IV. Environmental Impact Analysis

A. Air Quality

1. Introduction

This section evaluates the Project's potential air quality impacts, as well as its potential cumulative air quality impacts, generated by construction and operation of the Project. This section estimates the air pollutant emissions generated by Project construction and operation, and whether Project emissions would conflict with or obstruct implementation of the applicable air quality plan; result in a cumulatively considerable net increase of any criteria pollutant in non-attainment of federal or State ambient air quality standard; expose sensitive receptors to substantial pollutant concentrations; or result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. This section relies on the information, data, assumptions, calculation worksheets, and model outputs in the *Air Quality and Greenhouse Gas Technical Appendix* prepared by ESA and included in Appendix C of this Draft EIR, unless otherwise stated.

2. Environmental Setting

a) Air Quality Background

(1) Criteria Pollutants

Certain air pollutants have been recognized to cause notable 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 as part of the overall endeavor to prevent further deterioration and facilitate improvement in air quality. The following pollutants are regulated by the United States Environmental Protection Agency (USEPA) and are subject to emissions control requirements adopted by federal, state and local regulatory agencies. These pollutants are referred to as "criteria air pollutants" as a result of the specific standards, or criteria, which have been adopted for them. A description of the health effects of these criteria air pollutants are provided below.

(a) Ozone (O_3)

Ozone is a secondary pollutant formed by the chemical reaction of volatile organic compounds (VOCs) and nitrogen oxides (NO_X) in the presence of sunlight under favorable meteorological conditions, such as high temperature and stagnation episodes. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. According to the US

EPA, ozone can cause the muscles in the airways to constrict potentially leading to wheezing and shortness of breath.[1] Ozone can make it more difficult to breathe deeply and vigorously; cause shortness of breath and pain when taking a deep breath; cause coughing and sore or scratchy throat; inflame and damage the airways; aggravate lung diseases, such as asthma, emphysema, and chronic bronchitis; increase the frequency of asthma attacks; make the lungs more susceptible to infection; continue to damage the lungs even when the symptoms have disappeared; and cause chronic obstructive pulmonary disease.[2] Long-term exposure to ozone is linked to aggravation of asthma, and is likely to be one of many causes of asthma development and long-term exposures to higher concentrations of ozone may also be linked to permanent lung damage, such as abnormal lung development in children.[3] According to the California Air Resources Board (CARB), inhalation of ozone causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms and exposure to ozone can reduce the volume of air that the lungs breathe in and cause shortness of breath.[4] The USEPA states that people most at risk from breathing air containing ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers.[5] Children are at greatest risk from exposure to ozone because their lungs are still developing and they are more likely to be active outdoors when ozone levels are high, which increases their exposure.[6] According to CARB, studies show that children are no more or less likely to suffer harmful effects than adults; however, children and teens may be more susceptible to ozone and other pollutants because they spend nearly twice as much time outdoors and engaged in vigorous activities compared to adults.[7] Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults and are less likely than adults to notice their own symptoms and avoid harmful exposures.[8] Further research may be able to better distinguish between health effects in children and adults.[9]

(b) Volatile Organic Compounds (VOCs)

VOCs are organic chemical compounds of carbon and are not “criteria” pollutants themselves; however, they contribute with NO_X to form ozone, and are regulated to prevent the formation of ozone.[10] According to CARB, some VOCs are highly reactive and play a critical role in the formation of ozone, other VOCs have adverse health effects,

1 United States Environmental Protection Agency (USEPA), Health Effects of Ozone Pollution, https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution. Accessed February 25, 2020.
2 USEPA, Health Effects of Ozone Pollution.
3 USEPA, Health Effects of Ozone Pollution.
4 California Air Resources Board (CARB), Ozone & Health, Health Effects of Ozone, https://ww2.arb.ca.gov/resources/ozone-and-health. Accessed February 25, 2020.
5 USEPA, Health Effects of Ozone Pollution.
6 USEPA, Health Effects of Ozone Pollution.
7 CARB, Ozone & Health, Health Effects of Ozone.
8 CARB, Ozone & Health, Health Effects of Ozone.
9 CARB, Ozone & Health, Health Effects of Ozone.
10 USEPA, Technical Overview of Volatile Organic Compounds, https://www.epa.gov/indoor-air-quality-iaq/technical-overview-volatile-organic-compounds. Accessed February 25, 2020.

and in some cases, VOCs can be both highly reactive and have adverse health effects.[11] VOCs are typically formed from combustion of fuels and/or released through evaporation of organic liquids, internal combustion associated with motor vehicle usage, and consumer products (e.g., architectural coatings, etc.).[12]

(c) Nitrogen Dioxide (NO_2) and Nitrogen Oxides

NO_X is a term that refers to a group of compounds containing nitrogen and oxygen. The primary compounds of air quality concern include nitrogen dioxide (NO_2) and nitric oxide (NO). Ambient air quality standards have been promulgated for NO_2, which is a reddish-brown, reactive gas.[13] The principle form of NO_X produced by combustion is NO, but NO reacts quickly in the atmosphere to form NO_2, creating the mixture of NO and NO_2 referred to as NO_X.[14] Major sources of NO_X include emissions from cars, trucks and buses, power plants, and off-road equipment.[15] The terms NO_X and NO_2 are sometimes used interchangeably. However, the term NO_X is typically used when discussing emissions, usually from combustion-related activities, and the term NO_2 is typically used when discussing ambient air quality standards. Where NO_X emissions are discussed in the context of the thresholds of significance or impact analyses, the discussions are based on the conservative assumption that all NO_X emissions would oxidize in the atmosphere to form NO_2. According to the USEPA, short-term exposures to NO_2 can potentially aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing), hospital admissions and visits to emergency rooms while longer exposures to elevated concentrations of NO_2 may contribute to the development of asthma and potentially increase susceptibility to respiratory infections.[16] According to CARB, controlled human exposure studies that show that NO_2 exposure can intensify responses to allergens in allergic asthmatics.[17] In addition, a number of epidemiological studies have demonstrated associations between NO_2 exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses.[18] Infants and children are particularly at risk from exposure to NO_2 because they have disproportionately higher exposure to NO_2 than adults due to their greater breathing rate for their body weight and their typically greater outdoor exposure duration while in adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease.[19] CARB states that much of the information on distribution in air, human exposure and

11 CARB, Air Quality and Land Use Handbook: A Community Health Perspective, April 2005, page A-4.
12 CARB, Air Quality and Land Use Handbook: A Community Health Perspective, April 2005, page A-4.
13 CARB, Nitrogen Dioxide & Health, https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health. Accessed February 25, 2020.
14 CARB, Nitrogen Dioxide & Health.
15 USEPA, Nitrogen Dioxide (NO2) Pollution, https://www.epa.gov/no2-pollution/basic-information-about-no2. Accessed February 25, 2020.
16 USEPA, Nitrogen Dioxide (NO2) Pollution.
17 CARB, Nitrogen Dioxide & Health, https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health. Accessed February 25, 2020.
18 CARB, Nitrogen Dioxide & Health.
19 CARB, Nitrogen Dioxide & Health.

dose, and health effects is specifically for NO_2 and there is only limited information for NO and NO_X, as well as large uncertainty in relating health effects to NO or NO_X exposure.[20]

(d) Carbon Monoxide (CO)

Carbon monoxide (CO) is primarily emitted from combustion processes and motor vehicles due to the incomplete combustion of fuel, such as natural gas, gasoline, or wood, with the majority of outdoor CO emissions from mobile sources.[21] According to the USEPA, breathing air with a high concentration of CO reduces the amount of oxygen that can be transported in the blood stream to critical organs like the heart and brain and at very high levels, which are possible indoors or in other enclosed environments, CO can cause dizziness, confusion, unconsciousness and death.[22] Very high levels of CO are not likely to occur outdoors; however, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease since these people already have a reduced ability for getting oxygenated blood to their hearts and are especially vulnerable to the effects of CO when exercising or under increased stress.[23] In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina.[24] According to CARB, the most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain.[25] For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress; inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance.[26] Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO.[27]

(e) Sulfur Dioxide (SO_2)

According to the USEPA, the largest source of sulfur dioxide (SO_2) emissions in the atmosphere is the burning of fossil fuels by power plants and other industrial facilities while smaller sources of SO_2 emissions include industrial processes such as extracting metal from ore; natural sources such as volcanoes; and locomotives, ships and other vehicles and heavy equipment that burn fuel with a high sulfur content.[28] In 2006, California phased-in the ultra-low-sulfur diesel regulation limiting vehicle diesel fuel to a

20 CARB, Nitrogen Dioxide & Health.
21 CARB, Carbon Monoxide & Health, https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health. Accessed February 25, 2020.
22 USEPA, Carbon Monoxide (CO) Pollution in Outdoor Air, https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution. Accessed February 25, 2020.
23 USEPA, Carbon Monoxide (CO) Pollution in Outdoor Air.
24 USEPA, Carbon Monoxide (CO) Pollution in Outdoor Air.
25 CARB, Carbon Monoxide & Health, https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health. Accessed February 25, 2020.
26 CARB, Carbon Monoxide & Health.
27 CARB, Carbon Monoxide & Health.
28 USEPA, Sulfur Dioxide (SO2) Pollution, https://www.epa.gov/so2-pollution/sulfur-dioxide-basics, last updated June 28, 2018. Accessed February 25, 2020.

sulfur content not exceeding 15 parts per million, down from the previous requirement of 500 parts per million, substantially reducing emissions of sulfur from diesel combustion.[29] According to the USEPA, short-term exposures to SO_2 can harm the human respiratory system and make breathing difficult.[30] According to CARB, health effects at levels near the State one-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath and chest tightness, especially during exercise or physical activity and exposure at elevated levels of SO_2 (above 1 part per million (ppm)) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.[31] Children, the elderly, and those with asthma, cardiovascular disease, or chronic lung disease (such as bronchitis or emphysema) are most likely to experience the adverse effects of SO_2.[32,33]

(f) Particulate Matter (PM10 and PM2.5)

Particulate matter air pollution is a mixture of solid particles and liquid droplets found in the air.[34] Some particles, such as dust, dirt, soot, or smoke, are large or dark enough to be seen with the naked eye while other particles are so small they can only be detected using an electron microscope.[35] Particles are defined by their diameter for air quality regulatory purposes: inhalable particles with diameters that are generally 10 micrometers (µm) and smaller (PM10); and fine inhalable particles with diameters that are generally 2.5 µm and smaller (PM2.5).[36] Thus, PM2.5 comprises a portion or a subset of PM10. Sources of PM10 emissions include dust from construction sites, landfills and agriculture, wildfires and brush/waste burning, industrial sources, and wind-blown dust from open lands.[37] Sources of PM2.5 emissions include combustion of gasoline, oil, diesel fuel, or wood.[38] PM10 and PM2.5 may be either directly emitted from sources (primary particles) or formed in the atmosphere through chemical reactions of gases (secondary particles) such as SO_2, NO_X, and certain organic compounds.[39] According to CARB, both PM10 and PM2.5 can be inhaled, with some depositing throughout the airways; PM_{10} is more likely to deposit on the surfaces of the larger airways of the upper region of the lung while PM2.5 is more likely to travel into and deposit on the surface of the deeper parts of the lung, which can induce tissue damage, and lung inflammation.[40] Short-term (up to 24

[29] CARB, Final Regulation Order, Amendments to the California Diesel Fuel Regulations, Amend Section 2281, Title 13, California Code of Regulations, approved July 15, 2004.
[30] USEPA, Sulfur Dioxide (SO2) Pollution.
[31] CARB, Sulfur Dioxide & Health, https://ww2.arb.ca.gov/resources/sulfur-dioxide-and-health. Accessed February 25, 2020.
[32] CARB, Sulfur Dioxide & Health.
[33] USEPA, Sulfur Dioxide (SO2) Pollution.
[34] USEPA, Particulate Matter (PM) Pollution, https://www.epa.gov/pm-pollution/particulate-matter-pm-basics, last updated November 14, 2018. Accessed February 25, 2020.
[35] USEPA, Particulate Matter (PM) Pollution.
[36] USEPA, Particulate Matter (PM) Pollution.
[37] CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10) , https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm. Accessed February 25, 2020.
[38] CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10).
[39] CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10).
[40] CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10).

hours duration) exposure to PM10 has been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits.[41] The effects of long-term (months or years) exposure to PM10 are less clear, although studies suggest a link between long-term PM10 exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer.[42] Short-term exposure to PM2.5 has been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days and long-term exposure to PM2.5 has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children.[43] According to CARB, populations most likely to experience adverse health effects with exposure to PM10 and PM2.5 include older adults with chronic heart or lung disease, children, and asthmatics and children and infants are more susceptible to harm from inhaling pollutants such as PM10 and PM2.5 compared to healthy adults because they inhale more air per pound of body weight than do adults, spend more time outdoors, and have developing immune systems.[44]

(g) Lead (Pb)

Major sources of lead emissions include ore and metals processing, piston-engine aircraft operating on leaded aviation fuel, waste incinerators, utilities, and lead-acid battery manufacturers.[45] In the past, leaded gasoline was a major source of lead emissions; however, the removal of lead from gasoline has resulted in a decrease of lead in the air by 98 percent between 1980 and 2014.[46] Lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system, and affects the oxygen carrying capacity of blood.[47] The lead effects most commonly encountered in current populations are neurological effects in children, such as behavioral problems and reduced intelligence, anemia, and liver or kidney damage.[48] Excessive lead exposure in adults can cause reproductive problems in men and women, high blood pressure, kidney disease, digestive problems, nerve disorders, memory and concentration problems, and muscle and joint pain.[49]

(2) Other Criteria Pollutants (California Only)

The California Ambient Air Quality Standards (CAAQS) regulate the same criteria pollutants as the National Ambient Air Quality Standards (NAAQS) but, in addition,

41 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10).
42 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10).
43 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10).
44 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10)
45 USEPA, Lead Air Pollution, https://www.epa.gov/lead-air-pollution/basic-information-about-lead-air-pollution. Accessed February 25, 2020.
46 USEPA, Lead Air Pollution.
47 USEPA, Lead Air Pollution.
48 CARB, Lead & Health, https://ww2.arb.ca.gov/resources/lead-and-health. Accessed February 25, 2020.
49 CARB, Lead & Health.

regulate State-identified criteria pollutants, including sulfates, hydrogen sulfide, visibility-reducing particles, and vinyl chloride.[50] A description of the health effects of the State-identified criteria air pollutants relevant to the Project is provided below. As the Project would not generate emissions of hydrogen sulfide or vinyl chloride, they are not discussed.

(a) Sulfates (SO_4^{2-})

Sulfates in the environment occur as a result of SO_2 (sulfur dioxide) being converted to SO_4^{2-} compounds in the atmosphere where sulfur is first oxidized to SO_2 during the combustion process of sulfur containing petroleum-derived fuels (e.g., gasoline and diesel fuel).[51] Exposure to SO_4^{2-}, which are part of PM2.5, results in health effects similar to those from exposure to PM2.5 including reduced lung function, aggravated asthmatic symptoms, and increased risk of emergency department visits, hospitalizations, and death in people who have chronic heart or lung diseases.[52] Population groups with higher risks of experiencing adverse health effects with exposure to SO_4^{2-} include children, asthmatics, and older adults who have chronic heart or lung diseases.[53]

(b) Visibility-Reducing Particles

Visibility-reducing particles come from a variety of natural and manmade sources and can vary greatly in shape, size and chemical composition. Visibility reduction is caused by the absorption and scattering of light by the particles in the atmosphere before it reaches the observer. Certain visibility-reducing particles are directly emitted to the air such as windblown dust and soot, while others are formed in the atmosphere through chemical transformations of gaseous pollutants (e.g., sulfates, nitrates, organic carbon particles) which are the major constituents of particulate matter. As the number of visibility reducing particles increases, more light is absorbed and scattered, resulting in less clarity, color, and visual range.[54] Exposure to some haze-causing pollutants have been linked to adverse health impacts similar to PM10 and PM2.5 as discussed above.[55]

(3) Toxic Air Contaminants

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

50 CARB, California Ambient Air Quality Standards, https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards. Accessed February 25, 2020.
51 CARB, Sulfate & Health, https://ww2.arb.ca.gov/resources/sulfate-and-health. Accessed February 25, 2020.
52 CARB, Sulfate & Health.
53 CARB, Sulfate & Health.
54 CARB, Visibility-Reducing Particles and Health, https://www.arb.ca.gov/research/aaqs/common-pollutants/vrp/vrp.htm, last reviewed October 11, 2016. Accessed February 25, 2020.
55 CARB, Visibility-Reducing Particles and Health.

> *"Toxic air contaminant" means an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the federal act (42 U.S.C. Sec. 7412(b)) is a toxic air contaminant.*

Diesel particulate matter (DPM), which is emitted in the exhaust from diesel engines, was listed by the State as a TAC in 1998. Most major sources of diesel emissions, such as ships, trains, and trucks operate in and around ports, railyards, and heavily traveled roadways. These areas are often located near highly populated areas resulting in greater health consequences for urban areas than rural areas.[56] 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 <2.5 µm), including a subgroup of ultrafine particles (ultrafine particles have a diameter <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 and resultant potential health effects may be higher in 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.[57,58]

b) Regulatory Framework

(1) Federal

The Federal Clean Air Act (CAA) of 1963 was the first federal legislation regarding air pollution control and has been amended numerous times in subsequent years, with the most recent amendments occurring in 1990.[59] The USEPA is responsible for the implementation and enforcement of the CAA, which establishes the NAAQS, specifies future dates for achieving compliance, and requires USEPA to designate areas as attainment, nonattainment, or maintenance. The CAA also mandates that each state submit and implement a State Implementation Plan (SIP) for each criteria pollutant for

[56] CARB, Overview: Diesel Exhaust and Health, https://www.arb.ca.gov/research/diesel/diesel-health.htm. Accessed February 25, 2020.
[57] CARB, Diesel and Health Research, http://www.arb.ca.gov/research/diesel/diesel-health.htm. Accessed February 25, 2020.
[58] CARB, Diesel Particulate Matter Health Risk Assessment Study for the West Oakland Community: Preliminary Summary of Results, 2008.
[59] USEPA, Summary of the Clean Air Act, https://www.epa.gov/laws-regulations/summary-clean-air-act. Accessed February 25, 2020

which the state has not achieved the applicable NAAQS. The SIP includes pollution control measures that demonstrate how the standards for those pollutants will be met. The 1990 amendments to the Clean Air Act identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require 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 Project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions).[60,61]

Title I requirements are implemented for the purpose of attaining NAAQS for criteria air pollutants. The NAAQS were amended in July 1997 to include an 8-hour standard for ozone and to adopt a NAAQS for PM2.5. The NAAQS were also amended in September 2006 to include an established methodology for calculating PM2.5, as well to revoke the annual PM10 threshold. **Table IV.A-1**, *Ambient Air Quality Standards*, shows the NAAQS currently in effect for each criteria pollutant. The NAAQS and the CAAQS for the California criteria air pollutants (discussed below) 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 a margin of safety; and to protect public welfare, including against decreased visibility and damage to animals, crops, vegetation, and buildings.[62]

In addition to criteria pollutants, Title I also includes air toxics provisions which require USEPA to develop and enforce regulations to protect the public from exposure to airborne contaminants that are known to be hazardous to human health. In accordance with Section 112, USEPA establishes National Emission Standards for Hazardous Air Pollutants (NESHAPs). The list of hazardous air pollutants (HAPs), or air toxics, includes specific compounds that are known or suspected to cause cancer or other serious health effects.

Title II requirements pertain to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline, automobile pollution control devices, and vapor recovery nozzles on gas pumps are a few of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have been strengthened in recent years 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.

60 USEPA, Clean Air Act Overview, Clean Air Act Table of Contents by Title, Last Updated January 3, 2017, https://www.epa.gov/clean-air-act-overview/clean-air-act-text. Accessed February 25, 2020. As shown therein, Title I addresses nonattainment areas and Title II addresses mobile sources.

61 Mobile sources include on-road vehicles (e.g. cars, buses, motorcycles) and non-road vehicles e.g. aircraft, trains, construction equipment). Stationary sources are comprised of both point and area sources. Point sources are stationary facilities that emit large amount of pollutants (e.g. municipal waste incinerators, power plants). Area sources are smaller stationary sources that alone are not large emitters, but combined can account for large amounts of pollutants (e.g. consumer products, residential heating, dry cleaners).

62 USEPA, NAAQS Table, https://www.epa.gov/criteria-air-pollutants/naaqs-table. Accessed February 25, 2020.

TABLE IV.A-1
AMBIENT AIR QUALITY STANDARDS

		California Standards [a]		National Standards [b]		
Pollutant	**Average Time**	**Concentration[c]**	**Method[d]**	**Primary[c,e]**	**Secondary[c,f]**	**Method[g]**
O_3 [h]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
NO_2 [i]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemi-luminescence	100 ppb (188 µg/m^3)	None	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		53 ppb (100 µg/m^3)	Same as Primary Standard	
CO	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	None	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10mg/m^3)		9 ppm (10 mg/m^3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
SO_2 [j]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)[9]
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[j]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) [j]	—	
PM10[k]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
PM2.5 [k]	24 Hour	No Separate State Standard		35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3 [k]	15 µg/m^3	

TABLE IV.A-1
AMBIENT AIR QUALITY STANDARDS

		California Standards [a]		National Standards [b]		
Pollutant	**Average Time**	**Concentration[c]**	**Method[d]**	**Primary[c,e]**	**Secondary[c,f]**	**Method[g]**
Lead [l,m]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[m]	Same as Primary Standard	
	Rolling 3-Month Average [m]	--		0.15 µg/m^3		
Visibility Reducing Particles [n]	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more due to particles when relative humidity is less than 70 percent.		**No Federal Standards**		
Sulfates (SO_4)	24 Hour	25 µg/m^3	Ion Chroma-tography	**No Federal Standards**		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence	**No Federal Standards**		
Vinyl Chloride [l]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chroma-tography	**No Federal Standards**		

[a] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms/per cubic meter (µg/m^3) is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

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

[d] Any equivalent procedure which can be shown to the satisfaction of the California Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.

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

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

[g] Reference method as described by the USEPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the USEPA.

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

[i] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb.

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

[k] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3.

TABLE IV.A-1
AMBIENT AIR QUALITY STANDARDS

		California Standards [a]		National Standards [b]		
Pollutant	**Average Time**	**Concentration[c]**	**Method[d]**	**Primary[c,e]**	**Secondary[c,f]**	**Method[g]**

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

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

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

SOURCE: CARB, Ambient Air Quality Standards May 4, 2016.

(2) State

(a) 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 CAAQS by the earliest practical date. The CAAQS are established to protect the health of the most sensitive groups and apply to the same criteria pollutants as the CAA and also includes State-identified criteria pollutants, which are sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride.[63] CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for coordination and administration of both federal and State air pollution control programs within California.[64] In this capacity, CARB conducts research, sets the CAAQS, 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 (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of California's SIP, for which it works closely with the federal government and the local air districts. The SIP is required for the State to take over implementation of the CAA from the USEPA.

(b) On-Road and Off-Road Vehicle Rules

In 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel PM and other TACs (Title 13 California Code of Regulations [CCR], Section 2485). The CCR is the official compilation and publication of regulations adopted, amended or repealed by the State agencies pursuant to the Administrative Procedure Act. The CCR includes regulations

63 CARB, California Ambient Air Quality Standards (CAAQS), https://ww2.arb.ca.gov/resources/ california-ambient-air-quality-standards. Accessed February 25, 2020.

64 Chapter 1568 of the Statutes of 1988.

that pertain to air quality emissions. Specifically, Section 2485 in Title 13 of the CCR states that the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location. In addition, Section 93115 in Title 17 of the CCR states that operations of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emissions standards.

In 2008, CARB approved the Truck and Bus regulation to reduce NO_X, PM10, and PM2.5 emissions from existing diesel vehicles operating in California (13 CCR, Section 2025). The requirements were amended to apply to nearly all diesel-fueled trucks and buses with a gross vehicle weight rating greater than 14,000 pounds. For the largest trucks in the fleet, those with a gross vehicle weight rating greater than 26,000 pounds must comply with a schedule by engine model year or owners can report to show compliance with more flexible options, there are 2 methods to comply with the requirements. The first method is for the fleet owner to retrofit or replace engines, starting with the oldest engine model year, to meet 2010 engine standards, or better. This is phased over 8 years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the State subject to this option would meet or exceed the 2010 engine emission standards for NO_X and PM by 2023. The second method, if chosen, required fleet owners, starting in 2012, to retrofit a portion of their fleet with diesel particulate filters (DPFs) achieving at least 85 percent removal efficiency, with installation of DPFs for their entire fleet by January 1, 2016. However, DPFs do not typically lower NO_X emissions. Thus, fleet owners choosing the second option must still comply with the 2010 engine emission standards for their trucks and busses by 2020.

In addition to limiting exhaust from idling trucks, CARB also adopted emission standards for off-road diesel construction equipment of greater than 25 horsepower, such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel Fueled Fleets regulation adopted by the CARB on July 26, 2007, aims to reduce emissions by the installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission controlled models (13 CCR, Section 2449). Implementation is staggered based on fleet size (which is the total of all off-road horsepower under common ownership or control), with the largest fleets to begin compliance in 2014, medium fleets in 2017, and small fleets in 2019. Each fleet must demonstrate compliance through one of two methods. The first option is to calculate and maintain fleet average emissions targets, which encourages the retirement or repowering of older equipment and rewards the introduction of newer cleaner units into the fleet. The second option is to meet the Best Available Control Technology (BACT) requirements by turning over or installing Verified Diesel Emission Control Strategies (VDECS) on a certain percentage of its total fleet horsepower. The compliance schedule requires that BACT turn overs or retrofits (VDECS installation) be fully implemented by 2023 in all equipment for large and medium fleets and by 2028 for small fleets.

In 2020, CARB approved the Advanced Clean Trucks regulation (13 CCR, Sections 1963-1963.5 and 2012-2012.3) to accelerate a large-scale transition of zero-emission medium- and heavy-duty vehicles. The regulation requires manufacturers of medium- and heavy-

duty vehicles to sell an increasing percentage of zero-emission models from 2024 to 2035 with up to 55 percent of Class 2b-3 trucks, 75 percent of Class 4-8 trucks, and 40 percent of truck tractor sales.[65] The regulation also includes reporting requirements to provide information that would be used to identify future strategies.

(c) California Air Toxics Program

The California Air Toxics Program was established in 1983, when the California Legislature adopted AB 1807 to establish a two-step process of risk identification and risk management to address potential health effects from exposure to toxic substances in the air. In the risk identification step, 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. Since the inception of the program, a number of such substances have been listed (www.arb.ca.gov/toxics.id/taclist.htm). In 1993, the California Legislature amended the program to identify the 189 federal hazardous air pollutants (HAPs) as TACs. The SCAQMD has not adopted guidance applicable to land use projects that requires a quantitative health risk assessments be performed for construction exposures to TAC emissions.[66]

In the risk management step, CARB reviews emission sources of an identified TAC to determine whether regulatory action is needed to reduce risk. Based on the results of that review, CARB has promulgated a number of ATCMs, both for mobile and stationary sources. As discussed above, in 2004, CARB adopted an ATCM to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to DPM and other TACs.

The AB 1807 program is supplemented by the AB 2588 Air Toxics "Hot Spots" program, which was established by the California Legislature in 1987. 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. In 1992, the AB 2588 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.

(3) Regional

(a) South Coast Air Quality Management District

The SCAQMD is primarily responsible for planning, implementing, and enforcing air quality standards for the South Coast Air Basin (Air Basin) which includes all of Orange County, Los Angeles County (excluding the Antelope Valley portion), the western, non-desert portion of San Bernardino County, and the western Coachella Valley and San Gorgonio Pass portions of Riverside County. The Air Basin is an approximately 6,745-

[65] United States Department of Energy, Vehicle Weight Classes & Categories, https://afdc.energy.gov/data/10380. Accessed June 22, 2021. Class 2 is split into Class 2a: trucks between 6,001 and 8,500 lbs and Class 2b: trucks between 8,501 and 10,000 lbs.

[66] SCAQMD, Final Environmental Assessment for: Proposed Amended Rule 307.1 – Alternative Fees for Air Toxics Emissions Inventory; Proposed Amended Rule 1401 – New Source Review of Toxic Air Contaminants; Proposed Amended Rule 1402 – Control of Toxic Air Contaminants from Existing Sources; SCAQMD Public Notification Procedures for Facilities Under the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) and Rule 1402.

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 is a subregion within the western portion of the SCAQMD jurisdiction. **Figure IV.A-1**, *Boundaries of the South Coast Air Quality Management District*, illustrates the location of the Air Basin.

(i) Air Quality Management Plan

The SCAQMD has adopted Air Quality Management Plans (AQMPs) to meet the CAAQS and NAAQS. The SCAQMD Governing Board adopted the 2016 AQMP on March 3, 2017.[67] CARB approved the 2016 AQMP on March 23, 2017.[68] Key elements of the 2016 AQMP include implementing fair-share emissions reductions strategies at the federal, State, and local levels; establishing partnerships, funding, and incentives to accelerate deployment of zero and near-zero-emissions technologies; and taking credit from co-benefits from greenhouse gas, energy, transportation and other planning efforts.[69] The strategies included in the 2016 AQMP build on the strategies from the previous 2012 AQMP and are intended to demonstrate attainment of the NAAQS, which are set at levels considered safe to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including against decreased visibility and damage to animals, crops, vegetation, and buildings,[70] for the federal non-attainment pollutants ozone and PM2.5 while accounting for regional growth, increasing development, and maintaining a healthy economy.[71] In general, SCAQMD's criteria for evaluating control strategies for stationary and mobile sources is based on the following: (1) cost-effectiveness; (2) emissions reduction potential; (3) enforceability; (4) legal authority; (5) public acceptability; (6) rate of emission reduction; and (7) technological feasibility. Control strategies in the AQMP with potential applicability to reducing short-term emissions from construction activities associated with the Project include strategies denoted in the 2016 AQMP as MOB-08 and MOB-10, which are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment.[72] Descriptions of measures MOB-08 and MOB-10 are provided below:

- **MOB-08 – Accelerated Retirement of Older On-Road Heavy-Duty Vehicles:** This measure seeks to replace up to 2,000 heavy-duty vehicles per year with newer or new vehicles that at a minimum, meet the 2010 on-road heavy-duty NO_X exhaust emissions standard of 0.2 grams per brake horsepower-hour (g/bhp-hr).
- **MOB-10 – Extension of the SOON Provision for Construction/Industrial Equipment:** This measure continues the Surplus Off-Road Option for NO_X (SOON) provision of the statewide In-Use Off-Road Fleet Vehicle Regulation through the 2031 timeframe.

67 SCAQMD, 2016 AQMP, March 2017.
68 CARB, News Release - CARB establishes next generation of emission controls needed to improve state's air quality, https://ww2.arb.ca.gov/news/carb-establishes-next-generation-emission-controls-needed-improve-states-air-quality. Accessed February 25, 2020.
69 SCAQMD, 2016 AQMP, March 2017.
70 USEPA, NAAQS Table, https://www.epa.gov/criteria-air-pollutants/naaqs-table. Accessed February 25, 2020.
71 SCAQMD, NAAQS/CAAQS and Attainment Status for South Coast Air Basin, 2016.
72 SCAQMD, 2016 AQMP, March 2017.

SOURCE: California Air Resources Board, March 2004

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Figure IV.A-1
Boundaries of the South Coast Air Quality Management District

The 2016 AQMP is used in the analyses in this section, since it has been adopted by both SCAQMD and CARB.

(ii) SCAQMD Rules and Regulations

The SCAQMD has adopted many rules and regulations to regulate sources of air pollution in the Air Basin and to help achieve air quality standards. The Project may be subject to the following SCAQMD rules and regulations:

Regulation IV – Prohibitions: This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air emissions, fuel contaminants, start-up/shutdown exemptions and breakdown events. The following is a list of rules which apply to the Project:

- **Rule 401 – Visible Emissions:** This rule states that 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 three minutes in any one hour which is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart or of such opacity as to obscure an observer's view.
- **Rule 402 – Nuisance:** This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 403 – Fugitive Dust:** This rule requires projects to prevent, reduce or mitigate fugitive dust emissions from a site. Rule 403 restricts visible fugitive dust to the project property line, restricts the net PM10 emissions to less than 50 micrograms per cubic meter (µg/m3) and restricts the tracking out of bulk materials onto public roads. Additionally, projects must utilize one or more of the best available control measures (identified in the tables within the rule). Mitigation measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities. Finally, a contingency plan may be required if so determined by USEPA.

Regulation XI – Source Specific Standards: Regulation XI sets emissions standards for specific sources. The following is a list of rules which may apply to the Project:

- **Rule 1113 – Architectural Coatings:** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
- **Rule 1121 – Control of Nitrogen Oxides from Residential Type, Natural Gas-Fired Water Heaters:** This rule specifies NO_X emission limits for natural gas-fired water heaters, with heat input rates less than 75,000 British thermal units (BTUs) per hour.

- **Rule 1138 – Control of Emissions from Restaurant Operations:** This rule specifies PM and VOC emissions and odor control requirements for commercial cooking operations that use chain-driven charbroilers to cook meat.
- **Rule 1143 – Consumer Paint Thinners and Solvents:** This rule requires VOC content limits of 25 grams/Liter for both consumer paint thinners or multi-purpose solvents for manufacturers, suppliers, and sellers of consumer paint thinners and multi-purpose solvents, as well as any person who uses or solicits the use of any consumer paint thinner and multi-purpose solvent. These products include any liquid products designed or labeled to be used for dispersing or dissolving or removing contaminants or other organic materials for personal, family, household, or institutional use.
- **Rule 1146.1 – Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters:** This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NO_X emissions from natural gas-fired boilers, steam generators, and process heaters as defined in this rule.
- **Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters:** This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NO_X emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule.
- **Rule 1186 – PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations:** This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM10 emissions by requiring the cleanup of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).

Regulation XIV – Toxics and Other Non-Criteria Pollutants: Regulation XIV sets requirements for new permit units, relocations, or modifications to existing permit units which emit toxic air contaminants or other non-criteria pollutants. The following is a list of rules which may apply to the Project:

- **Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities:** This rule requires owners and operators of any demolition or renovation activity and the associated disturbance of asbestos-containing materials, any asbestos storage facility, or any active waste disposal site to implement work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.
- **Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines:** This rule applies to stationary compression ignition (CI) engine greater than 50 brake horsepower and sets limits on emissions and operating hours. In general, new stationary emergency standby diesel-fueled engines greater than 50 brake horsepower are not permitted to operate more than 50 hours per year for maintenance and testing.

- **Rule 1401 and Rule 1402 – New Source Review of Toxic Air Contaminants and Control of Toxic Air Contaminants from Existing Sources:** 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 the requirements of the AB 2588 program, including implementation of risk reduction plans for significant risk facilities.

(b) Southern California Association of Governments 2016-2040 RTP/SCS and 2020-2045 RTP/SCS

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 is the federally designated Metropolitan Planning Organization (MPO) for the majority of the Southern California region, and is the largest MPO in the nation.

Pursuant to California Health & Safety Code Section 40460, SCAG is responsible for preparing and approving the portions of the AQMP relating to regional demographic projections and integrated regional land use, housing, employment and transportation programs, measures and strategies.[73] With regard to air quality planning, SCAG adopted the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016-2040 RTP/SCS) in April 2016, which contains such regional development and growth forecasts. These regional development and growth forecasts form the basis for the land use and transportation control portions of the 2016 AQMP, and its growth forecasts were utilized in the preparation of the air quality forecasts and consistency analysis included in the 2016 AQMP.[74] Both the RTP/SCS and the AQMP are based on projections that originate with local jurisdictions. On September 3, 2020, the SCAG Regional Council adopted the 2020-2045 RTP/SCS, which is an update to the previous 2012-2035 RTP/SCS and 2016-2040 RTP/SCS.[75]

SCAG is required to adopt an SCS along with its RTP pursuant to SB 375 (Chapter 728, Statutes of 2008), which required the development of regional targets for reducing passenger vehicle greenhouse gas (GHG) emissions. Under SB 375, CARB is required, in consultation with the state's MPOs, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. The 2020-2045 RTP/SCS includes the SB 375 targets updated by CARB in March 2018 to require 8 percent reduction by 2020 and a 19 percent reduction by 2035 in per capita passenger vehicle GHG emissions.[76]

SCAG's 2016-2040 RTP/SCS and 2020-2045 RTP/SCS provide specific implementation strategies. These strategies include supporting projects that encourage infill

[73] SCAQMD, 2016 AQMP, March 2017, page 4-42.
[74] SCAQMD, 2016 AQMP, March 2017, page 4-42.
[75] Southern California Association of Governments (SCAG), 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020-2045 RTP/SCS), May 2020.
[76] CARB, SB 375 Regional Greenhouse Gas Emissions Reduction Targets.

development, diverse job opportunities for a variety of skills and education, recreation, cultures, and a full-range of shopping, entertainment and services all within a relatively short distance; encouraging employment development around current and planned transit stations and neighborhood commercial centers. The 2016-2040 RTP/SCS and 2020-2045 RTP/SCS emphasize the importance of focusing on high density development in High Quality Transit Areas (HQTAs) that allows for high quality housing with consideration of urban design, construction and durability, and potential increased ridership on important public transit investments, and can help the region achieve greater mobility, an improved economy and sustainable growth.[77,78]

(4) Local

(a) City of Los Angeles Air Quality Element

Local jurisdictions, such as the City of Los Angeles (City), have the authority and responsibility to reduce air pollution through their land use decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City's General Plan Air Quality Element was adopted on November 24, 1992, and sets forth the goals, objectives, and policies which guide the City in its implementation of its air quality improvement programs and strategies. A number of these goals, objectives, and policies are relevant to the Project, and relate to traffic mobility, minimizing particulate emissions from construction activities, discouraging single-occupancy vehicle trips, managing traffic congestion during peak hours, and increasing energy efficiency in City facilities and private developments.

The Air Quality Element establishes six goals, and to achieve these goals, performance-based standards to provide flexibility in implementation of the policies and objectives of the Air Quality Element. The following goals, objectives, and policies from the Air Quality Element of the General Plan are applicable to the Project:

Goal 1: Good air quality and mobility in an environment of continued population growth and healthy economic structure.

Objective 1.1: It is the objective of the City of Los Angeles to reduce air pollutants consistent with the Regional Air Quality Management Plan, increase traffic mobility, and sustain economic growth citywide.

Objective 1.3: It is the objective of the City of Los Angeles to reduce particulate air pollutants emanating from unpaved areas, parking lots, and construction sites.

Policy 1.3.1: Minimize particulate emissions from construction sites.

Policy 1.3.2: Minimize particulate emissions from unpaved roads and parking lots associated with vehicular traffic.

77 SCAG, 2016-2040 RTP/SCS, April 2016, page 8.
78 SCAG, 2020-2045 RTP/SCS, May 2020, page 51.

Goal 2: Less reliance on single-occupant vehicles with fewer commute and non-work trips.

Objective 2.1: It is the objective of the City of Los Angeles to reduce work trips as a step towards attaining trip reduction objectives necessary to achieve regional air quality goals.

Policy 2.1.1: Utilize compressed work weeks and flextime, telecommuting, carpooling, vanpooling, public transit, and improve walking/bicycling related facilities in order to reduce Vehicle Trips and/or Vehicle Miles Traveled (VMT) as an employer and encourage the private sector to do the same to reduce work trips and traffic congestion.

Policy 2.2.2: Encourage multi-occupant vehicle travel and discourage single-occupant vehicle travel by instituting parking management practices.

Goal 4: Minimize impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality.

Objective 4.1: It is the objective of the City of Los Angeles to include regional attainment of ambient air quality standards as a primary consideration in land use planning.

Policy 4.1.1: Coordinate with all appropriate regional agencies in the implementation of strategies for the integration of land use, transportation, and air quality policies.

Objective 4.2: It is the objective of the City of Los Angeles to reduce vehicle trips and vehicle miles traveled associated with land use patterns.

Policy 4.2.2: Improve accessibility for the City's residents to places of employment, shopping centers, and other establishments.

Policy 4.2.3: Ensure that new development is compatible with pedestrians, bicycles, transit, and alternative fuel vehicles.

Policy 4.2.4: Require that air quality impacts be a consideration in the review and approval of all discretionary projects.

Policy 4.2.5: Emphasize trip reduction, alternative transit and congestion management measures for discretionary projects.

Goal 5: Energy efficiency through land use and transportation planning, the use of renewable resources and less polluting fuels, and the implementation of conservation measures including passive methods such as site orientation and tree planting.

Objective 5.1: It is the objective of the City of Los Angeles to increase energy efficiency of City facilities and private developments.

Policy 5.1.2: Effect a reduction in energy consumption and shift to non-polluting sources of energy in its buildings and operations.

Policy 5.1.4: Reduce energy consumption and associated air emissions by encouraging waste reduction and recycling.

Objective 5.3: It is the objective of the City of Los Angeles to reduce the use of polluting fuels in stationary sources.

Policy 5.3.1: Support the development and use of equipment powered by electric or low-emitting fuels.

Goal 6: Citizen awareness of the linkages between personal behavior and air pollution and participation in efforts to reduce air pollution

Objective 6.1: It is the objective of the City of Los Angeles to make air quality education and citizen participation a priority in the City's effort to achieve clean air standards

Policy 6.1.1: Raise awareness through public information and education programs of the actions that individuals can take to reduce air emissions.

The City is also responsible for the implementation of transportation control measures as outlined in the AQMP. Through capital improvement programs, local governments can fund infrastructure that contributes to improved air quality by requiring such improvements as bus turnouts as appropriate, installation of energy-efficient streetlights, and synchronization of traffic signals. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation measures.

c) Existing Conditions

(1) Regional Context

(a) Criteria Pollutants

The extent and severity of pollutant concentrations in the Air Basin are a function of the area's natural physical characteristics (weather and topography) and 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. The Air Basin's meteorological conditions, in combination with regional topography, are conducive to the formation and retention of ozone, which is a secondary pollutant that forms through photochemical reactions in the atmosphere. Thus, the worst air pollution conditions throughout the Air Basin typically occur from June through September. These conditions are generally attributed to the seasonally light winds and shallow vertical atmospheric mixing, which reduce the potential for the dispersal of air pollutant emissions, thereby causing elevated air pollutant levels. Pollutant concentrations in the Air Basin vary with location, season, and time of day. Concentrations of ozone, for example, 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.[79] Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. **Table IV.A-2**, *South Coast Air Basin Attainment Status (Los Angeles County)*, shows the attainment status of the Air Basin for each criteria pollutant with respect to the State standards. The Air Basin is designated as attainment for the California standards for sulfates and unclassified for hydrogen sulfide and visibility-reducing particles.[80] The Air Basin is currently in non-attainment for O_3, PM10, and PM2.5 under the CAAQS. Since vinyl chloride is a carcinogenic toxic air contaminant, CARB does not classify attainment status for this pollutant.

TABLE IV.A-2
SOUTH COAST AIR BASIN ATTAINMENT STATUS (LOS ANGELES COUNTY)

Pollutant	National Standards (NAAQS)	California Standards (CAAQS)
O_3 (1-hour standard)	N/A [a]	Non-attainment – Extreme
O_3 (8-hour standard)	Non-attainment – Extreme	Non-attainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
PM10	Attainment	Non-attainment
PM2.5	Non-attainment – Serious	Non-attainment
Lead (Pb)	Non-attainment (Partial) [b]	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Unclassified
Vinyl Chloride [c]	N/A	N/A

N/A = not applicable

[a] The NAAQS for 1-hour ozone was revoked on June 15, 2005, for all areas except Early Action Compact areas.
[b] Partial Non-attainment designation – Los Angeles County portion of the Air Basin only for near-source monitors.
[c] In 1990, the California Air Resources Board identified vinyl chloride as a toxic air contaminant and determined that it does not have an identifiable threshold. Therefore, the California Air Resources Board does not monitor or make status designations for this pollutant.

SOURCE: USEPA, The Green Book Non-Attainment Areas for Criteria Pollutants, https://www.epa.gov/green-book, Green Book current as of January 31, 2020. Accessed February 25, 2020; CARB, Area Designations Maps/State and National, http://www.arb.ca.gov/desig/adm/adm.htm, last reviewed October 24, 2019. Accessed February 25, 2020.

79 SCAQMD, 2016 AQMP, March 2017.

80 Unclassified is the category designation of an area for a pollutant with insufficient data. CARB, Proposed 2017 Amendments to Area Designations for State Ambient Air Quality Standards, https://ww3.arb.ca.gov/regact/2018/area18/isor.pdf. Accessed October 15, 2020.

As shown in Table IV.A-2, the Air Basin is designated under federal or State ambient air quality standards as nonattainment for ozone, PM10, and fine particulate matter PM2.5. The Los Angeles County portion of the Air Basin is designated as nonattainment for the federal lead standard; however, this is due to localized emissions from two lead-acid battery recycling facilities in the City of Vernon and the City of Industry that are no longer operating.[81]

As detailed in the AQMP, the major sources of air pollution in the Air Basin are divided into four major source classifications: point, and area stationary sources, and on-road and off-road mobile sources. Point and area sources are the two major subcategories of stationary sources.[82] Point sources are permitted facilities that contain one or more emission sources at an identified location (e.g., power plants, refineries, emergency generator exhaust stacks). Area sources consist of many small emission sources (e.g., residential water heaters, architectural coatings, consumer products, restaurant charbroilers and permitted sources such as large boilers) which are distributed across the region. Mobile sources consist of two main subcategories: On-road sources (such as cars and trucks) and off-road sources (such as heavy construction equipment).

(b) Toxic Air Contaminants

In addition to criteria pollutants, the SCAQMD periodically assesses levels of TACs in the Air Basin. The greatest potential for TAC emissions during construction is related to DPM emissions associated with heavy-duty equipment. During long-term operations, sources of DPM may include heavy duty diesel-fueled delivery trucks and stationary emergency generators.

In August 2021, the SCAQMD released the Final Multiple Air Toxics Exposure Study V (MATES V).[83] The MATES V study includes a fixed site monitoring program with 10 stations, an updated emissions inventory of TACs, and a modeling effort to characterize risk across the Air Basin. The purpose of the fixed site monitoring is to characterize long-term regional air toxics levels in residential and commercial areas. In addition to new measurements and updated modeling results, several key updates were implemented in MATES V. First, MATES V estimates cancer risks by taking into account multiple exposure pathways, which includes inhalation and non-inhalation pathways. This approach is consistent with how cancer risks are estimated in South Coast AQMD's programs such as permitting, Air Toxics Hot Spots (AB2588), and CEQA. Previous MATES studies quantified the cancer risks based on the inhalation pathway only. Second, along with cancer risk estimates, MATES V includes information on the chronic non-cancer risks from inhalation and non-inhalation pathways for the first time. Cancer risks and chronic noncancer risks from MATES II through IV measurements have been re-examined using current Office of Environmental Health Hazard Assessment (OEHHA)

[81] SCAQMD, Board Meeting, Agenda No. 30, Adopt the 2012 Lead State Implementation Plan for Los Angeles County, May 4, 2012.
[82] SCAQMD, 2016 AQMP, March 2017, page 3-32.
[83] SCAQMD, 2021. Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin MATES V, August 2021.

and CalEPA risk assessment methodologies and modern statistical methods to examine the trends over time. This has led to a reduction of the Air Basin average air toxics cancer risk in MATES V of 455 in one million, compared to MATES IV of 997 in one million.[84] The key takeaways from the MATES V study: air toxics cancer risk has decreased by about 50 percent since MATES IV based on modeling data, MATES V Basin average multi-pathway air toxics cancer risk is 455 in one million, with the highest risk locations being in the Los Angeles International Airport, downtown and the ports areas, diesel particulate matter is the main risk driver for air toxics cancer risk, goods movement and transportation corridors have the highest air toxics cancer risks, and the chronic noncancer risk was estimated for the first time with a chronic hazard index of approximately 5 to 9 across all 10 fixed stations.[85,86]

(2) Local Area Conditions

(a) Existing Ambient Air Quality in the Surrounding Area

The SCAQMD maintains a network of air quality monitoring stations located throughout the Air Basin to measure ambient pollutant concentrations. The monitoring station most representative of the Project Site is the Central Los Angeles County Monitoring Station, located at 1630 North Main Street, Los Angeles, CA 90012. Criteria pollutants monitored at this station include ozone, NO_2, CO, SO_2, Pb, PM10, and PM2.5. The most recent data available from the SCAQMD for this monitoring station are from years 2018 to 2020.[87] The pollutant concentration data for these years are summarized in **Table IV.A-3,** *Ambient Air Quality in the Project Vicinity*. As shown in Table IV.A-3, the CAAQS and NAAQS were not exceeded in the Project Site vicinity for most pollutants between 2018 and 2020, except for O_3, PM10, and PM2.5.

84 SCAQMD, 2021. Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin MATES V, August 2021.

85 SCAQMD, 2021. Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin MATES V, August 2021.

86 SCAQMD, 2021. Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin MATES V, Appendix I-2, August 2021. Chronic non-cancer index calculations are defined as "the annual average concentrations for each pollutant were multiplied by the molecular weight adjustment factor and multi-pathway adjustment factor, and then divided by the applicable chronic REL to determine a hazard quotient. The hazard quotients are then summed for each target organ for all applicable toxic substances, and the maximum hazard quotient from all the target organ is reported as the hazard index. A hazard index of less than one indicates that the levels of that pollutant (or group of pollutants) are unlikely to cause chronic noncancer risk health effects for any of the target organs. A hazard index greater than one does not mean that adverse health effects will occur, but rather that the risk of chronic non-cancer health effects increases with increasing levels of the pollutant."

87 SCAQMD, Historical Data by Year, 2018-2020, http://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year. Accessed November 1, 2021.

TABLE IV.A-3
AMBIENT AIR QUALITY IN THE PROJECT VICINITY

Pollutant/Standard [a]	2018	2019	2020
Ozone, O_3 (1-hour)			
Maximum Concentration (ppm)	0.098	0.085	0.185
Days > CAAQS (0.09 ppm)	2	0	14
Ozone, O_3 (8-hour)			
Maximum Concentration (ppm)	0.073	0.080	0.118
4th High 8-hour Concentration (ppm)	0.071	0.065	0.093
Days > CAAQS (0.070 ppm)	4	2	22
Days > NAAQS (0.070 ppm)	4	2	22
Nitrogen Dioxide, NO_2 (1-hour)			
Maximum Concentration (ppm)	0.071	0.070	0.062
Days > CAAQS (0.18 ppm)	0	0	0
98th Percentile Concentration (ppm)	0.057	0.056	0.055
Days > NAAQS (0.100 ppm)	0	0	0
Nitrogen Dioxide, NO_2 (Annual)			
Annual Arithmetic Mean (0.030 ppm)	0.019	0.018	0.017
Carbon Monoxide, CO (1-hour)			
Maximum Concentration (ppm)	2.0	2.0	1.9
Days > CAAQS (20 ppm)	0	0	0
Days > NAAQS (35 ppm)	0	0	0
Carbon Monoxide, CO (8-hour)			
Maximum Concentration (ppm)	1.7	1.6	1.5
Days > CAAQS (9.0 ppm)	0	0	0
Days > NAAQS (9 ppm)	0	0	0
Sulfur Dioxide, SO_2 (1-hour)			
Maximum Concentration (ppm)	0.018	0.010	0.004
Days > CAAQS (0.25 ppm)	0	0	0
99th Percentile Concentration (ppm)	0.003	0.002	0.003
Days > NAAQS (0.075 ppm)	0	0	0
Sulfur Dioxide, SO_2 (24-hour)			
Maximum Concentration (ppm)	0.001	0.001	N/A
Days > CAAQS (0.04 ppm)	0	0	N/A
Respirable Particulate Matter, PM10 (24-hour)			
Maximum Concentration (µg/m^3)	81	62	77
Samples > CAAQS (50 µg/m^3)	31	3	24
Samples > NAAQS (150 µg/m^3)	0	0	0
Respirable Particulate Matter, PM10 (Annual)			
Annual Arithmetic Mean (20 µg/m^3)	34.1	25.5	23.0
Fine Particulate Matter, PM2.5 (24-hour)			
Maximum Concentration (µg/m^3)	43.8	43.5	47.3
98th Percentile Concentration (µg/m^3)	30.5	28.3	28.0
Samples > NAAQS (35 µg/m^3)	3	1	2
Fine Particulate Matter, PM2.5 (Annual)			
Annual Arithmetic Mean (12 µg/m^3)	12.6	10.9	12.3

TABLE IV.A-3
AMBIENT AIR QUALITY IN THE PROJECT VICINITY

Pollutant/Standard [a]	2018	2019	2020
Lead			
Maximum 30-day average (µg/m^3)	0.011	0.012	0.013
Samples > CAAQS (1.5 µg/m^3)	0	0	0
Maximum 3-month rolling average (µg/m^3)	0.010	0.010	0.011
Days > NAAQS (0.15 µg/m^3)	0	0	0

[a] ppm = parts per million; µg/m^3 = micrograms per cubic meter

SOURCE: SCAQMD, Historical Data by Year, http://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year; CARB, Air Quality Data Statistics, http://www.arb.ca.gov/adam/; USEPA, AirData, http://www.epa.gov/airdata/ad_rep_mon.html. Accessed November 1, 2021.

(b) Existing Health Risk in the Surrounding Area

The SCAQMD has prepared a series of maps that show regional trends in estimated outdoor inhalation cancer risk from toxic emissions, as part of an ongoing effort to provide insight into relative risks. The maps represent the estimated number of potential cancers per million people associated with a lifetime of breathing air toxics (24 hours per day outdoors for 70 years). The background potential cancer risk per million people in the Project Site area is estimated at 1,516 in one million (compared to an overall Air Basin-wide risk of 1,023 in one million for the average of 10 fixed monitoring sites).[88] Generally, the risk from air toxics is lower near the coastline and increases inland, with higher risks concentrated near large diesel sources (e.g., freeways, airports, rail yards and ports).

(c) Existing Site Emissions

The Project Site is located within the Downtown area of the City of Los Angeles, and is currently developed with existing one- to four-story freezer, cold storage, and dry storage warehouses with associated office space, loading docks, and surface parking. The existing warehouses, which date from approximately 1908 through 2003, range from approximately 22 to 61 feet in height and total approximately 205,393 square feet (refer to Chapter II, *Project Description*, of this Draft EIR for additional details). These existing uses would be demolished and removed to allow for development of the Project.

Existing emissions are associated with vehicle trips to and from the Project Site, on-site combustion of natural gas for heating, and fugitive emissions of VOCs from the use of aerosol products and coatings. Existing building emissions have been estimated using the California Emissions Estimator Model (CalEEMod) and USEPA natural gas combustion emission factors[89] for an existing furnace that is used infrequently and combusts a relatively minor amount of natural gas and included in area emissions. Mobile source emissions were based on facility provided information on truck and vehicle trips

[88] SCAQMD, Multiple Air Toxics Exposure Study, MATES IV Carcinogenic Risk Interactive Map.
[89] USEPA, AP-42: Compilation of Air Emission Factors, Chapter 1.4, Natural Gas Combustion.

and emission factors from the CARB on-road vehicle emissions factor (EMFAC2017) model. In addition, emissions from transportation refrigeration units (TRUs) used to provide refrigeration for cargo transported by trucks were based on four hours of TRU operation per truck per day and emission factors from the CARB OFFROAD model. A detailed discussion of the methodology used to estimate the existing Project Site emissions is provided below in subsection 3.b, *Methodology*. The existing Project Site emissions are summarized in **Table IV.A-4**, *Existing Site Regional Operational Emissions*. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

TABLE IV.A-4
EXISTING SITE OPERATIONAL EMISSIONS (POUNDS PER DAY) [a]

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Area	5	<1	<1	<1	<1	<1
Energy (Natural Gas)	<1	<1	<1	<1	<1	<1
Motor Vehicles	10	111	114	<1	6	4
Total Existing Emissions	**14**	**111**	**114**	**<1**	**6**	**4**

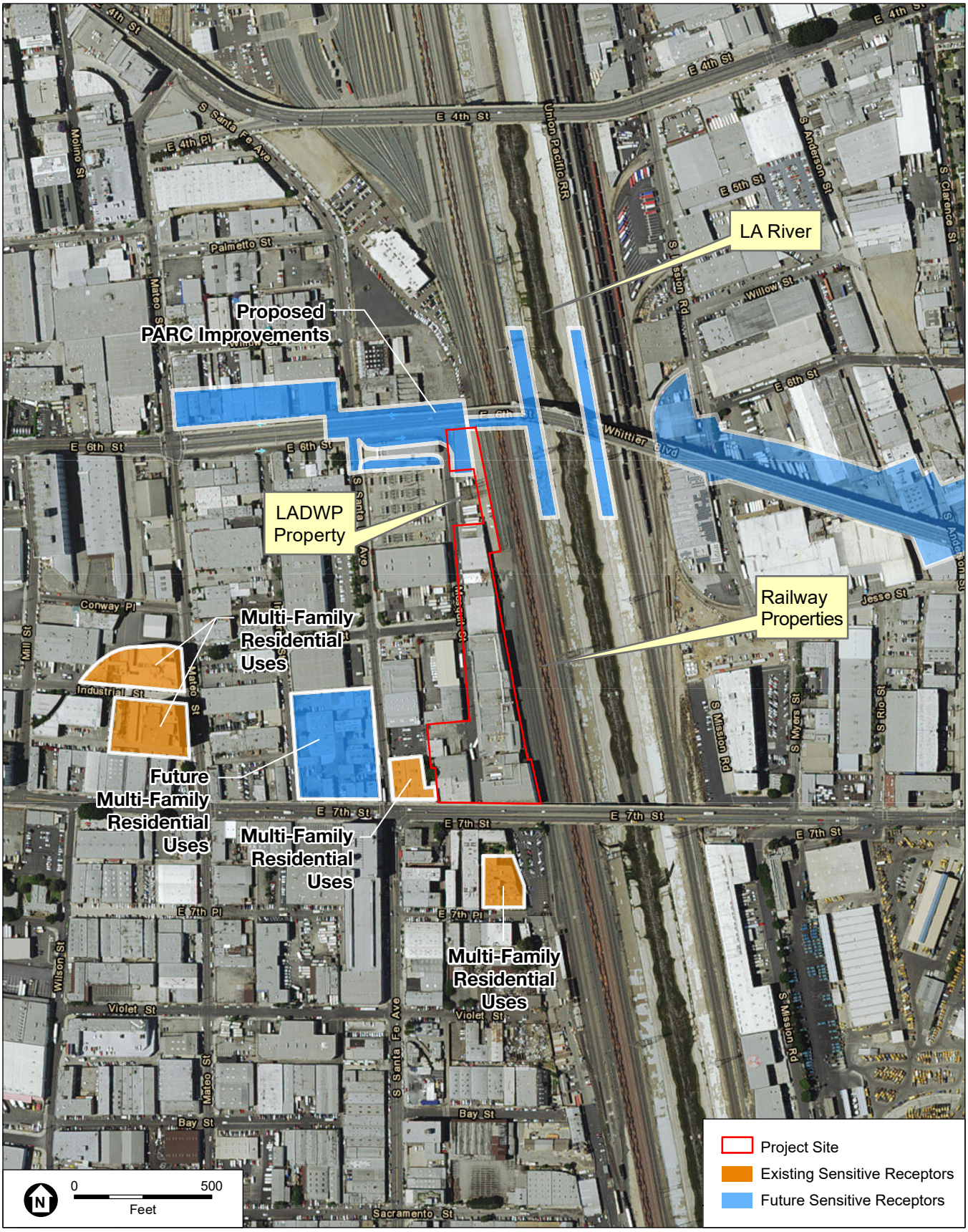
[a] Totals may not add up exactly due to rounding in the modeling calculations Detailed emissions calculations are provided in Appendix C of this Draft EIR.

SOURCE: ESA, 2021.

(d) Sensitive Receptors and Locations

Certain population groups, such as children, elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases), are considered more sensitive to the potential effects of air pollution than others. As a result, certain land uses that are occupied by these population groups, such as residences, hospitals and schools, are considered to be air quality-sensitive land uses. The Project Site is primarily surrounded by industrial and commercial uses, where the closest off-site land uses to the north are industrial and commercial uses, and the closest off-site land uses to the east of the Project Site are industrial, although there are air quality-sensitive land uses within approximately 500 feet of the Project Site to the west and south of the Project Site, as shown in **Figure IV.A-2,** *Sensitive Receptor Locations Nearest to the Project Site*. Air quality sensitive land uses nearest to the Project Site include the following:

- Multi-family residential uses adjacent to the Project site to the west at 2101 E. 7th Street.
- Multi-family residential uses to the south of the Project Site at 2135 E 7th Place.
- Brick, Toy Factory, and Biscuit Company Lofts (multi-family residential) to the west of the Project Site along Mateo Street.
- AMP Lofts, one block west of the Project Site, bound by Santa Fe Avenue on the east, Imperial Street on the West, Jesse Street to the north, and 7th Street to the south.



SOURCE: Google Map, 2015 (Aerial)

670 Mesquit

Figure IV.A-2
Sensitive Receptor Locations Nearest to the Project Site

All other air quality-sensitive uses are located at greater distances from the Project Site than the receptors listed above and would experience lower air pollutant impacts from potential sources of pollutants from the Project Site due to atmospheric dispersion effects and are not listed.

(e) Future Sensitive Receptors and Locations (Sensitive Receptors Not Built Yet)

Beyond the existing development that could potentially be impacted by Project construction, a potential future project that could include air-quality sensitive uses is located in the vicinity of the Project Site. This potential future project is not part of the existing setting. However, this future project is also shown in Figure IV.A-2, and is described as follows:

- The City's proposed PARC Improvements adjacent to and beneath the Ribbon of Light Bridge, immediately north of the Project Site.[90]

3. Project Impacts

a) Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, a project would have a significant impact related to air quality if it would:

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

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

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

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

For this analysis, the Appendix G Thresholds are relied upon. The analysis utilizes factors and considerations identified in the City's 2006 L.A. CEQA Thresholds Guide, as

[90] Completion of the Sixth Street Viaduct Replacement Project is expected Summer of 2022. City of Los Angeles Bureau of Engineering, Sixth Street Viaduct Replacement Project, https://www.sixthstreetviaduct.org/about_the_project. Accessed August 6, 2021.

appropriate, to assist in answering the Appendix G Threshold questions. The factors to evaluate air quality impacts are listed below.

- Combustion Emissions from Construction Equipment
  - Type, number of pieces and usage for each type of construction equipment;
  - Estimated fuel usage and type of fuel (diesel, natural gas) for each type of equipment; and
  - Emission factors for each type of equipment.
- Fugitive Dust: Grading, Excavation and Hauling
  - Amount of soil to be disturbed on-site or moved off-site;
  - Emission factors for disturbed soil;
  - Duration of grading, excavation and hauling activities;
  - Type and number of pieces of equipment to be used; and
  - Projected haul route.
- Fugitive Dust: Heavy-Duty Equipment Travel on Unpaved Roads
  - Length and type of road;
  - Type, number of pieces, weight and usage of equipment; and
  - Type of soil.
- Other Mobile Source Emissions
  - Number and average length of construction worker trips to project site, per day; and
  - Duration of construction activities.

While these factors are important inputs in determining the amounts and nature of air pollution emissions generated by a project during construction, construction air quality emissions are evaluated in consideration of the thresholds set forth by the SCAQMD. Pursuant to the CEQA Guidelines (Section 15064.7), a lead agency may consider using, when available, significance thresholds established by the applicable air quality management district or air pollution control district when making determinations of significance. For purposes of this analysis, the City has determined to assess the potential air quality impacts of the Project in accordance with the most recent thresholds adopted by the SCAQMD in connection with its CEQA Air Quality Handbook, Air Quality Analysis Guidance Handbook, and subsequent SCAQMD guidance, as discussed below, and this assessment satisfies the considerations raised in the 2006 L.A. CEQA Thresholds Guide.[91]

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

Consistency with Applicable Air Quality Plans: CEQA Guidelines Section 15125 requires an analysis of project consistency with applicable governmental plans and policies. In accordance with the SCAQMD's CEQA Air Quality Handbook, the following criteria were used to evaluate the Project's consistency with the SCAQMD's 2016 AQMP and the City's General Plan Air Quality Element:

- Criterion 1: Will the Project result in any of the following:
  - An increase in the frequency or severity of existing air quality violations; or
  - Cause or contribute to new air quality violations; or
  - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
- Criterion 2: Will the Project exceed the assumptions utilized in preparing the AQMP?

The Project's potential impacts with respect to these criteria are discussed to assess the consistency with the SCAQMD's 2016 AQMP and applicable City General Plan Air Quality Element plans and policies.

Construction and Operational Emission Air Quality Standards. A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. The Air Basin is currently in non-attainment for ozone, PM10, and PM2.5. SCAQMD methodology recommends that significance thresholds be used to determine the potential cumulative impacts to regional air quality along with a project's consistency with the current AQMP.

The SCAQMD has established numerical significance thresholds for construction and operational activities. The numerical thresholds are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health.[92] Given that construction impacts are temporary and limited to the construction phase, the SCAQMD has established numerical significance thresholds specific to construction activity. Based on the thresholds in the SCAQMD CEQA Air Quality Handbook,[93] the Project would potentially result in a significant impact of a federal or State non-attainment pollutant if emissions of ozone precursors (VOC and NO_X), PM10, or PM2.5 would exceed the values shown in **Table IV.A-5**, *SCAQMD Regional Emissions Thresholds*.

92 SCAQMD, CEQA Air Quality Handbook, April 1993.
93 SCAQMD, Air Quality Significance Thresholds, April 2019.

TABLE IV.A-5
SCAQMD REGIONAL EMISSIONS THRESHOLDS (POUNDS PER DAY)

Activity	VOC	NO_X	CO	SO_2	PM10	PM2.5
Construction	75	100	550	150	150	55
Operations	55	55	550	150	150	55

SOURCE: SCAQMD, Air Quality Significance Thresholds, April 2019.

Localized Emission Impacts on Sensitive Receptors. In addition, the SCAQMD has developed a methodology to assess the potential for localized emissions to cause an exceedance of applicable ambient air quality standards or ambient concentration limits. Impacts would be considered significant if the following would occur:

- Maximum daily localized emissions of NO_X and/or CO during construction or operation are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for NO_2 and/or CO.[94]
- Maximum daily localized emissions of PM10 and/or PM2.5 during construction are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project Site to exceed 10.4 $\mu g/m^3$ over 24 hours (SCAQMD Rule 403 control requirement).
- Maximum daily localized emissions of PM10 and/or PM2.5 during operation are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project Site to exceed 2.5 $\mu g/m^3$ over 24 hours (SCAQMD Rule 1303 allowable change in concentration).
- The following conditions would occur at an intersection or roadway within one-quarter mile of a sensitive receptor:
  - The Project would cause or contribute to an exceedance of the CAAQS 1-hour or 8-hour CO standards of 20 or 9.0 parts per million (ppm), respectively.
  - Where the CO standard is exceeded at the intersection, a project would result in a significant impact if the incremental increase due to the project is equal to or greater than 1.0 ppm for the California 1-hour CO standard, or 0.45 ppm for the 8-hour CO standard.

The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and, therefore, not cause or contribute to an exceedance of the applicable ambient air quality standards or ambient concentration limits without project-specific

94 SCAQMD, Final Localized Significance Threshold Methodology, June 2003 and revised July 2008.

dispersion modeling.[95] This analysis uses the screening criteria to evaluate impacts from localized emissions where applicable.

Toxic Air Contaminants and Sensitive Receptors. Based on the SCAQMD thresholds, the Project would cause a significant impact by exposing sensitive receptors to toxic air contaminants if any of the following would occur:[96]

- The Project emits carcinogenic materials or TACs that exceed the maximum incremental cancer risk of ten in one million or a cancer burden greater than 0.5 excess cancer cases (in areas greater than or equal to 1 in 1 million) or an acute or chronic hazard index of 1.0.

Objectionable Odors and Other Emissions. With respect to other emissions, such as odors, the Project would be considered significant if it created objectionable odors affecting a substantial number of people. In addition, based on the thresholds in the SCAQMD CEQA Air Quality Handbook,[97] the Project would potentially result in a significant impact of an attainment, maintenance, or unclassified pollutant if emissions of CO or SO_2 would exceed the values shown in Table IV.A-5.

b) Methodology

The evaluation of potential impacts to regional and local air quality that may result from the construction and long-term operations of the Project is discussed below. Additional details are provided in the *Air Quality and Greenhouse Gas Technical Appendix* in Appendix C of this Draft EIR.

(1) SCAQMD Air Quality Guidance Documents

The SCAQMD published the CEQA Air Quality Handbook to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts.[98] The CEQA Air Quality Handbook provides standards, methodologies, and procedures for conducting air quality analyses in EIRs and was used extensively in the preparation of this analysis. However, the SCAQMD is currently in the process of replacing the CEQA Air Quality Handbook with the Air Quality Analysis Guidance Handbook. While this process is underway, the SCAQMD recommends that lead agencies avoid using the screening tables in Chapter 6 (Determining the Air Quality Significance of a Project) and the on-road mobile source emission factors in Tables A9-5-J1 through A9-5 of the CEQA Air Quality Handbook as they are outdated.

The SCAQMD instead recommends using other approved models to calculate emissions from land use projects, such as the California Emissions Estimator Model (CalEEMod) software, which is a model developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California Air Districts. CalEEMod is a

95 SCAQMD, Final Localized Significance Threshold Methodology, June 2003 and revised July 2008.
96 SCAQMD, CEQA Air Quality Handbook, April 1993.
97 SCAQMD, Air Quality Significance Thresholds, April 2019.
98 SCAQMD, CEQA Air Quality Handbook, April 1993.

statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions from a variety of land use projects.

The SCAQMD has published a guidance document called the Final Localized Significance Threshold Methodology for CEQA Evaluations that is intended to provide guidance when evaluating the localized effects from mass emissions during construction.[99] The SCAQMD adopted additional guidance regarding PM2.5 emissions in a document called Final Methodology to Calculate Particulate Matter (PM)2.5 and PM2.5 Significance Thresholds.[100] This latter document has been incorporated by the SCAQMD into its CEQA significance thresholds and Final Localized Significance Threshold Methodology.

(2) Consistency with Air Quality Management Plan

The SCAQMD is required, pursuant to the CAA, to reduce emissions of criteria pollutants for which the Air Basin is in non-attainment of the NAAQS (e.g., ozone and PM2.5).[101] The SCAQMD's 2016 AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving the five NAAQS related to these pollutants, including transportation control strategies from SCAG's 2016-2040 RTP/SCS designed to reduce VMT.[102] The 2016 AQMP control strategies were developed, in part, based on regional growth projections prepared by SCAG through 2040.[103] For this reason, projects whose growth is consistent with the assumptions used in the 2016-2040 RTP/SCS will be deemed to be consistent with the 2016 AQMP because their growth has already been included in the growth projections utilized in the formulation of the control strategies in the 2016 AQMP. Thus, emissions from projects, uses, and activities that are consistent with the applicable growth projections and control strategies used in the development of the 2016 AQMP would not jeopardize attainment of the air pollutant reduction goals identified in the AQMP even if their emissions exceed the SCAQMD's thresholds of significance.[104] As noted above, the 2016 AQMP has been adopted by the SCAQMD and CARB. Therefore, this analysis considers consistency of the Project (see Chapter II, *Project Description*, of this Draft EIR for additional details) with the 2016 AQMP based on the AQMP's consistency with applicable growth projections and emission control strategies.

99 SCAQMD, Final Localized Significance Threshold Methodology, June 2003 and revised July 2008.

100 SCAQMD, Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM2.5 Significance Thresholds, 2006.

101 The Los Angeles County portion of the Air Basin is designated as nonattainment for the federal lead standard; however, this was due to localized emissions from two lead-acid battery recycling facilities in the City of Vernon and the City of Industry that are no longer operating. For reference see South Coast Air Quality Management District, Board Meeting, Agenda No. 30, Adopt the 2012 Lead State Implementation Plan for Los Angeles County, May 4, 2012.

102 SCAQMD, 2016 AQMP, March 2017, pages ES-6 and 4-42.

103 SCAQMD, 2016 AQMP, March 2017, pages 4-42 to 4-44.

104 SCAQMD, CEQA Air Quality Handbook, April 1993, page 12-1.

(3) Consistency with General Plan – Air Quality Element

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

(4) Existing Project Site Emissions

Existing operational building emissions were estimated using CalEEMod, as described above. Mobile source emissions were based on facility provided information on truck and vehicle trips and emission factors from the CARB on-road vehicle emissions factor (EMFAC2017) model. In addition, emissions from transportation refrigeration units (TRUs) used to provide refrigeration for cargo transported by trucks were based on four hours of TRU operation per truck per day and emission factors from the CARB OFFROAD model.

Emissions from on-site natural gas combustion were based on usage data from the CEC's *California Commercial End Use Survey* (CEUS), which lists energy demand by building type.[105] Since 1978, the CEC has established building energy efficiency standards, which are updated periodically. The CEUS provides data on a limited statewide basis for different climate zones. Because CalEEMod applies correction factors to account for compliance with recent updates to the Title 24 Building Energy Efficiency Standards, energy demand is adjusted to account for assumed compliance with older Title 24 Building Energy Efficiency Standards, based on available conversion data.[106]

Other sources of emissions from existing uses include equipment used to maintain landscaping, such as lawnmowers and trimmers, and an on-site furnace. The CalEEMod software uses landscaping equipment emission factors from the CARB off-road (OFFROAD) emissions factor model and the CARB *Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment (6/13/2003)*.[107] The CalEEMod software assumes that landscaping equipment operates for 250 days per year in the Air Basin. Fugitive VOC emissions are based on consumer product usage factors provided by the SCAQMD within CalEEMod and architectural coating emission factors based on SCAQMD Rule 1113. Furnace emissions were based on facility provided information on furnace usage and USEPA natural gas combustion emission factors and

105 California Energy Commission, California Commercial End-Use Survey, http://capabilities.itron.com/CeusWeb/Chart.aspx. Accessed June 10, 2020.
106 CARB, CalEEMod User's Guide, Appendix E, Section 5, October 2017.
107 CARB, OFFROAD Modeling Change Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment, June 13, 2003.

included as part of .[108] The existing furnace is used infrequently and combusts a relatively minor amount of natural gas generating relatively low emissions (i.e., less than one pound per day for all modeled pollutants) and included in area emissions.

(5) Construction Impacts

Construction air quality impacts were assessed based on the incremental increase in emissions compared to baseline conditions. Under CEQA, the baseline environmental setting for an EIR is generally established at or around the time that the Notice of Preparation (NOP) for the EIR is published. As discussed previously, the Project Site is currently developed with existing one- to four-story freezer, cold storage, and dry storage warehouses with associated office space, loading docks, and surface parking. The existing warehouses range from approximately 22 to 61 feet in height and total approximately 205,393 square feet. These existing uses would be demolished and removed to allow for development of the Project. Therefore, the net change in construction emissions is based on the difference between the emissions from construction of the Project and existing Project Site emissions.

Project construction activities that would have the potential to create regional air quality impacts include vehicle trips generated by construction workers, vendor trucks, and haul trucks traveling to and from the Project Site and building activities such as the application of paint and other surface coatings. The Project's daily regional criteria pollutant emissions during construction have been estimated by assuming a conservative scenario for construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. The emissions have been estimated using the CalEEMod software, an emissions inventory software program recommended by the SCAQMD, and the CARB on-road vehicle EMFAC2017 model. The input values used in this analysis were adjusted to be Project-specific based on equipment types and the construction schedule. Heavy-duty off-road equipment that would be used during construction of the Project were provided by the Applicant's contractor representative. CalEEMod is based on outputs from the CARB OFFROAD and EMFAC models, which are emissions estimation models developed by CARB and used to calculate emissions from construction activities, including on- and off-road vehicles. These values were applied to the construction phasing assumptions used in the criteria pollutant analysis to generate criteria pollutant emissions values from construction equipment and worker vehicle trips for each construction activity. Haul truck trip estimates were based on excavation volumes obtained from the Applicant and 14 cubic yards soil capacity haul trucks; cement truck trip estimates were based on mat foundation volumes obtained from the Applicant and 8.5 cubic yards concrete capacity concrete trucks; worker trip estimates were provided by the Applicant; and vendor supply and material supply truck trip estimates were also provided by the Applicant's contractor representative based on the maximum expected number of supply and material trucks and the maximum number of workers and visitors traveling to the site during all phases of Project construction. Criteria pollutant emissions from haul trucks, cement trucks and vendor

[108] USEPA, AP-42: Compilation of Air Emission Factors, Chapter 1.4, Natural Gas Combustion.

trucks were estimated outside of CalEEMod using EMFAC2017 emission factors for heavy-duty trucks. Construction phasing would include demolition of the existing buildings and associated parking, site clearing, grading, excavation, subterranean parking and building construction. The Project would export approximately 531,319 cubic yards of soil and generate approximately 26,848 cubic yards of demolition debris (asphalt, interior and exterior building demolition, and general construction debris). Emissions from these activities were estimated by construction phase. The maximum daily emissions were predicted values for the worst-case day and do not represent the emissions that would occur for every day of Project construction. The maximum net daily emissions were compared to SCAQMD daily regional significance thresholds. A detailed discussion of the Project's construction phasing and equipment list is available in the *Technical Appendix for Air Quality and Greenhouse Gas Emissions* for the Project, which is provided in Appendix C of this Draft EIR.[109]

Project construction activities that would have the potential to create local air quality impacts include fugitive dust from grading and demolition and building activities such as the application of paint and other surface coatings. The localized effects from the on-site portion of the Project's construction emissions were evaluated at the nearby sensitive receptor locations that would be potentially impacted by Project construction in accordance with the SCAQMD's *Final Localized Significance Threshold Methodology* (June 2003, revised July 2008).[110] The localized significance thresholds only address NO_X, CO, PM10, and PM2.5 emissions. The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards without the need for Project-specific dispersion modeling. The localized analysis for the Project is based on this SCAQMD screening criteria. The Project Site is located within the boundaries of the Central City North Community Plan Area within the Arts District of Downtown Los Angeles and is approximately 5.45 acres in size, with the nearest off-site receptors located west and south of the Project Site along East 7th Place, East 7th Street and Mateo Street. Therefore, the screening criteria used in the analysis were those applicable for a 5-acre site in the Central Los Angeles area with sensitive receptors located 25 meters away, which accounts for all adjacent off-site sensitive receptors.[111,112] The maximum net daily emissions from construction of the Project were compared to these screening criteria.

109 Impacts from asbestos and lead-based paint from Project demolition are expected to be less than significant with compliance with regulations. For additional details please refer to Section IV.F, *Hazards and Hazardous Materials* of this Draft EIR.

110 SCAQMD, Final Localized Significance Threshold Methodology, June 2003 and revised July 2008.

111 SCAQMD, Final Localized Significance Threshold Methodology, June 2003 and revised July 2008, page 3-3. "Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters."

112 Using the screening criteria for those applicable for a 5-acre site is conservative because the localized significance thresholds are project site dependent and the allowable thresholds increase with increasing project size. Therefore, using a 5-acre site threshold instead of the Project Site's full 5.45 acres yields a more stringent analysis.

The Project may include an on-site concrete batch plant to provide concrete. The emissions analysis conservatively sums emissions from both concrete trucks to deliver concrete to the Project Site as well as emissions from a concrete batch plant.[113] Since it not known if the Project would include a concrete batch plant, this approach was used to account for the emissions should the Project use a concrete batch plant and/or obtain concrete from concrete truck deliveries. Particulate matter emissions associated with concrete batch plant operations were calculated using emission factors outlined in the USEPA's AP-42 emission factor reference document and material requirements based on the max hourly, daily, and annual cubic yards of concrete provided by the Applicant's contractor representative.[114] The calculation accounts for emissions of different concrete components (aggregate, sand, cement, etc.) and the wind erosion from stockpiling the materials. Stockpile emissions assume an AP-42 90% control efficiency for regular watering or use of dust suppressants as required by SCAQMD Rule 403.

For consistency with the emissions modeling provided in Section IV.C, *Energy,* and IV.E, *Greenhouse Gas Emissions,* Project construction was modeled to start in 2020, but will commence at a later date. While the onset of construction was delayed to a later date than assumed in the modeling analysis, construction emissions would be similar to or less than those analyzed, because a more energy-efficient and cleaner burning construction equipment and vehicle fleet mix would be expected in the future. This is because State regulations require construction equipment fleet operators to phase-in less polluting heavy-duty equipment and trucks over time. As a result, since the Project would commence construction on a later date than modeled in this analysis, air quality impacts would be lower than the impacts disclosed herein.

(6) Operational Impacts

Operational impacts were assessed for two scenarios (Project and Project with the Deck Concept) based on whether or not the Project includes a deck that would extend over the adjacent railway.

Operation of the Project has the potential to generate criteria pollutant emissions through vehicle and truck trips traveling to and from the Project Site. For mobile sources, the estimated vehicle trips and maximum daily VMT were provided for the Project uses in the Project's Transportation Assessment (TA) where the VMT analysis used the City's VMT analysis procedures and LA VMT Calculator.[115] The VMT Calculator is based on Institute of Transportation Engineers (ITE) trip generation rates that implements the mixed-use trip generation model methodology from the USEPA, and utilizes socioeconomic, transit, and trip length data from the Los Angeles citywide travel demand model that is calibrated to Los Angeles conditions in order to adjust the trips for internalization, transit, and

113 Concrete batch plants are temporary concrete mixing facilities that can be assembled at a construction site. This centralizes concrete production and reduces the amount of trips of concrete trucks traveling to and from the site.

114 USEPA, AP-42: Compilation of Air Pollutant Emissions Factors: Volume I: Stationary Point and Area Sources, Fifth Ed., Table 11.12-2.

115 Fehr & Peers, Transportation Assessment for the 670 Mesquit Project, April 2021.

walkability.[116,117] The EMFAC2017 model was run in the emissions mode (also referred to as the "Burden" mode) and used to generate Air Basin-specific vehicle fleet emission factors in units of grams or metric tons per mile. These emission factors were then applied to the daily VMT to obtain daily mobile source emissions.

The estimated VMT from the TA prepared by Fehr & Peers takes into account trip distance reductions due to the Project's characteristics, including internal capture from co-locating commercial and residential uses on the Project Site, residential and job densities, neighborhood and site walkability and connectivity, and proximity to public transit and job centers.

Daily VMT are provided in the TA prepared for the Project.[118] Due to the off-peak nature of the temporary special event programming (occurring on the weekends), they are not anticipated to add traffic to weekday peak traffic conditions. The types and locations of special events would vary, but could include a farmer's market, art fair or art installation, musical performances or small concerts, outdoor films, food trucks, group exercise/yoga/tai chi classes, outdoor classrooms, and community meeting space. In addition, due to the off-peak nature of these events, the events would utilize the parking that is freed up by the office building tenants that would not be present on weekends. Additionally, adjustments were made to account for internal capture and transit/bike/walk trips. Based on the Project's TA, 27,040 daily vehicle trips are estimated under the Project scenario. Similarly, the Project with the Deck Concept is estimated to have 27,493 daily trips. As discussed on pages 64 through 66 of the Project's TA, the maximum daily vehicle trips for both the Project and the Project with the Deck Concept occur on weekdays. As such, the temporary special events and the permanent Weekend Farmers Market under the Project with the Deck Concept were not included as part of the peak hour weekday traffic analysis and weekday trips since they would occur on weekends. However, weekend trip generation rates for the Project with the Deck Concept that include permanent programming were developed to confirm that weekend land use activity would generate fewer trips than weekdays (see the Project's TA for additional details).[119] Therefore, daily maximum operational AQ emissions estimates would occur on weekdays as maximum daily VMT and mobile related emissions are expected on weekdays as compared to weekends that would have fewer trips and VMT and Project daily maximum weekday operational emissions were compared with applicable SCAQMD thresholds.

The Project's operational emissions were estimated using the CalEEMod software. CalEEMod was used to forecast the daily regional criteria pollutant emissions from on-site area and stationary sources that would occur during long-term Project operations. Emissions would result from area sources located on-site such as natural gas combustion from water heaters, boilers, and cooking stoves, landscaping equipment, and use of

116 USEPA, Mixed-Use Trip Generation Model, https://www.epa.gov/smartgrowth/mixed-use-trip-generation-model. Accessed June 11, 2020.
117 Fehr & Peers, Transportation Assessment for the 670 Mesquit Project, April 2021.
118 Fehr & Peers, Transportation Assessment for the 670 Mesquit Project, April 2021.
119 Fehr & Peers, Transportation Assessment for the 670 Mesquit Project, April 2021.

consumer products. The Project is not expected to contain any large stationary combustion equipment such as large boilers or combustion turbines. Natural gas usage factors in CalEEMod are based on the CEC 2002 CEUS data adjusted to reflect more recent Title 24 Building Energy Efficiency Standards.

Stationary sources would include two on-site emergency generators with capacities estimated at approximately 1,500 kilowatts (2,012 hp) and one emergency generator estimated at approximately 750 kW (1,006 hp). The emergency generators would result in emissions during maintenance and testing operations. Emergency generators are permitted by the SCAQMD and regulated under SCAQMD Rule 1470. Maintenance and testing would not occur daily, but rather periodically, up to 50 hours per year per Rule 1470. For the purposes of estimating maximum daily emissions, it is estimated that the emergency generators would operate for up to one hour each in a day for maintenance and testing purposes.

Stationary sources would also include four on-site cooling towers to assist in dissipating heat from commercial processes of the Project, and would utilize a flow rate of approximately 151,470 gallons per day[120] (refer to Section IV.R, *Water Supply*, of this Draft EIR). Emissions from the cooling towers occur as a result of air containing chemical impurities passing through the cooling water in the tower where some of the liquid water is entrained into the air stream and carried out of the tower as “drift” droplets where the particulate matter constituent of the drift droplets may be classified as an emission. Large drift droplets often settle out of the tower exhaust air stream and deposit near the tower, while other drift droplets may evaporate before being deposited in the area surrounding the tower, and they also can produce PM emissions. To estimate daily emissions, particulate matter emission factors for wet cooling towers calculated by the USEPA were used, conservatively assuming it would operate 24 hours a day, every day of the year using the above mentioned daily flow rate.[121]

Operational air quality impacts were assessed based on the incremental increase in emissions compared to baseline conditions. Under CEQA, the baseline environmental setting for an EIR is generally established at or around the time that the Notice of Preparation (NOP) for the EIR is published. As discussed previously, the Project Site is currently developed with existing one- to four-story freezer, cold storage, and dry storage warehouses with associated office space, loading docks, and surface parking. The existing warehouses range from approximately 22 to 61 feet in height and total approximately 205,393 square feet. These existing uses would be demolished and removed to allow for development of the Project. Therefore, the net change in operational emissions is based on the difference between the existing Project Site emissions and the emissions of the Project Site at full buildout. The maximum daily net emissions from

120 This value excludes City-mandated water conservation measures. Therefore, emissions from cooling towers are conservative and slightly overestimate the actual expected emissions.

121 USEPA, Air Pollutant Factors (AP-42), Fifth Edition, Volume I - Chapter 13.4: Wet Cooling Towers.

operation of the Project are compared to the SCAQMD daily regional significance thresholds.

For emissions modeling purposes, the Project's emissions were calculated assuming buildout in 2025. However, the Project would be completed as early as 2026. Therefore, the Project's emissions modeling is slightly conservative since operational emissions would be less than those analyzed here due to the improving vehicle technology that would be more fuel-efficient and lead to a cleaner vehicle fleet mix traveling to and from the Project Site as reflected in EMFAC mobile source emission factors. As a result, Project buildout at a later date than analyzed in emissions modeling would result in air quality emission impacts that would be lower than the impacts disclosed herein.

(7) Localized Emissions

The localized effects from the on-site portion of the maximum daily net emissions from Project operation were evaluated at the nearby sensitive receptor locations that would be potentially impacted by operation of the Project according to the SCAQMD's *Final Localized Significance Threshold Methodology* (June 2003, revised July 2008).[122,123] The localized impacts from operation of the Project were assessed similar to the construction emissions, as discussed previously. For further explanation, please see the *Technical Appendix for Air Quality and Greenhouse Gas Emissions* in Appendix C of this Draft EIR.

(8) CO Hotspots

The greatest quantities of CO are produced from motor vehicle combustion and are usually concentrated at or near ground level because they do not readily disperse into the atmosphere, particularly under cool, stable (i.e., low or no wind) atmospheric conditions. Localized areas where ambient concentrations exceed State and/or federal standards are termed "CO hotspots." The potential for the Project to cause or contribute to the formation of off-site CO hotspots was evaluated based on prior dispersion modeling of the four busiest intersections in the Air Basin that the SCAQMD conducted for its CO Attainment Demonstration Plan in the AQMP. The analysis compares the intersections with the greatest peak-hour traffic volumes that would be impacted by the Project to the intersections modeled by the SCAQMD. Project-impacted intersections with peak-hour traffic volumes that would be lower in traffic volumes than the intersections modeled by the SCAQMD, in conjunction with background CO levels, would not exceed the CO concentrations modeled in the SCAQMD AQMP.

122 SCAQMD, Final Localized Significance Threshold Methodology, June 2003 and revised July 2008.

123 Using the screening criteria for those applicable for a 5-acre site is conservative because the localized significance thresholds are project site dependent and the allowable thresholds increase with increasing project size. Therefore, using a 5-acre site threshold instead of the Project Site's full 5.45 acres yields a more stringent analysis.

(9) Toxic Air Contaminant Impacts (Construction and Operations)

The greatest potential for construction TAC emissions would be associated with DPM emissions associated from heavy-duty equipment during excavation and grading activities. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer based on the use of standard risk-assessment methodology. Additionally, the SCAQMD CEQA guidance does not require a HRA for short-term construction emissions. Construction activities associated with the Project would be sporadic, transitory, and short-term in nature (approximately 64 months). Thus, construction of the Project would not result in a substantial, long-term (i.e., 70-year) source of TAC emissions. Therefore, a qualitative assessment of TAC emissions associated with short-term construction TAC emissions is provided in the analysis section below.

During long-term operations, TACs could be emitted as part of periodic maintenance operations, periodic testing and maintenance of the emergency generator, restaurant charbroiling, from routine cleaning, from periodic painting, etc., and from periodic visits from delivery trucks and service vehicles. However, these events are expected to be occasional and result in minimal emissions exposure to off-site sensitive receptors. As the Project consists of residential, hotel, retail, office, restaurant uses, and other commercial uses, the Project would not include sources of substantial TAC emissions identified by the SCAQMD or CARB siting recommendations.[124,125] Thus, a qualitative analysis is appropriate for assessing the Project's operational emissions. The siting of the Project itself in relation to off-site sources of TACs is addressed under land use compatibility for the surrounding area in Section IV.H, *Land Use and Planning*, of this Draft EIR.

c) Project Design Features

Refer to Project Design Feature GHG-PDF-1 (Green Building Features) in Section IV.E, *Greenhouse Gas Emissions,* of this Draft EIR. With this Project Design Feature, the Project will be designed to achieve the equivalent of the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Silver Certification level or equivalent green building standards.

The following Project Design Feature would also be implemented as part of the Project:

> **AQ-PDF-1: Fireplace Exclusion:** The residential units within the Project will not include the installation of natural gas-fueled fireplaces.

124 SCAQMD, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, 2005, Table 2-3.

125 CARB, Air Quality and Land Use Handbook: A Community Health Perspective, 2005, Table 1-1.

d) Analysis of Project Impacts

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

(1) Impact Analysis

The following analysis addresses the Project's consistency with applicable SCAQMD and SCAG policies, inclusive of regulatory compliance. In accordance with SCAQMD's CEQA Air Quality Handbook, the following criteria are required to be addressed to determine the Project's consistency with applicable SCAQMD and SCAG policies:

(a) Criterion 1

With respect to the first criterion, as discussed under the analysis for Threshold (c) below, localized concentrations of NO_2 as NO_X, CO, PM10, and PM2.5 have been analyzed for the Project. As described by SCAQMD, LSTs are applicable to NO_X, CO, PM10 and PM2.5 and represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. The Project would not emit ozone directly but could contribute to ozone formation from emissions of NO_X, which is an ozone precursor emission. SO_2 emissions would be negligible during construction and long-term operations and, therefore, would not have the potential to cause or effect a violation of the SO_2 ambient air quality standard. Since VOCs are not a criteria pollutant, there is no ambient standard or localized threshold for VOCs. However, due to the role VOCs play in O_3 formation, it is classified as a precursor pollutant, and only a regional emissions threshold has been established.

The Project's NO_X, CO, PM10, and PM2.5 emissions during construction and operations were analyzed: (1) to ascertain potential effects on localized concentrations; and (2) to determine if there is a potential for such emissions to cause or effect a violation of the ambient air quality standards for NO_2, CO, PM10, and PM2.5. As shown in Table IV.A-14, the increases in localized emissions of NO_X, CO, PM10, and PM2.5 during construction would not exceed the SCAQMD-recommended localized significance thresholds at sensitive receptors in proximity to the Project Site with implementation of AQ-MM-1 (Refer to Mitigation Measure AQ-MM-1 below for additional information). As shown in Table IV.A-13, the increases in long-term localized emissions of NO_X, CO, PM10, and PM2.5 emissions during operation of the Project would not exceed the SCAQMD-recommended localized significance thresholds at sensitive receptors in proximity to the Project Site. As a result, the Project would not contribute to a long-term increase the frequency or severity of an existing violation or cause or contribute to new violations for these pollutants.

Because the Project would not introduce any substantial stationary sources of emissions, CO is the appropriate benchmark pollutant for assessing local area air quality impacts

from post-construction motor vehicle operations.[126] As indicated below in Threshold (c), no intersections would result in a CO hotspot in excess of the ambient air quality standards, and impacts would be less than significant. Therefore, the Project would not increase the frequency or severity of an existing CO violation or cause or contribute to new CO violations.

Therefore, in response to Criterion 1, the Project would not increase the frequency or severity of an existing violation or cause or contribute to new violations for these pollutants. As the Project would not exceed any of the State and federal standards, the Project would also not delay timely attainment of air quality standards or interim emission reductions specified in the AQMP.

(b) Criterion 2

With respect to the second criterion for determining consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's 2016-2040 RTP/SCS regarding population, housing, and growth trends.[127] Determining whether or not a project exceeds the assumptions reflected in the AQMP involves the evaluation of consistency with applicable population, housing, and employment growth projections and appropriate incorporation of AQMP control measures. The following discussion provides an analysis with respect to these criteria.

(i) Air Quality Management Plan Consistency

Construction and operation of the Project would comply with applicable required fleet rules and control strategies to reduce on-road truck emissions (i.e., 13 CCR, Section 2025 [CARB Truck and Bus regulation]), and other applicable SCAQMD rules specified and incorporated in the 2016 AQMP. As discussed under Subsection 3.b, *Methodology*, projects, uses, and activities that are consistent with the applicable growth projections and control strategies used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP even if their emissions exceed the SCAQMD's thresholds of significance. As discussed below, compliance with the applicable required fleet rules and control strategies and requirements would render the Project consistent with, and meet or exceed, the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. Thus, the Project's construction-related and operations-related criteria pollutant emissions would not cause the Air Basin's criteria pollutant emissions to worsen so as to impede the SCAQMD's efforts to achieve attainment with respect to any criteria pollutant for which it

126 SCAQMD, CEQA Air Quality Handbook, Chapter 12, Assessing Consistency with Applicable Regional Plans, April 1993.

127 While SCAG's Regional Council adopted the 2020-2045 RTP/SCS On September 3, 2020, as explained above under Subsection 3.b.2, *Consistency with Air Quality Management Plan*, the SCAQMD's 2016 AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving five NAAQS related to these pollutants, including transportation control strategies from the 2016-2040 RTP/SCS designed to reduce VMT, and the 2016 AQMP control strategies were developed, in part, based on regional growth projections prepared by SCAG through 2040. For this reason, consistency with the 2016-2040 SCAG RTP/SCS remains the appropriate version when discussing a project's consistency with the 2016 AQMP.

is currently not in attainment of the NAAQS and CAAQS (e.g., ozone, PM10, and PM2.5) [128] or to cause the Air Basin to deteriorate from its current attainment status with respect to any other criteria pollutant emissions.

As further discussed below, the Project is also consistent with the 2016 AQMP, as the Project will incorporate into its design appropriate control strategies set forth in the 2016 AQMP for achieving its emission reduction goals and would be consistent with the demographic and economic assumptions upon which the 2016 AQMP is based.

(a) Construction Growth Projections

The Project would generate short-term construction jobs, but these jobs would not necessarily bring new construction workers or their families into the region, since construction workers are typically drawn from an existing regional pool of construction workers who travel among construction sites within the region as individual projects are completed, and are not typically brought from other regions to work on developments such as the Project. Moreover, these jobs would be temporary in nature. **Therefore, the Project's construction jobs would not conflict with the long-term employment or population projections upon which the 2016 AQMP is based.**

(b) Operations Growth Projections

As discussed in Section IV.J, *Population and Housing*, of this Draft EIR, the Project's growth would also be consistent with the growth projections contained in the 2016-2040 RTP/SCS, which forms the basis of the growth projections in the 2016 AQMP. As stated above, in Subsection 3.b.6, for purposes of the air quality modeling, the Project is assumed to be operational in 2025 to provide a conservative estimate of emissions. However, if the Project buildout comes at a later time, the emissions will be less than disclosed herein. Based on the SCAG 2016-2040 RTP/SCS growth projections, the Project's proposed 308 housing units would comprise approximately 0.3 percent of SCAG's year 2026 estimated increase of 117,257 households within the City and approximately 0.1 percent of SCAG's 2040 estimated increase of 299,657 households within the City, relative to 2017.[129,130] Based on the SCAG 2016-2040 RTP/SCS growth projections, the Project would result in an increase in the number of employees on the Project Site of approximately 4,630 net new employees, which would comprise approximately 3.0 percent of SCAG's year 2026 estimated increase of 151,939 employees within the City and approximately 1.2 percent of SCAG's 2040 estimated increase of 388,289 employees within the City.[131] However, the Project would have a

128 The Los Angeles County portion of the Air Basin is designated as nonattainment for the federal lead standard; however, this was due to localized emissions from two lead-acid battery recycling facilities in the City of Vernon and the City of Industry that are no longer operating. For reference see SCAQMD, Board Meeting, Agenda No. 30, Adopt the 2012 Lead State Implementation Plan for Los Angeles County, May 4, 2012.

129 While air quality emissions were analyzed based on a conservative buildout year of 2025, buildout is expected in 2026 and, for this reason, population and housing is compared to SCAG's 2026 estimates. Refer to Section IV.J, *Population and Housing*, of this Draft EIR for additional information.

130 SCAG, 2016-2040 RTP/SCS, Demographics and Growth Forecast Appendix, April 2016, page 24.

131 SCAG, 2016-2040 RTP/SCS, Demographics and Growth Forecast Appendix, April 2016, page 24.

small effect on the overall employment projections for the City and Downtown areas. The Project's contribution to housing would be consistent with SCAG housing projections for the City and employment projections for the City. The Project's increases in population, housing, and employment would be consistent with SCAG's 2016-2040 RTP/SCS goals and would be consistent with the growth projections contained in SCAG's 2016-2040 RTP/SCS, which form the basis of the growth projections in the 2016 AQMP.

As discussed above under Subsection 3.b, *Methodology*, projects, uses, and activities that are consistent with the applicable growth projections and control strategies used in the development of the AQMP would not jeopardize attainment of the air quality reductions identified in the AQMP, even if their emissions exceed the SCAQMD's thresholds of significance.[132] The Project would not obstruct implementation of the 2016 AQMP, as discussed below under Thresholds (b), (c), and (d). Additionally, the Project's regional construction and operational emissions would be less than significant with implementation of feasible mitigation measures (discussed further below under the *Mitigation Measures* subsection) and its localized construction and operational emissions would be less than significant. **As a result, the Project would be consistent with the growth projections and control strategies used in the development in the 2016 AQMP.**

(ii) Control Strategies

(a) Construction

During its construction phase, the Project would comply with CARB's requirements to minimize short-term emissions from on-road and off-road diesel equipment, and with SCAQMD's regulations such as Rule 403 for controlling fugitive dust and Rule 1113 for controlling VOC emissions from architectural coatings. Furthermore, the Project would also utilize construction contractors in compliance with State on-road and off-road vehicle rules, including the ATCM that limits heavy-duty diesel motor vehicle idling to five minutes at any location (Title 13 CCR, Section 2485), the Truck and Bus regulation that reduces NO_X, PM10, and PM2.5 emissions from existing diesel vehicles operating in California (13 CCR, Section 2025), and the In-Use Off-Road Diesel Fueled Fleets regulation that reduces emissions by the installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission controlled models (13 CCR, Section 2449). It is further noted that, as described in Mitigation Measure AQ-MM-1, the Project would also require the use of construction equipment that meet stringent CARB and USEPA Tier 4 Final emissions standards, which would accelerate the use of newer emission-controlled construction equipment models beyond regulatory requirements. **Compliance with these requirements and mitigation measures would be consistent with and meet or exceed the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities.**

[132] SCAQMD, CEQA Air Quality Handbook, April 1993, page 12-1.

(b) Operations

The Project's location, design and land uses would be consistent with the 2016 AQMP during operations. As discussed above, the 2016 AQMP includes land use and transportation strategies from the 2016-2040 RTP/SCS that are intended to reduce VMT and resulting regional mobile source emissions. The majority of these strategies are to be implemented by cities, counties, and other regional agencies, such as SCAG and SCAQMD although some can be furthered by individual development projects.

The Project's location, design, and land uses would support transportation control strategies related to reducing vehicle trips for residents, patrons and employees by increasing residential, hotel and commercial density near public transit. The Project is considered an "urban infill" project, as it would replace existing industrial uses with a high-density, mixed-use development. The Project proposes higher density, consistent with compact growth, on a parcel of infill urban land accessible to and served by public transit, such as existing Metro bus routes (e.g., local routes 18, 60, and 62, and rapid route 720) and a Greyhound station located at the southwest corner of 7th Street and Decatur Street, all located within 0.3 miles of the Project Site. New housing and job growth, as a result of the completed Project, is focused in an HQTA. This analysis provides evidence of the Project's consistency with the 2016 AQMP's goal of reducing mobile source emissions as a source of NO_X and PM2.5. As described above, by locating its residential uses within an area that has existing high quality public transit (with access to existing local and regional bus service), employment opportunities, restaurants, and entertainment, all within walking distance, and by including features that support and encourage pedestrian activity and other non-vehicular transportation and increased transit use in the Arts District of Downtown Los Angeles, the Project would reduce vehicle trips and VMT, and the corresponding reduction in air pollutant emissions.

The Project's mobile source emissions are calculated based on the VMT generated by the Project, as obtained from the Project's TA,[133] which take into account the Project Site's location within the City, incorporates VMT reductions from the land use characteristics, and Project-specific transportation demand management features (refer to Section IV.L, *Transportation*, for a discussion of the transportation demand management features). **Thus, the Project would not conflict with the 2016 AQMP in regard to transportation control strategies from the 2016-2040 RTP/SCS that are intended to reduce VMT and resulting regional mobile source emissions.**

(c) General Plan Air Quality Element

The Project would promote the General Plan Air Quality Element goals, objectives and policies as listed in Subsection 2.b(4)(a), *City of Los Angeles Air Quality Element*. In particular, the Project location and characteristics, as discussed above, would achieve several goals, policies and objectives of the Air Quality Element by locating its development in an urban infill area and by establishing a land use pattern that promotes

133 Fehr & Peers, Transportation Assessment for the 670 Mesquit Project, April 2021.

sustainability. As described above, the Project would support and encourage pedestrian activity in the Arts District of Downtown Los Angeles and contribute to a land use pattern that addresses housing needs. The Project is located in a Transit Priority Area (TPA) as defined in PRC Section 21099 and confirmed by the Technical Memorandum – Applicability of Transit Priority Area (TPA) to the 670 Mesquit Project prepared for the Project[134] As such, the Project would reduce vehicle trips and air pollutant emissions generated by the proposed development by locating residential uses within an identified TPA that has multiple public transit options (with access to existing local and regional bus and rail service), and employment opportunities, restaurants and entertainment, all within walking distance. As such, the Project would provide opportunities for the use of alternative modes of transportation, including convenient access to public transit and opportunities for walking and biking, thereby facilitating a reduction in VMT.

The reduction in VMT is supported by a number of land use characteristics, such as proposed development density, location, mix of land uses, proximity to alternative transportation options, and pedestrian oriented design. The Project would increase the site density to approximately 57 dwelling units per acre.[135] Site density is a land use characteristic that reduces emissions associated with transportation as it reduces the distance people travel for work or services and provides a foundation for the implementation of other strategies, such as enhanced transit services.[136] The Project would provide a mix of residential, hotel, and commercial uses (including office). Increased land use diversity and mixed-uses is a VMT-reducing characteristic for projects that locate different types of land uses near one another since trips between land use types are shorter and can be accommodated by alternative modes of transportation, such as public transit, bicycles, and walking.[137] The Project Site is located in an area that offers access to multiple other nearby destinations, including restaurant, bar, office, retail, entertainment, and residential uses. Increased destination accessibility provides ready access to multiple destinations in close proximity to the Project Site, which encourages walking and non-automotive forms of transportation.[138] The Project Site is also located within 1.0 miles of public transportation, including the existing Metro bus routes (e.g., 18, 60, 62, 720) and a Greyhound station located at the southwest corner of 7th Street and Decatur Street, all located within 0.3 miles of the Project Site. The closest Los Angeles Department of Transportation (LADOT) stop for the LADOT Downtown Area Short Hop (DASH) Loop A is located at the intersection of Molino Street and Palmetto Street, approximately 0.28 miles northwest of the Project Site. The closest existing Metro light rail station is the L (Gold) Line Pico/Aliso Station, approximately 1.0 mile from the Project Site. Increased transit accessibility facilitates the use of transit by people traveling to or

134 Fehr & Peers, Technical Memorandum – Applicability of Transit Priority Area (TPA) to the 670 Mesquit Project prepared for the Project, September 2020. Provided in Appendix B of this Draft EIR.
135 The Project Site is 5.45 acres and the Project would have 308 dwelling units (308 dwelling units / 5.45 acres = 57 dwelling units per acre).
136 CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, 2010, pages 155-158.
137 CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, 2010, pages 162-166.
138 CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, 2010, pages 167-170.

from a location.[139] Furthermore, as discussed in Chapter II, *Project Description*, the Project would improve the street-level pedestrian environment and connectivity by providing four major pedestrian passageways (Entry Plazas) between Mesquit Street and the eastern edge of the Project Site that would visually connect Boyle Heights, the Los Angeles River, the Arts District, and greater Downtown. Three of these Entry Plazas would provide midblock access through the Project to its eastern edge, further facilitating pedestrian connectivity. The Project's pedestrian features would be integrated into the adjacent pedestrian network to maintain connections with multimodal facilities. Residents, visitors, patrons, and employees arriving to the Project Site by bicycle would have the same access opportunities as pedestrians and would be able to utilize on-site bicycle parking. Providing pedestrian and bicycle access that minimizes barriers and links the Project Site with existing or planned external streets encourages people to walk instead of drive and reduces VMT.[140]

As described in Section IV.E, *Greenhouse Gas Emissions*, of this Draft EIR, the Project design includes characteristics that would reduce trips and VMT when compared to a standard project within the Air Basin as measured by CalEEMod. These relative reductions in vehicle trips and VMT from a standard project within the Air Basin help quantify the criteria air pollutant emissions reductions achieved by locating the Project in an infill, HQTA area that promotes alternative modes of transportation. Previously, trip generation for land uses was calculated based on survey data collected by the ITE. However, these ITE trip generation rates were based on data collected at suburban, single-use, free standing sites, which may not be representative of urban mixed-use environments. Beginning in 2019, the USEPA has sponsored a study to collect travel survey data from mixed-use developments in order provide a more representative trip generation rate for multi-use sites. Results of the USEPA survey indicate that trip generation and VMT are affected by factors such as resident and job density, availability of transit, and accessibility of biking and walking paths. Based on these factors, the USEPA has developed equations known as the EPA Mixed- Use Development (MXD) model to calculate trip reductions for multi-use developments.[141] The LADOT VMT Calculator incorporates the USEPA MXD model and accounts for project features such as increased density and proximity to transit, which would reduce VMT and associated fuel usage in comparison to free-standing sites. As shown in Appendix B, Air Quality and Greenhouse Gas Emissions Appendix, and the Project's TA, included as Appendix M-1 of this Draft EIR, [142] incorporation of USEPA MXD VMT reduction features applicable to the Project results in a 22.5 percent reduction in overall VMT for the Project and resultant pollutant emissions and in a 22.4 percent reduction in overall VMT for the Project with the Deck Concept and resultant pollutant emissions. This reduction in VMT would not conflict with the General Plan Air Quality Element, which supports less reliance on single-

139 CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, 2010, pages 171-175.
140 CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, 2010, pages 186-189.
141 USEPA, Mixed-Use Trip Generation Model, www.epa.gov/smartgrowth/mixed-use-trip-generation-model, accessed on December 16, 2019.
142 Fehr & Peers, Transportation Assessment for the 670 Mesquit Project, April 2021.

occupant vehicles, reducing land use transportation emissions and associated air quality impacts, and providing people with less polluting transportation options.

Based on the above analysis, the Project would be consistent with, and not conflict with, applicable air quality policies of the General Plan's Air Quality Element.

(d) Project with the Deck Concept

(i) Criterion 1

Construction of the Project with the Deck Concept would require similar construction activities as the Project. The Project and the Project with the Deck Concept would use a similar mix of construction equipment, but the Project would require a similar or slightly reduced construction intensity level on a maximum construction activity day as compared to the Project with the Deck Concept given that the Deck would not be constructed under the Project. As such the analysis provided above for the Project is based on the worst-case construction activity, which includes concurrent construction of the buildings and the Deck. In addition, the Project with the Deck Concept would comply with all of the control strategies described above under threshold (a), Subsection 3.d(1)(b)(ii)(a), *Construction,* for the Project. Thus, the conclusions for construction are the same and apply to both the Project and the Project with the Deck Concept. In addition, the amount of maximum daily construction equipment and emissions, which is in large part the basis for the analysis, would be the same for the Project with the Deck Concept. As such, the air quality emissions during construction calculated in the analysis shown below in Tables IV.A-6 and IV.A-9 also reflects air quality emissions associated with the construction of the Project with the Deck Concept and the increases in localized emissions of NO_X, CO, PM10, and PM2.5 during construction of the Project with the Deck Concept would not exceed the SCAQMD-recommended localized significance thresholds at sensitive receptors in proximity to the Project Site. In addition, as shown in Table IV.A-14, the increases in localized emissions of NO_X, CO, PM10, and PM2.5 emissions during operation of the Project with the Deck Concept would not exceed the SCAQMD-recommended localized significance thresholds at sensitive receptors in proximity to the Project Site. **Therefore, in response to Criterion 1, the Project with the Deck Concept would not increase the frequency or severity of an existing violation or cause or contribute to new violations for these pollutants. As the Project with the Deck Concept would not exceed any of the State and federal standards, the Project with the Deck Concept would also not delay timely attainment of air quality standards or interim emission reductions specified in the AQMP.**

(ii) Criterion 2

Construction of the Project with the Deck Concept would require similar construction activities as the Project. In addition, all operational components related to the location, land uses proposed, compliance with regulations, and implementation of Project Design Features would be similar to that of the Project. Thus, the conclusions regarding impact significance presented above are the same and apply to the Project and the Project with

the Deck Concept. In addition, as the Deck would increase the outdoor public open space by 132,000 square feet, this would further encourage utilization of alternative modes of transportation in support of the transportation control strategies from the 2016-2040 RTP/SCS as the Deck would provide expanded pedestrian areas as compared to the Project. The Deck would provide Project residents, visitors, and employees with expanded pedestrian access to potential future Metro transit projects and would provide an expanded connection to the Los Angeles River. Pedestrians would be able to move from the Mesquit Street Level to the 7th Street Level and Deck via the Entry Plazas. With the inclusion of the Deck, the Project with the Deck Concept and the proposed 7th Street Bridge connection would increase accessibility of Mesquit Street from the surrounding streets and neighborhoods. **Therefore, construction and operation of the Project with the Deck Concept would be consistent with the demographic and economic assumptions upon which the 2016 AQMP is based and would not conflict with the 2016 AQMP in regard to transportation control strategies from the 2016-2040 RTP/SCS. Impacts would be less than significant.**

(iii) General Plan Air Quality Element

All operational components related to the project location, land uses proposed, compliance with regulations, and implementation of Project Design Features would be similar to that of the Project. Thus, the conclusions regarding impact significance presented above are the same and apply to the Project and the Project with the Deck Concept. In addition, as the Deck would increase the outdoor public open space by 132,000 square feet, this would further encourage utilization of alternative mode of transportation in support of the General Plan Air Quality Element goals, objectives and policies that encourage providing less polluting transportation options. As explained above, the Deck would provide expanded pedestrian areas as compared to the Project, and would provide Project residents, visitors, and employees with expanded pedestrian access to potential future Metro transit projects and would provide an expanded connection to the Los Angeles River. **Therefore, the Project with the Deck Concept would be consistent with, and not conflict with, applicable air quality policies of the General Plan's Air Quality Element, and impacts would be less than significant.**

(2) Mitigation Measures

Impacts regarding Project's consistency with applicable air quality plans were determined to be less than significant prior to mitigation. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Impacts regarding consistency with applicable air quality plans were determined to be less than significant prior to mitigation. As detailed in the discussion above, the Project and the Project with the Deck Concept would not increase the frequency or severity of an existing violation or cause or contribute to new violations for these pollutants and would also not delay timely attainment of air quality standards or interim emission reductions

specified in the AQMP. Furthermore, the Project would be consistent with the growth projections and control strategies of the 2016 AQMP and would be consistent with, and not conflict with, applicable air quality policies of the City's General Plan's Air Quality. The Project would also implement control strategies that would exceed the AQMP requirements, such as utilizing cleaner and/or alternative-fueled construction equipment to reduce emissions, as described above. Impacts would be less than significant.

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

(1) Impact Analysis

The Project would contribute to local and regional air pollutant emissions during construction (short-term or temporary) and occupancy (long-term). Based on the following analysis, construction of the Project would result in a potentially significant impact relative to the maximum daily emissions of NO_X as compared to the SCAQMD regional significance thresholds for construction criteria air pollutant emissions in which the region is non-attainment under the CAAQS or NAAQS. Therefore, a mitigation measure would be required. In addition, and as demonstrated below, construction emissions would not exceed the SCAQMD regional significance thresholds for the remaining non-attainment, attainment, maintenance, or unclassifiable criteria air pollutants (i.e., ozone precursors of VOCs, CO, SO_2, PM10, and PM2.5).

Operation of the Project would result in potentially significant impacts relative to the maximum net daily emissions of VOC as compared to the SCAQMD regional significance thresholds for operational criteria air pollutant emissions in which the region is non-attainment under the CAAQS or NAAQS. In addition, and as demonstrated below, net operational emissions would not exceed the SCAQMD regional significance thresholds for the remaining non-attainment, attainment, maintenance, or unclassifiable criteria air pollutants (i.e., CO, SO_2, PM10, and PM2.5). Therefore, mitigation would be required.

As shown below, construction and operational emissions would not exceed the SCAQMD regional significance thresholds for attainment, maintenance, or unclassifiable criteria air pollutants (i.e., CO and SO_2). With respect to the State-identified criteria pollutants (i.e., sulfates, hydrogen sulfide, visibility reducing particles, and vinyl chloride), the Project would either not emit them (i.e., hydrogen sulfide and vinyl chloride) or they would be accounted for as part of the pollutants estimated in this analysis (i.e., sulfates and visibility reducing particles). For example, visibility reducing particles are associated with particulate matter emissions and sulfates are associated with SO_2 emissions. Both particulate matter and SO_2 are included in the emissions estimates for the Project.

(a) Construction

Construction of the Project has the potential to generate temporary regional criteria pollutant emissions through the use of heavy-duty construction equipment, such as

excavators and forklifts, through vehicle trips generated by workers and haul trucks traveling to and from the Project Site, and through building activities such as the application of paint and other surface coatings. In addition, fugitive dust emissions would result from demolition and various soil-handling activities. Mobile source emissions, primarily NO_X, would result from the use of construction equipment such as dozers and loaders. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of construction activity, and prevailing weather conditions.[143] Construction of the Project with the Deck Concept would require similar construction activities as the Project. The Project and the Project with the Deck Concept would use a similar mix of construction equipment, but the Project would require a similar or slightly reduced construction intensity level on a maximum construction activity day as compared to the Project with the Deck Concept given that the Deck would not be constructed under the Project. The analysis provided herein for the Project is based on the most intensive construction scenario, which includes concurrent construction of the buildings and the Deck. Therefore, the construction analysis is applicable to the maximum emissions for both scenarios.

The maximum daily construction emissions for the Project were estimated for each construction phase. Some individual construction phases could potentially overlap; therefore, the estimated maximum daily emissions include these potential overlaps by combining the relevant construction phase emissions. The maximum daily emissions are predicted values for a representative worst-case day, and do not represent the actual emissions that would occur for every day of construction, which would likely be lower on many days. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

The results of the criteria pollutant calculations are presented in **Table IV.A-6**, *Estimated Maximum Unmitigated Regional Construction Emissions*. As shown in Table IV.A-6, construction-related daily emissions would not exceed the SCAQMD thresholds of significance with the exception of temporary NO_X emissions during the grading/excavation phase and concrete pouring activities required for the Project building foundations, parking garage, and building construction. All other emissions levels would be below the applicable SCAQMD thresholds of significance. The NO_X emissions result primarily from heavy-duty trucks required for on-road soil hauling and from concrete trucks delivering concrete to the Project Site from concrete suppliers. **Therefore, the Project's temporary impact related to regional NO_X construction emissions would be significant. As discussed below, this impact would remain significant and unavoidable even after implementation of feasible mitigation measures.**

[143] Impacts from asbestos and lead-based paint from Project demolition are expected to be less than significant with compliance with regulations. For additional details please refer to Section IV.F, *Hazards and Hazardous Materials* of this Draft EIR.

TABLE IV.A-6
ESTIMATED MAXIMUM UNMITIGATED REGIONAL CONSTRUCTION EMISSIONS (POUNDS PER DAY)[a]

Source	VOC	NO_X	CO	SO_2	PM10[b]	PM2.5[b]
Overlapping Phases [c,d]						
Year 1						
Site Preparation/Demolition	11	127	98	<1	15	6
Site Preparation/Demolition + Drainage/Utilities/Trenching	13	144	119	<1	16	7
Site Preparation/Demolition + Drainage/Utilities/Trenching + Grading/Excavation	22	290	200	1	24	12
Drainage/Utilities/Trenching + Grading/Excavation	11	163	102	<1	9	6
Grading/Excavation	11	146	80	<1	8	4
Grading/Excavation + Foundation/Concrete Pour/Parking Garage + Concrete Batch Plant	24	351	226	1	30	12
Year 2						
Grading/Excavation + Foundation/Concrete Pour/Parking Garage + Concrete Batch Plant	21	301	210	1	27	10
Foundation/Concrete Pour/Parking Garage + Concrete Batch Plant	12	170	133	<1	21	6
Parking Garage + Building Construction + Concrete Batch Plant	22	260	268	1	35	12
Building Construction + Concrete Batch Plant	10	90	135	<1	27	8
Year 3						
Building Construction + Concrete Batch Plant	9	82	129	<1	26	7
Building Construction + Architectural Coating + Concrete Batch Plant	28	83	131	<1	27	7
Year 4						
Building Construction + Architectural Coating + Concrete Batch Plant	27	70	121	<1	26	7
Building Construction + Architectural Coating + Paving + Concrete Batch Plant	30	91	135	<1	29	8

TABLE IV.A-6
ESTIMATED MAXIMUM UNMITIGATED REGIONAL CONSTRUCTION EMISSIONS
(POUNDS PER DAY)[a]

Source	VOC	NO_X	CO	SO_2	PM10[b]	PM2.5[b]
Building Construction + Architectural Coating + Concrete Batch Plant	27	71	122	<1	26	7
Year 5						
Building Construction + Architectural Coating + Concrete Batch Plant	26	65	117	<1	26	7
Year 6						
Building Construction + Architectural Coating	25	59	113	<1	13	4
Building Construction	7	58	111	<1	12	4
Maximum Daily Emissions	**30**	**351**	**268**	**1**	**35**	**12**
SCAQMD Significance Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	No	**Yes**	No	No	No	No

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.
[b] Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.
[c] Exact timing of batch concrete plant operation is unknown. Emissions from the concrete plant are added to the maximum daily emissions as a conservative estimate.
[d] Year 1 and Year 6 may represent partial calendar years of construction, depending on the actual start date of construction.

SOURCE: ESA, 2020.

(b) Operations

Mobile, stationary, and area source operational regional criteria pollutant emissions were calculated for the Project's full buildout year. Operational emission estimates assume compliance with Project Design Feature AQ-PDF-1, which would not allow the installation of natural gas-fueled fireplaces within the proposed residential units. In addition, emission estimates also assume implementation of Project Design Feature GHG-PDF-1, which includes increased energy efficiency features (refer to Section IV.E, *Greenhouse Gas Emissions*, of the Draft EIR for details regarding Project Design Feature GHG-PDF-1). Reductions in building energy and resource consumption due to physical and operational Project characteristics for which sufficient data is available to enable quantification have been included in the quantitative analysis, and include, but are not limited to, characteristics such as the installation of energy efficient appliances and reduced building energy usage sufficient to meet the Title 24 standard. Operational emission estimates include compliance with SCAQMD Rule 1113 (Architectural Coatings), which limits the

VOC content of architectural coatings. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

Daily trip generation rates and VMT for the Project were provided by the Project's TA[144] and include trips associated with the proposed multi-family residences, office, hotel, studio and retail space/restaurants. The VMT estimate takes into consideration the Project's locational characteristics, as an infill project near transit, discussed previously.

Natural gas usage factors are based on commercial and residential data from the California Energy Commission, and landscape equipment emissions are based on off-road emission factors from CARB. Emissions from the use of consumer products and the reapplication of architectural coatings are based on data provided in CalEEMod. For the purposes of estimating maximum daily emissions, it is assumed that emergency generator would only emit emissions during maintenance and testing operations. Maintenance and testing would not occur daily, but rather periodically. It is estimated that the emergency generators would operate for up to one hour in a day for maintenance and testing purposes.

The results of the regional criteria pollutant emission calculations for VOC, NO_X, CO, SO_X, PM10, and PM2.5 are presented in **Table IV.A-7,** *Estimated Maximum Unmitigated Regional Operational Emissions – Project.* The Project's net operational-related daily emissions would exceed the SCAQMD thresholds of significance for VOC. The exceedance in VOC would be mainly from consumer products and mobile sources. Therefore, with respect to regional emissions from operational activities, impacts would be significant. **As the Project's maximum regional emissions from operations would exceed the regional thresholds of significance, regional operational emissions impacts would be significant and mitigation is required. As discussed below, this impact would remain significant and unavoidable with the implementation of feasible mitigation measures.**

TABLE IV.A-7
ESTIMATED MAXIMUM UNMITIGATED REGIONAL OPERATIONAL EMISSIONS – PROJECT (POUNDS PER DAY) [a]

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Existing						
Area (Coating, Consumer Products, Landscaping)	5	<1	<1	<1	<1	<1
Energy (Natural Gas)	<1	<1	<1	<1	<1	<1
Mobile	10	111	114	<1	6	4
Total Existing	**14**	**111**	**114**	**<1**	**6**	**4**

144 Fehr & Peers, Transportation Assessment for the 670 Mesquit Project, April 2021.

TABLE IV.A-7
ESTIMATED MAXIMUM UNMITIGATED REGIONAL OPERATIONAL EMISSIONS – PROJECT
(POUNDS PER DAY) [a]

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Proposed Project						
Area (Coating, Consumer Products, Landscaping)	41	1	26	<1	<1	<1
Energy	1	13	10	<1	1	1
Mobile	53	89	491	1	152	41
Charbroilers	<1	-	-	-	1	<1
Cooling Tower	-	-	-	-	<1	<1
Emergency Generators	2	37	21	<1	<1	<1
Heliport	<1	4	3	-	-	-
Total Project	**98**	**143**	**552**	**2**	**154**	**43**
Net Increase						
Area (Coating, Consumer Products, Landscaping)	36	1	26	<1	<1	<1
Energy	1	12	10	<1	1	1
Mobile	44	-22	376	1	146	38
Charbroilers	<1	-	-	-	1	<1
Cooling Tower	-	-	-	-	<1	<1
Emergency Generators	2	37	21	<1	<1	<1
Heliport	<1	4	3	-	-	-
Net Total Regional Emissions	**84**	**32**	**437**	**1**	**148**	**39**
SCAQMD Thresholds of Significance	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	**Yes**	No	No	No	No	No

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.
[b] Area source VOC emissions are primarily emitted by consumer product usage as estimated in CalEEMod.

SOURCE: ESA, 2021.

(c) Project with the Deck Concept

Construction of the Project with the Deck Concept would require similar construction activities as the Project. In addition, the amount of maximum daily construction equipment and emissions, which is in large part the basis for the analysis, would be the same for the Project with the Deck Concept. The criteria air quality emissions calculated in the analysis above also reflects the criteria air quality emissions emitted under construction of the Project with the Deck Concept. Thus, the conclusions regarding impact significance presented above are the same and apply to the Project and the Project with the Deck Concept. **As such, the Project with the Deck Concept's temporary impact related to regional NO_X construction emissions would be significant. As discussed below and**

as shown in Table IV.A-9, this impact would remain significant and unavoidable even after implementation of feasible mitigation measures.

Similar to the Project, operation of the Project with the Deck Concept would emit criteria pollutants from mobile, stationary, and area sources. As discussed in Methodology, the Area source emissions (including architectural coating, consumer products and landscaping) would differ between the Project and Project with the Deck Concept as the Deck would add an additional deck area which area source emissions are influenced by the added square footage of the Deck (for additional details see the *Technical Appendix for Air Quality and Greenhouse Gas Emissions* for the Project, which is provided in Appendix C of this Draft EIR). Mobile emissions would differ between the Project and Project with the Deck Concept, as explained above in Subsection 3.b(6), *Operational Impacts*, based on the Project's TA, 27,040 daily vehicle trips are estimated under the Project scenario and the Project with the Deck Concept is estimated to have 27,493 daily trips, which accounts for additional trips related to special events that would be held on the Deck. All other operational components related to the land uses proposed, compliance with regulations, and implementation of Project Design Features would be similar to that of the Project. As such, operational emission estimates provided in **Table IV.A-8**, *Estimated Maximum Unmitigated Regional Operational Emissions – Project with the Deck Concept,* assume compliance with Project Design Features AQ-PDF-1 and GHG-PDF-1, as with the Project. Similar to the Project, the Project with the Deck Concept's operational-related daily emissions would exceed the SCAQMD thresholds of significance for VOC, but would also exceed the thresholds for PM10. The exceedance in VOC would be mainly from consumer products and mobile sources and the PM10 exceedance would be mainly from mobile sources. Therefore, with respect to regional emissions from operational activities, impacts would be significant. **As the Project with the Deck Concept's maximum regional emissions from operations would exceed the regional thresholds of significance, regional operational emissions impacts would be significant and mitigation is required. As discussed below in, this impact would remain significant and unavoidable with the implementation of feasible mitigation measures.**

TABLE IV.A-8
ESTIMATED MAXIMUM REGIONAL OPERATIONAL EMISSIONS – PROJECT WITH THE DECK CONCEPT (POUNDS PER DAY) [a]

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Existing						
Area (Coating, Consumer Products, Landscaping)	5	<1	<1	<1	<1	<1
Energy (Natural Gas)	<1	<1	<1	<1	<1	<1
Mobile	10	111	114	<1	6	4
Total Existing	**14**	**111**	**114**	**<1**	**6**	**4**
Proposed Project						
Area (Coating, Consumer Products, Landscaping)	44	1	26	<1	<1	<1
Energy	1	13	10	<1	1	1

TABLE IV.A-8
ESTIMATED MAXIMUM REGIONAL OPERATIONAL EMISSIONS – PROJECT WITH THE DECK CONCEPT (POUNDS PER DAY) [a]

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Mobile	54	90	499	2	154	42
Charbroilers	<1	-	-	-	1	<1
Cooling Tower	-	-	-	-	<1	<1
Emergency Generators	2	37	21	<1	<1	<1
Heliport	<1	4	3	-	-	-
Total Project	**102**	**145**	**560**	**2**	**156**	**44**
Net Increase						
Area (Coating, Consumer Products, Landscaping)	39	1	26	<1	<1	<1
Energy	1	12	10	<1	1	1
Mobile	45	-21	385	1	148	38
Charbroilers	<1	-	-	-	1	<1
Cooling Tower	-	-	-	-	<1	<1
Emergency Generators	2	37	21	<1	<1	<1
Heliport	<1	4	3	-	-	-
Net Total Regional Emissions	**88**	**34**	**445**	**1**	**150**	**40**
SCAQMD Thresholds of Significance	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	**Yes**	No	No	No	**Yes**	No

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.
[b] Area source VOC emissions are primarily emitted by consumer product usage as estimated in CalEEMod.

SOURCE: ESA, 2021.

(2) Mitigation Measures

(a) Construction

The following mitigation measure would reduce potentially significant impacts regarding construction emissions:

AQ-MM-1: Construction Equipment Features: The Applicant shall implement the following construction equipment features for equipment operating at the Project Site. These features shall be included in applicable bid documents, and successful contractor(s) must demonstrate the ability to supply such equipment. Construction features will include the following:

- The Project shall utilize off-road diesel-powered construction equipment that meets or exceeds the California Air Resources Board (CARB) and United States Environmental Protection Agency (USEPA) Tier 4 Final off-road emissions standards or equivalent for equipment rated at 50

horsepower (hp) or greater during Project construction. Such equipment shall be outfitted with Best Available Control Technology (BACT) which means a CARB certified Level 3 Diesel Particulate Filter or equivalent.

- During plan check, the Project's representative shall make available to the lead agency and South Coast Air Quality Management District (SCAQMD) a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used during any of the construction phases. The inventory shall include the horsepower rating, engine production year, and certification of the specified Tier standard. A copy of each such unit's certified tier specification, best available control technology (BACT) documentation, and CARB or SCAQMD operating permit shall be maintained on-site at the time of mobilization of each applicable unit of equipment.
- Alternative-fueled generators shall be used when commercial models that have the power supply requirements to meet the construction needs of the Project are commercially available from local suppliers/vendors.
- Contractors shall maintain and operate construction equipment so as to minimize exhaust emissions. All construction equipment must be properly tuned and maintained in accordance with the manufacturer's specifications. The contractor shall keep documentation on-site demonstrating that the equipment has been maintained in accordance with the manufacturer's specifications. Tampering with construction equipment to increase horsepower or to defeat emission control devices shall be prohibited.
- Construction activities shall be discontinued during second-stage smog alerts. A record of any second-stage smog alerts and of discontinued construction activities as applicable shall be maintained by the Contractor on-site.

(b) Operations

The following mitigation measures would reduce potentially significant impacts regarding operational emissions:

AQ-MM-2: Emergency Generator Maintenance & Testing: The Project shall utilize SCAQMD Certified Internal Combustion (ICE) engine emergency generators that meet or exceed the California Air Resources Board (CARB) and United States Environmental Protection Agency (USEPA) Tier 4 Final emissions standards. Each emergency generator will normally be limited to one hour in a day for routine maintenance and testing purposes.

AQ-MM-3: Emergency Generators: The Project representative shall schedule routine maintenance and testing of the emergency generators installed on the Project Site on different days. Prior to the installation of emergency generators, the Project representative shall supply documentation to the City that emergency generator testing by contractors, service providers, or maintenance crews will be conducted in accordance with the specified requirements. The Project

representative shall maintain records of emergency generator testing, including testing dates, which shall be made available to the City upon request.

In addition to the above, Mitigation Measure TRAF-MM-1 would require implementation of a transportation demand management (TDM) program to reduce regional-serving retail VMT and associated mobile source emissions. TRAF-MM-1 is described in Section IV.L, *Transportation*, of this Draft EIR.[145]

(3) Level of Significance After Mitigation

(a) Construction

Construction of the Project would result in emissions that exceed the NO_X regional threshold, and, as such, impacts would be potentially significant prior to mitigation. Implementation of Mitigation Measure AQ-MM-1 would reduce short-term and temporary NO_X emissions during the grading/excavation activities and the concrete pours required for the Project building foundations, parking garage, and building construction, as shown in **Table IV.A-9,** *Estimated Maximum Mitigated Regional Construction Emissions*. However, even with implementation of Mitigation Measure AQ-MM-1, short-term construction NO_X emissions would exceed the applicable regional emission significance threshold.[146]

TABLE IV.A-9
ESTIMATED MAXIMUM MITIGATED REGIONAL CONSTRUCTION EMISSIONS (POUNDS PER DAY) [a]

Source	VOC	NO_X	CO	SO_2	PM10[b]	PM2.5[b]
Overlapping Phases [c,d]						
Year 1						
Site Preparation/Demolition	4	52	113	<1	11	2
Site Preparation/Demolition + Drainage/Utilities/Trenching	4	54	135	<1	11	2
Site Preparation/Demolition + Drainage/Utilities/Trenching + Grading/Excavation	9	140	225	1	16	4
Drainage/Utilities/Trenching + Grading/Excavation	5	88	112	<1	5	2
Grading/Excavation	5	86	90	<1	5	2
Grading/Excavation + Foundation/Concrete Pour/Parking Garage + Concrete Batch Plant	14	240	240	1	23	6

145 The TDM mitigation program and its associated VMT reductions are only incorporated in the mitigated project emissions calculations for both the Project and Project with the Deck Concept and not in the unmitigated emissions calculations.

146 Emission reductions from the use of alternative-fueled generators cannot be accurately quantified since their commercial availability in the market is not known. Therefore, emission reductions were not included and not reflected it the not included in the table.

TABLE IV.A-9
ESTIMATED MAXIMUM MITIGATED REGIONAL CONSTRUCTION EMISSIONS (POUNDS PER DAY) [a]

Source	VOC	NO_X	CO	SO_2	PM10[b]	PM2.5[b]
Year 2						
Grading/Excavation + Foundation/Concrete Pour/Parking Garage + Concrete Batch Plant	12	201	225	1	22	5
Foundation/Concrete Pour/Parking Garage + Concrete Batch Plant	7	124	138	<1	18	4
Parking Garage + Building Construction + Concrete Batch Plant	11	155	280	1	29	6
Building Construction + Concrete Batch Plant	3	31	142	<1	23	4
Year 3						
Building Construction + Concrete Batch Plant	3	30	137	0	23	4
Building Construction + Architectural Coating + Concrete Batch Plant	22	31	139	<1	24	4
Year 4						
Building Construction + Architectural Coating + Concrete Batch Plant	21	24	130	<1	23	4
Building Construction + Architectural Coating + Paving + Concrete Batch Plant	23	47	171	<1	25	5
Building Construction + Architectural Coating + Concrete Batch Plant	22	25	131	<1	23	4
Year 5						
Building Construction + Architectural Coating + Concrete Batch Plant	21	23	126	<1	23	4
Year 6						
Building Construction + Architectural Coating	21	21	122	<1	11	4
Building Construction	2	20	121	<1	11	4
Maximum Daily Emissions	**23**	**240**	**280**	**1**	**29**	**6**
SCAQMD Thresholds of Significance	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	No	**Yes**	No	No	No	No

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.
[b] Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.
[c] The exact timing of batch concrete plant operation is unknown. Emissions from the concrete plant are added to the maximum daily emissions that could occur during those phases with concrete pours as a conservative estimate.
[d] Year 1 and Year 6 may represent partial calendar years of construction, depending on the actual start date of construction.

SOURCE: ESA, 2021.

It is of note that the emissions estimates related to the Project's construction activities, including grading/excavation and concrete pours, in Table IV.A-9 are conservatively estimated as they characterize the maximum daily emissions with the maximum number of heavy-duty equipment and heavy-duty trucks for these activities. However, in reality, while the maximum number of heavy-duty equipment and trucks represents a maximum impact day, the number of heavy-duty trucks may be substantially lower on a typical or average construction work day. Therefore, the regional emissions related to the grading/excavation phase in Table IV.A-9 only represents the emissions from a portion of the total days of the grading/excavation and concrete pour activities where regional emissions related to the grading/excavation phase on an average day would be lower than presented in Table IV.A-9.

Concrete would be supplied from a variety of area concrete suppliers and concrete trucks would be required to deliver the volume of concrete necessary for the concrete pours. There are no feasible mitigation measures that would reduce the NO_X emissions from the concrete trucks to below the regional significance threshold. It is not possible to reduce the number of concrete trucks needed to complete the concrete pouring activities without compromising the integrity of the building foundations and building structural needs. Similarly, the Project would require grading/excavation primarily for subterranean parking and haul trucks would be required to transport excavated soil to appropriate regional disposal sites. There are no feasible mitigation measures that would reduce the NO_X emissions from the concrete trucks to below the regional significance threshold. Therefore, impacts related to regional NO_X construction emissions would be temporarily significant primarily as a result of the concrete pours required for the Project building foundations, parking garage construction, and building construction and the hauling required to transport and dispose of excavated soil.

With implementation of feasible mitigation, regional emissions from construction would remain above the regional significance threshold for NO_X. Therefore, short-term and temporary impacts related to regional NO_X construction emissions would be significant and unavoidable after implementation of feasible mitigation measures.

(b) Operations

The Project's mitigated regional operational emissions are summarized in **Table IV.A-10**, *Estimated Maximum Mitigated Regional Operational Emissions – Project.* Implementation of Mitigation Measures AQ-MM-2, AQ-MM-3, and TRAF-MM-1, which are measures that are able to be quantified in the mitigated emissions, would minimize regional VOC emissions from operations. However, emissions of VOC would remain above the SCAQMD regional significance threshold. Therefore, impacts related to regional VOC operational emissions would be significant and unavoidable after implementation of mitigation measures. Project-level regional operational impacts under the Project would be significant after implementation of mitigation measures, and the Project's contribution to cumulatively significant operational impacts to air quality would be significant for regional VOC after implementation of mitigation measures.

TABLE IV.A-10
ESTIMATED MAXIMUM MITIGATED REGIONAL OPERATIONAL EMISSIONS – PROJECT
(POUNDS PER DAY) [a]

Source	VOC [b]	NO_X	CO	SO_2	PM10	PM2.5
Existing						
Area (Coating, Consumer Products, Landscaping)	5	<1	<1	<1	<1	<1
Energy (Natural Gas)	<1	<1	<1	<1	<1	<1
Mobile	10	111	114	<1	6	4
Total Existing	**14**	**111**	**114**	**<1**	**6**	**4**
Proposed Project						
Area (Coating, Consumer Products, Landscaping)	41 [b]	1	26	<1	<1	<1
Energy	1	13	10	<1	1	1
Mobile (mitigated)	48	80	444	1	137	37
Charbroilers	<1	-	-	-	1	<1
Cooling Tower	-	-	-	-	<1	<1
Emergency Generators (mitigated)	<1	7	9	<1	<1	<1
Heliport	<1	4	3	-	-	-
Total Project	**91**	**105**	**491**	**1**	**139**	**39**
Net Increase						
Area (Coating, Consumer Products, Landscaping)	36	1	26	<1	<1	<1
Energy	1	12	10	<1	1	1
Mobile	39	-31	329	1	131	34
Charbroilers	<1	-	-	-	1	<1
Cooling Tower	-	-	-	-	<1	<1
Emergency Generators	<1	7	9	<1	<1	<1
Heliport	<1	4	3	-	-	-
Net Total Regional Emissions	**77**	**-6**	**377**	**1**	**133**	**35**
SCAQMD Significance Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	**Yes**	No	No	No	No	No

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

[b] Area source VOC emissions are primarily emitted by consumer product usage as estimated in CalEEMod.

SOURCE: ESA, 2021.

The Project would result in potentially significant operational impacts due to regional emissions of VOC above the regional significance thresholds. Therefore, Mitigation Measures AQ-MM-2, AQ-MM-3, and TRAF-MM-1 would be required to reduce operations-related emissions. Implementation of Mitigation Measure AQ-MM-2 would reduce regional VOC emissions by requiring the Project to install emergency generators that meet or exceed the CARB USEPA Tier 4 Final emissions standards. In addition, implementation of AQ-MM-3 would reduce regional NO_X emissions from operations by scheduling routine maintenance of emergency generators so that only one emergency generator is maintained on any given day.

Implementation of TRAF-MM-1 is required to address the contribution to significant operational emissions from mobile sources. TRAF-MM-1 would reduce regional VOC emissions from operations from mobile sources via implementation of a TDM Program (See Section IV.L, *Transportation*, for more details). The TDM Program would be aimed at discouraging single-occupancy vehicle trips and encouraging alternative modes of transportation, such as carpooling, taking transit, walking, and biking, which would reduce Project-related VMT and therefore would reduce regional VOC emissions from operations from mobile sources.

However, even with implementation of Mitigation Measures AQ-MM-2, AQ-MM-3, and TRAF-MM-1, the regional VOC emissions from operations would be above the applicable significance thresholds. There are no other feasible mitigation measures that would reduce VOC emissions to below the significance thresholds. As shown in Table IV.A-10, the primary sources of VOC emissions are area and mobile sources. Regarding area sources, VOC emissions from consumer products and architectural coatings constitute approximately 36 pounds of the 41 pounds, or approximately 88 percent, attributable to area sources (see CalEEMod files in Appendix C of this Draft EIR). As stated in the CalEEMod User's Guide, consumer products include degreasers, fertilizers/pesticides, detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products.[147] However, consumer products would be utilized by Project occupants, including by residents, and the Project has no ability to regulate the personal choices made by future Project residents who may purchase and use various consumer products legally sold in California, as those listed above, which may or may not be low-VOC containing products. Regarding VOC emissions from mobile sources, the TDM Program mitigation measure would reduce VMT. However, as stated in Section IV.L, *Transportation*, there are no additional feasible mitigation measures to further reduce Project VMT. Thus, there are no additional feasible mitigation measures that would reduce operational VOC emissions and impacts related to regional VOC operational emissions would remain significant and unavoidable.

147 CARB, CalEEMod User's Guide, Appendix A, Section 6.2, October 2017.

As expressed in the *amicus curiae* brief submitted for the *Sierra Club v. County of Fresno* case (*Friant Ranch Case*),[148,149] the CEQA criteria pollutants significance thresholds from the SCAQMD were set at emission levels tied to the region's attainment status and are emission levels at which stationary pollution sources permitted by the SCAQMD must offset their emissions and where a CEQA project must use feasible mitigation measures. The thresholds are not intended to be indicative of any localized human health impact that a project may have. The City of Los Angeles prepared a technical paper, titled Air Quality and Health Effects,[150] in response to the Friant Ranch Case to provide information about the limitations regarding linking health consequences to air pollutant emissions from any singular project. The City's technical paper is incorporated by reference and explains that currently it is only feasible for projects that exceed any identified SCAQMD air quality threshold to disclose generalized health effects of certain air pollutants, but EIR documents are currently unable to establish a reliable connection between any project and a particular health effect.[151] The City explains that many factors contribute to this uncertainty, including the regional scope of air quality monitoring, technological limitations for modeling at a project-level, and the intrinsically complex nature between air pollutants and health effects in conjunction with environmental variables.[152] Therefore, the Project's exceedance of the mass regional emissions threshold (i.e., pounds per day VOC thresholds) from Project-related activities does not necessarily indicate that the Project will cause or contribute to the exposure of sensitive receptors to ground-level concentrations in excess of health-protective levels.

Furthermore, as explained in the City's technical paper, available models are designed to determine regional, population-wide health impacts, or were not designed to address secondary pollutants such as ozone, and cannot accurately quantify ozone-related health impacts caused by NO_X or VOCs emissions from project level emissions.[153] Therefore, it is infeasible to connect the Project level VOC emissions to ozone-related health impact at this time.

The primary health concern with exposure to VOC emissions is the secondary formation of ozone. As acknowledged in the City's technical paper and as the *amicus curiae* briefs submitted for the Friant Ranch Case suggested, because of the complexity of ozone formation and given the state of environmental science modeling in use at this time, it is infeasible to determine whether, or the extent to which, a single project's precursor (i.e., NO_X and VOCs) emissions would potentially result in the formation of secondary ground-

148 SCAQMD, 2014, Application of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

149 SJVAPCD, 2014. Application for Leave to File Brief of Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party In Interest and Respondent, Friant Ranch, L.P. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

150 City of Los Angeles, Air Quality and Health Effects: Sierra Club V. County of Fresno, October 2019.

151 City of Los Angeles, Air Quality and Health Effects: Sierra Club V. County of Fresno, October 2019.

152 City of Los Angeles, Air Quality and Health Effects: Sierra Club V. County of Fresno, October 2019.

153 City of Los Angeles, Air Quality and Health Effects: Sierra Club V. County of Fresno, October 2019.

level ozone and the geographic and temporal distribution of such secondary formed emissions. Meteorology, the presence of sunlight, seasonal impacts, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone. In addition, as discussed in the SCAQMD's 2016 AQMP White Paper on VOC Controls, NOx emissions in the Air Basin are a larger contributor to ground-level ozone formation than VOC emissions as the preferred strategy to minimize ozone formation in the SCAB is through a "NOx-heavy strategy accompanied by more modest VOC reduction" to reach ozone attainment for the Basin, where this finding "reaffirms the previous NOx-heavy State Implementation Plan (SIP) strategies to meet …ozone standards, but recognizes that VOC reductions can be given a lower priority."[154] Furthermore, available models today are designed to determine regional, population-wide health impacts, and cannot accurately quantify ozone-related health impacts caused by NO_X or VOCs emissions from local level (project level). Notwithstanding these scientific constraints, the disconnect between Project level VOC and NO_X emissions and Project-specific ozone-related health impacts cannot be bridged at this time.

The SCAQMD has shown that even with the population growth and increased development occurring within the Air Basin, O_3 ambient air concentrations have shown a decreasing trend since the SCAQMD started measuring ozone in 1976 within the Air Basin. The Air Basin-wide annual 1-hour and 8-hour averages have declined substantially from 0.38 ppm and 0.268 ppm, respectively in 1976 to an Air Basin-wide annual 1-hour and 8-hour averages of 0.163 and 0.122, respectively in 2016.[155] The decrease in O_3 ambient air concentrations is mirrored in the monitoring area around the Project Site as the SCAQMD monitoring station closest to the site has shown that criteria pollutant emissions have also displayed a decreasing trend (refer to Table IV.A-3, above). For example, in the most recent available SCAQMD monitoring data for the year 2019, the maximum 1-hour O_3 concentration was 0.085 ppm and the maximum 8-hour concentration was 0.080 ppm as compared to the year 2000 (the earliest year the SCAQMD has concentration data available for individual monitoring stations), where the maximum 1-hour O_3 concentration was 0.140 ppm and the maximum 8-hour concentration was 0.105 ppm.[156] In addition, in the year 2019, the maximum 1-hour NO_2 concentration was 0.070 ppm as compared to the year 2000, where the maximum 1-hour O_3 concentration was 0.16 ppm.[157] Thus, even with economic and population growth, ambient air pollutant concentration levels show a declining trend in the Project area and Air Basin.

154 SCAQMD, 2015. 2016 AQMP White Paper, VOC Controls, pg. 14, http://www.aqmd.gov/docs/default-source/Agendas/aqmp/white-paper-working-groups/wp-voc-revdf.pdf?sfvrsn=2. Accessed October 6, 2020.

155 SCAQMD, Historic Ozone Air Quality Trends, https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historic-ozone-air-quality-trends. Accessed June 10, 2020.

156 SCAQMD, Historical Data by Year, http://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year. Accessed February 25, 2020.

157 SCAQMD, Historical Data by Year, http://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year. Accessed February 25, 2020.

Although this analysis identifies a significant and unavoidable impact for regional VOC emissions, it is expected that many future employees and visitors to the Project likely already live and travel within the Air Basin and therefore generate mobile-source emissions. For example, a new mixed-use development could redistribute existing vehicle trips from a similar existing mixed-use development. In such cases, net new regional mobile source emissions could be less than the values shown above if the new mixed-use development is located in an infill location or closer to job centers or other higher density locations compared to existing mixed-use development, such as the Project, which is an infill development located within a HQTA, as identified by the RTP/SCS. As such, the operational regional VOC emissions shown in Table IV.A-10 are based on the conservative assumption that operation of the land uses proposed under the Project would result in all net new emissions. It is likely that the actual incremental increase in regional emissions from operation of the land uses proposed under the project could be substantially lower. **With implementation of feasible mitigation, regional emissions from operations under the Project would remain above the regional significance thresholds for VOC, and regional VOC impacts would be significant and unavoidable after implementation of feasible mitigation measures.**

(c) Project with the Deck Concept

Construction of the Project with the Deck Concept would require similar construction activities as the Project. The Project and the Project with the Deck Concept would use a similar mix of construction equipment, but the Project would require a similar or slightly reduced construction intensity level on a maximum construction activity day as compared to the Project with the Deck Concept given that the Deck would not be constructed under the Project. The analysis provided above for the Project construction is based on the most intensive construction scenario, which includes concurrent construction of the buildings and the Deck. Construction of the Project with the Deck Concept would result in emissions that exceed the NO_X regional threshold, and, as such, impacts would be potentially significant prior to mitigation. Similar to the Project and as described above, Implementation of Mitigation Measure AQ-MM-1 would reduce short-term and temporary NO_X emissions during the grading/excavation activities and the concrete pours required for the Project building foundations, parking garage, and building construction, as shown in Table IV.A-9. However, even with implementation of Mitigation Measure AQ-MM-1, short-term construction NO_X emissions would exceed the applicable regional emission significance threshold. Therefore, impacts related to regional NO_X construction emissions would be temporarily significant primarily as a result of the concrete pours required for the Project building foundations, parking garage construction, and building construction and the hauling required to transport and dispose of excavated soil. **With implementation of feasible mitigation, regional emissions from construction would remain above the regional significance threshold for NO_X. Therefore, short-term and temporary impacts related to regional NO_X construction emissions would be significant and unavoidable after implementation of feasible emissions controls.**

The Project with the Deck Concept's mitigated regional operational emissions are summarized in **Table IV.A-11,** *Estimated Maximum Mitigated Regional Operational Emissions – Project with the Deck Concept.* Implementation of Mitigation Measures AQ-MM-2, AQ-MM-3, and TRAF-MM-1 would reduce regional VOC and PM10 emissions operations. However, VOC emissions would remain above the SCAQMD regional significance threshold. Emissions of PM10 would be reduced to below the SCAQMD significance threshold. There are no other feasible mitigation measures that would reduce VOC emissions to below the significance thresholds. **Therefore, impacts related to regional VOC operational emissions would be significant and unavoidable after implementation of mitigation measures. Project level regional operational impacts under the Project with the Deck Concept would be significant after implementation of mitigation measures, and the Project with the Deck Concept's contribution to cumulatively significant operational impacts to air quality would be significant for regional VOC after implementation of mitigation measures.**[158]

TABLE IV.A-11
ESTIMATED MAXIMUM MITIGATED REGIONAL OPERATIONAL EMISSIONS – PROJECT WITH THE DECK CONCEPT (POUNDS PER DAY) [a]

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Existing						
Area (Coating, Consumer Products, Landscaping)	5	<1	<1	<1	<1	<1
Energy (Natural Gas)	<1	<1	<1	<1	<1	<1
Mobile	10	111	114	<1	6	4
Total Existing	**14**	**111**	**114**	**<1**	**6**	**4**
Proposed Project						
Area (Coating, Consumer Products, Landscaping)	44	1	26	<1	<1	<1
Energy	1	13	10	<1	1	1
Mobile (mitigated)	49	81	451	1	139	38
Charbroilers	<1	-	-	-	1	<1
Cooling Tower	-	-	-	-	<1	<1
Emergency Generators (mitigated)	<1	7	9	<1	<1	<1
Heliport	<1	4	3	-	-	-
Total Project	**95**	**106**	**499**	**1**	**141**	**40**

158 As explained above, the City's technical paper states that available models are designed to determine regional, population-wide health impacts, or were not designed to address secondary pollutants such as ozone, and cannot accurately quantify ozone-related health impacts caused by NOX or VOCs emissions from project level emissions. Therefore, it is also infeasible to connect the Project with the Deck Concept's VOC emissions to ozone-related health impact at this time. See under threshold (b), Subsection 3.d(3)(b), *Operations*, for additional details.

TABLE IV.A-11
ESTIMATED MAXIMUM MITIGATED REGIONAL OPERATIONAL EMISSIONS – PROJECT WITH THE DECK CONCEPT (POUNDS PER DAY) [a]

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Net Increase						
Area (Coating, Consumer Products, Landscaping)	39	1	26	<1	<1	<1
Energy	1	12	10	<1	1	1
Mobile	39	-29	337	1	133	34
Charbroilers	<1	-	-	-	1	<1
Cooling Tower	-	-	-	-	<1	<1
Emergency Generators	<1	7	9	<1	<1	<1
Heliport	<1	4	3	-	-	-
Net Total Regional Emissions	**81**	**-5**	**384**	**1**	**135**	**36**
SCAQMD Significance Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	**Yes**	No	No	No	No	No

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

SOURCE: ESA, 2021.

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

(1) Impact Analysis

(a) Localized Construction

(i) Existing Sensitive Receptors

As explained above, the localized construction air quality analysis was conducted using the methodology prescribed in the SCAQMD *Final Localized Significance Threshold Methodology* (June 2003, revised July 2008).[159] The screening criteria provided in the *Final Localized Significance Threshold Methodology* were used to determine localized construction emissions thresholds for the Project. The maximum daily localized emissions for each of the construction phases and the localized significance thresholds are presented in **Table IV.A-12,** *Estimated Maximum Localized Construction Emissions.* As shown in Table IV.A-12, construction-related localized emissions would exceed the SCAQMD localized significance thresholds for NO_X, PM10, and PM2.5. **Therefore, the Project's temporary impact related to localized construction emissions to existing**

[159] SCAQMD, Final Localized Significance Threshold Methodology, June 2003 and revised July 2008.

sensitive receptors would be significant and would require implementation of mitigation measures.

TABLE IV.A-12
ESTIMATED MAXIMUM UNMITIGATED LOCALIZED CONSTRUCTION EMISSIONS (POUNDS PER DAY) [a]

Source	NO_X	CO	PM10 [b]	PM2.5 [b]
On-site Construction Activities [c]				
Year 1				
Demolition/Site Preparation	84	80	12.4	5.3
Site Preparation/Demolition + Drainage/Utilities/Trenching	100	98	13.4	6.3
Site Preparation/Demolition + Drainage/Utilities/Trenching + Grading/Excavation	167	144	16.7	9.2
Drainage/Utilities/Trenching + Grading/Excavation	83	65	4.3	3.9
Grading/Excavation	67	46	3.3	2.9
Grading/Excavation + Foundation/Concrete Pour/Parking Garage + Concrete Batch Plant	125	103	19.3	8.1
Year 2				
Grading/Excavation + Foundation/Concrete Pour/Parking Garage + Concrete Batch Plant	113	102	18.4	7.3
Foundation/Concrete Pours/Parking Garage + Concrete Batch Plant	61	45	15.5	4.4
Foundation/Concrete Pour/Parking Garage + Building Construction + Concrete Batch Plant	126	124	19.2	8.2
Building Construction + Concrete Batch Plant	73	67	16.3	5.4
Year 3				
Building Construction + Concrete Batch Plant	66	67	15.8	4.9
Building Construction + Architectural Coating + Concrete Batch Plant	66	67	15.8	4.9
Year 4				
Building Construction + Architectural Coating + Concrete Batch Plant	60	66	15.4	4.5
Building Construction + Architectural Coating + Paving + Concrete Batch Plant	60	66	16.4	5.5
Year 5				
Building Construction + Concrete Batch Plant	56	66	15.1	4.2
Building Construction + Architectural Coating + Concrete Batch Plant	56	66	15.1	4.2
Year 6				
Building Construction + Architectural Coating	52	66	2.2	2.1
Building Construction	52	66	2.2	2.1

TABLE IV.A-12
ESTIMATED MAXIMUM UNMITIGATED LOCALIZED CONSTRUCTION EMISSIONS (POUNDS PER DAY) [a]

Source	NO_X	CO	PM10 [b]	PM2.5 [b]
Maximum Localized (On-Site) Emissions	**167**	**144**	**19.3**	**9.2**
SCAQMD Screening Significance Thresholds [d]	**161**	**1,861**	**16.0**	**8.0**
Exceed Screening Significance Thresholds?	**Yes**	No	**Yes**	**Yes**

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR. The derivations of the localized significance thresholds are also provided in Appendix C of this Draft EIR.
[b] Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.
[c] Year 1 and Year 6 may represent partial calendar years of construction, depending on the actual start date of construction.
[d] The SCAQMD LSTs are based on Source Receptor Area 1 (Central Los Angeles County) for a 5-acre site with sensitive receptors conservatively assumed to be located adjacent to the construction area.

SOURCE: ESA, 2020.

(ii) Future Sensitive Receptors

As discussed in Subsection 2.b(2)(d), *Sensitive Receptors and Locations*, one of the existing sensitive receptors, the multi-family residential uses adjacent to the Project site to the west at 2101 E. 7th Street, is closer to or a similar distance to the Project Site than the future sensitive receptor. According to the localized construction air quality analysis conducted for the existing sensitive receptors, including the multi-family residential uses adjacent to the Project Site to the west at 2101 E. 7th Street using the methodology prescribed in the SCAQMD Localized Significance Threshold Methodology (June 2003, revised July 2008), the Project's maximum daily localized construction emissions would exceed the SCAQMD localized significance thresholds for NO_X, PM10, and PM2.5. **Therefore, the Project's temporary impact to existing future sensitive receptors related to localized construction emissions would be significant and would require implementation of mitigation measures**.

(b) Localized Operations

(i) Existing Sensitive Receptors

The localized operational air quality analysis was conducted using the methodology prescribed in the SCAQMD Localized Significance Threshold Methodology (June 2003, revised July 2008). The screening criteria provided in the Localized Significance Threshold Methodology were used to determine the localized operational emissions numerical indicators of significance for the Project. The same assumptions, including compliance with the Title 24 (2019) building energy efficiency standards, CALGreen Code, and City of Los Angeles Green Building Code, and including incorporation of Project Design Features AQ-PDF-1 and GHG-PDF-1. The maximum daily localized emissions and the localized significance thresholds are presented in **Table IV.A-13,**

Estimated Maximum Localized Operational Emissions for Existing Sensitive Receptors – Project. **The Project's maximum localized operational emissions would be below the localized significance thresholds and localized operational emissions impacts to existing sensitive receptors would be less than significant.**

TABLE IV.A-13
ESTIMATED MAXIMUM LOCALIZED OPERATIONAL EMISSIONS FOR EXISTING SENSITIVE RECEPTORS – PROJECT (POUNDS PER DAY) [a]

Source	NO_X	CO	PM10	PM2.5
Area (Coating, Consumer Products, Landscaping)	1	26	0.2	0.2
Energy	13	10	1.0	1.0
Charbroilers	-	-	0.7	0.4
Cooling Tower	-	-	0.1	0.0
Emergency Generators	37	21	0.1	0.1
Heliport	<1	<1	-	-
Maximum Localized (On-Site) Emissions	**51**	**58**	**2.1**	**1.7**
SCAQMD Screening Significance Thresholds [b]	**161**	**1,861**	**4.0**	**2.0**
Exceeds Screening Significance Thresholds?	No	No	No	No

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

[b] The SCAQMD LSTs are based on Source Receptor Area 1 (Central Los Angeles County Costal) for a 5-acre site with sensitive receptors conservatively assumed to be located adjacent to the Project Site for operational emissions of NO_X, CO, PM10 and PM2.5 for LST purposes. Using the screening criteria for those applicable for a 5-acre site is conservative because the localized significance thresholds are project site dependent and the allowable thresholds increase with increasing project size. Therefore, using a 5-acre site threshold instead of the Project Site's full 5.45 acres yields a more stringent analysis.

SOURCE: ESA, 2021.

(ii) Future Sensitive Receptors

As discussed in Subsection 2.b(2)(d), *Sensitive Receptors and Locations*, one of the existing sensitive receptors, the multi-family residential uses adjacent to the Project site to the west at 2101 E. 7th Street, is closer to or a similar distance to the Project Site than the future sensitive receptor. According to the localized operational air quality analysis conducted for the existing sensitive receptors, including the multi-family residential uses adjacent to the Project site to the west at 2101 E. 7th Street using the methodology prescribed in the SCAQMD Localized Significance Threshold Methodology (June 2003, revised July 2008), the Project's maximum daily localized operational emissions would be below the localized significance thresholds. Therefore, localized operational emissions impacts to future sensitive receptors would also be less than significant since localized air quality impacts would be similar at the closest future sensitive receptor than at the

existing sensitive receptors, including multi-family residential uses adjacent to the Project Site to the west at 2101 E. 7th Street.

(c) Carbon Monoxide Hotspots

The potential for the Project to cause or contribute to CO hotspots was evaluated by comparing Project intersections (both intersection geometry and traffic volumes) with prior studies conducted by the SCAQMD in support of their AQMPs and considering existing background CO concentrations. As discussed below, this comparison demonstrates that the Project would not cause or contribute considerably to the formation of CO hotspots, that CO concentrations at Project-impacted intersections would remain well below the threshold one-hour and eight-hour ambient air quality standards (CAAQS) of 20 or 9.0 parts per million (ppm), respectively within one-quarter mile of a sensitive receptor, and that no further CO analysis is warranted or required.

As shown previously in Table IV.A-3, CO levels in the Project area are substantially below the federal and the state standards. Maximum CO levels in recent years (2018-2020) were 2.0 ppm (one-hour average) and 1.7 ppm (eight-hour average) as compared to the criteria of 20 ppm (CAAQS one-hour average) or 35 ppm (NAAQS one-hour average) and 9.0 ppm (eight-hour average). No exceedances of the CO standards have been recorded at monitoring stations in the Air Basin for some time,[160] and the Air Basin is currently designated as a CO attainment area for both the CAAQS and the NAAQS.

The SCAQMD conducted CO modeling for the 2003 AQMP for the four worst-case intersections in the Air Basin. These include: (a) Wilshire Boulevard and Veteran Avenue; (b) Sunset Boulevard and Highland Avenue; (c) La Cienega Boulevard and Century Boulevard; and (d) Long Beach Boulevard and Imperial Highway. In the 2003 AQMP CO attainment demonstration, the SCAQMD notes that the intersection of Wilshire Boulevard and Veteran Avenue is the most congested intersection in Los Angeles County, with an average daily traffic volume of about 100,000 vehicles per day.[161] Relevant information from the 2003 AQMP CO attainment demonstration relied upon in this assessment is provided in Appendix C of this Draft EIR. This intersection is located near the on- and off-ramps to Interstate 405 in West Los Angeles. The evidence provided in Table 4-10 of Appendix V of the 2003 AQMP shows that the peak modeled CO concentration due to vehicle emissions (i.e., excluding background concentrations) at these four intersections was 4.6 ppm (one-hour average) and 3.2 ppm (eight-hour average) at Wilshire Boulevard and Veteran Avenue.[162]

Based on the Project's TA,[163] under Future plus Project (2026) conditions, the intersection of South Alameda Street and 3rd Street would have a maximum traffic volume

160 SCAQMD, Final 2016 AQMP, February 2013, page 2-38.
161 SCAQMD, 2003 AQMP, Appendix V: Modeling and Attainment Demonstrations, page V-4-24, 2003.
162 The eight-hour average is based on a 0.7 persistence factor, as recommended by the SCAQMD.
163 Fehr & Peers, Transportation Assessment for the 670 Mesquit Project, April 2021.

of approximately 63,930 ADT.[164] As a result, CO concentrations from the Project's maximum traffic volume at the intersection identified above plus the measured background level in the Project Site area are expected to be approximately 4.9 ppm (one-hour average) and 3.7 ppm (eight-hour average), which would not exceed the numerical thresholds of significance. Total traffic volumes at the maximally impacted intersection would likely have to increase by approximately five times higher to cause or contribute to a CO hotspot impact, given that vehicles operating today have reduced CO emissions as compared to vehicles operating in year 2003 when the SCAQMD conducted the AQMP attainment demonstration modeling.[165] This comparison demonstrates that the Project would not contribute to the formation of CO hotspots and that no further CO analysis is required. The Project would result in less than significant impacts with respect to CO hotspots. **The Project would not contribute to the formation of CO hotspots and no further CO analysis is required. Therefore, the Project would result in less than significant impacts with respect to CO hotspots.**

(d) Toxic Air Contaminant Emissions

(i) Construction

Temporary TAC emissions associated with DPM emissions from heavy construction equipment would occur during the construction phase of the Project. According to the Office of Environmental Health Hazard Assessment (OEHHA) and the SCAQMD Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (August 2003),[166] health effects from TACs are described in terms of individual cancer risk based on a lifetime (i.e., 70-year) resident exposure duration. Given the temporary construction schedule (64 months), the Project would not result in a long-term (i.e., lifetime or 70-year) exposure as a result of Project construction.

Construction of the Project would result in DPM emissions adjacent to sensitive residential receptors. The nearest existing sensitive receptors are located directly to the west and south of the Project Site. As described in Mitigation Measure AQ-MM-1, the Project will incorporate into Project designs and plans the use of construction equipment that would minimize construction-related DPM emissions as well as exposure to DPM at existing sensitive receptors by requiring equipment that meet the CARB and USEPA Tier 4 Final construction equipment emissions standards.

The Project would also be consistent with applicable AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. The

164 The traffic volume of approximately 63,930 was estimated based on the peak hour intersection volumes under future with Project conditions and the general assumption that peak hour trips represent approximately 10 percent of daily trip volumes (the Federal Highway Administration considers 10 percent to be a standard assumption; see http://www.fhwa.dot.gov/planning/tmip/publications/other_reports/tod_modeling_procedures/ch02.cfm).

165 SCAQMD, 2003 SQMP, Chapter 6 Clean Air Act Requirements.

166 SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, August 2003.

Project would comply with the CARB Air Toxics Control Measure that limits diesel powered equipment and vehicle idling to no more than 5 minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation; compliance with these would minimize emissions of TACs during construction. The Project would also comply with the requirements of SCAQMD Rule 1403 if asbestos is found during the demolition and construction activities. **Therefore, TAC emissions from construction equipment associated with the Project would result in less than significant health risk impacts.**

(ii) Operations

The SCAQMD recommends that operational health risk assessments be conducted for substantial sources of operational DPM (e.g., truck stops and warehouse distribution facilities that generate more than 100 trucks per day or more than 40 trucks with operating transport refrigeration units) and has provided guidance for analyzing mobile source diesel emissions.[167] The Project would not include any truck stop or warehouse distribution uses and as such, operations would generate only minor amounts of diesel emissions from mobile sources, such as delivery trucks and occasional maintenance activities that would not exceed 100 trucks per day or more than 40 trucks with operating transport refrigeration units associated with truck stop or warehouse distribution uses. Relative to existing conditions, as explained in Subsection 2.c(2)(c), *Existing Site Emissions*, since the Project would remove the existing cold storage facility, the DPM emissions from the approximately 145 trucks and equipped TRUs that currently visit the site on a daily basis would no longer occur. Furthermore, Project trucks would be required to comply with the applicable provisions of the CARB Truck and Bus regulation to minimize and reduce PM and NO_X emissions from existing diesel trucks, and these requirements become more stringent over time. Therefore, given that the Project would remove an existing source of DPM emissions in the local area and that future delivery and maintenance trucks that would visit the Project Site in the future would be required to comply with the applicable provisions of the CARB Truck and Bus regulation, which would impose more stringent requirements in future years than current conditions, Project operations would not be considered a substantial source of diesel particulates.

In addition, Project operations would only result in minimal emissions of air toxics from maintenance or other ongoing activities, such as from the emergency generators, which would be required to comply with SCAQMD Rule 1470. In accordance with Rule 1470, the maintenance and testing of the emergency generator would not occur daily, but rather periodically, up to 50 hours per year to limit emissions of TACs.

With respect to the use of consumer products and architectural coatings, the residential uses associated with the Project would be expected to generate minimal emissions from these sources. The Project's land uses would not include installation of industrial-sized paint booths or require extensive use of commercial or household cleaning products. As a result, toxic or carcinogenic air pollutants are not expected to occur in any substantial

[167] SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, August 2003.

amounts in conjunction with operation of the proposed land uses within the Project Site. **Based on the uses expected on the Project Site, potential long-term operational impacts associated with the release of TACs would be minimal, regulated, and controlled, and would not be expected to exceed the SCAQMD significance threshold. Therefore, impacts would be less than significant.**

(e) Project with the Deck Concept

(i) Localized Construction

Construction of the Project with the Deck Concept would require similar construction activities as the Project. The localized emissions calculated in the analysis above also reflects the localized emissions emitted under construction of the Project with the Deck Concept. In addition, as construction of the Project with the Deck Concept would implement Mitigation Measure AQ-MM-1, impacts related to TACs during construction would also be similar as those of the Project. Thus, the conclusions regarding impact significance presented above are the same and apply to the Project and the Project with the Deck Concept. **As such, construction of the Project with the Deck Concept would potentially expose sensitive receptors to a substantial pollutant concentration without the implementation of mitigation.**

(ii) Localized Operation

Similar to the Project, operation of the Project with the Deck Concept would emit criteria pollutants from mobile, stationary, and area sources. As described above, area source emissions (including architectural coating, consumer products and landscaping) and mobile emissions would differ between the Project and Project with the Deck Concept, as explained above in under threshold (b), Subsection 3.d(1)(c), *Project with the Deck Concept*, based on the Project's TA, 27,040 daily vehicle trips are estimated under the Project scenario and the Project with the Deck Concept is estimated to have 27,493 daily trips, which accounts for additional trips related to special events that would be held on the Deck. All other operational components related to the land uses proposed, compliance with regulations, and implementation of Project Design Features would be similar to that of the Project. The maximum daily localized emissions and the localized significance thresholds are presented in **Table IV.A-14,** *Estimated Maximum Localized Operational Emissions for Existing Sensitive Receptors with Project Design Features – Project with the Deck Concept.* **As shown therein, the Project's maximum localized operational emissions would be below the localized significance thresholds, with Project Design Features incorporated and localized operational emissions impacts to existing sensitive receptors would be less than significant.**

TABLE IV.A-14
ESTIMATED MAXIMUM LOCALIZED OPERATIONAL EMISSIONS FOR EXISTING SENSITIVE RECEPTORS – PROJECT WITH THE DECK CONCEPT (POUNDS PER DAY) [a]

Source	NO_X	CO	PM10	PM2.5
Area (Coating, Consumer Products, Landscaping)	1	26	0.2	0.2
Energy	13	10	1.0	1.0
Charbroilers	-	-	0.7	0.4
Cooling Tower	-	-	0.1	0.0
Emergency Generators	37	21	0.1	0.1
Heliport	<1	<1	-	-
Total Localized (On-Site) Emissions	**51**	**58**	**2.1**	**1.7**
SCAQMD Screening Significance Thresholds [b]	**161**	**1,861**	**4.0**	**2.0**
Exceeds Screening Significance Thresholds?	No	No	No	No

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.
[b] The SCAQMD LSTs are based on Source Receptor Area 1 (Central Los Angeles County Costal) for a 5-acre site with sensitive receptors conservatively assumed to be located adjacent to the Project Site for operational emissions of NO_X, CO, PM10 and PM2.5 for LST purposes.

SOURCE: ESA, 2021.

(iii) Carbon Monoxide Hotspots

The Project with the Deck Concept's VMT would be higher as compared to the Project due to the proposed Deck. The Project's TA provides[168] under Future plus Project (2026) with Deck conditions that the intersection of South Alameda Street and 3rd Street would have a maximum traffic volume of approximately 63,990 ADT.[169] As a result, CO concentrations from the Project with the Deck Concept's maximum traffic volume at the intersection identified above plus the measured background level in the Project Site area are expected to be approximately 4.9 ppm (one-hour average) and 3.7 ppm (eight-hour average), which would not exceed the numerical thresholds of significance. Total traffic volumes at the maximally impacted intersection would likely have to increase by approximately five times higher to cause or contribute to a CO hotspot impact, given that vehicles operating today have reduced CO emissions as compared to vehicles operating in year 2003 when the SCAQMD conducted the AQMP attainment demonstration

168 Fehr & Peers, Transportation Assessment for the 670 Mesquit Project, April 2021.
169 The traffic volume of approximately 63,990 was estimated based on the peak hour intersection volumes under future with Project with the Deck Concept conditions and the general assumption that peak hour trips represent approximately 10 percent of daily trip volumes (the Federal Highway Administration considers 10 percent to be a standard assumption; see http://www.fhwa.dot.gov/planning/tmip/publications/other_reports/tod_modeling_procedures/ch02.cfm).

modeling.[170] This comparison demonstrates that the Project would not contribute to the formation of CO hotspots and that no further CO analysis is required. The Project would result in less than significant impacts with respect to CO hotspots. **The Project would not contribute to the formation of CO hotspots and no further CO analysis is required. Therefore, the Project would result in less than significant impacts with respect to CO hotspots.**

(iv) Toxic Air Contaminant Emissions

Construction of the Project with the Deck Concept would require similar construction activities as the Project. The Project and the Project with the Deck Concept would use a similar mix of construction equipment, but the Project would require a similar or slightly reduced construction intensity level on a maximum construction activity day as compared to the Project with the Deck Concept given that the Deck would not be constructed under the Project. The analysis provided for the Project construction is based on the worst-case construction activity, which includes concurrent construction of the buildings and the Deck. As described above, similar to the Project, the Project with the Deck Concept would be consistent with applicable AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. The Project with the Deck Concept would comply with the same emissions control requirements of the Project, including the CARB Air Toxics Control Measure that limits diesel powered equipment and vehicle idling to no more than 5 minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation; compliance with these would minimize emissions of TACs during construction. The Project with the Deck Concept would comply with the requirements of SCAQMD Rule 1403 if asbestos is found during the demolition and construction activities. **Therefore, TAC emissions from construction equipment associated with the Project with the Deck Concept would result in less than significant health risk impacts.**

During Project with the Deck Concept operation, the building uses would be the same as under the Project, except for the inclusion of the 132,000 square-foot Deck. Similar to the Project, Project with the Deck Concept operation would generate minor amounts of diesel emissions from mobile sources. Furthermore, trucks would be required to comply with the applicable provisions of the CARB Truck and Bus regulation to minimize and reduce PM and NOX emissions from existing diesel trucks. Therefore, the Project with the Deck Concept operations would not be considered a substantial source of diesel particulates. **Based on the uses expected on the Project Site under the Project with the Deck Concept, potential long-term operational impacts associated with the release of TACs would be minimal, regulated, and controlled, and would not be expected to exceed the SCAQMD significance threshold. Therefore, impacts would be less than significant.**

[170] SCAQMD, 2003 SQMP, Chapter 6 Clean Air Act Requirements.

(2) Mitigation Measures

Refer to Mitigation Measure AQ-MM-1 to reduce impacts regarding the exposure of substantial pollutant concentrations on sensitive receptors during construction. No additional mitigation measures are required.

(3) Level of Significance After Mitigation

(a) Construction

With implementation of Mitigation Measure AQ-MM-1, impacts regarding the exposure of substantial pollutant concentrations on sensitive receptors during construction would be reduced to less than significant. Mitigated localized construction emissions are provided in **Table IV.A-15**, *Estimated Maximum Mitigated Localized Construction Emissions*.

TABLE IV.A-15
ESTIMATED MAXIMUM MITIGATED LOCALIZED CONSTRUCTION EMISSIONS (POUNDS PER DAY) [a]

Source	NO_X	CO	PM10 [b]	PM2.5 [b]
On-site Construction Activities [c]				
Year 1				
Demolition/Site Preparation	9	94	8.3	1.5
Site Preparation/Demolition + Drainage/Utilities/Trenching	10	114	8.4	1.5
Site Preparation/Demolition + Drainage/Utilities/Trenching + Grading/Excavation	17	169	8.6	1.7
Drainage/Utilities/Trenching + Grading/Excavation	8	75	0.3	0.2
Grading/Excavation	7	55	0.2	0.2
Grading/Excavation + Foundation/Concrete Pour/Parking Garage + Concrete Batch Plant	14	117	13.0	2.2
Year 2				
Grading/Excavation + Foundation/Concrete Pour/Parking Garage + Concrete Batch Plant	14	117	13.0	2.2
Foundation/Concrete Pours/Parking Garage + Concrete Batch Plant	7	55	12.0	2.0
Foundation/Concrete Pour/Parking Garage + Building Construction + Concrete Batch Plant	21	137	12.9	2.2
Building Construction + Concrete Batch Plant	14	75	12.8	2.0
Year 3				
Building Construction + Concrete Batch Plant	14	75	12.8	2.0
Building Construction + Architectural Coating + Concrete Batch Plant	14	75	12.8	2.0

TABLE IV.A-15
ESTIMATED MAXIMUM MITIGATED LOCALIZED CONSTRUCTION EMISSIONS (POUNDS PER DAY) [a]

Source	NO_X	CO	PM10 [b]	PM2.5 [b]
Year 4				
Building Construction + Architectural Coating + Concrete Batch Plant	14	75	12.8	2.0
Building Construction + Architectural Coating + Paving + Concrete Batch Plant	16	102	12.9	2.1
Year 5				
Building Construction + Concrete Batch Plant	14	75	12.8	2.0
Building Construction + Architectural Coating + Concrete Batch Plant	14	75	12.8	2.0
Year 6				
Building Construction + Architectural Coating	14	75	0.2	0.2
Building Construction	14	75	0.2	0.2
Maximum Localized (On-Site) Emissions	21	169	13.0	2.2
SCAQMD Screening Significance Thresholds [d]	**161**	**1,861**	**16.0**	**8.0**
Exceed Screening Significance Thresholds?	No	No	No	No

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR. The derivations of the localized significance thresholds are also provided in Appendix C of this Draft EIR.
[b] Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.
[c] Year 1 and Year 6 may represent partial calendar years of construction, depending on the actual start date of construction.
[d] The SCAQMD LSTs are based on Source Receptor Area 1 (Central Los Angeles County) for a 5-acre site with sensitive receptors conservatively assumed to be located adjacent to the construction area.

SOURCE: ESA, 2020.

(b) Operation

Impacts regarding the exposure of substantial pollutant concentrations on sensitive receptors during operation were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

(c) Project with the Deck Concept

Impacts regarding the exposure of substantial pollutant concentrations on sensitive receptors during construction were determined to be potentially significant as it relates to localized construction emissions. As with the Project, impacts under the Project with the Deck Concept would be reduced to less-than-significant levels with implementation of Mitigation Measure AQ-MM-1.

Impacts regarding the exposure of substantial pollutant concentrations on sensitive receptors during operation of the Project with the Deck Concept were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

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

As discussed in Chapter VI, *Other CEQA Considerations*, and in the Initial Study (Appendix A), the Project would not create objectionable odors affecting a substantial number of people. In addition, as shown in Table IV.A-6 and Table IV.A-7, construction and operational emissions would not exceed the SCAQMD regional significance thresholds for attainment, maintenance, or unclassifiable criteria air pollutants (i.e., CO and SO_2).[171] **Therefore, construction and operation of the Project would result in less than significant impacts with respect to other emissions, including those leading to odors.**

(d) Project with the Deck Concept

Impacts associated with odors and other emissions affecting a substantial number of people would be the same under the Project or the Project with the Deck Concept for construction. Thus, the conclusions regarding impact significance presented above are the same and apply to the Project and the Project with the Deck Concept. In addition, as shown in Table IV.A-8, operational emissions would not exceed the SCAQMD regional significance thresholds for attainment, maintenance, or unclassifiable criteria air pollutants (i.e., CO and SO_2). **Therefore, construction and operation of the Project with the Deck Concept would result in less than significant impacts with respect to other emissions, including those leading to odors.**

e) Cumulative Impacts

(1) Impact Analysis

The City has identified a number of related projects located in the Project Site area that have not yet been built or that are currently under construction. However, since both the timing and the sequencing of the construction of the related projects are unknown, any quantitative analysis to ascertain daily construction emissions that assumes multiple, concurrent construction projects would be speculative. Accordingly, the SCAQMD recommends using two methodologies to assess the cumulative impact of air quality emissions: (1) project-specific air quality impacts be used to determine the project's

171 SCAQMD, 2016 AQMP, March 2017.

potential cumulative impacts to regional air quality;[172] or (2) that a project's consistency with the current AQMP be used to determine its potential cumulative impacts.

The SCAQMD CEQA Air Quality Handbook states that the "Handbook is intended to provide local governments, project proponents, and consultants who prepare environmental documents with guidance for analyzing and mitigating air quality impacts of projects."[173] The SCAQMD CEQA Air Quality Handbook also states that "[f]rom an air quality perspective, the impact of a project is determined by examining the types and levels of emissions generated by the project and its impact on factors that affect air quality. As such, projects should be evaluated in terms of air pollution thresholds established by the District."[174] The SCAQMD has also provided guidance on an acceptable approach to addressing the cumulative impacts issue for air quality as discussed below:[175]

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

The City has determined to rely on thresholds established by the SCAQMD (refer to State CEQA Guidelines Section 15064.7) to assess the Project's cumulative impacts. While it may be possible to add emissions from the list of related projects with the Project, it would not provide meaningful data for evaluating cumulative impacts under CEQA because neither the City nor the SCAQMD have established numerical thresholds applicable to the summation of multiple project emissions for comparison purposes. Additionally, regional emissions from a project have the potential to affect the Air Basin as a whole, and, unlike other environmental issues areas, such as aesthetics or noise, it is not possible to establish a geographical radius from a specific project site where potential cumulative impacts from regional emissions would be limited. Meteorological factors, such as wind, can disperse pollutants, often times tens of miles downwind from a project site. Therefore, consistent with accepted and established SCAQMD cumulative impact

172 SCAQMD, Potential Control Strategies to Address Cumulative Impacts from Air Pollution White Paper, Appendix D, 1993, page D-3 ("As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR… Projects that exceed the Project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.").

173 SCAQMD, CEQA Air Quality Handbook, April 1993, page iii.

174 SCAQMD, CEQA Air Quality Handbook, April 1993, page 6-1.

175 SCAQMD, Cumulative Impacts White Paper, Appendix D.

evaluation methodologies, the potential for the Project to result in cumulative impacts from regional emissions is assessed based on the SCAQMD thresholds.

(a) Project-Specific Impacts

For construction, as shown in Table IV.A-12, the Project would not result in an exceedance of localized significance thresholds. However, as shown in Table IV.A-9, with implementation of mitigation measures, regional emissions of NO_x for construction would still exceed the significance thresholds. **Therefore, cumulative impacts related to regional NO_x construction emissions would be significant.**

For operations, as shown in Table IV.A-13, the Project would not result in an exceedance of localized significance thresholds. However, as shown in Table IV.A-10, with implementation of mitigation measures, regional emissions of VOC for operations would still exceed the significance thresholds. **Therefore, cumulative impacts related to regional operational emissions of VOC would be significant.**

(b) Consistency with Air Quality Management Plan

The SCAQMD recommends assessing a project's cumulative impacts based on whether the project is consistent with the current AQMP. CEQA Guidelines Section 15064(h)(3) provides guidance in determining the significance of cumulative impacts. Specifically, CEQA Guidelines Section 15064(h)(3) states in part that:

> *"A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency…"*

For purposes of the cumulative air quality analysis with respect to CEQA Guidelines Section 15064(h)(3), the Project's cumulative air quality impacts are determined not to be significant based on its consistency with the SCAQMD's adopted 2016 AQMP, as discussed above. As is also discussed above, the Project's increase in population, housing, and employment would also be consistent with the 2016-2040 RTP/SCS growth projections, upon which the 2016 AQMP is based. Related projects would also be required to assess consistency with 2016 AQMP transportation control strategies, as well as with population, housing, and employment growth projections in the 2016-2040 RTP/SCS and provide mitigation measures if significant impacts are identified. **As such, the Project would be consistent with and would not conflict with or obstruct implementation of the 2016 AQMP.**

(i) Project with the Deck Concept

Construction of the Project with the Deck Concept would require similar construction activities as the Project. All operational components related to the land uses proposed, compliance with regulations, and implementation of Project Design Features would be similar to that of the Project. While the Project and the Project with the Deck Concept would have differences in quantified operational air quality emissions, the Project's impacts to implementation of an applicable air quality plan, increase of any criteria pollutant for which the project region is in non-attainment, and impacts on sensitive receptors would be essentially the same under both scenarios. Thus, the conclusions regarding the cumulative impact analysis and impact significance presented above are the same and apply to the Project without Deck and the Project with the Deck Concept. **As such, the Project with the Deck Concept would have a significant and unavoidable impact as it relates to both cumulative construction and operational air quality impacts.**

(2) Mitigation Measures

Refer to Mitigation Measures AQ-MM-1 through AQ-MM-3, and TRAF-MM-1 to reduce cumulative regional NO_X emissions during construction and cumulative regional VOC and PM10 emissions during operation. No additional mitigation measures are feasible.

(3) Level of Significance after Mitigation

Cumulative air quality impacts would be significant and unavoidable for construction NOx emissions and operational VOC emissions even with implementation of mitigation measures. Operational PM10 emissions would be reduced to less than significant. Therefore, when considered together with related projects, air quality impacts would result in a cumulatively considerable impact after mitigation.