity/frequent-questions-about-general-conformity, last updated May 9, 2024.

(a) Regional Emissions

Analysis of a project's impacts on regional air quality during long-term operations looks at three types of sources: (1) mobile; (2) area; and (3) energy. Mobile source emissions are generated by motor vehicle trips to and from the project site associated with operations. Area source emissions are generated by, among other things, landscape and maintenance equipment, natural gas fireplaces, and the use of consumer products. Energy source emissions are generated as a result of activities in buildings for which natural gas is used (e.g., for heat or cooking).

Regional operational impacts related to the incremental changes in emissions associated with the Modified Project were calculated with SCAQMD's CalEEMod (Version 2022.1) software. The model calculates both the daily maximum and annual average incremental emissions of criteria pollutants. In addition, the analysis relied on emissions estimation guidance from government-sponsored organizations, government-commissioned studies of energy use patterns, energy surveys by consulting firms, and Project-specific studies (e.g., the Newhall Ranch Transportation Demand Management Plan prepared by Fehr & Peers). In addition, the Modified Project's residential and non-residential land uses reflect compliance with the 2019 Title 24 Standards. To calculate the total residential and non-residential building energy input for the Modified Project, energy use data prepared by ConSol for the State-certified EIR was incorporated. Energy use rates and resulting emissions are included in **Appendix 5.1** of this SEIR.

(b) Localized Emissions

The general procedure for evaluating localized impacts resulting from a project's operations is to evaluate any new or modified stationary combustion sources as well as the likely effect on CO concentrations from induced traffic at nearby intersections. More specifically, the effects related to the operation of stationary-source combustion equipment associated with a project are evaluated by conducting a qualitative screening-level analysis. The screening-level analysis consists first of reviewing the project to identify any new or modified stationary-source combustion equipment. Then, if such equipment is identified, the potential significance of its impact is evaluated qualitatively considering applicable regulations and operating parameters.

With regard to mobile source emissions, such incremental changes in emissions associated with the Modified Project were calculated using the trip rates, trip length, and internal trip capture information specified in the traffic studies prepared for the Modified Project (see **Appendix 5.9a** of this SEIR), which are based on the Santa Clarita Valley Consolidated Traffic Model (SCVCTM). Those analyses utilize the same model and methodology used to generate trip information as the State-certified EIR. Mobile source emissions were then calculated using CalEEMod. However, as discussed further in

Appendix 5.1 of this SEIR, a CO hot spot analysis was not required. As an initial screening step, if a project intersection does not exceed 400,000 vehicles per day, then the project does not need to prepare a detailed CO hot spot analysis.³⁶

(3) Construction Start Time and Buildout Date

Air quality modeling for the Modified Project assumed that construction would begin 2022 and last eight years, resulting in full operational buildout in 2030. Construction equipment is expected to get cleaner each year as older equipment is retired and newer equipment becomes available and is incorporated into the construction fleet. Similarly for operations, mobile equipment, including heavy-duty trucks and passenger vehicles, is also expected to get cleaner over time due to compliance with CARB and SCAQMD regulations and rules that aim to reduce emissions from mobile sources. As such, the analysis herein is conservative given the Modified Project's anticipated buildout year of 2032, as described in Section 3.0, Project Description, of this SEIR.

(4) Toxic Air Contaminants Impacts (Construction and Operations)

The SCAQMD has adopted land use planning guidelines in the *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, which considers impacts to sensitive receptors from facilities that emit TAC emissions.³⁷ SCAQMD's siting distance recommendations are the same as those provided by CARB (e.g., a 500-foot siting distance for sensitive land uses proposed in proximity of freeways and high-traffic roads, and the same siting criteria for distribution centers and dry cleaning facilities). The SCAQMD's document introduces land use-related policies that rely on design and distance parameters to minimize emissions and lower potential health risk. SCAQMD's guidelines are voluntary initiatives recommended for consideration by local planning agencies.

Potential TAC impacts are evaluated by conducting a qualitative analysis, which reviews a project to identify any new or modified TAC emissions sources. A detailed assessment of potential TAC emissions during construction was provided in the State-certified EIR due to the use of heavy-duty construction equipment and the overall length of proposed construction activities. .

³⁶ Refer to Air Quality Report in **Appendix 5.1** of the SEIR for related discussion of CO hot spot analyses, which are based on data from SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide.

³⁷ SCAQMD, *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, May 6, 2005.

b. Project Impacts

Threshold 5.1-1: Would the Project conflict with or obstruct implementation of applicable air quality plans of the South Coast AQMD (SCAQMD)?

Entrada South and VCC Planning Areas³⁸

The State-certified EIR concluded that the 2017 Project would not conflict with or obstruct implementation of the air quality management plan. As stated therein, “[o]nce fully developed and occupied, the proposed Project, as well as other projects being proposed and developed in the area, are expected to be within the growth forecasts contained in the Growth Management Chapter of the Southern California Association of Government’s (SCAG) Regional Comprehensive Guide and Plan (RCGP), which forms the basis for the land use and transportation control portions of the SCAQMD’s AQMP”.³⁹ As discussed in **Section 5.9**, Land Use and Planning, of this SEIR, the Modified Project would slightly reduce the number of residential units by 151, but would be consistent and not exceed the General Plan and growth forecasts within the 2016–2040 RTP/SCS. Further, implementation of the Net Zero Newhall mitigation measures would result in net zero GHG emissions and yield air quality co-benefits (discussed further below), in furtherance of applicable goals in the RTP/SCS to reduce GHG and air quality emissions. Thus, like the 2017 Project, the Modified Project would not conflict with or obstruct implementation of the 2016 AQMP or the 2022 AQMP, which was adopted by SCAQMD in December 2022 and relies upon the 2020–2045 RTP/SCS. The Modified Project would not result in any new or substantially more severe significant impacts related to obstruction with applicable air quality plans as compared to the State-certified EIR.

Threshold 5.1-2: 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?

(a) Regional Emissions—Construction

Entrada South Planning Area

Analysis of Entrada South’s construction emissions follows a two-step approach. First, this section qualitatively evaluates whether the Modified Project is expected to cause

³⁸ Where impacts associated with both planning areas are similar or identical, the analysis has been combined to reduce redundancy.

³⁹ RMDP/SCP Final EIS/EIR, Section 6.5.7.2.2, Discussion of Cumulative Air Quality Impacts, <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=21422>.

an increase in emissions compared to the emissions presented in the State-certified EIR by reviewing horizontal and vertical construction. Second, this section evaluates and discusses whether regulatory measures and the PDFs described in Section 4 above would reduce emissions compared to the emissions disclosed in the State-certified EIR.

Within the Entrada South Planning Area, the Modified Project footprint for horizontal construction (e.g., site preparation, grading, demolition, and utilities installation) has not changed from the 2017 Project. Additionally, there would be no overall increase in grading or soil movement needed for the Modified Project as compared to the 2017 Project. Therefore, emissions from the horizontal construction phases are not anticipated to increase for the Modified Project in the Entrada South Planning Area.

While the Modified Project would result in a change in the mix of residential and non-residential uses compared to what was assumed in the State-certified EIR, the amount of vertical construction (e.g., residential and non-residential structures) is not expected to change relative to what was evaluated in the State-certified EIR. Specifically, within the Entrada South Planning Area, the land use mix associated with the Modified Project involves an increase in commercial square footage (from 450,000 square feet to 730,000 square feet) and a reduction in residential development (from 1,725 units to 1,574 units or from approximately 3,235,100 square feet to 2,951,913 square feet).^{40,41} These modifications would result in approximately the same overall floor area ratio (FAR) as that assumed in the State-certified EIR (or, more precisely, an estimated reduction of 3,187 square feet of development within the Entrada South Planning Area when compared to the 2017 Project). Because residential and non-residential uses will require similar construction equipment and the FAR for the Modified Project is consistent with the FAR for the 2017 Project, the type and number of construction equipment and the related construction intensity would be substantially similar to the vertical construction activities previously analyzed in the State-certified EIR. Therefore, emissions from the vertical construction phases are not anticipated to increase for the Modified Project in the Entrada South Planning Area. Overall, the type, number, and usage of construction equipment associated with the Modified Project in the Entrada Planning Area would remain consistent with the 2017 Project when compared against the State-certified EIR. As a result, no

⁴⁰ The residential floor area totals are based on an average unit size of 1,875 square feet.

⁴¹ The 2017 Project included an estimated 3,685,100 square feet of development area within the Entrada South Planning Area (450,000 square feet of commercial development and 3,235,100 square feet of residential development). The Modified Project would include an estimated 3,681,913 square feet of development area within the Entrada South Planning Area (730,000 square feet of commercial development and 2,951,913 square feet of residential development). As such, the Modified Project would result in an estimated reduction of 3,187 square feet of development within the Entrada South Planning Area when compared to the 2017 Project.

emission increases from horizontal and vertical construction (relative to the emissions disclosed in the State-certified EIR) are expected for Entrada South, resulting in a less than significant air quality impact for the Modified Project, resulting in a less than significant impact for the Modified Project.

Further, Tier 4 efficiency requirements contained in 40 CFR Parts 1039, 1065, and 1068, and most recently updated in 2014 79 Federal Register 46356, where emissions requirements for new off-road Tier 4 vehicles were completely phased in by the end of 2015, are anticipated to improve the efficiency of the area's construction fleet. To ensure the use of efficient construction equipment consistent with increased regulatory standards, the applicant has committed to PDFs (detailed above in Section 4) that would be implemented under the Modified Project but were not included in the air quality analysis provided in the State-certified EIR.

As described below, these Project Design Features will provide reductions in emissions compared to the air quality analysis for the State-certified EIR, resulting in a relative reduction in emissions for the Modified Project as compared to the State-certified EIR.

Emissions reduction PDFs include ES/VCC-PDF-AQ-2, which requires all construction off-road equipment for the Modified Project over 50 horsepower to use Tier 4 equipment where available or at a minimum meet USEPA and CARB Tier 3 emission certification standards and be equipped with Best Available Control Technology (BACT) to reduce particulate emissions. Project Design Feature ES/VCC-PDF-AQ-2 would reduce construction emissions compared to the analysis presented in the State-certified EIR because the State-certified EIR assumed the South Coast Air Basin fleet-average off-road emission factors for each calendar year, as incorporated into the URBEMIS model at that time, which then still included a combination of Tier 0, Tier 1, Tier 2, and Tier 3 equipment.⁴² Therefore, the Modified Project's obligation to use Tier 4 equipment when available and at a minimum Tier 3 equipment with Best Available Control Technology (BACT) results in enhanced environmental benefits compared to the State-certified EIR's air quality modeling assumptions.

Based on the State-certified EIR, the maximum daily emissions for VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} as reported in the State-certified EIR all would occur during the first

⁴² SCAQMD. *Off-Road Model Mobile Source Emission Factors*, www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/off-road-mobile-source-emission-factors, accessed March 11, 2024. These South Coast Air Basin factors correspond approximately to the factors that were used to calculate emissions in the State-certified EIR (with possible minor differences due to non-default differences in horsepower).

year of construction (originally modeled as 2011) for Entrada South, during which grading would contribute a substantial portion of emissions. Emissions of VOC, NO_x, PM₁₀, and PM_{2.5} were determined to be significant and unavoidable in the State-certified EIR. For the Modified Project, with the currently anticipated start of construction (2024), newer equipment would be used during construction as compared to the equipment assumed in the State-certified EIR. Newer equipment must meet more stringent emissions standards as reflected in the Modified Project's proposed PDFs. For example, the following reductions would occur for the Modified Project in comparison to the State-certified EIR due to the implementation of ES/VCC PDF-AQ-2:

- Emission factors for VOC would decrease 55 percent to 80 percent;
- Emission factors for NO_x would decrease 6 percent to 55 percent; and
- Emission factors for PM₁₀ and PM_{2.5} would decrease 85 percent to 94 percent below that modeled in the State-certified EIR for all large equipment greater than 50 horsepower.

These emission reductions would reduce the maximum daily and total mitigated emissions for the Modified Project compared to the mitigated emissions presented in the State-certified EIR. These reductions for the Modified Project would also correspond to reduced construction emissions and lower ambient air quality, localized impacts, and health risk impacts compared to those disclosed in the State-certified EIR. Similar reductions for the Modified Project would be expected for other construction phases and equipment types.

Other PDFs for the Modified Project would further reduce construction emissions for the Modified Project compared to the analysis presented in the State-certified EIR. For example, based on new ES/VCC-AQ-PDF-1, the Modified Project must use newer haul trucks that reduce exhaust emissions compared to older haul trucks compared to the State-certified EIR based on new ES/VCC-AQ-PDF-4, the Modified Project must use certified street sweepers that further reduce fugitive dust emissions compared to the State-certified EIR; and based on new ES/VCC-PDF-AQ-5, the Modified Project must use on-site electricity used where available to power construction equipment would reduce exhaust emissions compared to the State-certified EIR. These measures for the Modified Project would reduce emissions compared to those disclosed in the State-certified EIR. Additional details and calculations demonstrating emissions reductions with incorporation of the PDFs are presented in **Appendix 5.1** of this SEIR.

In sum, first, maximum daily and total construction emissions for the Entrada South Planning Area are not anticipated to increase compared to the emissions reported in the State-certified EIR. Second, with implementation of modern more stringent standards and

regulations along with PDFs, construction emissions for the Modified Project are expected to be reduced as compared to the mitigated construction emissions reported in the State-certified EIR. The State-certified EIR concluded that construction-related air quality impacts for the 2017 Project would be significant and unavoidable. As described above, the incremental change in emissions associated with construction of the Modified Project within the Entrada South Planning Area would not result in any new significant impacts or substantially increase the severity of previously identified significant impacts with respect to air quality.

VCC Planning Area

As it relates to construction within the VCC Planning Area, the Modified Project would not result in changes to the building square footage compared to what was assumed in the State-certified EIR. There also would be no overall increase in grading, soil movement, or construction equipment usage is anticipated during horizontal construction. Similarly, with the same non-residential building square footage, no overall increases in vertical construction are anticipated. Therefore, construction emissions for the VCC Planning area are not expected to increase for the Modified Project as compared to the emissions reported in the State-certified EIR, resulting in a less than significant impact.

As with the Entrada South Planning Area, this analysis evaluates whether the PDFs would be expected to reduce emissions compared to the air quality emissions disclosed in the State-certified EIR. The Modified Project includes several PDFs that are more stringent than the air quality analysis in the State-certified EIR, resulting in a relative reduction in emissions, as summarized next.

Based on the State-certified EIR, the maximum daily emissions for NO_x, CO, SO_x, PM₁₀, and PM_{2.5} as reported in the State-certified EIR all would occur during the first year of construction at Valencia Commerce Center, during which grading would contribute a substantial portion of emissions. Emissions for VOC, NO_x, PM₁₀, and PM_{2.5} were determined in the State-certified EIR to be significant and unavoidable.

For the Modified Project, similar to the analysis described above for Entrada South, with the currently anticipated start of construction (2024), newer equipment for the Modified Project would be used during construction as compared to the equipment assumed in the State-certified EIR (newer equipment must meet more stringent emissions standards). The use of newer equipment and the application of ES/VCC-PDF-AQ-2, which requires a minimum of Tier 3 equipment and diesel particulate filters for construction equipment over 50 horsepower, which is more stringent than the State-certified EIR assumptions, would reduce the Modified Project's construction emissions and lower impacts related to ambient air quality, localized significance thresholds, and health risks compared to those disclosed

in the State-certified EIR. Similar reductions would be expected for other construction phases and equipment types. These improvements would reduce maximum daily and total emissions compared to the analysis presented in the State-certified EIR. Implementation of the other construction-related mitigation measures would further reduce construction emissions compared to the State-Certified EIR 2017 Project. As a result, the following reductions would occur for the Modified Project in comparison to the State-certified EIR due to the implementation of PDF-5.1-2:

- Emission factors for VOC would decrease 55 percent to 80 percent;
- Emission factors for NO_x would decrease 6 percent to 55 percent; and
- Emission factors for PM₁₀ and PM_{2.5} would decrease 85 percent to 94 percent below that modeled in the State-certified EIR for all large equipment greater than 50 horsepower.

As with Entrada South, other PDFs for the Modified Project would further reduce construction emissions compared to the analysis presented in the State-certified EIR. The Modified Project must use newer haul trucks that reduce exhaust emissions compared to older haul trucks (see ES/VCC-PDF-AQ-1); the Modified Project must use certified street sweepers that further reduce fugitive dust emissions (see ES/VCC-PDF-AQ-4); and the Modified Project must use on-site electricity used where available to power construction equipment would reduce exhaust emissions (see ES/VCC-PDF-AQ-5). These PDFs for the Modified Project are expected to reduce emissions compared to those disclosed in the State-certified EIR.

In sum, first, maximum daily and total construction emissions for VCC are not expected to increase compared to the emissions reported in the State-certified EIR. Second, with the implementation of new vehicle fleet regulations and PDFs, construction emissions would be reduced as compared to the mitigated construction emissions reported in the State-certified EIR. The State-certified EIR concluded that construction-related air quality impacts would be significant and unavoidable. As described above, construction of the Modified Project within the VCC Planning Area would not result in any new significant impacts or substantially increase the severity of previously identified significant impacts with respect to air quality.

(b) Regional Emissions—Operations

As previously discussed, SCAQMD's CalEEMod was used to calculate any incremental change in regional area, energy, mobile source, and stationary emissions associated with the Modified Project as compared to the State-certified EIR. As also previously discussed, the Modified Project would incorporate a variety of more stringent air

quality regulations and PDFs to support and promote environmental sustainability. As discussed in the Air Quality Report (**Appendix 5.1**), **Section 3.2.6**, Air Quality Co-Benefits of GHG Mitigation Measures, the Net Zero Newhall mitigation measures are intended to support and promote environmental sustainability. While these features are designed primarily to reduce greenhouse gas emissions, the measures would also have the co-benefit of reducing criteria air pollutants, as discussed further below.

Entrada South Planning Area

The incremental change in emissions associated with Modified Project development within the Entrada South Planning Area are shown in **Table 5.1-4**, Estimate of Incremental Change in Maximum Regional Project Daily Operational Emissions—Entrada South Planning Area (Summer Emissions), on page 5.1-52 and **Table 5.1-5**, Estimate of Incremental Change in Maximum Regional Project Daily Operational Emissions—Entrada South Planning Area (Winter Emissions), on page 5.1-53. Both tables provide the total unmitigated and mitigated emissions as reported in the State-certified EIR and for the Modified Project. The mitigated emissions under the Modified Project reflect implementation of the Net Zero Newhall mitigation measures listed in the Air Quality Report (**Appendix 5.1**), **Section 3.2.6**, Air Quality Co-Benefits of GHG Mitigation Measures, the air quality co-benefits of which are discussed in detail in the Air Quality Report.⁴³ These

⁴³ *Certain air quality mitigation measures that were previously adopted as part of the State-certified EIR have been superseded by more stringent mitigation measures, specifically the Net Zero Newhall mitigation measures. It is further noted that for purposes of a conservative analysis, not all of the air quality benefits (i.e., emission reductions) associated with the mitigation measures applicable to the Modified Project have been quantified herein. Please refer to the Air Quality Report for identification of the specific mitigation measures and air quality benefits that have been quantified in this analysis.*

Table 5.1-4
Estimate of Incremental Change in Maximum Regional Project Daily Operational Emissions—
Entrada South Planning Area (Summer Emissions)^a

Emission Source	Pollutant Emissions (pounds per day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2017 Project (State-certified EIR Air Quality Analysis)						
Total Unmitigated Emissions	171	84	703	2	324	63
Total Mitigated Emissions ^b	167	73	668	2	309	60
SCAQMD Significance Threshold	55	55	550	150	150	55
Significant Impact Identified in the State-Certified EIR Air Quality Analysis?	Yes	Yes	Yes	No	Yes	Yes
Modified Project (Incremental Change in Emissions from State-Certified EIR Air Quality Analysis)						
Total Unmitigated Emissions	121	86	841	2	62	18
Total Mitigated Emissions ^c	101	49	482	1	59	16
Net Change for the Modified Project	(67)	(25)	(186)	(1)	(250)	(44)
SCAQMD Significance Threshold	55	55	550	150	150	55
New Significant Impact or Substantial Increase for the Modified Project?	No	No	No	No	No	No
<p>Numbers may not add up exactly due to rounding.</p> <p>^a The CalEEMod model printout sheets and/or calculation worksheets are presented in Appendix 5.1 (CalEEMod Output) of this SEIR.</p> <p>^b Total mitigated emissions include the air quality mitigation identified in the State-certified EIR, where readily quantifiable.</p> <p>^c Total mitigated emissions include the air quality co-benefits of the Net Zero Newhall mitigation.</p> <p>Source: RAMBOLL, 2024.</p>						

emission estimates take the modeling assumptions presented in Sub-**Section 6.1**, Construction Emissions Methodology, and Sub-**Section 6.2**, Operational Emissions Methodology, into account. As shown, the State-certified EIR determined that the 2017 Project would exceed SCAQMD thresholds for VOC, NO_x, CO, PM₁₀, and PM_{2.5}, resulting

**Table 5.1-5
Estimate of Incremental Change in Maximum Regional Project Daily Operational Emissions—
Entrada South Planning Area (Winter Emissions)^a**

Emission Source	Pollutant Emissions (pounds per day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2017 Project (State-certified EIR Air Quality Analysis)						
Total Unmitigated Emissions	174	106	647	1.7	325	64
Total Mitigated Emissions ^b	170	95	613	1.7	310	61
SCAQMD Significance Threshold	55	55	550	150	150	55
Significant Impact Identified in the State-Certified EIR Air Quality Analysis?	Yes	Yes	Yes	No	Yes	Yes
Modified Project (Incremental Change in Emissions from State-certified EIR Air Quality Analysis)						
Total Unmitigated Emissions	107	92	644	2	61	17
Total Mitigated Emissions ^c	87	54	285	1	59	16
Net Change	(83)	(41)	(328)	(1)	(251)	(45)
SCAQMD Significance Threshold	55	55	550	150	150	55
New Significant Impact or Substantial Increase for the Modified Project?	No	No	No	No	No	No
<p>Numbers may not add up exactly due to rounding.</p> <p>^a The CalEEMod model printout sheets and/or calculation worksheets are presented in Appendix 5.1 (CalEEMod Output) of this SEIR.</p> <p>^b Total mitigated emissions include the air quality mitigation identified in the State-certified EIR, where readily quantifiable.</p> <p>^c Total mitigated emissions include the air quality co-benefits of the Net Zero Newhall mitigation.</p> <p>Source: RAMBOLL, 2024.</p>						

in significant and unavoidable operational air quality impacts. The net change in emissions (after mitigation) attributable to the Modified Project would not exceed the SCAQMD's thresholds. Accordingly, the Modified Project would not result in any new or substantially more severe significant impacts related to air quality during operation.

VCC Planning Area

The incremental change in emissions associated with Modified Project development within the VCC Planning Area are shown in **Table 5.1-6**, Estimate of Incremental Change in Maximum Regional Project Daily Operational Emissions—VCC Planning Area, on page 5.1-54 and **Table 5.1-7**, Estimate of Incremental Change in Maximum Regional Project Daily Operational Emissions—VCC Planning Area (Winter Emissions), on page 5.1-55. As noted above, this analysis conservatively assumes that the Modified Project's operational

**Table 5.1-6
Estimate of Incremental Change in Maximum Regional Project Daily Operational Emissions—VCC
Planning Area
(Summer Emissions)^a**

Emission Source	Pollutant Emissions ^b (pounds per day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2017 Project (State-certified EIR Air Quality Analysis)						
Total Unmitigated Emissions	99	65	729	2.2	360	70
Total Mitigated Emissions ^c	97	57	693	2.2	343	67
SCAQMD Significance Threshold	55	55	550	150	150	55
Significant Impact Identified in the State-Certified EIR Air Quality Analysis?	Yes	Yes	Yes	No	Yes	Yes
Modified Project (Incremental Change in Emissions from State-certified EIR Air Quality Analysis)						
Total Unmitigated Emissions	99	65	729	2.2	360	70
Total Mitigated Emissions ^c	97	57	693	2.2	343	67
Net Change	0	0	0	0	0	0
SCAQMD Significance Threshold	55	55	550	150	150	55
New Significant Impact or Substantial Increase for the Modified Project?	No	No	No	No	No	No
<p>Numbers may not add up exactly due to rounding.</p> <p>^a The CalEEMod model printout sheets and/or calculation worksheets are presented in Appendix 5.1 (CalEEMod Output) of this SEIR.</p> <p>^b Because the land uses in VCC would not change compared to those analyzed in the State-certified EIR, the Modified Project's unmitigated and mitigated emissions are conservatively assumed to be equal to the unmitigated and mitigated emissions from the State-certified EIR. However, actual mitigated emissions would be less than listed here due to implementation of the mitigation measures set forth below as well as the Net Zero Newhall mitigation.</p> <p>^c Total mitigated emissions include the air quality mitigation identified in the State-certified EIR, where readily quantifiable.</p> <p>Source: RAMBOLL, 2024.</p>						

emissions within the VCC Planning Area would be the same as reported in the State-certified EIR. However, with improved vehicle fleets regulations, operational emissions for the Modified Project are expected to be reduced as compared to the operational emissions reported in the State-certified EIR. As shown, the State-certified EIR determined that the 2017 Project would exceed SCAQMD thresholds for VOC, NO_x, CO, PM₁₀, and PM_{2.5}. Since there would be no change in operational emissions as compared to the emissions reported in the State-certified EIR, the Modified Project would not result in any new or substantially more severe significant impacts related to air quality during operation.

Table 5.1-7
Estimate of Incremental Change in Maximum Regional Project Daily Operational Emissions—VCC
Planning Area (Winter Emissions)^a

Emission Source	Pollutant Emissions ^b (pounds per day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2017 Project (State-certified EIR Air Quality Analysis)						
Total Unmitigated Emissions	101	78	680	1.8	360	70
Total Mitigated Emissions ^c	99	70	644	1.8	343	67
SCAQMD Significance Threshold	55	55	550	150	150	55
Significant Impact Identified in the State-Certified EIR Air Quality Analysis?	Yes	Yes	Yes	No	Yes	Yes
Modified Project (Incremental Change in Emissions from State-certified EIR Air Quality Analysis)						
Total Unmitigated Emissions	101	78	680	1.8	360	70
Total Mitigated Emissions ^c	99	70	644	1.8	343	67
Net Change	0	0	0	0	0	0
SCAQMD Significance Threshold	55	55	550	150	150	55
New Significant Impact or Substantial Increase for the Modified Project?	No	No	No	No	No	No
<p>Numbers may not add up exactly due to rounding.</p> <p>^a The CalEEMod model printout sheets and/or calculation worksheets are presented in Appendix 5.1 (CalEEMod Output) of this SEIR.</p> <p>^b Because the land uses in VCC would not change compared to those analyzed in the State-certified EIR, the Modified Project emissions are conservatively assumed to be equal to the mitigated emissions from the State-certified EIR. However, actual mitigated emissions would be less than listed here due to implementation of the mitigation measures set forth below as well as the Net Zero Newhall mitigation.</p> <p>^c Total mitigated emissions include the air quality mitigation identified in the State-certified EIR, where readily quantifiable.</p> <p>Source: RAMBOLL, 2024.</p>						

(c) Combined Operational Emissions

Entrada South and VCC Planning Areas

A combined analysis of operational emissions associated with both the Entrada South and VCC Planning Areas was also conducted. **Table 5.1-8**, Summary of Combined Incremental Change in Modified Project Daily Operational Emissions—Entrada South and VCC Planning Areas (Summer and Winter Mitigated Emissions), on page 5.1-56 calculates the combined net change in operational emissions associated with both planning areas under the Modified Project as compared to the emissions reported in the State-certified EIR. As shown therein, the Modified Project would result in an overall net decrease in

**Table 5.1-8
Summary of Combined Incremental Change in Modified Project Daily Operational Emissions—
Entrada South and VCC Planning Areas (Summer and Winter Mitigated Emissions)^a**

Emission Source	Mitigated Pollutant Emissions ^b (pounds per day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer Emissions						
Entrada South Net Change (Modified Project less 2017 Project)	(67)	(25)	(186)	(1)	(250)	(44)
VCC Net Change (Modified Project less 2017 Project)	0	0	0	0	0	0
Net Change	(67)	(25)	(186)	(1)	(250)	(44)
SCAQMD Significance Threshold	55	55	550	150	150	55
New Significant Impact or Substantial Increase for the Modified Project?	No	No	No	No	No	No
Winter Emissions						
Entrada South Net Change (Modified Project less 2017 Project)	(83)	(41)	(328)	(1)	(251)	(45)
VCC Net Change (Modified Project less 2017 Project)	0	0	0	0	0	0
Net Change	(83)	(41)	(328)	(1)	(251)	(45)
SCAQMD Significance Threshold	55	55	550	150	150	55
New Significant Impact or Substantial Increase for the Modified Project?	No	No	No	No	No	No
<p>Numbers may not add up exactly due to rounding.</p> <p>^a The CalEEMod model printout sheets and/or calculation worksheets are presented in Appendix 5.1 (CalEEMod Output) of this SEIR.</p> <p>^b Mitigated emissions associated with Modified Project development within the Entrada South Planning Area were modeled using CalEEMod 2022.1 for year 2030 and compared to the mitigated emissions for the 2017 Project from the State-certified EIR. For the VCC Planning Area, because the land uses would not change compared to those analyzed in the State-certified EIR, the Modified Project's mitigated emissions are conservatively assumed to be equal to the mitigated emissions from the State-certified EIR.</p> <p>Source: RAMBOLL, 2024.</p>						

maximum daily emissions of VOC, CO, SO_x, PM₁₀, PM_{2.5}, and NO_x. As previously indicated, the State-certified EIR determined that the 2017 Project would exceed SCAQMD thresholds for VOC, NO_x, CO, PM₁₀, and PM_{2.5}, resulting in the State-certified EIR's identification of significant and unavoidable operational air quality impacts. However, the net changes in emissions attributable to the Modified Project would not exceed any of the SCAQMD's thresholds. Accordingly, the Modified Project would not result in any new or substantially more severe significant impacts related to air quality.

(d) Cumulative Operational Impacts

According to the SCAQMD, individual projects that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would cause a cumulatively considerable increase in emissions for those pollutants for which the Air Basin is in non-attainment. As shown in **Table 5.1-4**, Estimate of Incremental Change in Maximum Regional Project Daily Operational Emissions—Entrada South Planning Area (Summer Emissions), through **Table 5.1-8**, Summary of Combined Incremental Change in Modified Project Daily Operational Emissions—Entrada South and VCC Planning Areas (Summer and Winter Mitigated Emissions), the Modified Project's net change in construction and operational daily emissions associated with the Entrada South and VCC Planning Areas, as compared to the 2017 Project, would not exceed any of the SCAQMD's regional thresholds. The State-certified EIR concluded that the 2017 Project's air quality impacts would be cumulatively significant and unavoidable; based on the analysis herein, the Modified Project would not result in any new or substantially more severe significant impacts related to air quality.

Threshold 5.1-3: Would the Project expose sensitive receptors to substantial pollutant concentrations?

Entrada South and VCC Planning Areas**(a) Localized Emissions—Construction**

As previously discussed, maximum daily and total construction emissions from the Modified Project are not expected to increase compared to the emissions reported in the State-certified EIR. Further, construction emissions likely would be lower than that disclosed in the State-certified EIR due to improved vehicle fleets and implementation of the mitigation measures described below. Therefore, localized ambient air quality impacts are also expected to be the same as or lower than what was analyzed in the State-certified EIR.

In particular, ES/VCC-PDF-AQ-2 for the Modified Project requires all construction off-road equipment over 50 horsepower to meet USEPA and CARB Tier 3 or more stringent emission certification standards with BACT to reduce particulate emissions, which would have the benefit of reducing construction emissions compared to the State-certified EIR analysis, which assumed a less efficient mix of equipment based on the modeling assumptions at that time. Accordingly, as compared to the modeled estimates in the State-certified EIR for all large equipment greater than 50, implementation of ES/VCC-PDF-AQ-2 for the Modified Project would result in, at minimum, the following reductions:

- Emission factors for VOC would decrease 55 percent to 80 percent;

- Emission factors for NO_x would decrease 6 percent to 55 percent;
- Emission factors for PM₁₀ and PM_{2.5} would decrease 85 percent to 94 percent; and
- Similar reductions would be likely for all other construction sub-phases.

Because localized ambient air quality impacts are directly proportional to emissions, the Modified Project's reduction in emissions would reduce localized ambient air quality impacts compared to emissions reported in the State-certified EIR. The State-certified EIR concluded that construction-related impacts for localized ambient air quality would be significant and unavoidable. However, as demonstrated above, the Modified Project would not result in any new or substantially more severe significant impacts related to ambient air quality.

(b) Localized Emissions—Operations

The Modified Project's net change in on-site criteria air pollutant emissions for the Entrada South Planning Area, the VCC Planning Area, and the combined planning areas, as compared to the 2017 Project, are summarized in **Table 5.1-9**, Summary of Net Change in Modified Project Localized Operational Emissions—Entrada South and VCC Planning Areas, on page 5.1-59. These analyses evaluated the on-site criteria air pollutant emissions that may occur during operations once buildout is complete. The net change in emissions are conservatively compared to the SCAQMD mass rate localized significance thresholds (mass rate LSTs), chosen for the shortest receptor distance of 0 to 25 meters in accordance with SCAQMD guidance,⁴⁴ and for a development less than or equal to five acres using the receptor area of Santa Clarita Valley.⁴⁵

The analysis shows that the operational net change in emissions would not exceed the mass rate LSTs, and thus the Modified Project's operational emissions would not exceed the ambient air quality significance thresholds established by SCAQMD.⁴⁶

⁴⁴ SCAQMD, *Final Localized Significance Threshold Methodology*, revised July 2008.

⁴⁵ Per a phone discussion with Ian MacMillan at SCAQMD (August 29, 2014), this mass rate LST can be conservatively used to assess projects greater than five acres in size. This is conservative because it concentrates emissions from a larger area into a smaller site.

⁴⁶ On-site NO_x emissions were also compared to a similar screening threshold for the federal 1-hour NO₂ NAAQS, since this threshold was introduced after the mass LSTs were published (refer to footnote c in **Table 5.1-8** for further details regarding the federal 1-hour NO₂ NAAQS).

**Table 5.1-9
Summary of Net Change in Modified Project Localized Operational Emissions—Entrada South and
VCC Planning Areas^a**

Emission Source	Net Change in Modified Project Maximum Daily On-Site Emissions ^b (pounds per day)				
	CO	NO _x	1-hour NO _x ^c	PM ₁₀	PM _{2.5}
SCAQMD LSTs^d	1,644	246	137	3	2
Entrada South Planning Area	87	(29)		(0.8)	(0.77)
Exceeds SCAQMD LSTs?	No	No	No	No	No
VCC Planning Area	0	0		0	0
Exceeds SCAQMD LSTs?	No	No	No	No	No
Modified Project (Entrada South + VCC)	87	(29)		(0.8)	(0.77)
Exceeds SCAQMD LSTs?	No	No	No	No	No

Numbers may not add up exactly due to rounding.

LSTs = Localized Significance Thresholds

^a The CalEEMod model printout sheets and/or calculation worksheets are presented in **Appendix 5.1** (CalEEMod Output) of this SEIR.

^b On-site mitigated emissions associated with Modified Project development within the Entrada South Planning Area were modeled using CalEEMod 2022.1 for year 2030 and compared to the mitigated emissions for the 2017 Project from the State-certified EIR. For the VCC Planning Area, because the land uses would not change compared to those analyzed in the State-certified EIR, the Modified Project's mitigated emissions are conservatively assumed to be equal to the mitigated emissions from the State-certified EIR.

^c An approximated LST was estimated to evaluate the federal 1-hour NO₂ standard, as the SCAQMD LST has not been updated to reflect this standard. This value was estimated by scaling the SCAQMD LST that represents the state 1-hour NO₂ standard with the ratio of the federal to state 1-hour NO₂ standard (0.10 ppm/0.18 ppm). As a conservative approximation, the screening mass rate threshold for the federal 1-hour NO₂ NAAQS would be at least 45 percent lower than that estimated by SCAQMD. This estimate is based on a ratio of the federal threshold (188 µg/m³) to the 1-hour NO₂ SCAQMD/CAAQS threshold (339 µg/m³), on which the NO₂ mass rate LST is based. Since the federal threshold is based on the 98th percentile and on a 3-year average, this estimate is a conservatively low estimate.

^d LSTs based on the construction LSTs for Santa Clarita Valley. LSTs are based on the project size and distance to receptor for each on-site location and are considered to be conservative for larger sites. Obtained from the 2008 SCAQMD Final Localized Significance Threshold Methodology, Appendix C, Mass Rate LST Look-up Tables (revised October 2009), www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2, accessed March 11, 2024.

Source: RAMBOLL, 2024.

With respect to localized CO impacts, at buildout of the Modified Project, the highest number of average daily trips at any intersection is expected to be below the daily traffic volume of 400,000 trips that would generate CO exceedances (as evaluated in the 2003

AQMP).⁴⁷ There is no reason unique to Air Basin meteorology to conclude that the CO concentrations at any intersections due to Project traffic would exceed the 1-hour CO standard if modeled in detail, based on the studies undertaken for the 2003 AQMP. In addition, CO background concentrations within the vicinity of the modeled intersection have substantially decreased since preparation of the 2003 AQMP primarily due to ongoing fleet turnover of older on-road light duty vehicles and cleaner fuels.⁴⁸ An increased number of vehicles include engine stop-start technology which limits idling with stopped vehicles, which further reduces localized CO emissions. Furthermore, the rate of electric vehicle adoptions is occurring faster than anticipated. California has reached 1.5 million electric vehicle sales two years ahead of its planned 2025 target for the sales milestone. At the end of 2023, approximately 25 percent of new car sales in California were electric vehicles. Therefore, the Modified Project would not trigger the need for a detailed CO hot spots model and would not cause any new or exacerbate any existing CO hotspots. The Modified Project would not result in any new or substantially more severe significant impacts related to localized emissions.

(c) Toxic Air Contaminants—Construction

The greatest potential for TAC emissions during construction would be from diesel particulate emissions associated with heavy equipment operations. As described above, the total construction emissions from the Modified Project would not increase compared to the emissions reported in the State-certified EIR and, as demonstrated above, construction emissions would be lower than those disclosed in the State-certified EIR due to improved vehicle fleets regulations and implementation of the PDFs for the Modified Project. Therefore, health risk impacts are also expected to be the same or lower than what was disclosed in the State-certified EIR because construction-related health risks are proportional to construction emissions (primarily DPM emissions). Implementation of the proposed PDFs for the Modified Project would further reduce construction emissions, compared to the State-certified EIR's assumptions. For example, ES/VCC-PDF-AQ-2 for the Modified Project, which requires all construction off-road equipment over 50 horsepower to meet USEPA and CARB Tier 3 or more stringent emission certification standards and be equipped with BACT to reduce particulate emissions, would have the benefit of reducing construction emissions compared to the analysis presented in the State-certified EIR. ES/VCC-PDF-AQ-2 is much more stringent than the assumptions assumed in the State-certified EIR, which relied on default assumptions from the model at that time. As discussed previously, emissions factors for VOC, NO_x, PM₁₀, and PM_{2.5} for the Modified

⁴⁷ Trip data from Stantec, *Entrada South & Valencia Commerce Center Transportation Impact Analysis*, December 2023; refer to **Appendix 5.9a** of the SEIR.

⁴⁸ SCAQMD, *Carbon Monoxide Redesignation Request and Maintenance Plan*, February 2005.

Project would be reduced substantially compared to what was modeled in the State-certified EIR for all large equipment greater than 50 horsepower.

Moreover, as studied in Section 4.7.8 of the State-certified EIR, DPM is the primary TAC of concern and is emitted by diesel-fueled construction equipment and on-road heavy-duty trucks. The State-certified EIR modeled DPM by assuming all PM₁₀ exhaust from diesel equipment and trucks would be DPM. Therefore, the expected decrease in PM₁₀ would correlate to a decrease in DPM and related health risks compared to what was disclosed in the State-certified EIR. ES/VCC-PDF-AQ-2 for the Modified Project would reduce PM₁₀ exhaust emission factors 85 percent to 94 percent below that modeled in the State-certified EIR for all large equipment greater than 50 horsepower for the direct grading phase. Calculation details regarding reductions in construction emission factors are provided in **Appendix 5.1** of this SEIR.

Similar reductions are likely for all other construction sub-phases. As health risks are proportional to DPM exhaust emissions, the reduction in DPM emissions associated with the Modified Project would also reduce health risks compared to the analysis reported in the State-certified EIR. The SCAQMD significance thresholds for health risk are the same as that evaluated in the State-certified EIR. Therefore, the Modified Project would not result in new or substantially more severe significant impacts related to construction TACs.

(d) Toxic Air Contaminants—Operations

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).⁴⁹ The SCAQMD adopted similar recommendations in its *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*.⁵⁰ Together, 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.

⁴⁹ CARB, *Air Quality and Land Use Handbook, a Community Health Perspective*, April 2005.

⁵⁰ SCAQMD, *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, May 6, 2005.

The primary sources of potential air toxics associated with the operational land use changes associated with the Modified Project include diesel particulate matter from delivery trucks (e.g., truck traffic on local streets and idling on adjacent streets) and, to a lesser extent, facility operations (e.g., natural gas fired boilers). However, these activities, and the land uses changes associated with the Modified Project, are not considered land uses that generate substantial TAC emissions. Based on SCAQMD guidance, the operational land use changes associated with the Modified Project would not be considered a substantial source of diesel particulate matter warranting a refined health risk assessment (HRA). In addition, the CARB-mandated airborne toxic control measure limits diesel-fueled commercial vehicles (delivery trucks) to idle for no more than five minutes at any given time, which would further limit diesel particulate emissions.

Typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes (e.g., chrome plating, electrical manufacturing, petroleum refinery). The operational land use changes associated with the Modified Project would not include these types of potential industrial manufacturing process sources. It is expected that quantities of hazardous TACs generated on-site (e.g., cleaning solvents, paints, landscape pesticides, etc.) for the types of land uses proposed would be below thresholds warranting further study under the California Accidental Release Program (CalARP). As such, the operational land use changes associated with the Modified Project would not release substantial amounts of TACs. Accordingly, the Modified Project would not result in any new or substantially more severe significant impacts related to operational TACs.

Conclusion

The State-certified EIR concluded that the 2017 Project's construction-related regional air quality impacts related to VOC, NO_x, PM₁₀, and PM_{2.5} were significant and unavoidable. Additionally, the State-certified EIR concluded that construction-related localized emissions of NO₂, PM₁₀, and PM_{2.5} were significant and unavoidable. As described above, the Modified Project's mitigated regional and localized construction emissions likely would be lower than those disclosed in the State-certified EIR. The Modified Project would not result in any new or substantially more severe significant impacts related to localized construction emissions.

As it relates to operational impacts, the State-certified EIR concluded that emissions of VOC, NO_x, CO, PM₁₀, and PM_{2.5} were significant and unavoidable. As described above, the Modified Project's incremental change in operational emissions would not exceed any regional thresholds, and operational emissions would not exceed the ambient air quality significance thresholds. Additionally, the Modified Project would not trigger the need for a detailed CO hot spots model and would not cause any new or exacerbate any existing CO

hotspots. The Modified Project would not result in any new or substantially more severe significant impacts related to health risk impacts.

Finally, as evaluated in the State-certified EIR, the 2017 Project would result in less than significant impacts with respect to AQMP consistency as well as odors. Based on the analysis presented above and in the Initial Study prepared for the Modified Project (refer to **Appendix 1** of this SEIR), the Modified Project would not conflict with or obstruct implementation of the AQMP and would not involve odor-generating activities.

Therefore, the Modified Project would not result in any new or substantially more severe significant impacts related to air quality as compared to those identified for the 2017 Project in the State-certified EIR.

7. CUMULATIVE IMPACTS

The cumulative analysis for air quality is based on the guidance provided by SCAQMD:⁵¹

As Lead Agency, the [SCAQMD] uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the HI significance threshold for TAC emissions. 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.

Based on the regional air quality attainment status, the Air Basin is out of attainment for ozone (and thus its precursors NO_x and VOC) and PM_{2.5}. The State-certified EIR noted that “other large projects in the area are expected to have impacts” and that the 2017 Project’s “air quality impacts are significant when viewed in connection with the effects of other past, present, and reasonably foreseeable future projects.”⁵² Ultimately, the State-certified EIR concluded that the 2017 Project’s construction-related and operational air quality impacts would be cumulatively significant and unavoidable.

⁵¹ SCAQMD, *Cumulative Impacts White Paper, August 2003, Appendix A.*

⁵² *RMDP-SCP Final EIS/EIR, June 2010, Revised Section 6.0, Cumulative Impacts, Subsection 6.5.7.2, <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=21422>, accessed March 11, 2024.*

As discussed above, if a project exceeds the SCAQMD's recommended significance thresholds for project-specific construction and operational air emissions, then the project would have a cumulatively considerable increase in emissions for those pollutants. As described above, the incremental changes in emissions associated with the Modified Project would not result in any new significant project-level impacts or substantially increase the severity of previously identified project-level impacts. Therefore, following the SCAQMD's guidance, the Modified Project would not result in any new or substantially more severe significant cumulative impacts related to air quality.

8. MITIGATION MEASURES

A complete list of mitigation measures to be implemented under the Modified Project is provided in the Mitigation Monitoring and Reporting Program in **Appendix 2** of this SEIR. Previously adopted mitigation measures that are not applicable to the Modified Project or that require no further action as part of the Modified Project (generally because the measure has already been completed or would be achieved or exceeded through compliance with current regulatory requirements) are detailed in **Appendix 3** of this SEIR. Additionally, certain air quality mitigation measures that were previously adopted as part of the State-certified EIR have been superseded by more stringent regulations and mitigation measures, including the Net Zero Newhall mitigation measures listed in the Air Quality Report (**Appendix 5.1**), **Section 3.2.6**. Air Quality Co-Benefits of GHG Mitigation Measures, the air quality co-benefits of which are discussed in detail in the Air Quality Report. As a result, the measures enumerated below may not be sequential.

further noted that for purposes of a conservative analysis, not all of the air quality benefits (i.e., emission reductions) associated with the mitigation measures applicable to the Modified Project have been quantified herein. Please refer to Section 3.2.6, Air Quality Co-Benefits of GHG Mitigation Measures, of the Air Quality Report for identification of the specific mitigation measures that have been quantified in this analysis.

a. Previously Approved Mitigation from the State-Certified EIR

The following mitigation measures from the State-certified EIR are applicable to the Modified Project to address impacts related to air quality. Where appropriate, italicized parentheticals are used to provide additional information and clarification regarding the implementation of a particular measure's requirements.

RMDP/SCP-AQ-3: Suspend the use of all construction equipment during first-stage smog alerts.

RMDP/SCP-AQ-4: Use electricity or alternative fuels for on-site mobile equipment instead of diesel equipment, to the extent feasible.

RMDP/SCP-AQ-5: Maintain construction equipment by conducting regular tune-ups according to the manufacturer’s recommendations.

RMDP/SCP-AQ-6: Use electric welders to avoid emissions from gas or diesel welders, to the extent feasible.

RMDP/SCP-AQ-7: Use on-site electricity or alternative fuels rather than diesel-powered or gasoline-powered generators, to the extent feasible.

RMDP/SCP-AQ-12a: Construction shall be planned in such a way as to minimize heavy construction activity involving the use of diesel-fueled construction equipment within 500 meters of an occupied residence to the extent practical. Heavy construction activity that occurs within 500 meters of an occupied residence that involves the use of diesel-fueled construction equipment shall prohibit non-essential idling and shall utilize equipment certified to the Tier 2 or newer emission standard. Equipment shall be routed in such a way as to minimize travel within 500 meters of an occupied residence to the extent practical.

(This measure remains applicable to the Modified Project; however, Tier 3 and Tier 4 is now required per Mitigation Measure ES/VCC-PDF-AQ-2, which exceeds the requirement for Tier 2 equipment described in this measure.)

In addition, as discussed in the Air Quality Report provided in **Appendix 5.1** of this SEIR, implementation of the previously adopted, comprehensive mitigation framework designed to attain net zero GHG emissions will result in corresponding air quality co-benefits. Please refer to the Air Quality Report (**Section 3.2.6**, Air Quality Co-Benefits of GHG Mitigation Measures) for the full text of the measures.

b. Previously Approved Mitigation from the VCC EIR

Mitigation was previously adopted by the County for the VCC Planning Area as part of the County-certified VCC EIR. In general, those mitigation measures either have been superseded by other more stringent mitigation or would be achieved or exceeded through compliance with updated regulatory requirements. Please refer to **Appendix 3** of this SEIR for a list of VCC mitigation measures that are no longer applicable to the Modified Project or that require no further action as part of the Modified Project.

9. LEVEL OF SIGNIFICANCE AFTER MITIGATION

With the implementation of the mitigation measures described in Sub-Section 8 and compliance with regulatory standards as implemented through the PDFs described in Section 4, the Modified Project would not result in new or substantially more severe significant impacts related to air quality as compared to the 2017 Project in the State-certified EIR.