Attachment C

Air Quality Technical Report

ESA

3855 WATSEKA AVENUE PROJECT, CULVER CITY, CA

Air Quality Technical Report

Prepared for
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915 Wilshire Boulevard, Suite 2050
Los Angeles, CA 90017

September 2021

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ACRONYMS AND ABBREVIATIONS

Acronym	Description
Air Basin	South Coast Air Basin
AQMP	Air Quality Management Plan
ATCM	Airborne Toxics Control Measure
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEUS	Commercial End-Use Survey
CEQA	California Environmental Quality Act
City	City of Culver City
CO	Carbon monoxide
DPF	Diesel particulate filters
EMFAC	On-road vehicle emissions factor model
EV	Electric vehicle
GHG	Greenhouse gas
HAP	Hazardous air pollutant
hp	Horsepower
LADOT	Los Angeles Department of Transportation
MATES IV	Multiple Air Toxics Exposure Study, May 2015
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NO	Nitric oxide
NO_2	Nitrogen dioxide
NO_X	Nitrogen oxides
OFFROAD	Off-road vehicle emissions model

Acronym	Description
OEHHA	Office of Environmental Health Hazard Assessment
Pb	Lead
PDF	Project design feature
PM2.5	Fine particulate matter
PM10	Respirable particulate matter
ppm	Parts per million
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SO_2	Sulfur dioxide
TAC	Toxic air contaminant
$\mu g/m^3$	Micrograms per cubic meter
USEPA	United States Environmental Protection Agency
VDECS	Verified Diesel Emission Control Strategies
VOC	Volatile organic compounds

EXECUTIVE SUMMARY

LPC West (the "Applicant") is proposing redevelopment of an approximately 49,002 square foot (1.125-acre) property (Project) located in downtown Culver City at 3817, 3835, and 3855 Watseka Avenue, on a portion of the block extending between Washington Boulevard to the south, and Venice Boulevard to the north (Project Site). In accordance with the requirements under the California Environmental Quality Act (CEQA), this Air Quality Technical Report (Technical Report) provides an estimate of air quality emissions for the Project and the potential impacts from associated construction and operational activities. This Technical Report includes the categories and types of emission sources resulting from the Project, the calculation procedures used in the analysis, and any assumptions or limitations.

The Project would include a new, four-story office building with an area of approximately 149,518 gross square feet. Parking would be provided in a three-floor, subterranean parking garage. Development of the Project would require the demolition of the two existing low-rise office buildings and an asphalt-paved surface parking lot.

This Technical Report summarizes the potential for the Project to conflict with an applicable air quality plan, to violate an air quality standard or threshold, to result in a cumulatively net increase of criteria pollutant emissions, to expose sensitive receptors to substantial pollutant concentrations, or to create objectionable odors affecting a substantial number of people. The findings of the analyses are as follows:

- The incremental increase in emissions from construction and operation of the Project would not exceed the regional daily emission thresholds set forth by the South Coast Air Quality Management District (SCAQMD). Thus, the Project would not result in a regional violation of applicable air quality standards or jeopardize the timely attainment of such standards in the South Coast Air Basin (the Air Basin).
- The incremental increase in onsite emissions from construction and operation of the Project would not exceed the localized significance thresholds set forth by the SCAQMD. Thus, the Project would not result in a localized violation of applicable air quality standards or expose offsite receptors to substantial levels of regulated air contaminants resulting in a less than significant impact.
- Emissions from the increase in traffic due to operation of the Project would not have a significant impact upon 1-hour or 8-hour local carbon monoxide (CO) concentrations due to mobile source emissions.
- Project construction and operations would not expose off-site receptors to significant levels of toxic air contaminants and would result in less than significant health risk impacts.
- Project construction and operations would not result in significant levels of odors.
- The Project would be consistent with air quality policies set forth by the SCAQMD.
- The Project would result in a less than significant cumulative air quality impacts during construction and operations of the project.

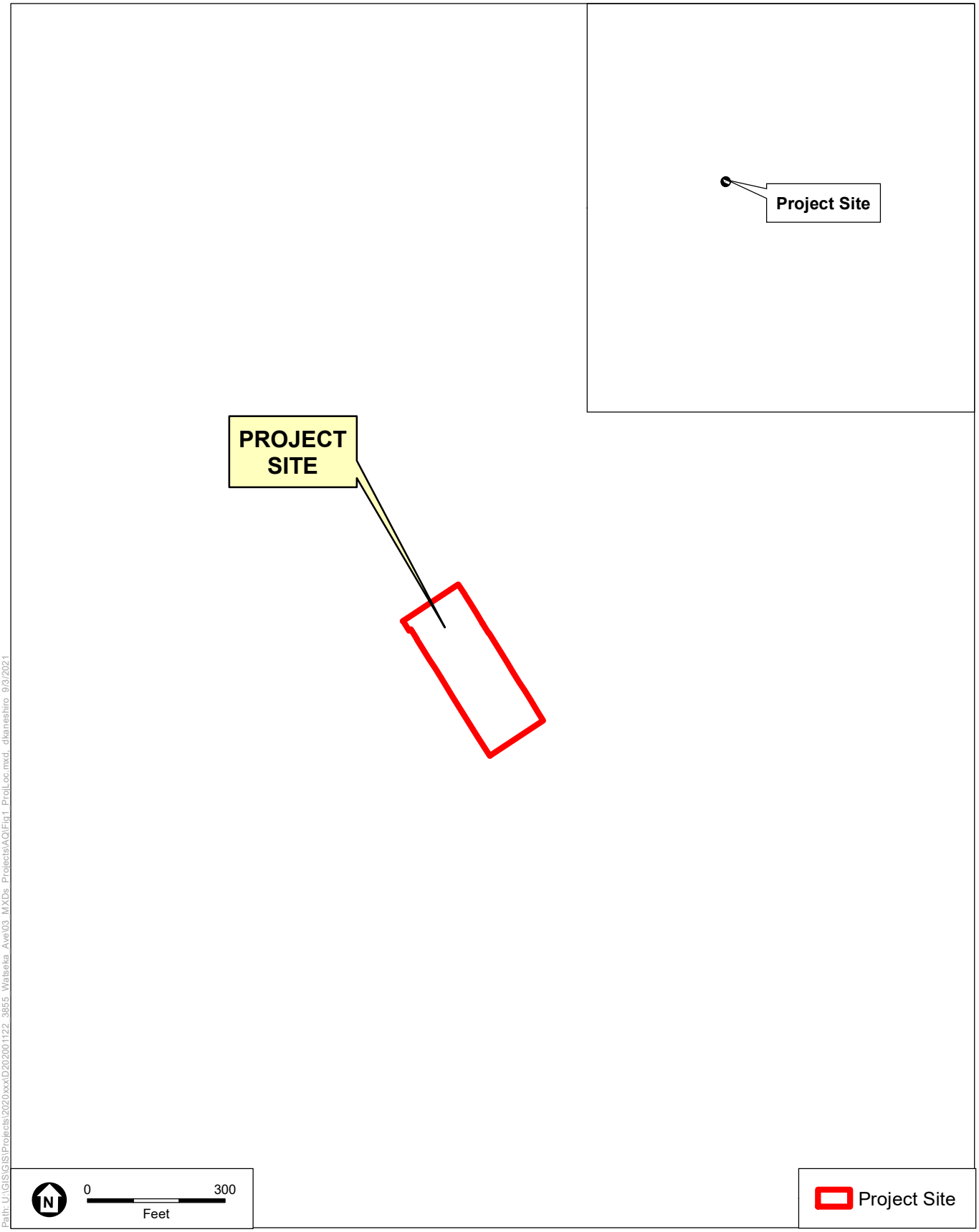
SECTION 1
Introduction

1.1 Existing Conditions

The approximately 1.125-acre Project Site is located in downtown Culver City in a commercial corridor that runs between Washington Boulevard and Venice Boulevard. The Project Site is approximately 5.18 miles from the Pacific Ocean and approximately 7.88 miles from Downtown Los Angeles. The northern boundary of the Project Site borders the City of Los Angeles. The Project Site is shown in **Figure 1**, *Regional Location.* Nearby uses surrounding the Project Site include commercial uses to the north across a public alley and east across Watseka Avenue. A two-story multi-family residential building is located immediately adjacent to the south of the Project Site. An additional two-story multi-family residential building is located across Watseka Avenue to the east of the Project Site. The Southern California Hospital at Culver City is located to the west of the Project Site. Specifically, a 7-story building which houses the acute rehab unit providing 24-hour medical service for the hospital (Acute Rehab Building) and associated surface parking is located immediately adjacent to the Project Site along Delmas Terrace. **Figure 2**, *Aerial Photograph with Surrounding Land Uses*, shows the Project Site and surrounding land uses. The Project Site is 49,002 square feet in size and is currently developed with low-level commercial buildings totaling 7,370 square feet and a surface parking lot totaling 33,769 square feet, all of which would be demolished and removed to support development of the Project. The Project Site is well served by a network of regional transportation facilities. Various public transit stops operated by the Los Angeles County Metropolitan Transportation Authority (Metro), Los Angeles Department of Transportation (LADOT), and Culver City Bus are located in proximity to the Project Site.

1.2 Project Description

The Applicant is proposing redevelopment of an approximately 49,002 square foot (1.125-acre) property located in downtown Culver City at 3817, 3835, and 3855 Watseka Avenue, on a portion of the block extending between Washington Boulevard to the south, and Venice Boulevard to the north. The Project Site is currently developed with two existing office buildings, one and two stories in height, totaling 7,370 square feet, and associated storage areas, an asphalt-paved surface parking lot, and ornamental landscaped areas. Existing improvements on the Project Site would be demolished and removed to support development of the Project. The Project would include a new, four-story, 149,518 square foot office building up to 56-feet in height over three levels of subterranean parking, along with trees, landscaping and other open space amenities. Construction of the Project would require approximately 45 feet of excavation. It is anticipated that construction activities would commence as early as the first quarter of 2022 with full build-out occurring in the first quarter of 2024, for a total of 26.5 months of construction.

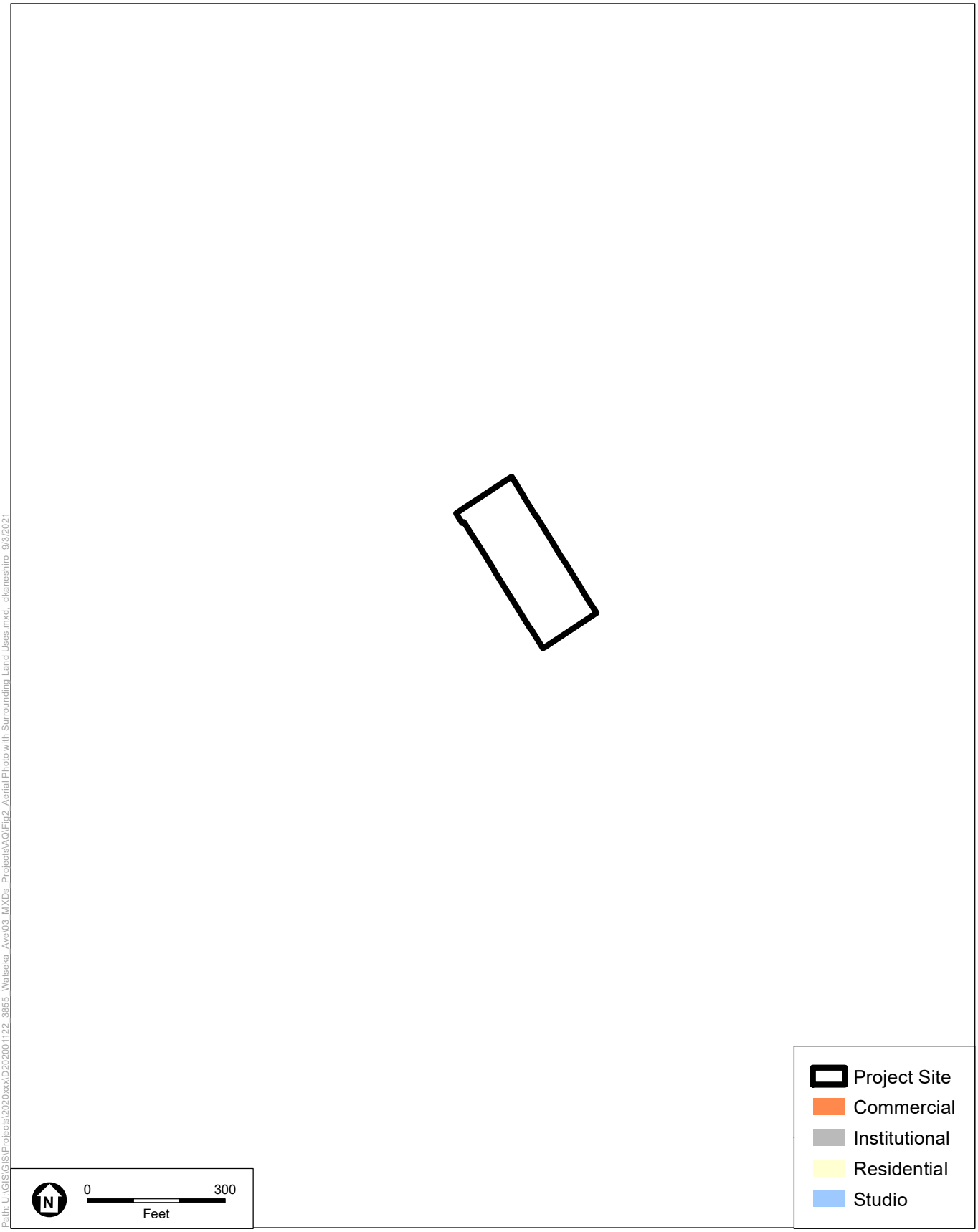


SOURCE: ESRI, 2021; ESA, 2021

3855 Watseka Avenue Project

Figure 1
Regional and Project Vicinity Location

ESA



Path: U:\GIS\GIS\Projects\2020xxx\D2020011222_3855_Watseka_Ave\03_MXDs_Projects\AQ\Fig2_Aerial Photo with Surrounding Land Uses.mxd dkaneshiro 9/3/2021

SOURCE: ESRI, 2021; ESA, 2021

3855 Watseka Avenue Project

Figure 2
Aerial Photograph with Surrounding Land Uses

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1.3 Project Land Use Characteristics

The Project would represent an urban infill development, since it would be undertaken on a currently developed property, and would be located near existing public transit stops, which would result in potential reduced vehicle trips and VMT compared to model default assumptions. Trip rates provided in the Project traffic study[1] were used in the operational emissions modeling. At Project buildout, hours of operation and periods of peak activity would be similar to those currently existing uses on the Project Site, with A.M. and P.M. peak hours.

1.4 Sustainability and Project Design Features

The Project will incorporate sustainability and project design features (PDFs) that would reduce construction emissions and target sustainable site development, water savings, energy efficiency, green-oriented materials selection, and improved indoor environmental quality. PDFs are part of the Project design and are not mitigation measures.

> **PDF-AIR-1: Construction Features:** Construction equipment operating at the Project Site shall be subject to a number of requirements. These requirements shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment. Construction measures would include, but are not limited to the following:
>
> - The Project shall require all off-road diesel construction equipment greater than 50 horsepower (hp) that will be used an aggregate of 40 or more hours to meet the United States Environmental Protection Agency (USEPA) Tier 4 Final off-road emission standards. A copy of each unit's certified tier specification or model year specification and California Air Resources Board or South Coast Air Quality Management District operating permit (if applicable) shall be available upon request at the time of mobilization of each applicable unit of equipment. This construction feature would allow for a reduction in diesel particulate matter and NO_X emissions during construction activities.
>
> In addition, the Project will incorporate the following construction and operational sustainability features:
>
> - The Project shall recycle and/or salvage at least 75 percent of non–hazardous construction and demolition debris.
> - The Project shall use local manufacturers and recycled products where possible.
> - The Project shall use Forest Sustainability Council-certified wood, including cross-laminated timber on the top floor in the building construction.
> - The Project shall install stormwater filtration and capture systems and use captured stormwater for irrigation.
> - The Project shall install 20 percent electric vehicle (EV)-capable, 10 percent EV-ready charging stations, and 10 percent of Full EV Charger Station, as required by the Culver City Municipal Code Section 15.02.150.

[1] Raju Associates, Inc., 3855 Watseka Office Project Traffic Study, 2021.

- The Project shall install water saving fixtures in all locations, including waterless urinals in public restrooms and water saving landscaping, consistent with the 2019 CALGreen Code.

- The Project shall install a solar photovoltaic power system equivalent to approximately 7.99 percent of the Project's base electricity demand (which represents 3.1 kilowatts of solar photovoltaics (PV) per 10,0000 square feet of the proposed building), which exceeds the City's requirement to provide at least 1 kilowatt of solar PV per 10,000 square feet of new development.

- The Project shall incorporate low-water and drought tolerant plants in the landscape plan.

- The Project shall install irrigation timers with rain sensors.

- The Project shall utilize dual low emissivity glazing.

- The Project shall install high reflective roof material

- The Project shall use high efficiency heating and air conditioning systems

- The Project shall use high efficiency systems for all interior and exterior lighting

- The Project shall use natural ventilation and daylighting.

- The Project shall provide on-site recycling collection facilities.

- The Project shall provide bicycle facilities such as lockers and bicycle parking for employees and visitors, including 28 short-term and 28 long-term spaces.

1.5 Existing Site Emissions

As discussed previously, the Project Site is currently developed with low-level commercial buildings totaling 7,370 square feet and a surface parking lot totaling 33,769 square feet, all of which would be demolished and removed to support development of the Project. Although, the surface parking lot itself does not generate air pollutant emissions, operation of the commercial building, vehicle trips to and from the Project Site, and maintenance of the landscaped areas generate air pollutant emissions.

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 volatile organic compounds (VOCs) from consumer product usage and architectural coatings. Existing emissions were estimated using the California Emissions Estimator Model (CalEEMod), Version 2020.4.0 software, an emissions inventory software program recommended by the SCAQMD. CalEEMod is a 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. CalEEMod was developed in collaboration with the air districts of California. Regional data (e.g.,

emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. CalEEMod is considered to be an accurate and comprehensive tool for quantifying air quality and GHG emissions impacts from land use projects throughout California.[2]

CalEEMod was used to estimate the existing site emissions from vehicle trips, natural gas combustion, consumer products usage, and architectural coatings. Mobile source emissions estimates were calculated outside of CalEEMod and were based on the California Air Resource Boards (CARB) latest on-road vehicle EMissions FACtor (EMFAC) model, EMFAC2021 and trip rates from the Project's traffic study.[3,4] A detailed discussion of the methodology used to estimate the existing Project Site emissions is provided below. **Table 1**, *Existing Site Operational Emissions*, identifies the emissions from the site's existing usage and emissions removed due to the Project. The emissions removed from the existing conditions will be counted as credit for the Project.

TABLE 1
EXISTING SITE OPERATIONAL EMISSIONS (POUNDS PER DAY)[a]

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Existing Site Emissions						
Area	<1	<1	<1	<1	<1	<1
Energy (Natural Gas)	<1	<1	<1	<1	<1	<1
Mobile	<1	<1	1	<1	<1	<1
Total	**<1**	**<1**	**1**	**<1**	**<1**	**<1**

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Exhibit B.

SOURCE: ESA 2021

1.6 Existing Air Quality Conditions

Regional Air Quality

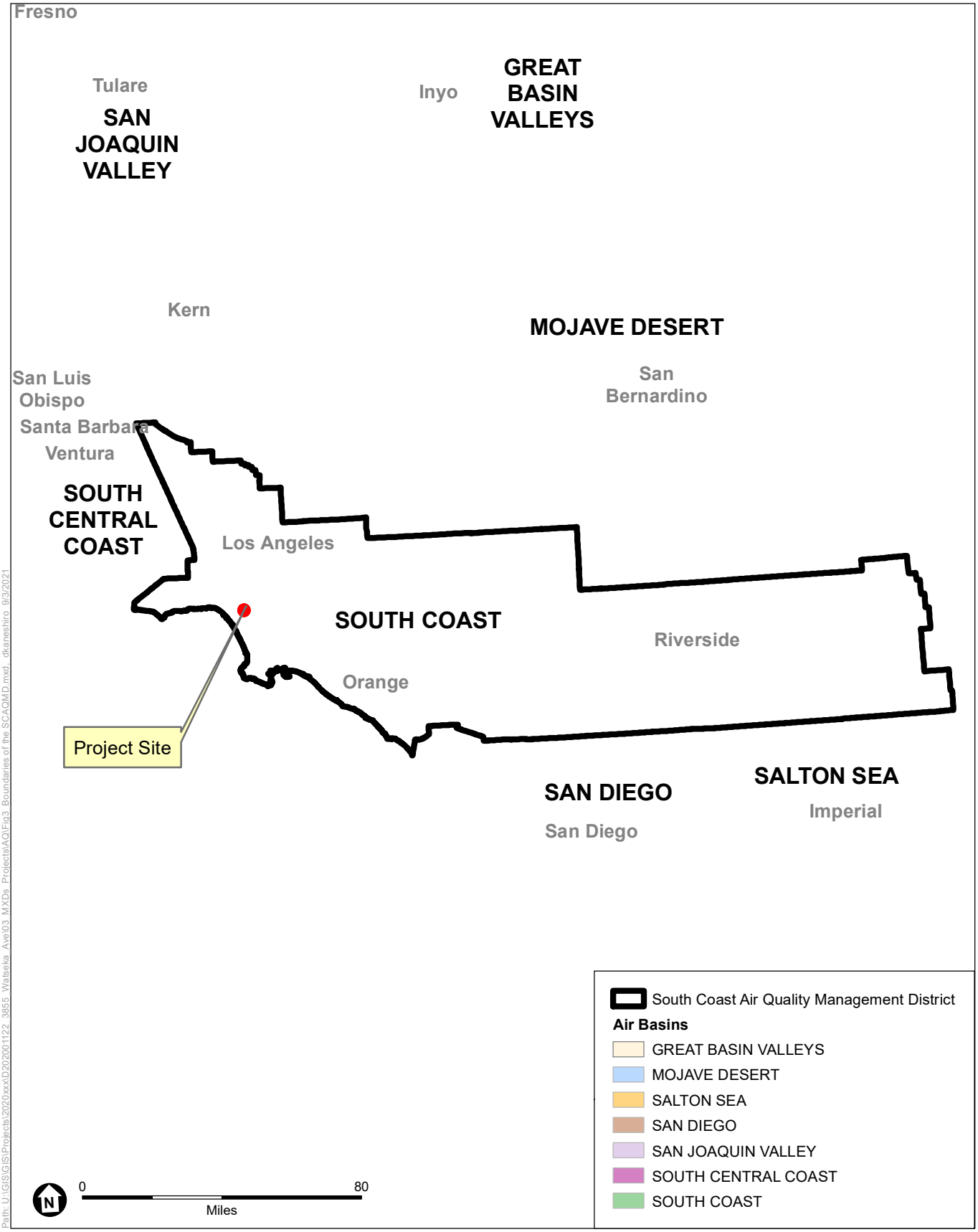
Criteria Pollutants

The Project Site is located within the South Coast Air Basin (Air Basin), which is shown in **Figure 3**, *Boundaries of the South Coast Air Quality Management District*. The Air Basin is an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Air Basin

2 See: http://www.caleemod.com.

3 Raju Associates, Inc., 3855 Watseka Office Project Traffic Study, 2021.

4 CalEEMod's default mobile emission factors are based on an internal database which utilizes EMFAC2017. EMFAC2021 is the most up-to-date version of EMFAC provided by CARB. EMFAC2021 emissions factors were generated outside of CalEEMod and mobile emissions were calculated externally based on the Project Traffic Study's total daily vehicle miles traveled.



SOURCE: California Air Resources Board, March 2004

3855 Watseka Avenue Project

Figure 3
Boundaries of the South Coast Air Quality Management District and Basin

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consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside counties, in addition to the San Gorgonio Pass area in Riverside County. The terrain and geographical location determine the distinctive climate of the Air Basin, as it is a coastal plain with broad valleys and low hills. The Air Basin lies in the semi-permanent high-pressure zone of the eastern Pacific Ocean. The usually mild climatological pattern is interrupted by periods of hot weather, winter storms, or Santa Ana winds.

The extent and severity of pollutant concentrations in the Air Basin is 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 greatest air pollution impacts throughout the Air Basin typically occur from June through September. This condition is generally attributed to the emissions occurring in the Air Basin, light winds, and shallow vertical atmospheric mixing. These factors reduce the potential for pollutant dispersion 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.

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 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 brief description of the health effects of these criteria air pollutants are provided below.

Ozone (O_3): Ozone is a secondary pollutant formed by the chemical reaction of 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 USEPA, ozone can cause the muscles in the airways to constrict potentially leading to wheezing and shortness of breath.[5] 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

5 United States Environmental Protection Agency (USEPA), Health Effects of Ozone Pollution, https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution, last updated October 10, 2018. Accessed May 2021.

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.[6] 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.[7] According to the 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.[8] 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.[9] 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.[10] 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.[11] 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.[12] Further research may be able to better distinguish between health effects in children and adults.[13]

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.[14] According to CARB, some VOCs are highly reactive and play a critical role in the formation of ozone, other VOCs have adverse health effects, and in some cases, VOCs can be both highly reactive and have adverse health effects.[15] 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.).[16]

Nitrogen Dioxide (NO_2) and Nitrogen Oxides (NO_X): NO_X is a term that refers to a group of compounds containing nitrogen and oxygen. The primary compounds of air quality concern

6 USEPA, Health Effects of Ozone Pollution.

7 USEPA, Health Effects of Ozone Pollution.

8 California Air Resources Board (CARB), Ozone & Health, Health Effects of Ozone, https://ww2.arb.ca.gov/resources/ozone-and-health. Accessed May 2021.

9 USEPA, Health Effects of Ozone Pollution.

10 USEPA, Health Effects of Ozone Pollution.

11 CARB, Ozone & Health, Health Effects of Ozone.

12 CARB, Ozone & Health, Health Effects of Ozone.

13 CARB, Ozone & Health, Health Effects of Ozone.

14 USEPA, Technical Overview of Volatile Organic Compounds, https://www.epa.gov/indoor-air-quality-iaq/technical-overview-volatile-organic-compounds, last updated April 12, 2017. Accessed May 2021.

15 CARB, Toxic Air Contaminants Monitoring, Volatile Organic Compounds, https://www.arb.ca.gov/aaqm/toxics.htm, last reviewed June 9, 2016. Accessed May 2021.

16 CARB, Toxic Air Contaminants Monitoring, Volatile Organic Compounds.

include NO_2 and nitric oxide (NO). Ambient air quality standards have been promulgated for NO_2, which is a reddish-brown, reactive gas.[17] 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.[18] Major sources of NO_X include emissions from cars, trucks and buses, power plants, and off-road equipment.[19] 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.[20] According to CARB, controlled human exposure studies that show that NO_2 exposure can intensify responses to allergens in allergic asthmatics.[21] 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.[22] 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.[23] CARB states that much of the information on distribution in air, human exposure and 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.[24]

Carbon Monoxide (CO): 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.[25] 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

17 CARB, Nitrogen Dioxide & Health, https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health. Accessed May 2021.

18 CARB, Nitrogen Dioxide & Health.

19 USEPA, Nitrogen Dioxide (NO_2) Pollution, https://www.epa.gov/no2-pollution/basic-information-about-no2, last updated September 8, 2016. Accessed May 2021.

20 USEPA, Nitrogen Dioxide (NO_2) Pollution.

21 CARB, Nitrogen Dioxide & Health.

22 CARB, Nitrogen Dioxide & Health.

23 CARB, Nitrogen Dioxide & Health.

24 CARB, Nitrogen Dioxide & Health.

25 CARB, Carbon Monoxide & Health, https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health. Accessed May 2021.

and death.[26] 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.[27] 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.[28] According to CARB, the most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain.[29] 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.[30] 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.[31]

Sulfur Dioxide (SO_2): According to the USEPA, the largest source of 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.[32] In 2006, California phased-in the ultra-low-sulfur diesel regulation limiting vehicle diesel fuel to a 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.[33] According to the USEPA, short-term exposures to SO_2 can harm the human respiratory system and make breathing difficult.[34] 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.[35] Children, the elderly, and those with asthma, cardiovascular disease, or chronic

26 USEPA, Carbon Monoxide (CO) Pollution in Outdoor Air, https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution, last updated September 8, 2016. Accessed May 2021.

27 USEPA, Carbon Monoxide (CO) Pollution in Outdoor Air.

28 USEPA, Carbon Monoxide (CO) Pollution in Outdoor Air.

29 CARB, Carbon Monoxide & Health.

30 CARB, Carbon Monoxide & Health.

31 CARB, Carbon Monoxide & Health.

32 USEPA, Sulfur Dioxide (SO_2) Pollution, https://www.epa.gov/so2-pollution/sulfur-dioxide-basics, last updated June 28, 2018. Accessed May 2021.

33 CARB, Final Regulation Order, Amendments to the California Diesel Fuel Regulations, Amend Section 2281, Title 13, California Code of Regulations, https://www.arb.ca.gov/regact/ulsd2003/fro2.pdf, approved July 15, 2004. Accessed May 2021.

34 USEPA, Sulfur Dioxide (SO_2) Pollution.

35 CARB, Sulfur Dioxide & Health, https://ww2.arb.ca.gov/resources/sulfur-dioxide-and-health. Accessed May 2021.

lung disease (such as bronchitis or emphysema) are most likely to experience the adverse effects of SO_2.[36,37]

Particulate Matter (PM10 and PM2.5): Particulate matter air pollution is a mixture of solid particles and liquid droplets found in the air.[38] 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.[39] Particles are defined by their diameter for air quality regulatory purposes: inhalable particles with diameters that are generally 10 micrometers and smaller (PM10); and fine inhalable particles with diameters that are generally 2.5 micrometers and smaller (PM2.5).[40] 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.[41] Sources of PM2.5 emissions include combustion of gasoline, oil, diesel fuel, or wood.[42] 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.[43] According to CARB, both PM10 and PM2.5 can be inhaled, with some depositing throughout the airways; PM10 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.[44] Short-term (up to 24 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.[45] 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.[46] 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.[47] 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

36 CARB, Sulfur Dioxide & Health.

37 USEPA, Sulfur Dioxide (SO_2) Pollution.

38 USEPA, Particulate Matter (PM) Pollution, https://www.epa.gov/pm-pollution/particulate-matter-pm-basics, last updated November 14, 2018. Accessed May 2021.

39 USEPA, Particulate Matter (PM) Pollution.

40 USEPA, Particulate Matter (PM) Pollution.

41 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10), https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm, last reviewed August 10, 2017. Accessed May 2021.

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 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10).

46 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10).

47 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10).

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.[48]

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.[49] 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.[50] 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.[51] 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.[52] 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.[53]

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, regulate State-identified criteria pollutants, including sulfates, hydrogen sulfide, visibility-reducing particles, and vinyl chloride.[54] 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_X emissions. Both particulate matter and SO_X are included in the emissions estimates for the Project. A description of the health effects of the State-identified criteria air pollutants is provided below.

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).[55] 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

48 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10).

49 USEPA, Lead Air Pollution, https://www.epa.gov/lead-air-pollution/basic-information-about-lead-air-pollution, last updated November 29, 2017. Accessed May 2021.

50 USEPA, Lead Air Pollution.

51 USEPA, Lead Air Pollution.

52 CARB, Lead & Health, https://ww2.arb.ca.gov/resources/lead-and-health. Accessed May 2021.

53 CARB, Lead & Health.

54 CARB, California Ambient Air Quality Standards, https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards. Accessed May 2021.

55 CARB, Sulfate & Health, https://ww2.arb.ca.gov/resources/sulfate-and-health. Accessed May 2021.

chronic heart or lung diseases.[56] 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.[57]

Hydrogen Sulfide (H_2S): H_2S is a colorless gas with a strong odor of rotten eggs. The most common sources of H_2S emissions are oil and natural gas extraction and processing, and natural emissions from geothermal fields. Industrial sources of H_2S include petrochemical plants and kraft paper mills. H_2S is also formed during bacterial decomposition of human and animal wastes, and is present in emissions from sewage treatment facilities and landfills.[58] Exposure to H_2S can induce tearing of the eyes and symptoms related to overstimulation of the sense of smell, including headache, nausea, or vomiting; additional health effects of eye irritation have only been reported with exposures greater than 50 ppm, which is considerably higher than the odor threshold.[59] H_2S is regulated as a nuisance based on its odor detection level; if the standard were based on adverse health effects, it would be set at a much higher level.[60] According to CARB, there are insufficient data available to determine whether or not some groups are at greater risk than others.[61]

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.[62] Exposure to some haze-causing pollutants have been linked to adverse health impacts similar to PM10 and PM2.5 as discussed above.[63]

Vinyl Chloride: Vinyl chloride is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products and are generally emitted from industrial processes and other major sources of vinyl chloride have been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.[64] Short-term health of effects of exposure to high levels of vinyl chloride in the air include central nervous system effects, such as dizziness, drowsiness, and headaches while long-term exposure to

56 CARB, Sulfate & Health.
57 CARB, Sulfate & Health.
58 CARB, Hydrogen Sulfide & Health, https://ww2.arb.ca.gov/resources/hydrogen-sulfide-and-health. Accessed May 2021.
59 CARB, Hydrogen Sulfide & Health.
60 CARB, Hydrogen Sulfide & Health.
61 CARB, Hydrogen Sulfide & Health.
62 CARB, Visibility-Reducing Particles and Health, last reviewed October 11, 2016, https://www.arb.ca.gov/research/aaqs/common-pollutants/vrp/vrp.htm. Accessed May 2021.
63 CARB, Visibility-Reducing Particles and Health.
64 CARB, Vinyl Chloride & Health, https://ww2.arb.ca.gov/resources/vinyl-chloride-and-health. Accessed May 2021.

vinyl chloride through inhalation and oral exposure causes liver damage and has been shown to increase the risk of angiosarcoma, a rare form of liver cancer in humans.[65] Most health data on vinyl chloride relate to carcinogenicity; thus, the people most at risk are those who have long-term exposure to elevated levels, which is more likely to occur in occupational or industrial settings; however, control methodologies applied to industrial facilities generally prevent emissions to the ambient air.[66]

Toxic Air Contaminants (TACs)

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

> *"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, which is emitted in the exhaust from diesel engines, was listed by the State as a toxic air contaminant 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.[67] Diesel particulate matter has historically been used as a surrogate measure of exposure for all diesel exhaust emissions. Diesel particulate matter 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 diesel particulate matter may be a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Diesel particulate matter 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, diesel particulate matter exposure may lead to the following adverse health effects: (1) Aggravated asthma; (2) Chronic bronchitis; (3) Increased respiratory and cardiovascular

65 CARB, Vinyl Chloride & Health.

66 CARB, Vinyl Chloride & Health.

67 CARB, Overview: Diesel Exhaust and Health, https://www.arb.ca.gov/research/diesel/diesel-health.htm. Accessed May 2021.

hospitalizations; (4) Decreased lung function in children; (5) Lung cancer; and (6) Premature deaths for people with heart or lung disease.[68,69]

In August 2021, the SCAQMD released the Final Multiple Air Toxics Exposure Study V (MATES V).[70] The MATES V study includes a fixed site monitoring program with ten 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 noncancer 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) and CalEPA risk assessment methodologies and modern statistical methods to examine the trends over time. This has led to a reduction of the Basin Average Air Toxics Cancer Risk in MATES V, 455 in a million, from MATES IV, 997 in a million.[71] 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 a 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 ten fixed stations.[72]

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

68 CARB, Diesel and Health Research, http://www.arb.ca.gov/research/diesel/diesel-health.htm. Accessed May 2021.

69 CARB, Diesel Particulate Matter Health Risk Assessment Study for the West Oakland Community: Preliminary Summary of Results, (2008), http://www.arb.ca.gov/ch/communities/ra/westoakland/documents/factsheet0308.pdf. Accessed May 2021.

70 SCAQMD, 2021. Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin MATES V. http://www.aqmd.gov/docs/default-source/planning/mates-v/mates-v-final-report.pdf?sfvrsn=4, accessed August 23, 2021.

71 SCAQMD, 2021. FinalDraft Report Multiple Air Toxics Exposure Study in the South Coast Air Basin MATES V, April. http://www.aqmd.gov/docs/default-source/planning/mates-v/mates-v-final-report.pdf?sfvrsn=4http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v, accessed August 23May 25, 2021.

72 SCAQMD, 2021. Multiple Air Toxics Exposure Study V (MATES V): Overview of Results and Major Changes, MATES V Technical Advisory Group Meeting April 14, 2021. http://www.aqmd.gov/docs/default-source/planning/mates-v/mates-v-tag-item2-overview.pdf?sfvrsn=12, accessed May 25, 2021.

background potential cancer risk per million people in the Project Site area is estimated at approximately 468 in one million (compared to an overall Air Basin-wide risk of 455 in one million for the average of 10 fixed monitoring sites).[73] 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, and ports).

Local Air Quality

The SCAQMD maintains a network of air quality monitoring stations located throughout the Air Basin to measure ambient pollutant concentrations. The Project Site is located in SCAQMD Source Receptor Area (SRA) 2; therefore, the monitoring station most representative of the Project Site is the Northwest Coastal LA County Monitoring Station. Criteria pollutants monitored at this station include ozone, NO_2, and CO. The Southwest Coastal LA County Monitoring Station was used to report data for SO_2, lead, and PM10. The Central LA station was used for PM2.5 monitoring data. Air quality monitoring data available from the SCAQMD for these monitoring stations are summarized in **Table 2,** *Ambient Air Quality Data*.

TABLE 2
AMBIENT AIR QUALITY DATA

Pollutant/Standard	2016	2017	2018	2019
O_3 (1-hour)				
Maximum Concentration (ppm)	0.085	0.099	0.098	0.086
Days > CAAQS (0.09 ppm)	0	1	0	0
O_3 (8-hour)				
Maximum Concentration (ppm)	0.073	0.077	0.073	0.075
4th High 8-hour Concentration (ppm)	0.066	0.069	0.068	0.064
Days > CAAQS (0.070 ppm)	2	3	2	1
Days > NAAQS (0.075 ppm)	0	0	0	0
NO_2 (1-hour)				
Maximum Concentration (ppm)	0.055	0.056	0.065	0.049
98th Percentile Concentration (ppm)	0.049	0.046	0.046	0.043
NO_2 (Annual)				
Annual Arithmetic Mean (0.030 ppm)	0.012	0.010	0.013	0.010
CO (1-hour)				
Maximum Concentration (ppm)	2.2	2.0	1.6	1.9
CO (8-hour)				
Maximum Concentration (ppm)	1.1	1.2	1.3	1.2
SO_2 (1-hour)				
Maximum Concentration (ppm)	0.010	0.010	0.012	0.008
99th Percentile Concentration (ppm)	0.006	0.07	0.005	0.004
SO_2 (24-hour)				
Maximum Concentration (ppm)	--	--	--	--

[73] South Coast Air Quality Management District, Multiple Air Toxics Exposure Study, MATES IV Carcinogenic Risk Interactive Map.

Pollutant/Standard	2016	2017	2018	2019
PM10 (24-hour)				
Maximum Concentration (µg/m^3)	43	46	45	62
Samples > CAAQS (50 µg/m^3)	0	0	0	2
Samples > NAAQS (150 µg/m^3)	0	0	0	0
PM10 (Annual Average)				
Annual Arithmetic Mean (20 µg/m^3)	21.6	19.8	20.5	19.2
PM2.5 (24-hour)				
Maximum Concentration (µg/m^3)	44.4	49.2	43.8	43.5
98th Percentile Concentration (µg/m^3)	27.3	27.8	30.5	28.3
Samples > NAAQS (35 µg/m^3)	2	5	3	1
PM2.5 (Annual)				
Annual Arithmetic Mean (12 µg/m^3)	11.8	11.94	12.58	10.85
Lead				
Maximum 30-day average (µg/m^3)	0.006	0.00	0.004	0.004

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

[b] The monitoring station most representative of the Project Site is Station number 91 in Northwest Costal LA County, which is used to establish ambient ozone, NO_2, and CO, levels. Since data for SO_2, lead, PM10 and PM2.5 are not monitored at this station, the Station in Southwest Coastal LA County was used to report data for SO_2, lead, and PM10 and the Central LA Station was used to report data for PM2.5 The most recent data available from SCAQMD for these monitoring stations are from years 2016 to 2019.

[c] CAAQS are based on a not to exceed standard. NAAQS are based on a 3-year average of the annual 4th highest daily maximum 8-hour concentration for ozone; 98th percentile of 1-hour daily maximum concentrations averaged over 3 years for 1-hr NO_2; and not to be exceeded more than once per year on average over 3 years for 24-hr PM.

[d] State annual average (AAM) PM10 standard is > 20 µg/m^3. Federal annual PM10 standard (AAM > 50 µg/m3) was revoked in 2006.

[e] Both Federal and State standards are annual average (AAM) > 12.0 µg/m^3.

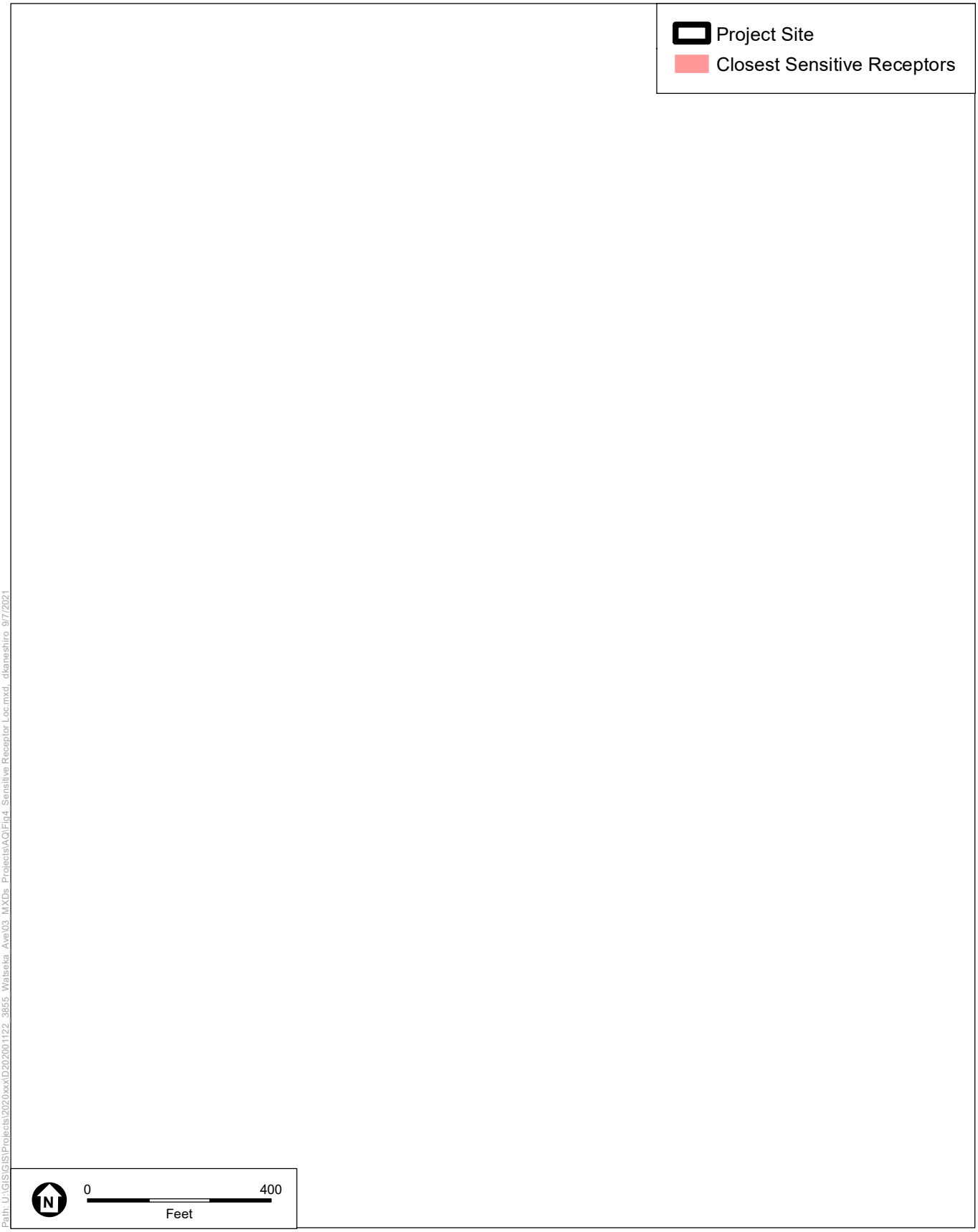
SOURCE: SCAQMD, Historical Data by Year, www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year; USEPA, AirData, www.epa.gov/airdata/ad_rep_mon.html. Accessed May 2021.

1.7 Sensitive Receptors

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. Sensitive land uses within 500 feet of the Project Site are shown in **Figure 4**, *Sensitive Receptor Locations Nearest to the Project Site*, and include the following:

- Residential Uses: Multi-family residences are located immediately adjacent to the south of and east of the Project Site.
- Hospital Use: The Southern California Hospital at Culver City is located adjacent and to the west of the Project Site.

All other air quality sensitive receptors are located at greater distances from the Project Site, and would be less impacted by Project emissions. Impacts are quantified for the sensitive receptors listed here.



SOURCE: ESRI, 2021; ESA, 2021

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Figure 4
Sensitive Receptor Locations Nearest to the Project Site

ESA

SECTION 2
Regulatory Framework

A number of statutes, regulations, plans and policies have been adopted which address air quality concerns. The Project Site and vicinity is subject to air quality regulations developed and implemented at the federal, State, and local levels. At the federal level, the USEPA is responsible for implementation of the federal Clean Air Act (CAA). Some portions of the CAA (e.g., certain mobile source requirements and other requirements) are implemented directly by the USEPA. Other portions of the CAA (e.g., stationary source requirements) are implemented through delegation of authority to State and local agencies. A number of plans and policies have been adopted by various agencies that address air quality concerns. Those plans and policies that are relevant to the Project are discussed below.

2.1 Federal

The federal CAA was enacted in 1955 and has been amended numerous times in subsequent years, with the most recent amendments occurring in 1990.[74] The CAA is the comprehensive federal law that regulates air emissions in order to protect public health and welfare.[75] The USEPA is responsible for the implementation and enforcement of the CAA, which establishes federal 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 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 sections of the CAA most applicable to the Project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions).[76,77]

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

74 42 United States Code §7401 et seq. (1970).

75 Summary of the Clean Air Act, https://www.epa.gov/laws-regulations/summary-clean-air-act. Accessed May 2021.

76 U.S. Environmental Protection Agency, 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 May 2021. As shown therein, Title I addresses nonattainment areas and Title II addresses mobile sources.

77 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).

established methodology for calculating PM2.5, as well to revoke the annual PM10 threshold. **Table 3**, *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.[78]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. 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.

TABLE 3
AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards[a]		National Standards[b]		
		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)		—	—	

78 USEPA, NAAQS Table, https://www.epa.gov/criteria-air-pollutants/naaqs-table. Accessed May 2021.

Pollutant	Average Time	California Standards[a]		National Standards[b]		
		Concentration[c]	Method[d]	Primary[c,e]	Secondary [c,f]	Method[g]
SO_2[j]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Fluorescence; Spectrophotometry (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. [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	
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 10 miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates (SO_4)	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride [l]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

a California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

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 $PM_{2.5}$, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

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

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. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
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.
l The California Air Resources Board 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 three-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, the California Air Resources Board 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: California Air Resources Board, Ambient Air Quality Standards (5/4/16). Availablehttps://ww2.arb.ca.gov/resources/documents/ambient-air-quality-standards-0. Accessed May 2021.

Table 4, *South Coast Air Basin Attainment Status (Los Angeles County)*, shows the attainment status of the Air Basin for each criteria pollutant. As shown in Table 4, the Air Basin is designated under federal or state ambient air quality standards as nonattainment for ozone, PM10, and PM2.5. 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 2 lead-acid battery recycling facilities in the city of Vernon and the city of Industry that are no longer operating.[79]

As shown in Table 4, the Air Basin is designated under federal or state ambient air quality standards as nonattainment for ozone, PM10, and 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. [80]

79 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.

80 SCAQMD, Board Meeting, Agenda No. 30, Adopt the 2012 Lead State Implementation Plan for Los Angeles County, May 4, 2012.

TABLE 4
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; CARB, Area Designations Maps/State and National, http://www.arb.ca.gov/desig/adm/adm.htm. Accessed May 2021.

As detailed in the Air Quality Management Plan (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.[81] 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).

2.2 State

California Air Resources Board

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of California to achieve and maintain the CAAQS. CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air

81 SCAQMD, 2016 AQMP, page 3-32.

pollution control programs within California. 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 federal CAA from USEPA.

California Clean Air Act

The California Clean Air Act, 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 federal Clean Air Act and also includes State-identified criteria pollutants, which are sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride.[82] CARB has primary responsibility for ensuring the implementation of the California Clean Air Act,[83] responding to the federal Clean Air Act planning requirements applicable to the state, and regulating emissions from motor vehicles and consumer products within the state.

Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. Table 4 provides a summary of the attainment status of the Los Angeles County portion of the Air Basin 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. The Air Basin is currently in non-attainment for ozone, 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.

California Code of Regulations

The California Code of Regulations (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 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.

82 CARB, California Ambient Air Quality Standards (CAAQS), last reviewed August 10, 2017.

83 Chapter 1568 of the Statutes of 1988.

California Air Resources Board 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 measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given time.

In 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 busses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. For the largest trucks in the fleet, those with a GVWR greater than 26,000 pounds, 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 achieving at least 85 percent removal efficiency, with installation of diesel particulate filters (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 had until 2020 to comply with the 2010 engine emission standards for their trucks and busses.

In addition to limiting exhaust from idling trucks, CARB also promulgated 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 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.

Toxic Air Contaminants

The California Air Toxics Program was established in 1983, when the California Legislature adopted Assembly Bill (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 OEHHA determine if a substance should be formally identified, or "listed", as a TAC in California. 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 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.[84] The SCAQMD states that: "SCAQMD currently does not have guidance on construction Health Risk Assessments."[85]

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 measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given time.

In addition to limiting exhaust from idling trucks, as discussed above, CARB promulgated emission standards for off-road diesel construction equipment such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation, adopted by CARB on July 26, 2007, aims to reduce emissions by the installation of diesel particulate filters and encouraging the replacement of older, dirtier engines with newer emission controlled models. Implementation is staggered based on fleet size, with the largest operators beginning compliance in 2014.

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.

84 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.

85 SCAQMD Guidelines for Participating in the Rule 1402 Voluntary Risk, page 2-23, September 2016, http://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2016/final-ea_par-307-1_1401_1402.pdf?sfvrsn=4. Accessed May 2021.

2.3 Regional

South Coast Air Quality Management District (SCAQMD)

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-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. While air quality in the Air Basin has improved, the Air Basin requires continued diligence to meet the air quality standards. While air quality in the Air Basin has improved, the Air Basin requires continued diligence to meet the air quality standards.

Air Quality Management Plan

The SCAQMD has adopted AQMPs to meet the CAAQS and NAAQS. The SCAQMD Governing Board adopted the 2016 AQMP on March 3, 2017.[86] CARB approved the 2016 AQMP on March 23, 2017.[87] 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.[88] 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,[89] for the federal non-attainment pollutants ozone and PM2.5 while accounting for regional growth, increasing development, and maintaining a healthy economy.[90] 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.[91] Descriptions of measures MOB-08 and MOB-10 are provided below:

86 SCAQMD, 2016 AQMP, March 2017.

87 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 June 2021.

88 SCAQMD, 2016 AQMP, March 2017.

89 USEPA, NAAQS Table, https://www.epa.gov/criteria-air-pollutants/naaqs-table. Accessed June 2021.

90 SCAQMD, NAAQS/CAAQS and Attainment Status for South Coast Air Basin, 2016.

91 SCAQMD, 2016 AQMP, March 2017.

- **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.

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.[92] 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 Table 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 CalEEMod software, which is a model developed for California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California Air Districts, which is a 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 GHG emissions from a variety of land use projects.

The SCAQMD has also adopted land use planning guidelines in its *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, which considers impacts to sensitive receptors from facilities that emit TAC emissions.[93] SCAQMD's general land use siting distance recommendations are the same as those provided by CARB (e.g., a 500-foot siting distance for sensitive land uses proposed in proximity to freeways and high-traffic roads, a 1,000-foot siting distance for sensitive land uses proposed in proximity to a major service and maintenance rail yard, and the same siting criteria for distribution centers and dry cleaning facilities). The SCAQMD's document introduces land use-related policies that rely on design and distance parameters to minimize emissions and lower potential health risk. SCAQMDs guidelines are voluntary initiatives recommended for consideration by local planning agencies.

The SCAQMD has published a guidance document called the *Final Localized Significance Threshold Methodology* for CEQA Evaluations that is intended to provide guidance when

92 SCAQMD, CEQA Air Quality Handbook 1993, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). Accessed May 2021.

93 SCAQMD, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, 2005, http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf?sfvrsn=4. Accessed May 2021.

evaluating the localized effects from mass emissions during construction.[94] 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*.[95] This latter document has been incorporated by the SCAQMD into its CEQA significance thresholds and *Final Localized Significance Threshold Methodology*.

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.

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 ($\mu g/m^3$) 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). Control measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering or using non-toxic chemical stabilizers to prevent the generation of visible dust plumes, limiting vehicle

94 SCAQMD, Final Localized Significance Threshold Methodology, 2008, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds. Accessed May 2021.

95 SCAQMD, Final Methodology to Calculate Particulate Matter (PM)2.5 and PM2.5 Significance Thresholds, 2006, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/pm-2-5-significance-thresholds-and-calculation-methodology. Accessed May 2021.

speeds to 15 miles per hour on unpaved surfaces, 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 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.

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) engines greater than 50 brake horsepower, such as emergency generators, 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.

Southern California Association of Governments

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties, and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG 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 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.[96] 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.[97] 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 *Regional Transportation Plan/Sustainable Communities Strategy* (2020-2045 RTP/SCS), which is an update to the previous 2016-2040 RTP/SCS.[98]

SCAG is required to adopt an SCS along with its RTP pursuant to Senate Bill (SB) 375 (Chapter 728, Statutes of 2008), which required the development of regional targets for reducing passenger vehicle 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. In February 2011, CARB adopted the final GHG emissions reduction targets for SCAG, within whose jurisdiction the City of Culver City is located. SCAG's target is a per capita reduction of 8 percent for 2020 and 13 percent for 2035 compared to the 2005 baseline.[99] SCAG's 2016-2040 RTP/SCS meets or exceeds these targets, lowering GHG emissions (below 2005 levels) by eight percent by 2020; 18 percent by 2035; and 21 percent by 2040.[100] The 2020-2045 RTP/SCS includes the CARB updated SB 375 targets from March 2018 to require 8 percent reduction by 2020 and a 19 percent reduction by 2035 in per capita passenger vehicle GHG emissions.[101] Although the RTP/SCS is not focused specifically on air quality emissions, the targets growth projections established in the 2016-2040 RTP/SCS, as incorporated in the 2016 AQMP affect air quality through optimized land use planning and the consequential reduction of emissions from passenger and light-duty vehicles.

SCAG's SCS is "built on a foundation of contributions from communities, cities, counties and other local agencies" and "based on local general plans as well as input from local governments."[102] SCAG's 2016-2040 RTP/SCS and 2020-2045 RTP/SCS provide specific

96 SCAQMD, 2016 AQMP, page 4-42.

97 SCAQMD, 2016 AQMP, page 4-42.

98 Southern California Association of Governments (SCAG), 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020-2045 RTP/SCS), May 2020.

99 Southern California Association of Governments (SCAG), 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS), 2016, page 8, http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf. Accessed May 2021.

100 SCAG, 2016 RTP/SCS, page 153.

101 CARB, SB 375 Regional Greenhouse Gas Emissions Reduction Targets.

102 SCAG, 2016 RTP/SCS, page 75.

strategies for implementation. These strategies include supporting projects that encourage a diverse job opportunities for a variety of skills and education, recreation and 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; encouraging the implementation of a "Complete Streets" policy that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and supporting alternative fueled vehicles.[103] Like the 2016-2040 RTP/SCS, the 2020-2045 RTP/SCS overall land use pattern reinforces the trend of focusing new development and employment in the region's high quality transit areas (HQTAs), which SCAG defines as an area within a one-half mile of a well-serviced transit stop.[104] HQTAs are a cornerstone of land use planning best practice in the SCAG region because they concentrate roadway repair investments, leverage transit and active transportation investments, reduce regional life cycle infrastructure costs, improve accessibility, create local jobs, and have the potential to improve public health and availability of community amenities.

2.4 Local

Local jurisdictions, such as the City of Culver City (City), have the authority and responsibility to reduce air pollution through its police power and decision-making authority. The City reviews project plans for consistency with environmental regulations and other conditions applicable to proposed development. The City is also responsible for the implementation of transportation control measures as outlined in the AQMP. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA, the City has the authority to obtain input from other local agencies and may consult with any person with special expertise relating to the Project environmental impacts to assess air quality impacts of new development projects. If significant impacts are found, the City has the authority to require mitigation of potentially significant air quality impacts by conditioning discretionary permits and monitors and enforces implementation of such mitigation measures.

The City's General Plan was originally adopted in 1995 and is periodically amended as the City grows in population and physical development. The current General Plan does not have an Air Quality Element. However, the Circulation Element of the General Plan contains objectives and policies focused on public transit (Objective #2), bikeways (Objective #3), pedestrian access (Objective #4), participating in regional system improvements (Implementation Measure #1), and roadway improvement (Implementation Measure #2). Consistency with these goals and policies have the potential to reduce single occupancy vehicle trips and vehicle miles traveled (VMT), thus reducing air pollutants from mobile sources. The growth projections within the General Plan inform the development of SCAQMD's AQMP.

In 2009, the City adopted the Green Building program which contains a number of features that would indirectly reduce air pollution emissions through features such as enhanced building insulation, low-flow fixtures, efficient lighting and heating, ventilation and air conditioning

103 SCAG, 2025-2040 RTP/SCS, May 2020, pages 48-86.
104 SCAG, 2020-2045 RTP/SCS, May 2020, page 51.

systems.

SECTION 3
Thresholds of Significance

The significance thresholds below are derived from the Environmental Checklist question in Appendix G of the *State CEQA Guidelines*. Accordingly, a significant air quality impact would occur if the Project would:

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

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;

c) Expose sensitive receptors to substantial pollutant concentrations; or

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

Pursuant to the State CEQA Guidelines (Section 15064.7), a lead agency may consider using, when available, the significance criteria established by the applicable air quality management district or air pollution control district when making determinations of significance. The Project would be under the SCAQMD's jurisdiction. SCAQMD has established air quality significance thresholds in its *CEQA Air Quality Handbook*. These 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.[105] The potential air quality impacts of the Project are, therefore, evaluated according to 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 previously.[106] As stated above, the SCAQMD has stated that these 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.[107]

105 South Coast Air Quality Management District, CEQA Air Quality Handbook (1993) 6-2.

106 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 established thresholds for lead. Unleaded fuel and unleaded paints have virtually eliminated lead emissions from commercial and residential land use projects such as the Project. As a result, lead emissions are not further evaluated.

107 SCAQMD, CEQA Air Quality Handbook, page 6-2.

3.1 Consistency with Air Quality Plans and Policies

The Project would have a significant impact if it would:

- Substantially conflict with or obstruct implementation of relevant air quality policies in the AQMP or the General Plan or other adopted regional and local plans adopted for reducing air quality impacts.

Evaluating whether the Project would conflict with or obstruct implementation of the applicable air quality plan is based on consistency with applicable control measures and policies adopted for the purpose of reducing air pollutant emissions and associated impacts.

3.2 Construction Emissions

Based on the most recently adopted significance thresholds in the SCAQMD *CEQA Air Quality Handbook,* the Project would potentially cause or contribute to an exceedance of an air quality standard if the following would occur:

- Regional construction emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed daily regional emissions thresholds:[108]
  - 75 pounds a day for VOC;
  - 100 pounds per day for NO_X;
  - 550 pounds per day for CO;
  - 150 pounds per day for SO_2;
  - 150 pounds per day for PM10; or
  - 55 pounds per day for PM2.5.

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 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.[109]
- Maximum daily localized emissions of PM10 and/or PM2.5 during construction are greater than the applicable localized significance thresholds, resulting in predicted ambient

[108] South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, (March 2015), http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2. Accessed May 2021.

[109] South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, (2008). Available: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds. Accessed May 2021.

concentrations in the vicinity of the Project Site to exceed 10.4 μg/m^3 over 24 hours (SCAQMD Rule 403 control requirement).

As discussed previously, 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 dispersion modeling. This analysis uses these screening criteria to evaluate potential impacts from the Project's localized construction emissions. A detailed discussion of the Project's construction phasing and equipment list is available in **Exhibit A** of this Technical Report.

3.3 Operational Emissions

The significance thresholds of significance, below, are the most recently adopted indicators in the SCAQMD *CEQA Air Quality Handbook* for determining the significance of operational emissions. The SCAQMD has established numerical indicators as significance thresholds based, in part, on Section 182(e) of the CAA, which sets 10 tons per year of VOC as a significance level for stationary source emissions in extreme non-attainment areas for ozone.[110] As shown in Table 4, the Air Basin is designated as extreme non-attainment for ozone. The SCAQMD converted this significance level to pounds per day for ozone precursor emissions (10 tons per year × 2,000 pounds per ton ÷ 365 days per year = 55 pounds per day). The significance thresholds for other pollutants are also based on federal stationary source significance levels. SCAQMD's numeric emission indicators 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.[111] Based on the indicators in the SCAQMD *CEQA Air Quality Handbook,* the Project would potentially cause or contribute to an exceedance of an air quality standard if the following would occur:

- Regional operational emissions exceed any of the following SCAQMD prescribed daily regional emissions thresholds:[112]
  - 55 pounds a day for VOC;
  - 55 pounds per day for NO_X;
  - 550 pounds per day for CO;
  - 150 pounds per day for SO_2;
  - 150 pounds per day for PM10; or
  - 55 pounds per day for PM2.5.

110 SCAQMD, CEQA Air Quality Handbook, page 6-1.

111 SCAQMD, CEQA Air Quality Handbook, page 6-2.

112 South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, (March 2015), http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2. Accessed May 2021.

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. Impacts would be considered significant if the following were to occur:

- Maximum daily localized emissions of NO_X and/or CO during 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.[113]
- 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).

As discussed previously, 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 dispersion modeling. This analysis used the screening criteria to evaluate impacts from the Project's localized operational emissions.

3.4 Carbon Monoxide Hotspots

With respect to the formation of CO hotspots, the Project would be considered significant if the following would occur:

- The Project would cause or contribute to an exceedance of the CAAQS one-hour or eight-hour CO standards of 20 or 9.0 ppm, respectively within one-quarter mile of a sensitive receptor.[114]

3.5 Toxic Air Contaminants

Based on criteria set forth by the SCAQMD, the project would expose sensitive receptors to substantial concentrations of toxic air contaminants if any of the following were to occur:[115]

- The Project would expose sensitive receptors to substantial concentrations of TACs if it emits carcinogenic materials or TACs that exceed the maximum incremental cancer risk of 10 in one million or a cancer burden greater than 0.5 excess cancer cases (in areas greater than or equal to one in one million) or an acute or chronic hazard index of 1.0.

As discussed further below in subsection 4, *Methodology,* construction impacts from TACs are evaluated quantitatively in a construction HRA due to the use of heavy-duty, diesel equipment.

113 Ibid.

114 The CAAQS are more conservative than the NAAQS (35 ppm for one-hour CO and 9.0 ppm for eight-hour CO).

115 South Coast Air Quality Management District, CEQA Air Quality Handbook, Chapter 6 (Determining the Air Quality Significance of a Project) and Chapter 10 (Assessing Toxic Air Pollutants), (1993); SCAQMD Air Quality Significance Thresholds, (March 2011), http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2. Accessed May 2021.

For operations, the impacts are analyzed qualitatively due to the limited and minimal sources of TACs associated with operation of the proposed land uses.

3.6 Other Emissions (Such as Odors)

With respect to other emissions such as those leading to odors, the Project would be considered significant if it created other emissions such as objectionable odors affecting a substantial number of people.

SECTION 4
Methodology

The methodology to evaluate potential impacts to regional and local air quality that may result from the construction and long-term operations of the Project is conducted as follows. Detailed modeling calculations are provided in **Exhibit B** of this Technical Report.

4.1 Consistency with Air Quality 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).[116] The SCAQMD's 2016 AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving NAAQS related to these pollutants, including transportation control strategies from SCAG's 2016-2040 RTP/SCS designed to reduce VMT.[117] The 2016 AQMP control strategies were developed, in part, based on regional growth projections prepared by SCAG.[118] For this reason, projects whose growth is consistent with the assumptions used in the 2016 AQMP 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.[119] As noted above, the 2016 AQMP has been adopted by the SCAQMD and CARB. Therefore, this analysis considers consistency of the Project with the 2016 AQMP based on the AQMP's consistency with applicable growth projections and emission control strategies.

4.2 Existing Site Emissions

Existing operational emissions were estimated using CalEEMod, as described above. For mobile sources, the vehicle trips were obtained for the existing uses from the Project's traffic study.[120]

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116 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.

117 SCAQMD, Air Quality Management Plan (AQMP), 2016, page ES-6, 4-42.

118 SCAQMD, AQMP, page 4-42 to 4-44.

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

120 Raju Associates, Inc., 3855 Watseka Office Project Traffic Study, 2021.

Emissions from on-site natural gas combustion were based on usage data from the California Energy Commissions (CEC) *California Commercial End Use Survey* (CEUS), which lists energy demand by building type.[121] 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.

Other sources of emissions from existing uses include equipment used to maintain landscaping, such as lawnmowers and trimmers. 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)*.[122] 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.

4.3 Construction Emissions

Construction of the Project has the potential to generate temporary criteria pollutant emissions through the use of heavy-duty construction equipment, such as excavators, and through vehicle trips generated from workers and haul trucks traveling to and from the Project Site. 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. The assessment of construction air quality impacts considers each of these potential sources.

Daily regional emissions during construction are forecasted by assuming a conservative estimate of 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 most recent version of CARB's on-road vehicle emissions factor model (EMFAC2021). Construction phasing would include demolition, grading and excavation, draining, utilities and trenching, foundations/concrete pour, building construction and exterior finishes, and paving.

The input values used in this analysis were adjusted to be Project-specific based on equipment types and the construction schedule. Haul truck trip estimates were based on information obtained from the Applicant. Worker trip and vendor truck trip estimates were based on calculation methodologies in CalEEMod. Emissions from on-road vehicles (i.e. haul trucks, material vendors, and worker vehicles) were estimated outside of CalEEMod, since the most current version of CalEEMod uses EMFAC2017. CalEEMod is based on outputs from the CARB OFFROAD and

121 California Energy Commission, California Commercial End-Use Survey, http://capabilities.itron.com/CeusWeb/Chart.aspx. Accessed November 2018.

122 CARB, OFFROAD Modeling Change Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment, June 13, 2003, http://www.arb.ca.gov/msei/2001_residential_lawn_and_garden_changes_in_eqpt_pop_and_act.pdf. Accessed May 2021.

on-road emissions factor 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 for each construction activity. The Project would export approximately 75,000 cubic yards (cy) of soil during the grading/excavation phase in addition to the 682 cy of building demolition debris and 625 cy of hardscape. Emissions from Project construction activities were estimated based on the construction phase in which the activity would be occurring. Heavy-duty equipment, vendor supply trucks and concrete trucks would be used during construction of foundations, parking structures, and buildings. Project design features, such as the use of USEPA Tier 4 Final equipment, were incorporated into the construction emissions analysis. Use of USEPA Tier 4 Final emissions compliant equipment would reduce regional and localized pollutant emissions. The maximum daily regional emissions from these activities are estimated by construction phase and compared to the SCAQMD significance thresholds. The maximum daily regional emissions are predicted values for the worst-case day and do not represent the emissions that would occur for every day of Project construction.

The localized effects from the on-site portion of the construction emissions are evaluated at nearby sensitive receptor locations potentially impacted by the Project according to the SCAQMD's Localized Significance Threshold Methodology.[123] The localized significance thresholds are only applicable to NO_X, CO, PM10, and PM2.5. The SCAQMD has established screening criteria for projects that disturb five acres or less 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 project-specific dispersion modeling. The localized analysis is based on this SCAQMD screening criteria. The screening criteria depend on: (1) the area in which the Project is located SRA, (2) the size of the Project Site, and (3) the distance between the Project Site and the nearest sensitive receptor. The Project Site is located in the SCAQMD SRA 2 and could disturb up to approximately 1.125 acres on a given day. The off-site air quality sensitive receptors would include the Southern California Hospital at Culver City located adjacent to the west of the Project Site and the residential uses located adjacent at the southernmost portion of the Project Site. Since the Project Site is larger than 1 acre but less than 2 acres, the SCAQMD localized significance threshold screening criteria from SRA 2 with sensitive receptors located within 25 meters were linearly interpolated for the Project Site acreage.

As stated above, fugitive dust emissions would result from demolition and various soil-handling activities during construction of the Project. Construction contractors are required to comply with the applicable provision of SCAQMD Rule 403 (Fugitive Dust). As discussed in Section 2.3 above, SCAQMD Rule 403 requires construction activities to control fugitive dust emissions during construction by complying with best available control measures, such as ensuring sufficient freeboard height for haul vehicles, covering loose material on haul vehicles, applying water or non-toxic soil stabilizers in sufficient quantities to prevent the generation of visible dust

[123] South Coast Air Quality Management District, Localized Significance Thresholds, (2003, revised 2008), http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds. Accessed May 2021.

plumes on disturbed or unpaved road surfaces, and limiting vehicle speeds to 15 miles per hour on unpaved surfaces. Applicable fugitive dust control measures are incorporated into the construction emissions modeling within the SCAQMD-approved CalEEMod software.

Project construction is assumed to start as early as January 2022 and require up to 26.5 months. If construction commences at a later date, construction emissions would be lower than those estimated in this Technical Report due to the use of a more energy-efficient and cleaner burning construction vehicle fleet mix, pursuant to State regulations that require vehicle fleet operators to phase-in less polluting trucks. As a result, should Project construction commence at a later date than analyzed in this Technical Report, air quality impacts would be lower than the impacts disclosed herein.

4.3 Operational Emissions

Operation of the Project has the potential to generate criteria pollutant emissions through vehicle trips traveling to and from the Project Site. In addition, emissions would result from on-site sources such as natural gas combustion, landscaping equipment, and use of consumer products. Operational impacts were assessed for the Project buildout year (i.e., as early as 2024 assuming construction begins at the earliest possible time in January 2022).

The Project's operational emissions are also estimated using the CalEEMod software. CalEEMod was used to forecast the Project's daily regional emissions from area and energy sources that would occur during long-term Project operations. Mobile source emissions were estimated based on CARB's EMFAC2021 to generate Air Basin-specific vehicle fleet emission factors in units of pounds per mile, and daily trip rates from the Project's traffic study.[124]

Area source emissions, including landscaping equipment and consumer products, such as solvents used in non-industrial applications which emit VOCs during their product use and cleaning supplies and kitchen aerosols, were calculated using the CalEEMod software. Energy source emissions are based on natural gas combustion (building heating and water heaters). Natural gas usage factors in CalEEMod are based on the CEUS data set, which provides energy demand by building type and climate zone.[125] Additionally, operational emissions modeling conservatively assumes one 750-kilowatt emergency generator, estimated to be run a maximum of 50 hours annually for emergencies and for a maximum of 2 hours per day for maintenance.

Operational air quality impacts are assessed based on the incremental increase in emissions compared to baseline conditions. As discussed previously, the Project Site is currently developed with low-level commercial buildings which are currently in use and have existing operational emissions as shown in Table 1, *Existing Site Operational Emissions*. Therefore, the Project's operational emissions analysis subtracts the existing site's emissions to estimate the total net new

124 Raju Associates, Inc. 3855 Watseka Office Project Traffic Study, 2021.

125 California Energy Commission, California Commercial End-Use Survey, http://capabilities.itron.com/CeusWeb/Chart.aspx. Accessed May 2021.

emissions from the Project. The maximum daily net emissions from operation of the Project are compared to the SCAQMD daily regional significance thresholds.

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 Project operations).[126] The localized impacts from operation of the Project were assessed similar to the construction emissions, as discussed previously. Detailed emissions calculations are provided in Exhibit B.

The greatest quantities of CO are produced from motor vehicle combustion and are usually concentrated at or near ground level as 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 than the intersections modeled by the SCAQMD, in conjunction with lower background CO levels, would result in lower overall CO concentrations as compared to the SCAQMD-modeled values to maintain attainment status in its AQMP.

4.4 Toxic Air Contaminants (TACs)

The greatest potential for TAC emissions during construction would be related to DPM emissions associated with heavy-duty equipment during excavation and grading activities. Construction activities associated with the Project would be sporadic, transitory, and short-term in nature (approximately 26.5 months). The SCAQMD has not adopted guidance that requires that quantitative health risk assessments be performed for short-term exposures to TAC emissions. The SCAQMD also has not adopted guidance that establishes a methodology or that requires Lead Agencies to use the 2015 OEHHA guidance manual when assessing short-term TAC exposures from construction emissions for CEQA analyses. Specifically, the SCAQMD states that "SCAQMD currently does not have guidance on construction Health Risk Assessments" and does not apply the 2015 OEHHA update to construction.[127] Therefore, the City is continuing to assess potential impacts from short-term TAC exposures in accordance with the methodology supported by the SCAQMD prior to the 2015 OEHHA update. Thus, a qualitative assessment of

126 SCAQMD, Final Localized Significance Threshold Methodology.

127 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; and, SCAQMD Guidelines for Participating in the Rule 1402 Voluntary Risk, page 2-23, September 2016, http://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2016/final-ea_par-307-1_1401_1402.pdf?sfvrsn=4.

the impacts associated with the Project's 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, from routine cleaning, from periodic painting, etc., from periodic visits from delivery trucks and service vehicles, and from maintenance and testing of the emergency generator. However, these events are expected to be occasional and result in minimal emissions exposure to off-site sensitive receptors. As the Project consists only of office uses, the Project would not include sources of substantial TAC emissions identified by the SCAQMD or CARB siting recommendations.[128, 129]

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

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

SECTION 5
Environmental Impacts

Threshold 1 Conflict with or obstruct the implementation of the applicable air quality plan.

Impact 1: Implementation of the Project would not conflict with or obstruct implementation of the applicable air quality plan. (*Less than Significant)*

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.

5.1 Criterion 1

With respect to the first criterion, as discussed under the analysis for Threshold 3 below, localized concentrations of NO_2 as NO_X, CO, PM10, and PM2.5 have been analyzed for the Project. 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 ozone 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 7, the increases in localized emissions of NO_2, 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. As shown in Table 8, the increases in 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.

The Project would not introduce any substantial stationary sources of emissions; therefore, CO is the appropriate benchmark pollutant for assessing local area air quality impacts from post-construction motor vehicle operations.[130] As indicated below in Threshold 3, no intersections would result in a CO hotspot in excess of the ambient air quality standards, and impacts would be

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

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 ozone. **Impacts regarding the timely attainment of air quality standards or interim emission reductions specified in the AQMP and impacts would be less than significant.**

5.2 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. 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.

Air Quality Management Plan Consistency

The Project is located within the Air Basin, which is under the jurisdiction of the SCAQMD. As such, SCAQMD's 2016 AQMP is the applicable air quality plan for the Project. The 2016 AQMP relies on emissions forecasts based on the demographic and economic growth projections provided by SCAG's 2016-2040 RTP/SCS in devising its control strategies for reducing emissions of ozone and PM2.5 to meet five NAAQS standards.[131] SCAG is charged by California law to prepare and approve "the portions of each AQMP relating to demographic projections and integrated regional land use, housing, employment, and transportation programs, measures and strategies."[132] The SCAQMD recommends that, when determining whether a project is consistent with the current AQMP, the lead agency assess whether the project would directly obstruct implementation of the plan by impeding the SCAQMD's efforts to achieve attainment with respect to any criteria pollutant for which it is currently not in attainment of the NAAQS and CAAQS (e.g., ozone, PM10, and PM2.5) and whether it is consistent with the demographic and economic assumptions (typically land use related, such as employment and population/residential units) upon which the plan is based.[133] Projects whose growth is included in the projections used in the formulation of the AQMP are considered to be consistent with the plan and not to interfere with its attainment.[134]

Project construction and operations would not obstruct implementation of the 2016 AQMP as 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 in

131 SCAQMD, 2016 AQMP, pages ES-6, 3-1, 3-3, 3-10, 3-17.

132 SCAQMD, 2016 AQMP, page 4-42.

133 SCAQMD, Air Quality Analysis Handbook, 1993, pages 12-2, 12-3, http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook.

134 SCAQMD, CEQA Air Quality Handbook, page 12-1.

Section 3.2, *Methodology*, projects, uses, and activities are consistent with the applicable growth projections and control strategies used in the development of the 2016 AQMP and would not jeopardize attainment of the air quality levels identified in the 2016 AQMP. As discussed below, compliance with the applicable required fleet rules and control strategies and requirements would render it consistent with, and meet or exceed, the 2016 AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. Thus, the Project's 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 is currently not in attainment of the NAAQS and CAAQS (e.g., ozone, PM10, and PM2.5),[135] 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. The Project incorporates 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 plan is based.

Construction

Control Strategies

During its construction phase, the Project would ensure compliance 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 utilize off-road diesel equipment greater than 50 hp that meet USEPA Tier 4 Final off-road emission standards, as per PDF-AIR-1. Compliance with these features and requirements would be consistent with and meets or exceeds the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities.

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 who travel among construction sites within the region. Construction workers are not typically brought from other regions to work on developments such as the Project. Moreover, these jobs would be relatively small in number and 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.

135 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.

Operations

Control Strategies and Policy Consistency

The Project design and land uses render it consistent with the 2016 AQMP during operations. As discussed above, the 2016 AQMP includes transportation control 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 location, design, and land uses would support land use and transportation control strategies related to reducing vehicle trips for people working and visiting the Project by increasing office density near public transit. The Project is considered an "urban infill" project, as it further develops existing low density property within an already developed urban area. The Project is accessible to and well served by public transit including frequent and comprehensive transit services, and thus, the project and job growth, as a result of the Project, would be located in an HQTA, which SCAG defines as an area within a one-half mile of a well-serviced transit stop. Specifically, various public transit stops operated by Metro, LADOT, and Culver City Bus are located in proximity to the Project Site. 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.

The CAPCOA has provided guidance on mitigating or reducing emissions from land use development projects in its guidance document entitled *Quantifying Greenhouse Gas Mitigation Measures*, which provides emission reduction values for recommended air pollutant reduction strategies.[136] The location of the Project Site is consistent with and would not conflict with the Urban location setting in the CAPCOA guidance document shown to reduce VMT per capita as compared to the Statewide average from 48 percent in central Berkeley to 82 percent in the North Beach area of San Francisco.[137] In addition, compact infill location settings are shown to reduce VMT per capita by 29 percent in the Fairfax area of Los Angeles.[138] The Project Site shares virtually all of the characteristics listed by CAPCOA for the Urban location setting, including a location close to the central business district, an area rich in jobs, and readily available high quality transit options.[139] The land use characteristics of the Project listed below are consistent with and would not conflict with those shown in the CAPCOA guidance document to reduce vehicle trips to and from the Project Site as compared to the Statewide and Air Basin averages. They would, therefore, also result in corresponding reductions in VMT and associated air pollutant and GHG emissions in accordance with the CAPCOA methodologies.

136 California Air Pollution Control Officers Association (CAPCOA), Quantifying Greenhouse Gas Mitigation Measures, 2010, http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.

137 CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, page 59.

138 CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, page 59.

139 CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, page 59.

- **Increased Density:** Increased density, measured in terms of persons, jobs, or dwelling units per unit area, 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. This characteristic corresponds to CAPCOA guidance strategy LUT-1.[140] According to CAPCOA, the reduction in VMT from this characteristic applies to Urban and Suburban location settings for residential, retail, office, industrial, and mixed-use projects. The Project is located in an urban location and is an office project; therefore, this characteristic applies to the Project.
- **Location Efficiency:** Location efficiency describes the location of a project relative to the type of urban landscape such as an Urban area, Compact Infill, or Suburban Center. In general, compared to the Statewide average, a project could realize VMT reductions up to 65 percent in an Urban setting, up to 30 percent in a Compact Infill setting, or up to 10 percent in a Suburban Center for land use/location strategies.[141] This characteristic corresponds to CAPCOA guidance strategy LUT-2.[142] According to CAPCOA, the reduction in VMT from this characteristic applies to Urban and Suburban settings for residential, retail, office, industrial, and mixed-use projects. This characteristic applies to the Project since it is located in an Urban location within an identified HQTA. According to the CAPCOA guidance, factors that contribute to VMT reductions under this characteristic include the geographic location of a project within the region. The Project Site represents an Urban location within the City and is served by existing high quality public transportation located less than 0.1 miles from the Project Site. The Project Site is within an active urban center with many existing off-site commercial and residential buildings. The location efficiency of the Project Site would result in synergistic benefits that would reduce vehicle trips and VMT compared to the Statewide and Air Basin averages and would result in corresponding reductions in transportation-related emissions.
- **Increased Destination Accessibility:** This characteristic corresponds to CAPCOA guidance strategy LUT-4.[143] According to CAPCOA, the reduction in VMT from this characteristic applies to Urban and Suburban settings for residential, retail, office, industrial, and mixed-use projects. The Project is located in an Urban location within an identified TPA, therefore this characteristic applies to the Project. According to the CAPCOA guidance, factors that contribute to VMT reductions under this characteristic include the distance to a downtown or major job center. The Project would be located in an area that offers access to multiple other nearby destinations including restaurant, bar, office, retail, and residential uses. Ready access to multiple destinations in close proximity to the Project Site would reduce vehicle trips and

140 CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, page 155.

141 CalEEMod, by default, assumes that trip distances in the South Coast Air Basin are slightly longer than the Statewide average. This is due to the fact that commute patterns in the South Coast Air Basin involve a substantial portion of the population commuting relatively far distances, which is documented in the Southern California Association of Governments 2016-2040 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS). The RTP/SCS shows that, even under future Plan conditions, upwards of 52 percent of all work trips would be 10 miles or longer (SCAG, Performance Measures Appendix, p. 13, 2016). The RTP/SCS does not specify the current percentage of work trips greater than 10 miles in the region, but it can be assumed that the percentage is currently greater than 52 percent since the goal of the RTP/SCS is to reduce overall per capita VMT in the region. It is thus reasonable to assume that the trip distances in South Coast Air Basin are analogous to the statewide average given that the default model trip distances in the South Coast Air Basin are slightly longer but still generally similar to the statewide average. Therefore, projects could achieve similar levels of VMT reduction (65 percent in an urban area, 30 percent in a compact infill area, or 10 percent for a suburban center) compared to the South Coast Air Basin average.

142 CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, pages 159-161.

143 CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, pages 167-170.

VMT compared to the Statewide and South Coast Air Basin averages, and encourage walking and non-automotive forms of transportation, and result in corresponding reductions in transportation-related emissions.

- **Increased Transit Accessibility:** Locating a project with high density near transit facilitates the use of transit by people traveling to or from the Project Site. This characteristic corresponds to CAPCOA guidance strategy LUT-5.[144] According to CAPCOA, the reduction in VMT from this characteristic applies to Urban and Suburban settings (also potentially for rural settings adjacent to a commuter rail station with convenient access to a major employment center) for residential, retail, office, industrial, and mixed-use projects. The Project is located in an Urban location within an identified TPA, therefore, this characteristic applies to the Project. According to the CAPCOA guidance, factors that contribute to VMT reductions under this characteristic include the distance to transit stations near a project. Various public transit stops operated by the Metro, LADOT, and Culver City Bus are located in proximity to the Project Site.

As described above, by locating new office uses within an area that has existing high quality public transit (with access to existing local bus and rail service), housing, 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 Los Angeles, the Project would reduce vehicle trips and VMT, and resulting air pollutant emissions.

Growth Projections

The Project is anticipated to be fully operational in 2024. The Project's growth would be consistent with the growth projections contained in the 2016-2040 RTP/SCS. The Project would increase employees in the area but would comprise a negligible portion of the City's total employment, which was estimated at 44,100 in 2012 and projected to reach 53,000 in 2040.[145] As such, the Project would have a very small effect on the overall employment projections for the City. Therefore, the increases in 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 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.[146] **The Project would also be consistent with the growth projections in the 2016 AQMP, since the growth would occur in a High Quality Transit Area, resulting in highly transportation-efficient growth, which would minimize an increase in transportation-related emissions. Impacts would be less than significant.**

City's General Plan

Although the City's General Plan does not have an Air Quality Element, the project would be consistent with other elements of the General Plan. The Project Site is currently zoned as "CD"

144 CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, pages 171-175.

145 SCAG 2016-2040 RTP/SCS Appendix: Demographics & Growth Forecast; https://scag.ca.gov/sites/main/files/file-attachments/f2016rtpscs_demographicsgrowthforecast.pdf?1606073557

146 SCAQMD, CEQA Air Quality Handbook, page 12-1.

Commercial Downtown based on the City's Zoning Map. As previously discussed, the Project would be replacing the two existing office buildings and a surface parking lot with associated landscaping and would develop a four-story office building with subterranean parking areas that would be consistent with the current zoning designation. Furthermore, the Project would not conflict with the Circulation Element of the General Plan. The Project is committed to providing pedestrian access to nearby commercial and residential. Furthermore, as discussed previously, the project is located close proximity of various public transit stops including those operated by Metro, LADOT and Culver City Bus. **As such, the Project would be consistent with and not conflict with the General Plan and impacts would be less than significant.**

Threshold 2	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.

Impact 2: Implementation of the Project would not 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. (Less than Significant)

5.2 Cumulatively Considerable Non-Attainment Pollutants

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 would result in less than significant impacts relative to the maximum daily emissions 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 (i.e., ozone precursors of VOCs and NO_X, PM10, and PM2.5). Operation of the Project would result in less than significant impacts relative to the maximum daily emissions 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 (i.e., ozone precursors of VOCs and NO_X, PM10, and PM2.5). 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).

Construction Emissions

Construction of the Project has the potential to generate temporary regional criteria pollutant emissions through the use of heavy-duty construction equipment, such as backhoes 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. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of construction activity, and prevailing weather conditions.

The maximum daily construction emissions for the Project were estimated for each construction phase. 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. As stated above, in order to provide a conservative emissions analysis, for modeling purposes, construction emissions were modeled beginning in 2022. Detailed emissions calculations are provided in Exhibit B of this Technical Report.

The results of the criteria pollutant calculations are presented in **Table 5**, *Estimated Maximum Unmitigated Regional Construction Emissions.* Emissions include dust control measures required by SCAQMD Rule 403 (Control of Fugitive Dust) and fugitive VOC control measures to be implemented by architectural coating emission factors required by SCAQMD Rule 1113 (Architectural Coatings). In addition, as included in PDF-AIR-1, the Project would require the use of all off-road diesel construction equipment greater than 50 hp that will be used an aggregate of 40 or more hours to meet the USEPA Tier 4 Final off-road emission standards. As shown in Table 5, construction-related daily emissions would not exceed the SCAQMD numeric indicators of significance and emissions levels would be below the applicable numeric indicators. **As the Project's maximum regional emissions from construction would be below the regional numeric indicators, regional construction emissions impacts would be less than significant.**

TABLE 5
ESTIMATED MAXIMUM UNMITIGATED REGIONAL CONSTRUCTION EMISSIONS (POUNDS PER DAY)[a]

Construction Phases	VOC	NO_x	CO	SO_2	PM10[b]	PM2.5[b]
Demolition - 2022	<1	5	19	<1	1	<1
Grading/Excavation - 2022	1	60	62	<1	6	2
Drainage/Utilities/Trenching 2022	<1	4	14	<1	<1	<1
Foundations/Concrete Pour - 2022	1	20	30	<1	3	1
Foundations/Concrete Pour - 2023	1	17	30	<1	3	1
Building Construction/Exterior Finishes – 2023	10	7	17	<1	2	1
Paving - 2023	<1	2	12	<1	1	<1
Paving - 2024	<1	2	12	<1	1	<1
Maximum Daily Construction Emissions[c]	**10**	**60**	**62**	**<1**	**6**	**2**
SCAQMD Regional Significance Threshold	75	100	550	150	150	55
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

NOTES:
[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Exhibit B.
[b] Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.
[c] Construction is scheduled such that no phases would overlap.

SOURCE: ESA 2021

Operational Emissions

Operational criteria pollutant emissions were calculated for mobile, area, and stationary sources (such as the conservatively assumed emergency generator) for the Project operational year, 2024.

Operations would adhere to the applicable codes including 2019 Title 24 Green Building Code. 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 Exhibit B of this Technical Report.

Daily trip generation rates and VMT for the Project were provided by the Project's traffic study and include trips associated with the proposed offices uses.[147] Natural gas usage factors are based on recreational and retail data from the CEC, 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. As discussed previously, operational emissions are reduced based on the estimated operational emissions of the existing uses on the Project Site.

The results of the regional criteria pollutant emission calculations for VOC, NO_X, CO, SO_2, PM10, and PM2.5 are presented in **Table 6,** *Estimated Maximum Unmitigated Regional Operational Emissions.* The Project's operational-related daily emissions would not exceed the SCAQMD numeric indicators for any criteria pollutants. **As the Project's maximum regional emissions from operational activities would be below the regional numeric indicators, regional construction emissions impacts would be less than significant.**

TABLE 6
ESTIMATED MAXIMUM UNMITIGATED REGIONAL OPERATIONAL EMISSIONS (POUNDS PER DAY)[a]

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Area (Consumer Products, Landscaping)	3	<1	<1	<1	<1	<1
Energy (Natural Gas)	<1	<1	<1	<1	<1	<1
Mobile Vehicles	2	2	16	<1	4	<1
Stationary Source (i.e., Emergency Generator)	<1	<1	7	<1	<1	<1
Project Maximum Daily Operational Emissions	**5**	**4**	**23**	**<1**	**4**	**1**
Existing Site Emissions Removed	<1	<1	1	<1	<1	<1
Net Maximum Regional Operational Emissions	**5**	**3**	**22**	**<1**	**4**	**<1**
SCAQMD Significance Threshold	55	55	550	150	150	55
Exceeds Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

[a] Totals may not add up exactly due to rounding in the modeling calculations.

SOURCE: ESA 2021

Cumulative Impacts

The SCAQMD's approach for assessing cumulative impacts related to operations or long-term implementation is based on attainment of ambient air quality standards in accordance with the requirements of the CAA and California Clean Air Act. As discussed earlier, the SCAQMD has

[147] Raju Associates, Inc, 3855 Watseka Office Project Traffic Study, 2021.

developed a comprehensive plan, the AQMP, which addresses the region's cumulative air quality condition.

A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or California non-attainment pollutant. Because the Los Angeles County portion of the Air Basin is currently in non-attainment for ozone, NO_2, PM10, and $PM_{2.5}$, cumulative projects could exceed an air quality standard or contribute to an existing or projected air quality exceedance. Cumulative impacts to air quality are evaluated under two sets of thresholds for CEQA and the SCAQMD. In particular, Section 15064(h)(3) of the CEQA Guidelines provides guidance in determining the significance of cumulative impacts. Specifically, 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 incremental contribution to cumulative air quality impacts is determined based on compliance with the SCAQMD adopted the AQMP. As discussed above in Threshold 1 the Project would not conflict with or obstruct implementation of AQMP and would be consistent with the growth projections in the AQMP.

Nonetheless, SCAQMD no longer recommends relying solely upon consistency with the AQMP as an appropriate methodology for assessing cumulative air quality impacts. The SCAQMD recommends that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. As shown in **Table 6**, the Project's regional emissions would be below SCAQMD significance thresholds. In particular, non-attainment pollutant emissions of ozone precursors and particulate matter would not exceed the SCAQMD significance thresholds. The formation of ground-level ozone is a complex process due to photochemical reactions of precursor pollutants (i.e., VOC and NO_X emissions) in the atmosphere in the presence of sunlight. Meteorological factors, such as wind, would result in dispersive effects of pollutants, including ozone precursor and particulate matter emissions, that are dispersed horizontally downwind and through vertical mixing. It is unlikely that the Project's emissions, which would not exceed the SCAQMD significance thresholds, would result in a substantial measurable increase in the respective pollutant concentrations in the Air Basin to a degree that clearly predictable and identifiable heath impacts would specifically result from this Project's emissions. **Therefore, the Project's incremental contribution to long-term emissions of non-attainment pollutants and ozone precursors, considered together with**

cumulative projects, would not be cumulatively considerable, and therefore the cumulative impact of the Project would be less than significant.

Threshold 3 Expose sensitive receptors to substantial pollutant concentrations.

Impact 3: Implementation of the Project would not expose sensitive receptors to substantial pollutant concentrations. (Less than Significant)

5.3 Substantial Pollutant Concentrations

Localized Construction Emissions

As explained above, the localized construction air quality analysis was conducted using the methodology prescribed in the SCAQMD *Final Localized Significance Threshold Methodology*.[148] The maximum daily localized emissions for each of the construction phases and the localized significance thresholds are presented in **Table 7**, *Estimated Maximum Unmitigated Localized Construction Emissions.* The same phasing, equipment assumptions, and compliance with SCAQMD Rule 403 and Rule 1113, were used as for the regional emissions calculations discussed above. As shown in Table 7, maximum localized construction emissions for sensitive receptors would be below the localized screening indicators for NO_X, CO, PM10, and PM2.5, therefore, with respect to localized construction emissions, impacts to sensitive receptors would not be potentially significant. **As the Project's maximum localized construction emissions would not exceed the localized numeric indicators for NO_X, CO, PM10, and PM2.5, its construction emissions impacts to sensitive receptors would be less than significant.**

TABLE 7
ESTIMATED MAXIMUM UNMITIGATED LOCALIZED CONSTRUCTION EMISSIONS (POUNDS PER DAY)[a]

Construction Phases	NO_X	CO	PM10[b]	PM2.5[b]
Demolition - 2022	1	16	1	<1
Grading/Excavation - 2022	5	26	<1	<1
Drainage/Utilities/Trenching 2022	4	12	<1	<1
Foundations/Concrete Pour - 2022	5	16	<1	<1
Foundations/Concrete Pour - 2023	5	16	<1	<1
Building Construction/Exterior Finishes – 2023	3	8	<1	<1
Paving - 2023	2	10	<1	<1
Paving - 2024	2	10	<1	<1
Maximum Daily Construction Emissions	**5**	**26**	**1**	**<1**
SCAQMD Localized Significance Threshold	60	596	4	3
Exceeds Threshold?	**No**	**No**	**No**	**No**

148 SCAQMD, Final Localized Significance Threshold Methodology. July 2008.

Construction Phases	NO_X	CO	PM10[b]	PM2.5[b]

NOTES:

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Exhibit B.

[b] Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.

[c] Construction is scheduled such that no phases would overlap.

SOURCE: ESA 2019

Localized Operational Emissions

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 2019 Title 24 building energy efficiency standards, and 2019 CALGreen Code, were used in the analysis. The maximum daily localized emissions and the localized significance thresholds are presented in **Table 8,** *Estimated Maximum Unmitigated Localized Operational Emissions*. **As the Project's maximum localized operational emissions would not exceed the localized numeric indicators for NO_X, CO, PM10, or PM2.5, operational emissions impacts to sensitive receptors would be less than significant.**

TABLE 8
ESTIMATED MAXIMUM UNMITIGATED LOCALIZED OPERATIONAL EMISSIONS (POUNDS PER DAY)[a]

Source	NO_X	CO	PM10	PM2.5
Area	<1	<1	<1	<1
Energy	<1	<1	<1	<1
Stationary Source (Emergency Generator)	1	7	<1	<1
Total Localized Project Operational Emissions	**1**	**8**	**<1**	**<1**
Localized Existing Site Emissions Removed	<1	<1	<1	<1
Net Maximum Localized Operational Emissions	**1**	**8**	**<1**	**<1**
SCAQMD Significance Threshold	60	596	1	1
Exceeds 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 Exhibit B.

SOURCE: ESA 2021

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 2, CO levels in the Project Site area are substantially below the Federal and the State standards. Maximum CO levels in recent years were 1.9 ppm (one-hour average) and 1.2 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,[149] 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.[150] 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.[151] Therefore, projects that result in traffic at any intersection of less than 100,000 vehicles per day would be considered to be less than significant.

Based on the Project's traffic study, under the Future with Project Conditions (2024), the intersection of Hughes Avenue and Venice Boulevard would have a maximum traffic volume of approximately 5,600 average daily trips under the Project buildout scenario.[152] As the Project does not result in 100,000 vehicles per day at any study area intersection, 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 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.**

Toxic Air Contaminants

Construction

Temporary TAC emissions associated with DPM emissions from heavy construction equipment would occur during construction activities. According to OEHHA and the SCAQMD's Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling

149 SCAQMD, Final 2012 AQMP, page 2-22.
150 SCAQMD, 2003 AQMP, Appendix V: Modeling and Attainment Demonstrations, page V-4-24.
151 The eight-hour average is based on a 0.7 persistence factor, as recommended by the SCAQMD.
152 Raju Associates, Inc., 3855 Watseka Office Project Traffic Study, 2021.

Emissions for CEQA Air Quality Analysis,[153] 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 and short-term construction schedule (approximately 26.5 months), the Project would not result in a long-term (i.e., lifetime or 70-year) exposure as a result of construction activities.

As discussed above, the Project will implement PDF-AIR-1, which would require off-road diesel construction equipment greater than 50 hp to meet USEPA Tier 4 Final off-road emission standards. The Project would be consistent with the applicable 2016 AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. The Project would comply with regulatory control measures 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 that requires fleets to retire, replace, or repower of older, dirtier engines with newer emission-controlled models; compliance with these would minimize emissions of TACs during construction. SCAQMD recommends that construction health risk assessments be conducted for substantial sources of DPM emissions (e.g., earth-moving construction activities) in proximity to sensitive receptors and has provided guidance for analyzing mobile source diesel emissions. Although, sensitive receptors, including a hospital and multi-family residential uses, are located adjacent to the Project Site to the south, east, and west localized DPM emissions (strongly correlated with PM2.5 emissions) are less than significant (as shown in Table 7, above). Although the localized analysis does not directly measure health risk impacts, it does provide data that can be used to evaluate the potential to cause health risk impacts. The low level of PM2.5 emissions coupled with the relatively short-term duration of construction activity anticipated at 26.5 months resulted in an overall low level of DPM concentrations in the project area. Furthermore, compliance with the aforementioned CARB ATCM anti-idling measure further minimizes DPM emissions in the project area. Thus, although there are sensitive receptors within 25 meters of the Project Site, compliance with regulatory control measures and the limited duration of construction activities would minimize exposures.

Thus, construction activities would not expose sensitive receptors to substantial toxic air contaminant concentrations, and construction-related health impacts would be less than significant.

Operation

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.[154] Project operations would generate only minor amounts of diesel emissions from mobile sources, such as delivery

153 SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, August 2003, http://www.aqmd.gov/docs/default-source/ceqa/handbook/mobile-source-toxics-analysis.doc?sfvrsn=2.

154 SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, August 2003, http://www.aqmd.gov/docs/default-source/ceqa/handbook/mobile-source-toxics-analysis.doc?sfvrsn=2.

trucks and occasional maintenance activities that would not exceed 100 trucks per day or more than 40 trucks with operating transport refrigeration units. Furthermore, Project trucks would be required to comply with the applicable provisions of the CARB 13 CCR, Section 2025 (Truck and Bus regulation) to minimize and reduce PM and NO_X emissions from existing diesel trucks. Therefore, Project operations would not be considered a substantial source of diesel particulates.

In addition, Project operations would only result in minimal emissions of toxic air contaminants from maintenance or other ongoing activities, such as from the maintenance and testing of the emergency generator and use of architectural coatings and other products. As previously stated, the emergency generator which would be operated for a maximum of 50 hours annually and a maximum of 2 hours per day for maintenance activities. With respect to the use of consumer products and architectural coatings, the office and retail 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 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 numerical indicator of significance.

Thus, operation of the Project would not expose sensitive receptors to substantial toxic air contaminant concentrations and operational impacts would be less than significant.

Threshold 4	Result in other emissions (such as those leading to odors) affecting a substantial number of people.

Impact 4: Implementation of the Project would not result in other emissions (such as those leading to odors adversely affecting a substantial number of people). (Less than Significant)

5.4 Other Emissions (Such as Odors)

Construction

Potential activities that may emit odors during construction include the use of architectural coatings and solvents, as well as the combustion of diesel fuel in on-and off-road equipment. SCAQMD Rule 1113 would limit the amount of VOCs in architectural coatings and solvents. In addition, the Project would comply with the applicable provisions of the CARB Air Toxics Control Measure regarding idling limitations for diesel trucks. Diesel particulate matter poses a carcinogenic health risk that is generally measured using an exposure period of 30 years for sensitive residential receptors, according to the California Environmental Protection Agency, OEHHA Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, which was updated in 2015 with new exposure parameters including age sensitivity factors. Through mandatory compliance with SCAQMD Rules, no construction activities or materials are expected to create objectionable odors affecting a substantial number of people. Furthermore, as shown in Table 5 (regional) and Table 7 (localized), construction emissions

would not exceed the SCAQMD significance thresholds for attainment, maintenance, or unclassifiable criteria air pollutants (i.e., CO and SO_2). **Therefore, construction activities would result in less than significant impacts with respect to other emissions, including those leading to odors.**

Operations

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Project does not include any uses identified by the SCAQMD as being associated with substantial odors. As a result, the Project is not expected to discharge contaminants into the air in quantities that would cause a nuisance, injury, or annoyance to the public or property pursuant to SCAQMD Rule 402. Furthermore, as shown in Table 6 (regional) and Table 8 (localized), daily operational emissions would not exceed the SCAQMD significance thresholds for attainment, maintenance, or unclassifiable criteria air pollutants (i.e., CO and SO_2). **Therefore, operation of the Project would result in less than significant impacts with respect to other emissions, including those leading to odors.**

SECTION 6
Summary of Results

Air pollutant emissions associated with the Project have been evaluated to determine the level of impact from construction activities and future operations of the Project.

6.1 Construction

Construction of the Project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Project Site. In addition, fugitive dust emissions would result from grading and construction activities. However, use of typical construction equipment (in terms of size) and compliance with Rule 403 requirements (regarding dust control measures such as watering three times per day and track out prevention measures), minimizes air emissions to the extent warranted. The Project will also implement PDF-AIR-1, which would require off-road diesel construction equipment greater than 50 hp to meet USEPA Tier 4 Final off-road emission standards, which would further reduce emissions.

As shown in Table 5, regional construction emissions would not exceed the SCAQMD significance thresholds. Therefore, impacts related to regional construction emissions would be less than significant. As shown in Table 7, localized emissions would not exceed the SCAQMD significance thresholds. Therefore, impacts related to localized construction emissions would be less than significant. As a result, Project-related construction impacts would be less than significant. Furthermore, off-site health impacts to sensitive receptors would be below SCAQMD significant thresholds and exposure to TACs would result in less than significant impacts.

6.2 Operation

Air pollutant emissions associated with Project operations would be generated by the consumption of natural gas, use of consumer products, and by the operation of on-road vehicles. As shown in Table 6 and Table 8, regional and localized operational emissions associated with the Project would not exceed the SCAQMD daily significance thresholds. In addition, the Project would not result in a CO hotspot, or emit unhealthy levels of toxic air contaminants and odiferous emissions. Furthermore, the Project would be consistent with applicable air quality plans and policies. Therefore, impacts related to Project operational emissions and consistency with applicable air quality management plans, policies, or regulations would be less than significant.

Exhibit A

Project Construction Schedule, Equipment List, and Assumptions

ESA

3855 Watseka Avenue

Site (acres):	1.128
Lot Area (sqft):	49,125
Location:	Culver City-LA County South Coast
CEC Forecasting Climate Zone:	11
Utility:	LADWP
Operational Year:	2024

Existing Site Land Uses

Parcel	CalEEMod LandUse Type	CalEEMod LandUse Subtype	Amount	Unit	Amount (sq.ft.)	Acres
Office Buildings	Commercial	General Office	7.37	1000sqft	7,370	0.29
		One-story building	*3.92*	*1000sqft*	*3,920*	
		Two-story building	*3.45*	*1000sqft*	*3,450*	
Surface Parking - Asphalt	Parking		120	spaces	33,769	0.77
Landscaped Area	Recreational	City Park	2.73	1000sqft	2,729	0.06
					43,868	1.128

Project Land Uses

Land Use Type	CalEEMod LandUse Type	CalEEMod LandUse Subtype	Amount	Unit	Building sq.ft.	Acres
Office Building	Commercial	General Office	149.518	1000sqft	149,518	0.431
Aboveground Open Space	Parking	Other Non-Asphalt Surface	6.84	1000sqft	6,840	0.157
Landscaped Area	Recreational	City Park	4.758	1000sqft	4,758	0.109
3-Level Subterranean Parking	Parking	Enclosed Parking Structure with Elevator	555	spaces	142,548	0.431
					303,664	1.128

Foundation/Concrete Quantities

Parameters	Amount	
Site Area (acres)	1.13	
Site Area (ft^2)	49,125	
Footing Depth[4] (ft)	5	
Total Concrete Volume (ft)	245,625	
Total Concrete Volume (CY)	20,500	*From construction data needs request*
Concrete Truck Capacity (CY)	10	
Total Concrete Trucks Required	2,050	
Total Concrete Truck Trips (In/Out)	4,100	
Total Concrete Truck Trips (In/Out) per day	70	
Maximum Daily Cubic Yards of Concrete	500	*From construction data needs request*
Maximum Daily Trucks/Day	50	
Maximum Daily Truck Trips/Day	100	
Days of Pouring	60	*From construction management plan_4.30.2021*

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Demolition Quantities

Buildings	**Amount**	Notes
Building Floor Area (ft^2)	7,370	*From data needs request*
Building Floor Space to Building Volume[2]	10	
Building Waste Volume (CY)[2]	682	
Building Waste weight (tons)[2]	820	
Hardscape		
Hardscape Area (sf) [1]	33,769	*From data needs request*
Thickness (ft)	0.50	
Hardscape Debris Volume (CY)	625	
Debris weight (lb):Volume (CY)[3]	2,400	
Hardscape Debris Weight (tons)	750	
Total Debris Weight (tons)	1,570	<--Enter in CalEEMod
Total Demolition Debris (CY)	**1,308**	
Haul Truck Capacity (CY)	10	
Total Haul Trucks Required	131	
Total Haul Truck Trips (In/Out)	**262**	<--Enter in CalEEMod
Total Haul Days	15	*From construction management plan_4.30.2021*
Total Haul Truck Trips (In/Out) per day	18	

Grading

Excavation Volume	Value	
Excavation Volume (CY)	**75,000**	<--Enter in CalEEMod
Soil Expansion	20%	
Excavation Volume (export) (cy)	90,000	
Total Trucks Needed	6,429	
Total Truck Trips Needed	12,858	
Maximum Daily Excavation Volume	1,920	*From construction data needs request_2-11-21 (+20% soil expansion factor)*
Maximum Daily Haul Trucks	138	
Maximum Daily Haul Truck Trips (In/Out)	276	
Capacity of Haul Trucks (CY)	14	*From data needs request*
Days of Hauling During Excavation	50	*From construction management plan_4.30.2021*

Sources:

1 Construction Data Needs (02.11.2021) and Construction Management Plan (4.30.2021)

2 CalEEMod v2020.4.0 User's Guide, Appendix A

3 CalRecycle Weights and Volumes

3855 Watseka Avenue

Location: Culver City-LA County South Coast
CEC Forecasting Climate Zone: 11
Utility: LADWP

Acronyms/symbols used in the list below are:

#	Number of each piece of equipment
Hrs/day	hours per day of operating per construction phase

Construction Schedule

Phase	Start Date	Completion Date	Work Days	Notes
Demolition	1/1/2022	1/31/2022	26	
Grading/Excavation	2/1/2022	5/31/2022	103	
Drainage/Utilities/Trenching	6/1/2022	6/30/2022	26	
Foundations/Concrete Pour	7/1/2022	6/15/2023	300	
2022	7/1/2022	12/31/2022	158	
2023	1/1/2023	6/15/2023	142	
Building Construction / Exterior Finishes	6/16/2023	12/15/2023	157	
Paving	12/16/2023	3/15/2024	78	
2023	12/16/2023	12/31/2023	13	
2024	1/1/2024	3/15/2024	65	

Construction Trips

Phase	# Workers/Day [1]	# Worker Trips/Day (In/Out)[2]	# Vendor Trips/Day (In/Out)	# Hauling/Concrete Truck Trips Per Day (In/Out)	# Hauling/Concrete Truck Trips Total
Demolition	5	10	6	18	262
Grading/Excavation	15	30	6	276	12,858
Drainage/Utilities/Trenching	20	40	6	0	0
Foundations/Concrete Pour	60	120	0	70	4,100
Building Construction / Exterior Finishes	75	150	50	0	0
Paving	30	60	0	0	0

Notes:

1 Maximum number of workers/day provided in the Construction Data Needs (02.11.2021)

2 For building construction vendor trips, the trip number is estimated using the trip generation rate from a survey conducted by SMAQMD.

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Construction By SubPhase

Phase	Equipment Type	#	Hrs/day	Notes
Demolition				
	Air Compressor	1	8	
	Excavator	1	8	
	Generator Set	1	8	
	Graders	1	8	
	Rough Terrain Forklift	1	8	
Grading/Excavation				
	Air Compressor	1	8	
	Bore/Drill Rig	1	8	
	Cranes	1	8	
	Excavator	1	8	
	Generator Set	1	8	
	Graders	1	8	
	Rough Terrain Forklift	1	8	
	Rubber Tired Loader	1	8	
	Sweeper/Scrubber	1	8	
Drainage/Utilities/Trenching				
	Graders	1	8	
	Rough Terrain Forklift	1	8	
	Sweeper/Scrubber	1	8	
	Trencher	1	8	
	Tractors/Loaders/Backhoes	1	8	
Foundation and Concrete Structure				
	Crane	1	8	Electric, Tower Crane
	Placing Boom	2	8	Electric, Modeled as Crane
	Air Compressor	1	8	
	Forklifts	2	8	
	Pumps	2	8	
	Sweeper/Scrubber	1	8	
Building Exterior and Finish - Arch Coating				
	Forklifts	2	8	
	Air Compressor	1	8	
	Sweeper/Scrubber	1	8	
	Welder	1	8	
	Aerial Lift	2	8	Electric, Articulating Manlift
Paving				
	Pavers	1	6	
	Rough Terrain Forklift	1	8	
	Sweeper/Scrubber	1	8	
	Tractors/Loaders/Backhoes	1	8	

3855 Watseka Avenue
Operational Energy and GHG Analysis

Estimated Electricity demand from Electric Vehicle Supply Equipment (EVSE)

Land Use Type	Number of EVSE Charging Spaces	Percent of Spaces with EV Chargers [b]	Average Charge (kWh/day) [a]	Days/Year	Electricity Demand (kWh/yr)	Electricity Demand (MWh/yr)
Total	**42**	**10.0%**	**4.4**	**365**	6,746	6.75

Electricity Emission Factor (MT CO2/MWh)	Electricity Emission Factor (lbs CO2/MWh)	Total EV Charging GHG Emissions Per Year
0.30	657.80	2.02
(MT CH4/MWh)	**(lbs CH4/MWh)**	
1.50E-05	0.033	
(MT N2O/MWh)	**(lbs N2O/MWh)**	
1.81E-06	0.004	

Notes:

a. Estimated based on reference sources listed below.

b. Project would install EV charging spaces for approximately 10 percent of its 403 required parking spaces for immediate use.

c. Project would install pre-wiring for EV charging spaces for 20 percent of its parking capacity for future use (so 10% in addition to the immediate use).

Sources:

US Department of Energy. Alternative Fuels Data Center, 2016. Hybrid and Plug-In Electric Vehicle Emissions Data Sources and Assumptions.
Available at: https://www.afdc.energy.gov/vehicles/electric_emissions_sources.html.

US Department of Energy. Smith, Margaret, 2016. Level 1 Electric Vehicle Charging Stations at the Workplace.
Available at: https://www.afdc.energy.gov/uploads/publication/WPCC_L1ChargingAtTheWorkplace_0716.pdf.

UCLA Luskin Center for Innovation. Williams, Brett and JR deShazo, 2013. Pricing Workplace Charging: Financial Viability and Fueling Costs.
Available at: http://luskin.ucla.edu/sites/default/files/Luskin-WPC-TRB-13-11-15d.pdf.

3855 Watseka Avenue
Operational Waste Assumptions

Area	sqft	Trash	Recycle	Organics	Diversion Rate	Units
Office	149,518	58	29	30	50.6%	cy/week
		3	2	2	50.6%	tons/week
		162	82	84	50.6%	tons/year

Assumed Density per CY
Office 108 lbs/CY

Source: Terra Pacific Waste Management, *Project Summary - 3855 Watseka*

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Utility Provider: LADWP

CO2 Intensity Factor RPS under SB100

Year	RPS Mandate	Electricity Emission Factor (MT CO2/MWh)	Electricity Emission Factor (lbs CO2/MWh)
Base	Base	0.5328	1174.64949
2016	29.00%	0.378296486	834.00113
Base	0%	0.5328	1174.65
2016	29%	0.3783	834.00
2017	30.00%	0.3730	822.25
2018	31.00%	0.3676	810.51
2019	32.00%	0.3623	798.76
2020	33.00%	0.3570	787.02
2021	35.75%	0.3423	754.71
2022	38.50%	0.3277	722.41
2023	41.25%	0.3130	690.11
2024	44.00%	0.2984	657.80
2025	46.67%	0.2842	626.48
2026	49.33%	0.2700	595.16
2027	52.00%	0.2557	563.83
2028	54.67%	0.2415	532.51
2029	57.33%	0.2273	501.18
2030	60.0%	0.2131	469.86
2031	62.7%	0.1989	438.54
2032	65.3%	0.1847	407.21
2033	68.0%	0.1705	375.89
2034	70.7%	0.1563	344.56
2035	73.3%	0.1421	313.24
2036	76.0%	0.1279	281.92
2037	78.7%	0.1137	250.59
2038	81.3%	0.0995	219.27
2039	84.0%	0.0852	187.94
2040	86.7%	0.0710	156.62
2041	89.3%	0.0568	125.30
2042	92.0%	0.0426	93.97
2043	94.7%	0.0284	62.65
2044	97.3%	0.0142	31.32
2045	100%	0	0
2046	100%	0	0
2047	100%	0	0
2048	100%	0	0
2049	100%	0	0
2050	100%	0	0
2051	100%	0	0
2052	100%	0	0
2053	100%	0	0

[1] Los Angeles Department of Water and Power, 2017 Power Strategic Long-Term Resource Plan, December 2017. https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-power/a-p-integratedresourceplanning/a-p-irp-documents?_adf.ctrl-state=7vm6k5c6e_4&_afrLoop=401204849008238

[2] LADWP 2016 Power Content Label
https://ww2.energy.ca.gov/pcl/labels/2016_labels/Los_Angeles_Department_of_Water_and_Power.pdf

[3] SB-100 California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases, https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180

Exhibit B

Detailed Construction and Operations Modeling

ESA

3855 Watseka Ave

Air Quality Construction Analysis

Regional Emissions Summary	ROG	NOX	CO	SO2	Total PM10	Total PM2.5
Source	lb/day					
3.2 Demolition - 2022	<1	5	19	<1	1	<1
3.3 Grading/Excavation - 2022	1	60	62	<1	6	2
3.4 Drainage/Utilities/Trenching - 2022	<1	4	14	<1	<1	<1
3.5 Foundations/Concrete Pour - 2022	1	20	30	<1	3	1
3.5 Foundations/Concrete Pour - 2023	1	17	30	<1	3	1
3.6 Building Construction/Exterior Finishes - 2023	10	7	17	<1	2	1
3.7 Paving - 2023	<1	2	12	<1	1	<1
3.7 Paving - 2024	<1	2	12	<1	1	<1
Project Daily Maximum Emissions	10	60	62	<1	6	2
SCAQMD Regional Significance Threholds	75	100	550	150	150	55
Exceeds Thresholds?	No	No	No	No	No	No

3855 Watseka Ave

Air Quality Construction Analysis

Localized Emissions Summary	NOX	CO	Total PM10	Total PM2.5
Source	lb/day			
3.2 Demolition - 2022	1	16	1	<1
3.3 Grading/Excavation - 2022	5	26	<1	<1
3.4 Drainage/Utilities/Trenching - 2022	4	12	<1	<1
3.5 Foundations/Concrete Pour - 2022	5	16	<1	<1
3.5 Foundations/Concrete Pour - 2023	5	16	<1	<1
3.6 Building Construction/Exterior Finishes - 2023	3	8	<1	<1
3.7 Paving - 2023	2	10	<1	<1
3.7 Paving - 2024	2	10	<1	<1
Project Daily Localized Maximum Emissions	5	26	1	<1
SCAQMD Localized Significance Threholds	60	596	4	3
Exceeds Thresholds?	No	No	No	No

3855 Watseka Ave

Air Quality Construction Analysis

Regional Maximums Source	ROG	NOX	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5
					lb/day					
3.2 Demolition - 2022	0.3	5.4	19.1	0.043	1.0	0.1	1.0	0.2	0.1	0.3
3.3 Grading/Excavation - 2022	1.1	60.3	61.6	0.270	5.5	0.4	6.0	1.5	0.4	1.9
3.4 Drainage/Utilities/Trenching - 2022	0.3	4.2	13.8	0.024	0.4	0.0	0.5	0.1	0.0	0.1
3.5 Foundations/Concrete Pour - 2022	0.8	19.8	30.1	0.095	2.5	0.3	2.8	0.7	0.2	0.9
3.5 Foundations/Concrete Pour - 2023	0.7	17.0	29.7	0.094	2.5	0.2	2.8	0.7	0.2	0.9
3.6 Building Construction/Exterior Finishes - 2023	9.6	7.1	17.5	0.042	1.8	0.1	1.9	0.5	0.1	0.6
3.7 Paving - 2023	0.2	2.1	11.9	0.019	0.6	0.0	0.6	0.2	0.0	0.2
3.7 Paving - 2024	0.2	2.1	11.7	0.019	0.6	0.0	0.6	0.2	0.0	0.2
Project Daily Maximum Emissions	**9.6**	**60.3**	**61.6**	**0.3**	**5.5**	**0.4**	**6.0**	**1.5**	**0.4**	**1.9**

3855 Watseka Ave

Air Quality Construction Analysis

Summer	Onsite Emissions										Offsite Emissions									
Source	ROG	NOX	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5	ROG	NOX	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5
	lb/day										lb/day									
3.2 Demolition - 2022	0.29	1.27	16.00	0.03	0.50	0.04	0.54	0.08	0.04	0.12	0.04	4.12	3.05	0.017	0.47	0.02	0.50	0.12	0.02	0.15
3.3 Grading/Excavation - 2022	0.64	4.58	25.52	0.05	0.04	0.11	0.15	0.01	0.11	0.11	0.46	55.68	36.07	0.225	5.48	0.32	5.80	1.46	0.31	1.77
3.4 Drainage/Utilities/Trenching - 2022	0.29	3.54	11.70	0.02	0.00	0.03	0.03	0.00	0.03	0.03	0.04	0.63	2.09	0.006	0.45	0.00	0.45	0.11	0.00	0.12
3.5 Foundations/Concrete Pour - 2022	0.55	5.47	16.22	0.03	0.00	0.16	0.16	0.00	0.15	0.15	0.21	14.38	13.84	0.068	2.54	0.09	2.63	0.65	0.08	0.74
3.5 Foundations/Concrete Pour - 2023	0.53	5.19	16.18	0.03	0.00	0.15	0.15	0.00	0.14	0.14	0.14	11.79	13.48	0.067	2.53	0.08	2.61	0.65	0.08	0.73
3.6 Building Construction/Exterior Finishes - 2023	9.49	3.18	8.37	0.01	0.00	0.07	0.07	0.00	0.07	0.07	0.14	3.93	9.12	0.029	1.84	0.02	1.86	0.46	0.02	0.48
3.7 Paving - 2023	0.19	1.96	9.55	0.01	0.00	0.02	0.02	0.00	0.02	0.02	0.04	0.18	2.34	0.006	0.62	0.00	0.62	0.15	0.00	0.16
3.7 Paving - 2024	0.19	1.96	9.55	0.01	0.00	0.02	0.02	0.00	0.02	0.02	0.04	0.16	2.16	0.006	0.62	0.00	0.62	0.15	0.00	0.16

Note: Offsite emissions pasted over from EMFAC2021 analysis

Regional Emissions	ROG	NOX	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5
3.2 Demolition - 2022	0.3	5.4	19.1	0.0	1.0	0.1	1.0	0.2	0.1	0.3
3.3 Grading/Excavation - 2022	1.1	60.3	61.6	0.3	5.5	0.4	6.0	1.5	0.4	1.9
3.4 Drainage/Utilities/Trenching - 2022	0.3	4.2	13.8	0.0	0.4	0.0	0.5	0.1	0.0	0.1
3.5 Foundations/Concrete Pour - 2022	0.8	19.8	30.1	0.1	2.5	0.3	2.8	0.7	0.2	0.9
3.5 Foundations/Concrete Pour - 2023	0.7	17.0	29.7	0.1	2.5	0.2	2.8	0.7	0.2	0.9
3.6 Building Construction/Exterior Finishes - 2023	9.6	7.1	17.5	0.0	1.8	0.1	1.9	0.5	0.1	0.6
3.7 Paving - 2023	0.2	2.1	11.9	0.0	0.6	0.0	0.6	0.2	0.0	0.2
3.7 Paving - 2024	0.2	2.1	11.7	0.0	0.6	0.0	0.6	0.2	0.0	0.2
Project Daily Maximum Emissions	**9.63**	**60.26**	**61.60**	**0.27**	**5.52**	**0.44**	**5.95**	**1.46**	**0.42**	**1.88**

**Note: No overlapping phases for the Watseka Project*

3855 Watseka Ave

Air Quality Construction Analysis

Winter	Onsite Emissions										Offsite Emissions									
Source	ROG	NOX	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5	ROG	NOX	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5
	lb/day										lb/day									
3.2 Demolition - 2022	0.29	1.27	16.00	0.03	0.50	0.04	0.54	0.08	0.04	0.12	0.04	4.12	3.05	0.017	0.47	0.02	0.50	0.12	0.02	0.15
3.3 Grading/Excavation - 2022	0.64	4.58	25.52	0.05	0.04	0.11	0.15	0.01	0.11	0.11	0.46	55.68	36.07	0.225	5.48	0.32	5.80	1.46	0.31	1.77
3.4 Drainage/Utilities/Trenching - 2022	0.29	3.54	11.70	0.02	0.00	0.03	0.03	0.00	0.03	0.03	0.04	0.63	2.09	0.006	0.45	0.00	0.45	0.11	0.00	0.12
3.5 Foundations/Concrete Pour - 2022	0.55	5.47	16.22	0.03	0.00	0.16	0.16	0.00	0.15	0.15	0.21	14.38	13.84	0.068	2.54	0.09	2.63	0.65	0.08	0.74
3.5 Foundations/Concrete Pour - 2023	0.53	5.19	16.18	0.03	0.00	0.15	0.15	0.00	0.14	0.14	0.14	11.79	13.48	0.067	2.53	0.08	2.61	0.65	0.08	0.73
3.6 Building Construction/Exterior Finishes - 2023	9.49	3.18	8.37	0.01	0.00	0.07	0.07	0.00	0.07	0.07	0.14	3.93	9.12	0.029	1.84	0.02	1.86	0.46	0.02	0.48
3.7 Paving - 2023	0.19	1.96	9.55	0.01	0.00	0.02	0.02	0.00	0.02	0.02	0.04	0.18	2.34	0.006	0.62	0.00	0.62	0.15	0.00	0.16
3.7 Paving - 2024	0.19	1.96	9.55	0.01	0.00	0.02	0.02	0.00	0.02	0.02	0.04	0.16	2.16	0.006	0.62	0.00	0.62	0.15	0.00	0.16

Note: Offsite emissions pasted over from EMFAC2021 analysis

Regional Emissions	ROG	NOX	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5
3.2 Demolition - 2022	0.3	5.4	19.1	0.0	1.0	0.1	1.0	0.2	0.1	0.3
3.3 Grading/Excavation - 2022	1.1	60.3	61.6	0.3	5.5	0.4	6.0	1.5	0.4	1.9
3.4 Drainage/Utilities/Trenching - 2022	0.3	4.2	13.8	0.0	0.4	0.0	0.5	0.1	0.0	0.1
3.5 Foundations/Concrete Pour - 2022	0.8	19.8	30.1	0.1	2.5	0.3	2.8	0.7	0.2	0.9
3.5 Foundations/Concrete Pour - 2023	0.7	17.0	29.7	0.1	2.5	0.2	2.8	0.7	0.2	0.9
3.6 Building Construction/Exterior Finishes - 2023	9.6	7.1	17.5	0.0	1.8	0.1	1.9	0.5	0.1	0.6
3.7 Paving - 2023	0.2	2.1	11.9	0.0	0.6	0.0	0.6	0.2	0.0	0.2
3.7 Paving - 2024	0.2	2.1	11.7	0.0	0.6	0.0	0.6	0.2	0.0	0.2
Project Daily Maximum Emissions	**9.63**	**60.26**	**61.60**	**0.27**	**5.52**	**0.44**	**5.95**	**1.46**	**0.42**	**1.88**

**Note: No overlapping phases for the Watseka Project*

3855 Watseka Ave - Cnst - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3855 Watseka Ave - Cnst

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	149.52	1000sqft	0.43	149,518.00	0
Enclosed Parking with Elevator	555.00	Space	0.43	142,548.00	0
Other Non-Asphalt Surfaces	6.84	1000sqft	0.16	6,840.00	0
City Park	0.11	Acre	0.11	4,758.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	657.8	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Updated default value with project-specific values

Land Use - Updated default value with project-specific values

Construction Phase - Updated default value with project-specific values

Off-road Equipment - Updated default value with project-specific values

Off-road Equipment - Updated default value with project-specific values

Off-road Equipment - Updated default value with project-specific values

Off-road Equipment - Updated default value with project-specific values

Off-road Equipment - Updated default value with project-specific values

Off-road Equipment - Updated default value with project-specific values

Trips and VMT - On-road mobile construction emissions analyzed externally

Demolition -

Grading - Default value, no change to total acres graded

Architectural Coating - Updated defaults with project-specific values

Vehicle Trips - Operational emissions calculated separately

Area Coating -

Construction Off-road Equipment Mitigation - Electric tower crane; electric placing boom modeled as electric crane; electric articulating manlift modeled as electric aerial lift; all other equipment >50 hp modeled as Tier 4F according to PDF

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	26.00
tblConstructionPhase	NumDays	4.00	103.00
tblConstructionPhase	NumDays	200.00	300.00
tblConstructionPhase	NumDays	10.00	157.00
tblConstructionPhase	NumDays	10.00	78.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	AcresOfGrading	51.50	1.88
tblGrading	MaterialExported	0.00	75,000.00
tblLandUse	LandUseSquareFeet	149,520.00	149,518.00
tblLandUse	LandUseSquareFeet	222,000.00	142,548.00
tblLandUse	LandUseSquareFeet	4,791.60	4,758.00
tblLandUse	LotAcreage	3.43	0.43
tblLandUse	LotAcreage	4.99	0.43
tblOffRoadEquipment	HorsePower	100.00	64.00
tblOffRoadEquipment	LoadFactor	0.40	0.46
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CO2IntensityFactor	691.98	657.8
tblTripsAndVMT	HaulingTripNumber	155.00	0.00
tblTripsAndVMT	HaulingTripNumber	9,375.00	0.00
tblTripsAndVMT	VendorTripNumber	50.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	113.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	9.74	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.5161	24.5997	20.7410	0.0498	1.2922	1.2018	1.8528	0.1957	1.1392	1.1392	0.0000	4,797.5792	4,797.5792	1.2828	0.0000	4,829.6491
2023	10.0592	22.3148	19.5768	0.0400	0.0000	1.0695	1.0695	0.0000	1.0131	1.0131	0.0000	3,840.0290	3,840.0290	0.7970	0.0000	3,859.9548
2024	0.5564	5.7137	8.6119	0.0126	0.0000	0.2665	0.2665	0.0000	0.2452	0.2452	0.0000	1,223.0510	1,223.0510	0.3956	0.0000	1,232.9400
Maximum	**10.0592**	**24.5997**	**20.7410**	**0.0498**	**1.2922**	**1.2018**	**1.8528**	**0.1957**	**1.1392**	**1.1392**	**0.0000**	**4,797.5792**	**4,797.5792**	**1.2828**	**0.0000**	**4,829.6491**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.6422	5.4659	25.5202	0.0455	0.5040	0.1623	0.5429	0.0763	0.1519	0.1519	0.0000	4,378.4564	4,378.4564	1.1472	0.0000	4,407.1375
2023	9.4869	5.1894	16.1761	0.0270	0.0000	0.1515	0.1515	0.0000	0.1419	0.1419	0.0000	2,582.6857	2,582.6857	0.3955	0.0000	2,592.4452
2024	0.1860	1.9585	9.5458	0.0126	0.0000	0.0206	0.0206	0.0000	0.0206	0.0206	0.0000	1,223.0510	1,223.0510	0.3956	0.0000	1,232.9400
Maximum	**9.4869**	**5.4659**	**25.5202**	**0.0455**	**0.5040**	**0.1623**	**0.5429**	**0.0763**	**0.1519**	**0.1519**	**0.0000**	**4,378.4564**	**4,378.4564**	**1.1472**	**0.0000**	**4,407.1375**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**21.45**	**76.03**	**-4.73**	**16.91**	**61.00**	**86.82**	**77.58**	**61.00**	**86.88**	**86.88**	**0.00**	**17.00**	**17.00**	**21.70**	**0.00**	**17.03**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.4114	6.6000e-004	0.0725	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1557	0.1557	4.1000e-004		0.1659
Energy	0.0456	0.4141	0.3478	2.4800e-003		0.0315	0.0315		0.0315	0.0315		496.8672	496.8672	9.5200e-003	9.1100e-003	499.8199
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.4570**	**0.4147**	**0.4203**	**2.4900e-003**	**0.0000**	**0.0317**	**0.0317**	**0.0000**	**0.0317**	**0.0317**		**497.0229**	**497.0229**	**9.9300e-003**	**9.1100e-003**	**499.9857**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.4114	6.6000e-004	0.0725	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1557	0.1557	4.1000e-004		0.1659
Energy	0.0456	0.4141	0.3478	2.4800e-003		0.0315	0.0315		0.0315	0.0315		496.8672	496.8672	9.5200e-003	9.1100e-003	499.8199
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.4570**	**0.4147**	**0.4203**	**2.4900e-003**	**0.0000**	**0.0317**	**0.0317**	**0.0000**	**0.0317**	**0.0317**		**497.0229**	**497.0229**	**9.9300e-003**	**9.1100e-003**	**499.9857**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3855 Watseka Ave - Cnst - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/31/2022	6	26	
2	Grading/Excavation	Grading	2/1/2022	5/31/2022	6	103	
3	Drainage/Utilities/Trenching	Trenching	6/1/2022	6/30/2022	6	26	
4	Foundations/Concrete Pour	Building Construction	7/1/2022	6/15/2023	6	300	
5	Building Construction/Exterior Finishes	Architectural Coating	6/16/2023	12/15/2023	6	157	
6	Paving	Paving	12/16/2023	3/15/2024	6	78	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.88

Acres of Paving: 0.59

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 224,277; Non-Residential Outdoor: 74,759; Striped Parking Area: 8,963

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Air Compressors	1	8.00	78	0.48
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Generator Sets	1	8.00	84	0.74
Demolition	Graders	1	8.00	187	0.41
Demolition	Rough Terrain Forklifts	1	8.00	100	0.40
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading/Excavation	Air Compressors	1	8.00	78	0.48
Grading/Excavation	Bore/Drill Rigs	1	8.00	221	0.50
Grading/Excavation	Cranes	1	8.00	231	0.29
Grading/Excavation	Excavators	1	8.00	158	0.38
Grading/Excavation	Generator Sets	1	8.00	84	0.74
Grading/Excavation	Graders	1	8.00	187	0.41
Grading/Excavation	Rough Terrain Forklifts	1	8.00	100	0.40
Grading/Excavation	Rubber Tired Dozers	0	7.00	247	0.40
Grading/Excavation	Rubber Tired Loaders	1	8.00	203	0.36
Grading/Excavation	Sweepers/Scrubbers	1	8.00	64	0.46
Grading/Excavation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Drainage/Utilities/Trenching	Graders	1	8.00	187	0.41
Drainage/Utilities/Trenching	Rough Terrain Forklifts	1	8.00	64	0.46
Drainage/Utilities/Trenching	Rubber Tired Dozers	0	8.00	247	0.40

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Drainage/Utilities/Trenching	Sweepers/Scrubbers	1	8.00	64	0.46
Drainage/Utilities/Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Drainage/Utilities/Trenching	Trenchers	1	8.00	78	0.50
Foundations/Concrete Pour	Air Compressors	1	8.00	78	0.48
Foundations/Concrete Pour	Cranes	3	8.00	231	0.29
Foundations/Concrete Pour	Forklifts	2	8.00	89	0.20
Foundations/Concrete Pour	Generator Sets	0	8.00	84	0.74
Foundations/Concrete Pour	Pumps	2	8.00	84	0.74
Foundations/Concrete Pour	Sweepers/Scrubbers	1	8.00	64	0.46
Foundations/Concrete Pour	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Foundations/Concrete Pour	Welders	0	8.00	46	0.45
Building Construction/Exterior Finishes	Aerial Lifts	2	8.00	63	0.31
Building Construction/Exterior Finishes	Air Compressors	1	8.00	78	0.48
Building Construction/Exterior Finishes	Cement and Mortar Mixers	0	6.00	9	0.56
Building Construction/Exterior Finishes	Forklifts	2	8.00	89	0.20
Building Construction/Exterior Finishes	Pavers	0	6.00	130	0.42
Building Construction/Exterior Finishes	Paving Equipment	0	8.00	132	0.36
Building Construction/Exterior Finishes	Rollers	0	7.00	80	0.38
Building Construction/Exterior Finishes	Sweepers/Scrubbers	1	8.00	64	0.46
Building Construction/Exterior Finishes	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction/Exterior Finishes	Welders	1	8.00	46	0.45
Paving	Air Compressors	0	6.00	78	0.48
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	0	8.00	132	0.36
Paving	Rollers	0	7.00	80	0.38
Paving	Rough Terrain Forklifts	1	8.00	100	0.40
Paving	Sweepers/Scrubbers	1	8.00	64	0.46
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Excavation	9	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Drainage/Utilities/Trenching	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Foundations/Concrete Pour	9	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction/Exterior Finishes	7	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2922	0.0000	1.2922	0.1957	0.0000	0.1957			0.0000			0.0000
Off-Road	1.3320	13.3211	13.3593	0.0258		0.5606	0.5606		0.5362	0.5362		2,473.3473	2,473.3473	0.5311		2,486.6247
Total	**1.3320**	**13.3211**	**13.3593**	**0.0258**	**1.2922**	**0.5606**	**1.8528**	**0.1957**	**0.5362**	**0.7319**		**2,473.3473**	**2,473.3473**	**0.5311**		**2,486.6247**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5040	0.0000	0.5040	0.0763	0.0000	0.0763			0.0000			0.0000
Off-Road	0.2924	1.2671	16.0028	0.0258		0.0390	0.0390		0.0390	0.0390	0.0000	2,473.3473	2,473.3473	0.5311		2,486.6247
Total	**0.2924**	**1.2671**	**16.0028**	**0.0258**	**0.5040**	**0.0390**	**0.5429**	**0.0763**	**0.0390**	**0.1153**	**0.0000**	**2,473.3473**	**2,473.3473**	**0.5311**		**2,486.6247**

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Grading/Excavation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1017	0.0000	0.1017	0.0146	0.0000	0.0146			0.0000			0.0000
Off-Road	2.4138	24.5997	20.7410	0.0498		1.0291	1.0291		0.9672	0.9672		4,797.5792	4,797.5792	1.2828		4,829.6491
Total	**2.4138**	**24.5997**	**20.7410**	**0.0498**	**0.1017**	**1.0291**	**1.1308**	**0.0146**	**0.9672**	**0.9818**		**4,797.5792**	**4,797.5792**	**1.2828**		**4,829.6491**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0397	0.0000	0.0397	5.6800e-003	0.0000	5.6800e-003			0.0000			0.0000
Off-Road	0.6422	4.5776	25.5202	0.0455		0.1125	0.1125		0.1090	0.1090	0.0000	4,378.4564	4,378.4564	1.1472		4,407.1375
Total	**0.6422**	**4.5776**	**25.5202**	**0.0455**	**0.0397**	**0.1125**	**0.1521**	**5.6800e-003**	**0.1090**	**0.1147**	**0.0000**	**4,378.4564**	**4,378.4564**	**1.1472**		**4,407.1375**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Drainage/Utilities/Trenching - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2193	13.2053	10.1599	0.0182		0.6553	0.6553		0.6029	0.6029		1,761.2870	1,761.2870	0.5696		1,775.5279
Total	**1.2193**	**13.2053**	**10.1599**	**0.0182**		**0.6553**	**0.6553**		**0.6029**	**0.6029**		**1,761.2870**	**1,761.2870**	**0.5696**		**1,775.5279**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2850	3.5404	11.7043	0.0182		0.0297	0.0297		0.0297	0.0297	0.0000	1,761.2870	1,761.2870	0.5696		1,775.5279
Total	**0.2850**	**3.5404**	**11.7043**	**0.0182**		**0.0297**	**0.0297**		**0.0297**	**0.0297**	**0.0000**	**1,761.2870**	**1,761.2870**	**0.5696**		**1,775.5279**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Foundations/Concrete Pour - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5161	24.2811	19.7833	0.0400		1.2018	1.2018		1.1392	1.1392		3,840.0623	3,840.0623	0.8056		3,860.2023
Total	**2.5161**	**24.2811**	**19.7833**	**0.0400**		**1.2018**	**1.2018**		**1.1392**	**1.1392**		**3,840.0623**	**3,840.0623**	**0.8056**		**3,860.2023**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5509	5.4659	16.2195	0.0270		0.1623	0.1623		0.1519	0.1519	0.0000	2,582.6940	2,582.6940	0.3989		2,592.6676
Total	**0.5509**	**5.4659**	**16.2195**	**0.0270**		**0.1623**	**0.1623**		**0.1519**	**0.1519**	**0.0000**	**2,582.6940**	**2,582.6940**	**0.3989**		**2,592.6676**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Foundations/Concrete Pour - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3525	22.3148	19.5768	0.0400		1.0695	1.0695		1.0131	1.0131		3,840.0290	3,840.0290	0.7970		3,859.9548
Total	**2.3525**	**22.3148**	**19.5768**	**0.0400**		**1.0695**	**1.0695**		**1.0131**	**1.0131**		**3,840.0290**	**3,840.0290**	**0.7970**		**3,859.9548**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5347	5.1894	16.1761	0.0270		0.1515	0.1515		0.1419	0.1419	0.0000	2,582.6857	2,582.6857	0.3904		2,592.4452
Total	**0.5347**	**5.1894**	**16.1761**	**0.0270**		**0.1515**	**0.1515**		**0.1419**	**0.1419**	**0.0000**	**2,582.6857**	**2,582.6857**	**0.3904**		**2,592.4452**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3855 Watseka Ave - Cnst - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Building Construction/Exterior Finishes - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.0928					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.9664	7.8496	10.4849	0.0155		0.3954	0.3954		0.3757	0.3757		1,450.2196	1,450.2196	0.3257		1,458.3607
Total	**10.0592**	**7.8496**	**10.4849**	**0.0155**		**0.3954**	**0.3954**		**0.3757**	**0.3757**		**1,450.2196**	**1,450.2196**	**0.3257**		**1,458.3607**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.0928					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3941	3.1782	8.3655	0.0121		0.0696	0.0696		0.0696	0.0696	0.0000	1,124.9799	1,124.9799	0.2205		1,130.4913
Total	**9.4869**	**3.1782**	**8.3655**	**0.0121**		**0.0696**	**0.0696**		**0.0696**	**0.0696**	**0.0000**	**1,124.9799**	**1,124.9799**	**0.2205**		**1,130.4913**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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3855 Watseka Ave - Cnst - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5831	6.0530	8.5995	0.0126		0.2960	0.2960		0.2723	0.2723		1,222.9694	1,222.9694	0.3955		1,232.8577
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5831**	**6.0530**	**8.5995**	**0.0126**		**0.2960**	**0.2960**		**0.2723**	**0.2723**		**1,222.9694**	**1,222.9694**	**0.3955**		**1,232.8577**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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3855 Watseka Ave - Cnst - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1860	1.9585	9.5458	0.0126		0.0206	0.0206		0.0206	0.0206	0.0000	1,222.9694	1,222.9694	0.3955		1,232.8577
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1860**	**1.9585**	**9.5458**	**0.0126**		**0.0206**	**0.0206**		**0.0206**	**0.0206**	**0.0000**	**1,222.9694**	**1,222.9694**	**0.3955**		**1,232.8577**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5564	5.7137	8.6119	0.0126		0.2665	0.2665		0.2452	0.2452		1,223.0510	1,223.0510	0.3956		1,232.9400
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5564**	**5.7137**	**8.6119**	**0.0126**		**0.2665**	**0.2665**		**0.2452**	**0.2452**		**1,223.0510**	**1,223.0510**	**0.3956**		**1,232.9400**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1860	1.9585	9.5458	0.0126		0.0206	0.0206		0.0206	0.0206	0.0000	1,223.0510	1,223.0510	0.3956		1,232.9400
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1860**	**1.9585**	**9.5458**	**0.0126**		**0.0206**	**0.0206**		**0.0206**	**0.0206**	**0.0000**	**1,223.0510**	**1,223.0510**	**0.3956**		**1,232.9400**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3855 Watseka Ave - Cnst - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3855 Watseka Ave - Cnst

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	149.52	1000sqft	0.43	149,518.00	0
Enclosed Parking with Elevator	555.00	Space	0.43	142,548.00	0
Other Non-Asphalt Surfaces	6.84	1000sqft	0.16	6,840.00	0
City Park	0.11	Acre	0.11	4,758.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	657.8	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Updated default value with project-specific values

Land Use - Updated default value with project-specific values

Construction Phase - Updated default value with project-specific values

Off-road Equipment - Updated default value with project-specific values

Off-road Equipment - Updated default value with project-specific values

Off-road Equipment - Updated default value with project-specific values

Off-road Equipment - Updated default value with project-specific values

Off-road Equipment - Updated default value with project-specific values

Off-road Equipment - Updated default value with project-specific values

Trips and VMT - On-road mobile construction emissions analyzed externally

Demolition -

Grading - Default value, no change to total acres graded

Architectural Coating - Updated defaults with project-specific values

Vehicle Trips - Operational emissions calculated separately

Area Coating -

Construction Off-road Equipment Mitigation - Electric tower crane; electric placing boom modeled as electric crane; electric articulating manlift modeled as electric aerial lift; all other equipment >50 hp modeled as Tier 4F according to PDF

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	26.00
tblConstructionPhase	NumDays	4.00	103.00
tblConstructionPhase	NumDays	200.00	300.00
tblConstructionPhase	NumDays	10.00	157.00
tblConstructionPhase	NumDays	10.00	78.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	AcresOfGrading	51.50	1.88
tblGrading	MaterialExported	0.00	75,000.00
tblLandUse	LandUseSquareFeet	149,520.00	149,518.00
tblLandUse	LandUseSquareFeet	222,000.00	142,548.00
tblLandUse	LandUseSquareFeet	4,791.60	4,758.00
tblLandUse	LotAcreage	3.43	0.43
tblLandUse	LotAcreage	4.99	0.43
tblOffRoadEquipment	HorsePower	100.00	64.00
tblOffRoadEquipment	LoadFactor	0.40	0.46
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CO2IntensityFactor	691.98	657.8
tblTripsAndVMT	HaulingTripNumber	155.00	0.00
tblTripsAndVMT	HaulingTripNumber	9,375.00	0.00
tblTripsAndVMT	VendorTripNumber	50.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	113.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	9.74	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.5161	24.5997	20.7410	0.0498	1.2922	1.2018	1.8528	0.1957	1.1392	1.1392	0.0000	4,797.5792	4,797.5792	1.2828	0.0000	4,829.6491
2023	10.0592	22.3148	19.5768	0.0400	0.0000	1.0695	1.0695	0.0000	1.0131	1.0131	0.0000	3,840.0290	3,840.0290	0.7970	0.0000	3,859.9548
2024	0.5564	5.7137	8.6119	0.0126	0.0000	0.2665	0.2665	0.0000	0.2452	0.2452	0.0000	1,223.0510	1,223.0510	0.3956	0.0000	1,232.9400
Maximum	**10.0592**	**24.5997**	**20.7410**	**0.0498**	**1.2922**	**1.2018**	**1.8528**	**0.1957**	**1.1392**	**1.1392**	**0.0000**	**4,797.5792**	**4,797.5792**	**1.2828**	**0.0000**	**4,829.6491**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.6422	5.4659	25.5202	0.0455	0.5040	0.1623	0.5429	0.0763	0.1519	0.1519	0.0000	4,378.4564	4,378.4564	1.1472	0.0000	4,407.1375
2023	9.4869	5.1894	16.1761	0.0270	0.0000	0.1515	0.1515	0.0000	0.1419	0.1419	0.0000	2,582.6857	2,582.6857	0.3955	0.0000	2,592.4452
2024	0.1860	1.9585	9.5458	0.0126	0.0000	0.0206	0.0206	0.0000	0.0206	0.0206	0.0000	1,223.0510	1,223.0510	0.3956	0.0000	1,232.9400
Maximum	**9.4869**	**5.4659**	**25.5202**	**0.0455**	**0.5040**	**0.1623**	**0.5429**	**0.0763**	**0.1519**	**0.1519**	**0.0000**	**4,378.4564**	**4,378.4564**	**1.1472**	**0.0000**	**4,407.1375**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**21.45**	**76.03**	**-4.73**	**16.91**	**61.00**	**86.82**	**77.58**	**61.00**	**86.88**	**86.88**	**0.00**	**17.00**	**17.00**	**21.70**	**0.00**	**17.03**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/31/2022	6	26	
2	Grading/Excavation	Grading	2/1/2022	5/31/2022	6	103	
3	Drainage/Utilities/Trenching	Trenching	6/1/2022	6/30/2022	6	26	
4	Foundations/Concrete Pour	Building Construction	7/1/2022	6/15/2023	6	300	
5	Building Construction/Exterior Finishes	Architectural Coating	6/16/2023	12/15/2023	6	157	
6	Paving	Paving	12/16/2023	3/15/2024	6	78	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.88

Acres of Paving: 0.59

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 224,277; Non-Residential Outdoor: 74,759; Striped Parking Area: 8,963

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Air Compressors	1	8.00	78	0.48
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Generator Sets	1	8.00	84	0.74
Demolition	Graders	1	8.00	187	0.41
Demolition	Rough Terrain Forklifts	1	8.00	100	0.40
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading/Excavation	Air Compressors	1	8.00	78	0.48
Grading/Excavation	Bore/Drill Rigs	1	8.00	221	0.50
Grading/Excavation	Cranes	1	8.00	231	0.29
Grading/Excavation	Excavators	1	8.00	158	0.38
Grading/Excavation	Generator Sets	1	8.00	84	0.74
Grading/Excavation	Graders	1	8.00	187	0.41
Grading/Excavation	Rough Terrain Forklifts	1	8.00	100	0.40
Grading/Excavation	Rubber Tired Dozers	0	7.00	247	0.40
Grading/Excavation	Rubber Tired Loaders	1	8.00	203	0.36
Grading/Excavation	Sweepers/Scrubbers	1	8.00	64	0.46
Grading/Excavation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Drainage/Utilities/Trenching	Graders	1	8.00	187	0.41
Drainage/Utilities/Trenching	Rough Terrain Forklifts	1	8.00	64	0.46
Drainage/Utilities/Trenching	Rubber Tired Dozers	0	8.00	247	0.40
Drainage/Utilities/Trenching	Sweepers/Scrubbers	1	8.00	64	0.46
Drainage/Utilities/Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Drainage/Utilities/Trenching	Trenchers	1	8.00	78	0.50
Foundations/Concrete Pour	Air Compressors	1	8.00	78	0.48

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Foundations/Concrete Pour	Cranes	3	8.00	231	0.29
Foundations/Concrete Pour	Forklifts	2	8.00	89	0.20
Foundations/Concrete Pour	Generator Sets	0	8.00	84	0.74
Foundations/Concrete Pour	Pumps	2	8.00	84	0.74
Foundations/Concrete Pour	Sweepers/Scrubbers	1	8.00	64	0.46
Foundations/Concrete Pour	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Foundations/Concrete Pour	Welders	0	8.00	46	0.45
Building Construction/Exterior Finishes	Aerial Lifts	2	8.00	63	0.31
Building Construction/Exterior Finishes	Air Compressors	1	8.00	78	0.48
Building Construction/Exterior Finishes	Cement and Mortar Mixers	0	6.00	9	0.56
Building Construction/Exterior Finishes	Forklifts	2	8.00	89	0.20
Building Construction/Exterior Finishes	Pavers	0	6.00	130	0.42
Building Construction/Exterior Finishes	Paving Equipment	0	8.00	132	0.36
Building Construction/Exterior Finishes	Rollers	0	7.00	80	0.38
Building Construction/Exterior Finishes	Sweepers/Scrubbers	1	8.00	64	0.46
Building Construction/Exterior Finishes	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction/Exterior Finishes	Welders	1	8.00	46	0.45
Paving	Air Compressors	0	6.00	78	0.48
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	0	8.00	132	0.36
Paving	Rollers	0	7.00	80	0.38
Paving	Rough Terrain Forklifts	1	8.00	100	0.40
Paving	Sweepers/Scrubbers	1	8.00	64	0.46
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Excavation	9	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Drainage/Utilities/Trenching	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Foundations/Concrete Pour	9	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction/Exterior Finishes	7	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2922	0.0000	1.2922	0.1957	0.0000	0.1957			0.0000			0.0000
Off-Road	1.3320	13.3211	13.3593	0.0258		0.5606	0.5606		0.5362	0.5362		2,473.3473	2,473.3473	0.5311		2,486.6247
Total	**1.3320**	**13.3211**	**13.3593**	**0.0258**	**1.2922**	**0.5606**	**1.8528**	**0.1957**	**0.5362**	**0.7319**		**2,473.3473**	**2,473.3473**	**0.5311**		**2,486.6247**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5040	0.0000	0.5040	0.0763	0.0000	0.0763			0.0000			0.0000
Off-Road	0.2924	1.2671	16.0028	0.0258		0.0390	0.0390		0.0390	0.0390	0.0000	2,473.3473	2,473.3473	0.5311		2,486.6247
Total	**0.2924**	**1.2671**	**16.0028**	**0.0258**	**0.5040**	**0.0390**	**0.5429**	**0.0763**	**0.0390**	**0.1153**	**0.0000**	**2,473.3473**	**2,473.3473**	**0.5311**		**2,486.6247**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading/Excavation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1017	0.0000	0.1017	0.0146	0.0000	0.0146			0.0000			0.0000
Off-Road	2.4138	24.5997	20.7410	0.0498		1.0291	1.0291		0.9672	0.9672		4,797.5792	4,797.5792	1.2828		4,829.6491
Total	**2.4138**	**24.5997**	**20.7410**	**0.0498**	**0.1017**	**1.0291**	**1.1308**	**0.0146**	**0.9672**	**0.9818**		**4,797.5792**	**4,797.5792**	**1.2828**		**4,829.6491**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0397	0.0000	0.0397	5.6800e-003	0.0000	5.6800e-003			0.0000			0.0000
Off-Road	0.6422	4.5776	25.5202	0.0455		0.1125	0.1125		0.1090	0.1090	0.0000	4,378.4564	4,378.4564	1.1472		4,407.1375
Total	**0.6422**	**4.5776**	**25.5202**	**0.0455**	**0.0397**	**0.1125**	**0.1521**	**5.6800e-003**	**0.1090**	**0.1147**	**0.0000**	**4,378.4564**	**4,378.4564**	**1.1472**		**4,407.1375**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Drainage/Utilities/Trenching - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2193	13.2053	10.1599	0.0182		0.6553	0.6553		0.6029	0.6029		1,761.2870	1,761.2870	0.5696		1,775.5279
Total	**1.2193**	**13.2053**	**10.1599**	**0.0182**		**0.6553**	**0.6553**		**0.6029**	**0.6029**		**1,761.2870**	**1,761.2870**	**0.5696**		**1,775.5279**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2850	3.5404	11.7043	0.0182		0.0297	0.0297		0.0297	0.0297	0.0000	1,761.2870	1,761.2870	0.5696		1,775.5279
Total	**0.2850**	**3.5404**	**11.7043**	**0.0182**		**0.0297**	**0.0297**		**0.0297**	**0.0297**	**0.0000**	**1,761.2870**	**1,761.2870**	**0.5696**		**1,775.5279**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Foundations/Concrete Pour - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5161	24.2811	19.7833	0.0400		1.2018	1.2018		1.1392	1.1392		3,840.0623	3,840.0623	0.8056		3,860.2023
Total	**2.5161**	**24.2811**	**19.7833**	**0.0400**		**1.2018**	**1.2018**		**1.1392**	**1.1392**		**3,840.0623**	**3,840.0623**	**0.8056**		**3,860.2023**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Date: 8/30/2021 9:32 AM

3855 Watseka Ave - Cnst - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5509	5.4659	16.2195	0.0270		0.1623	0.1623		0.1519	0.1519	0.0000	2,582.6940	2,582.6940	0.3989		2,592.6676
Total	**0.5509**	**5.4659**	**16.2195**	**0.0270**		**0.1623**	**0.1623**		**0.1519**	**0.1519**	**0.0000**	**2,582.6940**	**2,582.6940**	**0.3989**		**2,592.6676**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Date: 8/30/2021 9:32 AM

3855 Watseka Ave - Cnst - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Foundations/Concrete Pour - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3525	22.3148	19.5768	0.0400		1.0695	1.0695		1.0131	1.0131		3,840.0290	3,840.0290	0.7970		3,859.9548
Total	**2.3525**	**22.3148**	**19.5768**	**0.0400**		**1.0695**	**1.0695**		**1.0131**	**1.0131**		**3,840.0290**	**3,840.0290**	**0.7970**		**3,859.9548**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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3855 Watseka Ave - Cnst - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5347	5.1894	16.1761	0.0270		0.1515	0.1515		0.1419	0.1419	0.0000	2,582.6857	2,582.6857	0.3904		2,592.4452
Total	**0.5347**	**5.1894**	**16.1761**	**0.0270**		**0.1515**	**0.1515**		**0.1419**	**0.1419**	**0.0000**	**2,582.6857**	**2,582.6857**	**0.3904**		**2,592.4452**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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3855 Watseka Ave - Cnst - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Building Construction/Exterior Finishes - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.0928					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.9664	7.8496	10.4849	0.0155		0.3954	0.3954		0.3757	0.3757		1,450.2196	1,450.2196	0.3257		1,458.3607
Total	**10.0592**	**7.8496**	**10.4849**	**0.0155**		**0.3954**	**0.3954**		**0.3757**	**0.3757**		**1,450.2196**	**1,450.2196**	**0.3257**		**1,458.3607**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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3855 Watseka Ave - Cnst - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.0928					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3941	3.1782	8.3655	0.0121		0.0696	0.0696		0.0696	0.0696	0.0000	1,124.9799	1,124.9799	0.2205		1,130.4913
Total	**9.4869**	**3.1782**	**8.3655**	**0.0121**		**0.0696**	**0.0696**		**0.0696**	**0.0696**	**0.0000**	**1,124.9799**	**1,124.9799**	**0.2205**		**1,130.4913**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Date: 8/30/2021 9:32 AM

3855 Watseka Ave - Cnst - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5831	6.0530	8.5995	0.0126		0.2960	0.2960		0.2723	0.2723		1,222.9694	1,222.9694	0.3955		1,232.8577
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5831**	**6.0530**	**8.5995**	**0.0126**		**0.2960**	**0.2960**		**0.2723**	**0.2723**		**1,222.9694**	**1,222.9694**	**0.3955**		**1,232.8577**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Date: 8/30/2021 9:32 AM

3855 Watseka Ave - Cnst - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1860	1.9585	9.5458	0.0126		0.0206	0.0206		0.0206	0.0206	0.0000	1,222.9694	1,222.9694	0.3955		1,232.8577
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1860**	**1.9585**	**9.5458**	**0.0126**		**0.0206**	**0.0206**		**0.0206**	**0.0206**	**0.0000**	**1,222.9694**	**1,222.9694**	**0.3955**		**1,232.8577**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Date: 8/30/2021 9:32 AM

3855 Watseka Ave - Cnst - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5564	5.7137	8.6119	0.0126		0.2665	0.2665		0.2452	0.2452		1,223.0510	1,223.0510	0.3956		1,232.9400
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5564**	**5.7137**	**8.6119**	**0.0126**		**0.2665**	**0.2665**		**0.2452**	**0.2452**		**1,223.0510**	**1,223.0510**	**0.3956**		**1,232.9400**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Date: 8/30/2021 9:32 AM

3855 Watseka Ave - Cnst - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1860	1.9585	9.5458	0.0126		0.0206	0.0206		0.0206	0.0206	0.0000	1,223.0510	1,223.0510	0.3956		1,232.9400
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1860**	**1.9585**	**9.5458**	**0.0126**		**0.0206**	**0.0206**		**0.0206**	**0.0206**	**0.0000**	**1,223.0510**	**1,223.0510**	**0.3956**		**1,232.9400**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3855 Watseka Avenue
Total On-Road Emissions

3855 Watseka Avenue

Total On-Road Emissions

3855 Watseka Avenue

Total On-Road Emissions

260 Max construction days per year

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Idling per Day (minutes)	Regional Emissions (pounds/day) ROG	NOX	CO	SO2	PM10 Dust	PM10 Exh	Total PM10	PM2.5 Dust	PM2.5 Exh	Total PM2.5	(MT/yr) Total CO2e
Demolition	2022															
Total Haul Trips	262															
Hauling	18	15	8	20	15	0.03	3.59	2.24	0.01	0.33	0.02	0.36	0.09	0.02	0.11	11.31
Vendor	6	26	8	6.9	15	0.01	0.49	0.38	0.00	0.04	0.00	0.04	0.01	0.00	0.01	2.33
Worker	10	26	8	14.7	0	0.01	0.03	0.43	0.00	0.10	0.00	0.10	0.03	0.00	0.03	1.25
					Total:	0.04	4.12	3.05	0.02	0.47	0.02	0.50	0.12	0.02	0.15	14.89
Grading/Excavation	2022															
Total Haul Trips	12858															
Hauling	276	50	8	20	15	0.43	55.09	34.41	0.22	5.13	0.32	5.45	1.37	0.31	1.68	578.06
Vendor	6	103	8	6.9	15	0.01	0.49	0.38	0.00	0.04	0.00	0.04	0.01	0.00	0.01	9.24
Worker	30	103	8	14.7	0	0.02	0.10	1.28	0.00	0.31	0.00	0.31	0.08	0.00	0.08	14.86
					Total:	0.46	55.68	36.07	0.22	5.48	0.32	5.80	1.46	0.31	1.77	602.16
Drainage/Utilities/Trenching	2022															
Total Haul Trips	0															
Hauling	0	26	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	6	26	8	6.9	15	0.01	0.49	0.38	0.00	0.04	0.00	0.04	0.01	0.00	0.01	2.33
Worker	40	26	8	14.7	0	0.03	0.14	1.70	0.00	0.41	0.00	0.41	0.10	0.00	0.10	5.00
					Total:	0.04	0.63	2.09	0.01	0.45	0.00	0.45	0.11	0.00	0.12	7.34
Foundations/Concrete Pour	2022															
Total Haul Trips	2,159															
Hauling	70	32	8	20	15	0.11	13.97	8.73	0.06	1.30	0.08	1.38	0.35	0.08	0.43	93.83
Vendor	0	158	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	120	158	8	14.7	0	0.10	0.41	5.11	0.01	1.23	0.01	1.24	0.31	0.01	0.31	91.19
					Total:	0.21	14.38	13.84	0.07	2.54	0.09	2.63	0.65	0.08	0.74	185.02

3855 Watseka Avenue

Total On-Road Emissions

3855 Watseka Avenue

Total On-Road Emissions

260 Max construction days per year

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Idling per Day (minutes)	Regional Emissions (pounds/day) ROG	NOX	CO	SO2	PM10 Dust	PM10 Exh	Total PM10	PM2.5 Dust	PM2.5 Exh	Total PM2.5	(MT/yr) Total CO2e
Foundations/Concrete Pour	2023															
Total Haul Trips	1,941															
Hauling	70	28	8	20	15	0.05	11.43	8.80	0.05	1.30	0.08	1.37	0.35	0.07	0.42	80.46
Vendor	0	142	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	120	142	8	14.7	0	0.09	0.37	4.69	0.01	1.23	0.01	1.24	0.31	0.01	0.31	80.07
					Total:	0.14	11.79	13.48	0.07	2.53	0.08	2.61	0.65	0.08	0.73	160.52
Building Cnst / Exterior Finishes	2023															
Total Haul Trips	0															
Hauling	0	157	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	50	157	8	6.9	15	0.03	3.48	3.26	0.01	0.29	0.02	0.31	0.08	0.01	0.09	114.96
Worker	150	157	8	14.7	0	0.11	0.46	5.86	0.02	1.54	0.01	1.55	0.38	0.01	0.39	110.66
					Total:	0.14	3.93	9.12	0.03	1.84	0.02	1.86	0.46	0.02	0.48	225.61
Paving	2023															
Total Haul Trips	0															
Hauling	0	13	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	13	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	60	13	8	14.7	0	0.04	0.18	2.34	0.01	0.62	0.00	0.62	0.15	0.00	0.16	3.67
					Total:	0.04	0.18	2.34	0.01	0.62	0.00	0.62	0.15	0.00	0.16	3.67
Paving	2024															
Total Haul Trips	0															
Hauling	0	65	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	65	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	60	65	8	14.7	0	0.04	0.16	2.16	0.01	0.62	0.00	0.62	0.15	0.00	0.16	17.88
					Total:	0.04	0.16	2.16	0.01	0.62	0.00	0.62	0.15	0.00	0.16	17.88

3855 Watseka Avenue

Total On-Road Emissions

3855 Watseka Avenue

Total On-Road Emissions

260 Max construction days per year

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Idling per Day (minutes)	Regional Emissions (Tons/year) ROG	NOX	CO	SO2	PM10 Dust	PM10 Exh	Total PM10	PM2.5 Dust	PM2.5 Exh	Total PM2.5	(MT/yr) Total CO2e
Demolition	2022															
Total Haul Trips	262															
Hauling	18	15	8	20	15	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.31
Vendor	6	26	8	6.9	15	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.33
Worker	10	26	8	14.7	0	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25
Grading/Excavation	2022															
Total Haul Trips	12858															
Hauling	276	50	8	20	15	0.01	1.38	0.86	0.01	0.13	0.01	0.14	0.03	0.01	0.04	578.06
Vendor	6	103	8	6.9	15	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.24
Worker	30	103	8	14.7	0	0.00	0.01	0.07	0.00	0.02	0.00	0.02	0.00	0.00	0.00	14.86
Drainage/Utilities/Trenching	2022															
Total Haul Trips	0															
Hauling	0	26	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	6	26	8	6.9	15	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.33
Worker	40	26	8	14.7	0	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	5.00
Foundations/Concrete Pour	2022															
Total Haul Trips	2159															
Hauling	70	32	8	20	15	0.00	0.22	0.14	0.00	0.02	0.00	0.02	0.01	0.00	0.01	93.83
Vendor	0	158	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	120	158	8	14.7	0	0.01	0.03	0.40	0.00	0.10	0.00	0.10	0.02	0.00	0.02	91.19
Foundations/Concrete Pour	2023															
Total Haul Trips	1941															
Hauling	70	28	8	20	15	0.00	0.16	0.12	0.00	0.02	0.00	0.02	0.00	0.00	0.01	80.46
Vendor	0	142	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	120	142	8	14.7	0	0.01	0.03	0.33	0.00	0.09	0.00	0.09	0.02	0.00	0.02	80.07

3855 Watseka Avenue

Total On-Road Emissions

3855 Watseka Avenue

Total On-Road Emissions

260 Max construction days per year

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Idling per Day (minutes)	Regional Emissions (Tons/year) ROG	NOX	CO	SO2	PM10 Dust	PM10 Exh	Total PM10	PM2.5 Dust	PM2.5 Exh	Total PM2.5	(MT/yr) Total CO2e
Building Cnst / Exterior Finishes	2023															
Total Haul Trips	0															
Hauling	0	157	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	50	157	8	6.9	15	0.00	0.27	0.26	0.00	0.02	0.00	0.02	0.01	0.00	0.01	114.96
Worker	150	157	8	14.7	0	0.01	0.04	0.46	0.00	0.12	0.00	0.12	0.03	0.00	0.03	110.66
Paving	2023															
Total Haul Trips	0															
Hauling	0	13	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	13	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	60	13	8	14.7	0	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.67
Paving	2024															
Total Haul Trips	0															
Hauling	0	65	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	65	8	6.9	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	60	65	8	14.7	0	0.00	0.01	0.07	0.00	0.02	0.00	0.02	0.00	0.00	0.01	17.88

3855 Watseka Avenue
Running Emissions

3855 Watseka Avenue
Running Emissions

		Running Emissions Factor (grams/mile)						Running Emissions Factor (grams/mile)		
		ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O
2022Hauling	Hauling	0.03421326	2.5062345	0.63539007	0.01457119	0.02511684	0.02402496	1605.22158	0.08234696	0.25591748
2022Vendor	Vendor	0.040384	1.901886221	0.64194565	0.01318653	0.01910675	0.01827249	1421.44968	0.04594901	0.19634864
2022Worker	Worker	0.02543435	0.10576118	1.31315239	0.00320928	0.00202047	0.00186006	324.651399	0.00590966	0.0081981
2023Hauling	Hauling	0.01583726	1.846349092	0.53216798	0.01440181	0.02335548	0.02234022	1582.16594	0.07485845	0.25204854
2023Vendor	Vendor	0.02517402	1.413009631	0.53163708	0.01304101	0.01704589	0.01630115	1404.04014	0.0416683	0.1941139
2023Worker	Worker	0.02253027	0.09409696	1.20532597	0.00313687	0.00190111	0.00175	317.32672	0.00530072	0.00752789
2024Hauling	Hauling	0.01500166	1.757966945	0.5097505	0.01416696	0.02319781	0.02218961	1557.21286	0.07114403	0.24811684
2024Vendor	Vendor	0.02221033	1.324663487	0.47751009	0.01284951	0.01640294	0.01568629	1384.23319	0.03949423	0.19181212
2024Worker	Worker	0.01996092	0.084125691	1.11121797	0.00306134	0.00178709	0.00164482	309.685005	0.0047538	0.0069466
0Hauling	Hauling	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0Vendor	Vendor	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0Worker	Worker	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
GWP		N/A	N/A	N/A	N/A	N/A	N/A	1	25	290

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day)						Regional Emissions (MT/year)			
					ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O	CO2e
Demolition	2022													
Total Haul Trips	262													
Hauling	18	15	8	20	0.03	1.99	0.50	0.01	0.02	0.02	8.67	0.01	0.40	9.08
Vendor	6	26	8	6.9	0.00	0.17	0.06	0.00	0.00	0.00	1.53	0.00	0.06	1.59
Worker	10	26	8	14.7	0.01	0.03	0.43	0.00	0.00	0.00	1.24	0.00	0.01	1.25
Grading/Excavation	2022													
Total Haul Trips	12858													
Hauling	276	50	8	20	0.42	30.50	7.73	0.18	0.31	0.29	443.04	0.57	20.48	464.09
Vendor	6	103	8	6.9	0.00	0.17	0.06	0.00	0.00	0.00	6.06	0.00	0.24	6.31
Worker	30	103	8	14.7	0.02	0.10	1.28	0.00	0.00	0.00	14.75	0.01	0.11	14.86

3855 Watseka Avenue
Running Emissions

		Running Emissions Factor (grams/mile)						Running Emissions Factor (grams/mile)		
		ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O
2022Hauling	Hauling	0.03421326	2.5062345	0.63539007	0.01457119	0.02511684	0.02402496	1605.22158	0.08234696	0.25591748
2022Vendor	Vendor	0.040384	1.901886221	0.64194565	0.01318653	0.01910675	0.01827249	1421.44968	0.04594901	0.19634864
2022Worker	Worker	0.02543435	0.10576118	1.31315239	0.00320928	0.00202047	0.00186006	324.651399	0.00590966	0.0081981
2023Hauling	Hauling	0.01583726	1.846349092	0.53216798	0.01440181	0.02335548	0.02234022	1582.16594	0.07485845	0.25204854
2023Vendor	Vendor	0.02517402	1.413009631	0.53163708	0.01304101	0.01704589	0.01630115	1404.04014	0.0416683	0.1941139
2023Worker	Worker	0.02253027	0.09409696	1.20532597	0.00313687	0.00190111	0.00175	317.32672	0.00530072	0.00752789
2024Hauling	Hauling	0.01500166	1.757966945	0.5097505	0.01416696	0.02319781	0.02218961	1557.21286	0.07114403	0.24811684
2024Vendor	Vendor	0.02221033	1.324663487	0.47751009	0.01284951	0.01640294	0.01568629	1384.23319	0.03949423	0.19181212
2024Worker	Worker	0.01996092	0.084125691	1.11121797	0.00306134	0.00178709	0.00164482	309.685005	0.0047538	0.0069466
0Hauling	Hauling	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0Vendor	Vendor	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0Worker	Worker	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
GWP		N/A	N/A	N/A	N/A	N/A	N/A	1	25	290

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day)						Regional Emissions (MT/year)			
					ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O	CO2e
Drainage/Utilities/Trenchir	2022													
Total Haul Trips	0													
Hauling	0	26	8	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	6	26	8	6.9	0.00	0.17	0.06	0.00	0.00	0.00	1.53	0.00	0.06	1.59
Worker	40	26	8	14.7	0.03	0.14	1.70	0.00	0.00	0.00	4.96	0.00	0.04	5.00
Foundations/Concrete Pou	2022													
Total Haul Trips	2159													
Hauling	70	32	8	20	0.11	7.74	1.96	0.04	0.08	0.07	71.91	0.09	3.32	75.33
Vendor	0	158	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	120	158	8	14.7	0.10	0.41	5.11	0.01	0.01	0.01	90.48	0.04	0.66	91.19

3855 Watseka Avenue
Running Emissions

		Running Emissions Factor (grams/mile)						Running Emissions Factor (grams/mile)		
		ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O
2022Hauling	Hauling	0.03421326	2.5062345	0.63539007	0.01457119	0.02511684	0.02402496	1605.22158	0.08234696	0.25591748
2022Vendor	Vendor	0.040384	1.901886221	0.64194565	0.01318653	0.01910675	0.01827249	1421.44968	0.04594901	0.19634864
2022Worker	Worker	0.02543435	0.10576118	1.31315239	0.00320928	0.00202047	0.00186006	324.651399	0.00590966	0.0081981
2023Hauling	Hauling	0.01583726	1.846349092	0.53216798	0.01440181	0.02335548	0.02234022	1582.16594	0.07485845	0.25204854
2023Vendor	Vendor	0.02517402	1.413009631	0.53163708	0.01304101	0.01704589	0.01630115	1404.04014	0.0416683	0.1941139
2023Worker	Worker	0.02253027	0.09409696	1.20532597	0.00313687	0.00190111	0.00175	317.32672	0.00530072	0.00752789
2024Hauling	Hauling	0.01500166	1.757966945	0.5097505	0.01416696	0.02319781	0.02218961	1557.21286	0.07114403	0.24811684
2024Vendor	Vendor	0.02221033	1.324663487	0.47751009	0.01284951	0.01640294	0.01568629	1384.23319	0.03949423	0.19181212
2024Worker	Worker	0.01996092	0.084125691	1.11121797	0.00306134	0.00178709	0.00164482	309.685005	0.0047538	0.0069466
0Hauling	Hauling	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0Vendor	Vendor	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0Worker	Worker	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
GWP		N/A	N/A	N/A	N/A	N/A	N/A	1	25	290

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day)						Regional Emissions (MT/year)			
					ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O	CO2e
Foundations/Concrete Pou	2023													
Total Haul Trips	1941													
Hauling	70	28	8	20	0.05	5.70	1.64	0.04	0.07	0.07	62.02	0.07	2.87	64.96
Vendor	0	142	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	120	142	8	14.7	0.09	0.37	4.69	0.01	0.01	0.01	79.49	0.03	0.55	80.07
Building Cnst / Exterior Fin	2023													
Total Haul Trips	0													
Hauling	0	157	8	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	50	157	8	6.9	0.02	1.07	0.40	0.01	0.01	0.01	76.05	0.06	3.05	79.16
Worker	150	157	8	14.7	0.11	0.46	5.86	0.02	0.01	0.01	109.85	0.05	0.76	110.66

3855 Watseka Avenue
Running Emissions

		Running Emissions Factor (grams/mile)						Running Emissions Factor (grams/mile)		
		ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O
2022Hauling	Hauling	0.03421326	2.5062345	0.63539007	0.01457119	0.02511684	0.02402496	1605.22158	0.08234696	0.25591748
2022Vendor	Vendor	0.040384	1.901886221	0.64194565	0.01318653	0.01910675	0.01827249	1421.44968	0.04594901	0.19634864
2022Worker	Worker	0.02543435	0.10576118	1.31315239	0.00320928	0.00202047	0.00186006	324.651399	0.00590966	0.0081981
2023Hauling	Hauling	0.01583726	1.846349092	0.53216798	0.01440181	0.02335548	0.02234022	1582.16594	0.07485845	0.25204854
2023Vendor	Vendor	0.02517402	1.413009631	0.53163708	0.01304101	0.01704589	0.01630115	1404.04014	0.0416683	0.1941139
2023Worker	Worker	0.02253027	0.09409696	1.20532597	0.00313687	0.00190111	0.00175	317.32672	0.00530072	0.00752789
2024Hauling	Hauling	0.01500166	1.757966945	0.5097505	0.01416696	0.02319781	0.02218961	1557.21286	0.07114403	0.24811684
2024Vendor	Vendor	0.02221033	1.324663487	0.47751009	0.01284951	0.01640294	0.01568629	1384.23319	0.03949423	0.19181212
2024Worker	Worker	0.01996092	0.084125691	1.11121797	0.00306134	0.00178709	0.00164482	309.685005	0.0047538	0.0069466
0Hauling	Hauling	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0Vendor	Vendor	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0Worker	Worker	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
GWP		N/A	N/A	N/A	N/A	N/A	N/A	1	25	290

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day)						Regional Emissions (MT/year)			
					ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O	CO2e
Paving	2023													
Total Haul Trips	0													
Hauling	0	13	8	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	13	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	60	13	8	14.7	0.04	0.18	2.34	0.01	0.00	0.00	3.64	0.00	0.03	3.67
Paving	2024													
Total Haul Trips	0													
Hauling	0	65	8	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	65	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	60	65	8	14.7	0.04	0.16	2.16	0.01	0.00	0.00	17.75	0.01	0.12	17.88

3855 Watseka Avenue
Idling Emissions

3855 Watseka Avenue
Idling Emissions

		Idling Emissions Factor (grams/minute)						Idling Emissions Factor (grams/minute)		
		ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O
2022Hauling	Hauling	0.0016087	2.694343185	2.92340107	0.00464768	0.00161969	0.00154716	523.608043	0.10282892	0.08401339
2022Vendor	Vendor	0.00919929	1.588240943	1.63749288	0.00268811	0.00141893	0.00135617	301.301319	0.05657711	0.04795348
2022Worker	Worker	0	0	0	0	0	0	0	0	0
2023Hauling	Hauling	0.00153219	2.475440914	3.09007671	0.00445539	0.00146199	0.00139636	501.459269	0.09222066	0.08043855
2023Vendor	Vendor	0.00873855	1.452222429	1.72640023	0.00258336	0.00124295	0.00118783	289.393152	0.05139395	0.0460508
2023Worker	Worker	0	0	0	0	0	0	0	0	0
2024Hauling	Hauling	0.0020895	2.445312655	3.07903027	0.00435308	0.00137735	0.00131528	490.827049	0.0905213	0.07877141
2024Vendor	Vendor	0.00870264	1.431440263	1.72000292	0.00253055	0.00112049	0.0010706	283.971879	0.05066755	0.04521769
2024Worker	Worker	0	0	0	0	0	0	0	0	0
	GWP	N/A	N/A	N/A	N/A	N/A	N/A	1	25	290

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	Idling minutes per Day (miles)	Regional Emissions (pounds/day)						Regional Emissions (MT/year)			
					ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O	CO2e
Demolition	2022													
Total Haul Trips	262													
Hauling	18	15	8	15	0.00	1.60	1.74	0.00	0.00	0.00	2.12	0.01	0.10	2.23
Vendor	6	26	8	15	0.00	0.32	0.32	0.00	0.00	0.00	0.71	0.00	0.03	0.74
Worker	10	26	8	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation	2022													
Total Haul Trips	12858													
Hauling	276	50	8	15	0.01	24.59	26.68	0.04	0.01	0.01	108.39	0.53	5.04	113.96
Vendor	6	103	8	15	0.00	0.32	0.32	0.00	0.00	0.00	2.79	0.01	0.13	2.94
Worker	30	103	8	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3855 Watseka Avenue
Idling Emissions

		Idling Emissions Factor (grams/minute)						Idling Emissions Factor (grams/minute)		
		ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O
2022Hauling	Hauling	0.0016087	2.694343185	2.92340107	0.00464768	0.00161969	0.00154716	523.608043	0.10282892	0.08401339
2022Vendor	Vendor	0.00919929	1.588240943	1.63749288	0.00268811	0.00141893	0.00135617	301.301319	0.05657711	0.04795348
2022Worker	Worker	0	0	0	0	0	0	0	0	0
2023Hauling	Hauling	0.00153219	2.475440914	3.09007671	0.00445539	0.00146199	0.00139636	501.459269	0.09222066	0.08043855
2023Vendor	Vendor	0.00873855	1.452222429	1.72640023	0.00258336	0.00124295	0.00118783	289.393152	0.05139395	0.0460508
2023Worker	Worker	0	0	0	0	0	0	0	0	0
2024Hauling	Hauling	0.0020895	2.445312655	3.07903027	0.00435308	0.00137735	0.00131528	490.827049	0.0905213	0.07877141
2024Vendor	Vendor	0.00870264	1.431440263	1.72000292	0.00253055	0.00112049	0.0010706	283.971879	0.05066755	0.04521769
2024Worker	Worker	0	0	0	0	0	0	0	0	0
	GWP	N/A	N/A	N/A	N/A	N/A	N/A	1	25	290

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	Idling minutes per Day (miles)	Regional Emissions (pounds/day)						Regional Emissions (MT/year)			
					ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O	CO2e
Drainage/Utilities/Trenchir	2022													
Total Haul Trips	0													
Hauling	0	26	8	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	6	26	8	15	0.00	0.32	0.32	0.00	0.00	0.00	0.71	0.00	0.03	0.74
Worker	40	26	8	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Foundations/Concrete Pou	2022													
Total Haul Trips	2159													
Hauling	70	32	8	15	0.00	6.24	6.77	0.01	0.00	0.00	17.59	0.09	0.82	18.50
Vendor	0	158	8	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	120	158	8	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3855 Watseka Avenue
Idling Emissions

		Idling Emissions Factor (grams/minute)						Idling Emissions Factor (grams/minute)		
		ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O
2022Hauling	Hauling	0.0016087	2.694343185	2.92340107	0.00464768	0.00161969	0.00154716	523.608043	0.10282892	0.08401339
2022Vendor	Vendor	0.00919929	1.588240943	1.63749288	0.00268811	0.00141893	0.00135617	301.301319	0.05657711	0.04795348
2022Worker	Worker	0	0	0	0	0	0	0	0	0
2023Hauling	Hauling	0.00153219	2.475440914	3.09007671	0.00445539	0.00146199	0.00139636	501.459269	0.09222066	0.08043855
2023Vendor	Vendor	0.00873855	1.452222429	1.72640023	0.00258336	0.00124295	0.00118783	289.393152	0.05139395	0.0460508
2023Worker	Worker	0	0	0	0	0	0	0	0	0
2024Hauling	Hauling	0.0020895	2.445312655	3.07903027	0.00435308	0.00137735	0.00131528	490.827049	0.0905213	0.07877141
2024Vendor	Vendor	0.00870264	1.431440263	1.72000292	0.00253055	0.00112049	0.0010706	283.971879	0.05066755	0.04521769
2024Worker	Worker	0	0	0	0	0	0	0	0	0
	GWP	N/A	N/A	N/A	N/A	N/A	N/A	1	25	290

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	Idling minutes per Day (miles)	Regional Emissions (pounds/day) ROG	NOX	CO	SO2	PM10	PM2.5	Regional Emissions (MT/year) CO2	CH4	N2O	CO2e
Foundations/Concrete Pou	2023													
Total Haul Trips	1941													
Hauling	70	28	8	15	0.00	5.73	7.15	0.01	0.00	0.00	14.74	0.07	0.69	15.50
Vendor	0	142	8	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	120	142	8	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Cnst / Exterior Fini	2023													
Total Haul Trips	0													
Hauling	0	157	8	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	50	157	8	15	0.01	2.40	2.85	0.00	0.00	0.00	34.08	0.15	1.57	35.80
Worker	150	157	8	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3855 Watseka Avenue
Idling Emissions

		Idling Emissions Factor (grams/minute)						Idling Emissions Factor (grams/minute)		
		ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O
2022Hauling	Hauling	0.0016087	2.694343185	2.92340107	0.00464768	0.00161969	0.00154716	523.608043	0.10282892	0.08401339
2022Vendor	Vendor	0.00919929	1.588240943	1.63749288	0.00268811	0.00141893	0.00135617	301.301319	0.05657711	0.04795348
2022Worker	Worker	0	0	0	0	0	0	0	0	0
2023Hauling	Hauling	0.00153219	2.475440914	3.09007671	0.00445539	0.00146199	0.00139636	501.459269	0.09222066	0.08043855
2023Vendor	Vendor	0.00873855	1.452222429	1.72640023	0.00258336	0.00124295	0.00118783	289.393152	0.05139395	0.0460508
2023Worker	Worker	0	0	0	0	0	0	0	0	0
2024Hauling	Hauling	0.0020895	2.445312655	3.07903027	0.00435308	0.00137735	0.00131528	490.827049	0.0905213	0.07877141
2024Vendor	Vendor	0.00870264	1.431440263	1.72000292	0.00253055	0.00112049	0.0010706	283.971879	0.05066755	0.04521769
2024Worker	Worker	0	0	0	0	0	0	0	0	0
GWP		N/A	N/A	N/A	N/A	N/A	N/A	1	25	290

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	Idling minutes per Day (miles)	Regional Emissions (pounds/day)						Regional Emissions (MT/year)			
					ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O	CO2e
Paving	2023													
Total Haul Trips	0													
Hauling	0	13	8	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	13	8	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	60	13	8	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	2024													
Total Haul Trips	0													
Hauling	0	65	8	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	65	8	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	60	65	8	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3855 Watseka Avenue
Road Dust, Break Wear, and Tire wear Emissions

3855 Watseka Avenue
Road Dust, Break Wear, and Tire wear Emissions

	Emission Factors (grams/mile)					
	PM10			PM2.5		
	RD	BW	TW	RD	BW	TW
2022Hauling Hauling	3.00E-01	0.086593921	0.03543077	7.36E-02	0.03030787	0.00885769
2022Vendor Vendor	3.00E-01	0.065113667	0.02371539	7.36E-02	0.02278978	0.00592885
2022Worker Worker	3.00E-01	0.009511466	0.008	7.36E-02	0.00332901	0.002
2023Hauling Hauling	3.00E-01	0.084714206	0.03543552	7.36E-02	0.02964997	0.00885888
2023Vendor Vendor	3.00E-01	0.064163683	0.02371776	7.36E-02	0.02245729	0.00592944
2023Worker Worker	3.00E-01	0.009477692	0.008	7.36E-02	0.00331719	0.002
2024Hauling Hauling	3.00E-01	0.08427948	0.03543928	7.36E-02	0.02949782	0.00885982
2024Vendor Vendor	3.00E-01	0.063890978	0.02371964	7.36E-02	0.02236184	0.00592991
2024Worker Worker	3.00E-01	0.009419633	0.008	7.36E-02	0.00329687	0.002
0Hauling Hauling	3.00E-01	#DIV/0!	#DIV/0!	7.36E-02	#DIV/0!	#DIV/0!
0Vendor Vendor	3.00E-01	#DIV/0!	#DIV/0!	7.36E-02	#DIV/0!	#DIV/0!
0Worker Worker	3.00E-01	#DIV/0!	#DIV/0!	7.36E-02	#DIV/0!	#DIV/0!

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day)					
					PM10			PM2.5		
					RD	BW	TW	RD	BW	TW
Demolition	2022									
Total Haul Trips	262									
Hauling	18	15	8	20	0.24	0.07	0.03	0.06	0.02	0.01
Vendor	6	26	8	6.9	0.03	0.01	0.00	0.01	0.00	0.00
Worker	10	26	8	14.7	0.10	0.00	0.00	0.02	0.00	0.00
Grading/Excavation	2022									
Total Haul Trips	12858									
Hauling	276	50	8	20	3.65	1.05	0.43	0.90	0.37	0.11
Vendor	6	103	8	6.9	0.03	0.01	0.00	0.01	0.00	0.00
Worker	30	103	8	14.7	0.29	0.01	0.01	0.07	0.00	0.00

3855 Watseka Avenue

Road Dust, Break Wear, and Tire wear Emissions

	Emission Factors (grams/mile)					
	PM10			PM2.5		
	RD	BW	TW	RD	BW	TW
2022Hauling Hauling	3.00E-01	0.086593921	0.03543077	7.36E-02	0.03030787	0.00885769
2022Vendor Vendor	3.00E-01	0.065113667	0.02371539	7.36E-02	0.02278978	0.00592885
2022Worker Worker	3.00E-01	0.009511466	0.008	7.36E-02	0.00332901	0.002
2023Hauling Hauling	3.00E-01	0.084714206	0.03543552	7.36E-02	0.02964997	0.00885888
2023Vendor Vendor	3.00E-01	0.064163683	0.02371776	7.36E-02	0.02245729	0.00592944
2023Worker Worker	3.00E-01	0.009477692	0.008	7.36E-02	0.00331719	0.002
2024Hauling Hauling	3.00E-01	0.08427948	0.03543928	7.36E-02	0.02949782	0.00885982
2024Vendor Vendor	3.00E-01	0.063890978	0.02371964	7.36E-02	0.02236184	0.00592991
2024Worker Worker	3.00E-01	0.009419633	0.008	7.36E-02	0.00329687	0.002
0Hauling Hauling	3.00E-01	#DIV/0!	#DIV/0!	7.36E-02	#DIV/0!	#DIV/0!
0Vendor Vendor	3.00E-01	#DIV/0!	#DIV/0!	7.36E-02	#DIV/0!	#DIV/0!
0Worker Worker	3.00E-01	#DIV/0!	#DIV/0!	7.36E-02	#DIV/0!	#DIV/0!

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day)					
					PM10			PM2.5		
					RD	BW	TW	RD	BW	TW
Drainage/Utilities/Trenchin	2022									
Total Haul Trips	0									
Hauling	0	26	8	20	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	6	26	8	6.9	0.03	0.01	0.00	0.01	0.00	0.00
Worker	40	26	8	14.7	0.39	0.01	0.01	0.10	0.00	0.00
Foundations/Concrete Pou	2022									
Total Haul Trips	2159									
Hauling	70	32	8	20	0.93	0.27	0.11	0.23	0.09	0.03
Vendor	0	158	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00
Worker	120	158	8	14.7	1.17	0.04	0.03	0.29	0.01	0.01

3855 Watseka Avenue

Road Dust, Break Wear, and Tire wear Emissions

	Emission Factors (grams/mile)					
	PM10			PM2.5		
	RD	BW	TW	RD	BW	TW
2022Hauling Hauling	3.00E-01	0.086593921	0.03543077	7.36E-02	0.03030787	0.00885769
2022Vendor Vendor	3.00E-01	0.065113667	0.02371539	7.36E-02	0.02278978	0.00592885
2022Worker Worker	3.00E-01	0.009511466	0.008	7.36E-02	0.00332901	0.002
2023Hauling Hauling	3.00E-01	0.084714206	0.03543552	7.36E-02	0.02964997	0.00885888
2023Vendor Vendor	3.00E-01	0.064163683	0.02371776	7.36E-02	0.02245729	0.00592944
2023Worker Worker	3.00E-01	0.009477692	0.008	7.36E-02	0.00331719	0.002
2024Hauling Hauling	3.00E-01	0.08427948	0.03543928	7.36E-02	0.02949782	0.00885982
2024Vendor Vendor	3.00E-01	0.063890978	0.02371964	7.36E-02	0.02236184	0.00592991
2024Worker Worker	3.00E-01	0.009419633	0.008	7.36E-02	0.00329687	0.002
0Hauling Hauling	3.00E-01	#DIV/0!	#DIV/0!	7.36E-02	#DIV/0!	#DIV/0!
0Vendor Vendor	3.00E-01	#DIV/0!	#DIV/0!	7.36E-02	#DIV/0!	#DIV/0!
0Worker Worker	3.00E-01	#DIV/0!	#DIV/0!	7.36E-02	#DIV/0!	#DIV/0!

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day)					
					PM10			PM2.5		
					RD	BW	TW	RD	BW	TW
Foundations/Concrete Pour	2023									
Total Haul Trips	1941									
Hauling	70	28	8	20	0.93	0.26	0.11	0.23	0.09	0.03
Vendor	0	142	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00
Worker	120	142	8	14.7	1.17	0.04	0.03	0.29	0.01	0.01
Building Cnst / Exterior Finis	2023									
Total Haul Trips	0									
Hauling	0	157	8	20	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	50	157	8	6.9	0.23	0.05	0.02	0.06	0.02	0.00
Worker	150	157	8	14.7	1.46	0.05	0.04	0.36	0.02	0.01

3855 Watseka Avenue
Road Dust, Break Wear, and Tire wear Emissions

	Emission Factors (grams/mile)					
	PM10			PM2.5		
	RD	BW	TW	RD	BW	TW
2022Hauling Hauling	3.00E-01	0.086593921	0.03543077	7.36E-02	0.03030787	0.00885769
2022Vendor Vendor	3.00E-01	0.065113667	0.02371539	7.36E-02	0.02278978	0.00592885
2022Worker Worker	3.00E-01	0.009511466	0.008	7.36E-02	0.00332901	0.002
2023Hauling Hauling	3.00E-01	0.084714206	0.03543552	7.36E-02	0.02964997	0.00885888
2023Vendor Vendor	3.00E-01	0.064163683	0.02371776	7.36E-02	0.02245729	0.00592944
2023Worker Worker	3.00E-01	0.009477692	0.008	7.36E-02	0.00331719	0.002
2024Hauling Hauling	3.00E-01	0.08427948	0.03543928	7.36E-02	0.02949782	0.00885982
2024Vendor Vendor	3.00E-01	0.063890978	0.02371964	7.36E-02	0.02236184	0.00592991
2024Worker Worker	3.00E-01	0.009419633	0.008	7.36E-02	0.00329687	0.002
0Hauling Hauling	3.00E-01	#DIV/0!	#DIV/0!	7.36E-02	#DIV/0!	#DIV/0!
0Vendor Vendor	3.00E-01	#DIV/0!	#DIV/0!	7.36E-02	#DIV/0!	#DIV/0!
0Worker Worker	3.00E-01	#DIV/0!	#DIV/0!	7.36E-02	#DIV/0!	#DIV/0!

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day)					
					PM10			PM2.5		
					RD	BW	TW	RD	BW	TW
Paving	2023									
Total Haul Trips	0									
Hauling	0	13	8	20	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	13	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00
Worker	60	13	8	14.7	0.58	0.02	0.02	0.14	0.01	0.00
Paving	2024									
Total Haul Trips	0									
Hauling	0	65	8	20	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	65	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00
Worker	60	65	8	14.7	0.58	0.02	0.02	0.14	0.01	0.00

3855 Watseka Avenue
Road Dust

3855 Watseka Avenue
Road Dust

Paved Road Dust Emission Factors (Assumes No Precipitation)

Formula: $EF_{Dust,P} = (k\ (sL)^{0.91} \times (W)^{1.02})$

Where:

$EF_{Dust,P}$ =	Paved Road Dust Emission Factor (having the same units as k)
k =	particle size multiplier
sL =	road surface silt loading (g/m^2)
W =	average fleet vehicle weight (tons) (CARB uses 2.4 tons as a fleet average vehicle weight factor)

	Emission Factor (grams per VMT)	
	PM10	PM2.5
k	0.9979	0.2449
sL	0.1	0.1
W	2.4	2.4
$EF_{Dust,P}$	3.00E-01	7.36E-02

Unpaved Road Dust Emission Factors (Assumes No Precipitation)

Formula: $EF_{Dust,U} = (k\ (\ s / 12)^{1} \times (Sp / 30)^{0.5} / (M / 0.5)^{0.2}) - C)$

Where:

$EF_{Dust,U}$ =	Unpaved Road Dust Emission Factor (having the same units as k)
k =	particle size multiplier
s =	surface material silt content (%)
Sp =	mean vehicle speed (mph)
M =	surface material moisture content (%)
C =	Emission Factor for 1980s vehicle fleet exhaust, brake wear, and tire wear

	Emission Factor (grams per VMT)	
	PM10	PM2.5
k	816.47	81.65
s	4.3%	4.3%
Sp	15	15
M	0.5%	0.5%
C	0.00047	0.00036
$EF_{Dust,U}$	5.20E+00	5.19E-01

Sources:

SCAQMD, CalEEMod, Version 2011.1.

CARB, *Entrained Dust from Paved Road Travel: Emission Estimation Methodology Background Document* , (1997).

USEPA, *AP-42* , Fifth Edition, Volume I, Chapter 13.2.1 - Paved Roads, (2011).

PCR Services Corporation, 2013.

3855 Watseka Avenue
Total On-Road Fuel Consumption

3855 Watseka Avenue

Total On-Road Fuel Consumption

		gal/mile	gal/min
2022Hauling	Hauling	0.17004641	2.77692E-07
2022Vendor	Vendor	0.14160709	7.74566E-07
2022Worker	Worker	0.03985527	1.00537E-06
2023Hauling	Hauling	0.00029531	4.64577E-10
2023Vendor	Vendor	0.00024693	1.33415E-09
2023Worker	Worker	1.3131E-05	3.21199E-10
2024Hauling	Hauling	0.00029162	3.50088E-10
2024Vendor	Vendor	0.00024474	1.15331E-09
2024Worker	Worker	1.2371E-05	2.78871E-10

3855 Watseka Avenue

Total On-Road Fuel Consumption

Source	Fuel Type	Total Fuel Use (gal)
Hauling	Diesel	55,481
Vendor	Diesel	922
Worker	Gasoline	13,689

Fuel Type	Total Fuel Use	Annual Fuel Use
Diesel	56,403	25,606
Gasoline	13,689	6,214

Duration of Construction	
2.2	years

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Idling per Day (minutes)	Regional Emissions (gallons) gal/mile	gal/min	gal/day	Total Gallons/yr
Demolition	2022								
Total Haul Trips	262								
Hauling	18	15	8	20	15	0.17	2.78E-07	61	918
Vendor	6	26	8	6.9	15	0.14	7.75E-07	6	152
Worker	10	26	8	14.7	0	0.04	1.01E-06	6	152
Grading/Excavation	2022								
Total Haul Trips	12858								
Hauling	276	50	8	20	15	0.17	2.78E-07	939	46,933
Vendor	6	103	8	6.9	15	0.14	7.75E-07	6	604
Worker	30	103	8	14.7	0	0.04	1.01E-06	18	1,810

3855 Watseka Avenue

Total On-Road Fuel Consumption

		gal/mile	gal/min
2022Hauling	Hauling	0.17004641	2.77692E-07
2022Vendor	Vendor	0.14160709	7.74566E-07
2022Worker	Worker	0.03985527	1.00537E-06
2023Hauling	Hauling	0.00029531	4.64577E-10
2023Vendor	Vendor	0.00024693	1.33415E-09
2023Worker	Worker	1.3131E-05	3.21199E-10
2024Hauling	Hauling	0.00029162	3.50088E-10
2024Vendor	Vendor	0.00024474	1.15331E-09
2024Worker	Worker	1.2371E-05	2.78871E-10

3855 Watseka Avenue

Total On-Road Fuel Consumption

Source	Fuel Type	Total Fuel Use (gal)
Hauling	Diesel	55,481
Vendor	Diesel	922
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Fuel Type	Total Fuel Use	Annual Fuel Use
Diesel	56,403	25,606
Gasoline	13,689	6,214

Duration of Construction	
2.2	years

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Idling per Day (minutes)	Regional Emissions (gallons) gal/mile	gal/min	gal/day	Total Gallons/yr
Drainage/Utilities/Trenching	2022								
Total Haul Trips	0								
Hauling	0	26	8	20	15	0.17	2.78E-07	0	0
Vendor	6	26	8	6.9	15	0.14	7.75E-07	6	152
Worker	40	26	8	14.7	0	0.04	1.01E-06	23	609
Foundations/Concrete Pour	2022								
Total Haul Trips	2159								
Hauling	70	32	8	20	15	0.17	2.78E-07	238	7,618
Vendor	0	158	8	6.9	15	0.14	7.75E-07	0	0
Worker	120	158	8	14.7	0	0.04	1.01E-06	70	11,108
Foundations/Concrete Pour	2023								
Total Haul Trips	1941								
Hauling	70	28	8	20	15	0.00	4.65E-10	0	12
Vendor	0	142	8	6.9	15	0.00	1.33E-09	0	0
Worker	120	142	8	14.7	0	0.00	3.21E-10	0	3

3855 Watseka Avenue

Total On-Road Fuel Consumption

		gal/mile	gal/min
2022Hauling	Hauling	0.17004641	2.77692E-07
2022Vendor	Vendor	0.14160709	7.74566E-07
2022Worker	Worker	0.03985527	1.00537E-06
2023Hauling	Hauling	0.00029531	4.64577E-10
2023Vendor	Vendor	0.00024693	1.33415E-09
2023Worker	Worker	1.3131E-05	3.21199E-10
2024Hauling	Hauling	0.00029162	3.50088E-10
2024Vendor	Vendor	0.00024474	1.15331E-09
2024Worker	Worker	1.2371E-05	2.78871E-10

3855 Watseka Avenue

Total On-Road Fuel Consumption

Source	Fuel Type	Total Fuel Use (gal)
Hauling	Diesel	55,481
Vendor	Diesel	922
Worker	Gasoline	13,689

Fuel Type	Total Fuel Use	Annual Fuel Use
Diesel	56,403	25,606
Gasoline	13,689	6,214

Duration of Construction	
2.2	years

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Idling per Day (minutes)	Regional Emissions (gallons) gal/mile	gal/min	gal/day	Total Gallons/yr
Building Cnst / Exterior Finishes	2023								
Total Haul Trips	0								
Hauling	0	157	8	20	15	0.00	4.65E-10	0	0
Vendor	50	157	8	6.9	15	0.00	1.33E-09	0	13
Worker	150	157	8	14.7	0	0.00	3.21E-10	0	5
Paving	2023								
Total Haul Trips	0								
Hauling	0	13	8	20	15	0.00	4.65E-10	0	0
Vendor	0	13	8	6.9	15	0.00	1.33E-09	0	0
Worker	60	13	8	14.7	0	0.00	3.21E-10	0	0
Paving	2024								
Total Haul Trips	0								
Hauling	0	65	8	20	15	0.00	3.50E-10	0	0
Vendor	0	65	8	6.9	15	0.00	1.15E-09	0	0
Worker	60	65	8	14.7	0	0.00	2.79E-10	0	1

3855 Watseka Ave
Operational Air Quality Assessment

Regional Operational Emissions

Maximum Unmitigated Regional Operational Emissions (pounds per day)

Source	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area (Consumer Products, Landscaping)	3	<1	<1	<1	<1	<1
Energy (Natural Gas)	<1	<1	<1	<1	<1	<1
Motor Vehicles	2	2	17	<1	4	<1
Emergency Generator	<1	<1	7	<1	<1	<1
Total Project On-Site and Off-Site Emissions	**5**	**4**	**24**	**0**	**4**	**1**
SCAQMD Numeric Indicators	**55**	**55**	**550**	**150**	**150**	**55**
Over/(Under)	(50)	(51)	(526)	(150)	(146)	(54)
Exceeds Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Net Regional Operations

Maximum Unmitigated Regional Operational Emissions (pounds per day)

Source	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area (Consumer Products, Landscaping)	3	<1	<1	<1	<1	<1
Energy (Natural Gas)	<1	<1	<1	<1	<1	<1
Motor Vehicles	2	2	16	<1	4	<1
Emergency Generator	<1	<1	7	<1	<1	<1
Total Project On-Site and Off-Site Emissions	**5**	**4**	**23**	**<1**	**4**	**1**
Existing On-Site and Off-Site Emissions	<1	<1	1	<1	<1	<1
Net On-Site and Off-Site Emissions	**5**	**3**	**22**	**<1**	**4**	**<1**
SCAQMD Numeric Indicators	**55**	**55**	**550**	**150**	**150**	**55**
Over/(Under)	(50)	(52)	(528)	(150)	(146)	(54)
Exceeds Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

3855 Watseka Ave
Operational Air Quality Assessment

Localized Operational Emissions

Maximum Unmitigated Localized Operational Emissions (pounds per day)

Source	NO_X	CO	PM_{10}	$PM_{2.5}$
Area (Consumer Products, Landscaping)	0.0	0.1	0.0	0.0
Energy (Natural Gas)	0.4	0.3	0.0	0.0
Emergency Generator	0.9	7.2	0.0	0.0
Total Project On-Site Emissions	**1**	**8**	**0.1**	**0.1**
SCAQMD Numeric Indicators	**60**	**596**	**1.1**	**1.0**
Over/(Under)	(59.1)	(588.2)	(1.1)	(0.9)
Exceeds Thresholds?	**No**	**No**	**No**	**No**

Localized significance thresholds from SCAQMD Look-Up tables, used a 1.128-acre site in SRA 2 with the nearest sensitive receptor within 25 meters from the Site.

3855 Watseka Ave
Operational Air Quality Assessment

Existing Operational Emissions

Estimated Existing Operational Emissions (pounds per day)

Source	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area (Consumer Products, Landscaping)	<1	<1	<1	<1	<1	<1
Energy (Natural Gas)	<1	<1	<1	<1	<1	<1
Motor Vehicles	<1	<1	1	<1	<1	<1
Maximum Net Regional (On-Site and Off-Site) Emissions	**<1**	**<1**	**1**	**<1**	**<1**	**<1**

3855 Watseka Ave
Operational Air Quality Assessment

Conversion Factors

hp/kW	1.3410	
PM10 Fraction of Total PM	0.960	Table A - Updated CEIDARS Table with PM2.5 Fractions, INTERNAL COMBUSTION - DISTILLATE AND DIESEL-ELECTRIC GENERATION
PM2.5 Fraction of Total PM	0.937	Table A - Updated CEIDARS Table with PM2.5 Fractions, INTERNAL COMBUSTION - DISTILLATE AND DIESEL-ELECTRIC GENERATION

Emergency Generator

Power Rating:	750	kW	*(based on conservative engineering assumptions)*
	1,006	hp	*(based on conservative engineering assumptions; conversion from kW to hp)*
Load Factor:	0.74		*(based on CalEEMod Generator Set Load Factor)*
Engine Emissions Tier:	Tier 4F		
Operating Hours per Unit:	2	hours/day	*(testing/maintenance)*
	50	hours/year	*(testing/maintenance, Regulatory Limit per)*

Emergency Generator Emissions

Units	Criteria Pollutants [1, 2]						Greenhouse Gases [3]	
	VOC	NO_X	CO	SOx	PM10	PM2.5	CO_2	CO_2e
g/kW-hr	—	—	—	—	—	—	—	—
g/hp-hr	0.06	0.26	2.20	5.00E-02	0.0080	0.0080	568.30	573.42
lbs/hr	0.10	0.43	3.61	0.08	0.01	0.01	932.70	941.10
lbs/day	**0.20**	**0.85**	**7.22**	**0.16412**	**0.03**	**0.03**	1,865.39	1,882.20
lbs/yr	4.92	21.34	180.53	4.10	0.66	0.66	46,634.82	47,054.95
tons/yr	0.00	0.01	0.09	0.00	0.00	0.00	23.32	23.53
metric tons/yr	—	—	—	—	—	—	**21.15**	**21.34**

Notes:

1. Emission factors for VOC, NOX, CO, PM10, and PM 2.5: CalEEMod v2020.4.0, Appendix D, Table 3.5, Tier 4 Final factors
2. Emission factor for SO2: CalEEMod v2020.4.0, Appendix D, Table 3.4
3. Emission factor for CO2: CalEEMod v2020.4.0, Appendix D, Table 3.4

Source: ESA 2021

3855 Watseka Ave - Existing Ops - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3855 Watseka Ave - Existing Ops

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	7.37	1000sqft	0.29	7,370.00	0
Parking Lot	120.00	Space	0.77	33,769.00	0
City Park	0.07	Acre	0.06	2,729.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2021
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	691.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Updated default with project

Land Use - Updated defaults to project-specific values

Vehicle Trips - Operational mobile emissions calculated externally to account for EMFAC2021

Energy Use - Applied default parking lot lighting to the landscaped area.

Waste Mitigation -

3855 Watseka Ave - Existing Ops - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	0.00	0.35
tblLandUse	LandUseSquareFeet	48,000.00	33,769.00
tblLandUse	LandUseSquareFeet	3,049.20	2,729.00
tblLandUse	LotAcreage	0.17	0.29
tblLandUse	LotAcreage	1.08	0.77
tblLandUse	LotAcreage	0.07	0.06
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	9.74	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1805	1.2000e-004	0.0131	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0279	0.0279	7.0000e-005		0.0297
Energy	2.2500e-003	0.0204	0.0171	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003		24.4914	24.4914	4.7000e-004	4.5000e-004	24.6370
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1828**	**0.0205**	**0.0302**	**1.2000e-004**	**0.0000**	**1.6000e-003**	**1.6000e-003**	**0.0000**	**1.6000e-003**	**1.6000e-003**		**24.5193**	**24.5193**	**5.4000e-004**	**4.5000e-004**	**24.6667**

3855 Watseka Ave - Existing Ops - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1805	1.2000e-004	0.0131	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0279	0.0279	7.0000e-005		0.0297
Energy	2.2500e-003	0.0204	0.0171	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003		24.4914	24.4914	4.7000e-004	4.5000e-004	24.6370
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1828**	**0.0205**	**0.0302**	**1.2000e-004**	**0.0000**	**1.6000e-003**	**1.6000e-003**	**0.0000**	**1.6000e-003**	**1.6000e-003**		**24.5193**	**24.5193**	**5.4000e-004**	**4.5000e-004**	**24.6667**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
General Office Building	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Parking Lot	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425

3855 Watseka Ave - Existing Ops - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.2500e-003	0.0204	0.0171	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003		24.4914	24.4914	4.7000e-004	4.5000e-004	24.6370
NaturalGas Unmitigated	2.2500e-003	0.0204	0.0171	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003		24.4914	24.4914	4.7000e-004	4.5000e-004	24.6370

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	208.177	2.2500e-003	0.0204	0.0171	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003		24.4914	24.4914	4.7000e-004	4.5000e-004	24.6370
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.2500e-003**	**0.0204**	**0.0171**	**1.2000e-004**		**1.5500e-003**	**1.5500e-003**		**1.5500e-003**	**1.5500e-003**		**24.4914**	**24.4914**	**4.7000e-004**	**4.5000e-004**	**24.6370**

3855 Watseka Ave - Existing Ops - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0.208177	2.2500e-003	0.0204	0.0171	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003		24.4914	24.4914	4.7000e-004	4.5000e-004	24.6370
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.2500e-003**	**0.0204**	**0.0171**	**1.2000e-004**		**1.5500e-003**	**1.5500e-003**		**1.5500e-003**	**1.5500e-003**		**24.4914**	**24.4914**	**4.7000e-004**	**4.5000e-004**	**24.6370**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1805	1.2000e-004	0.0131	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0279	0.0279	7.0000e-005		0.0297
Unmitigated	0.1805	1.2000e-004	0.0131	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0279	0.0279	7.0000e-005		0.0297

3855 Watseka Ave - Existing Ops - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0213					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1580					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2200e-003	1.2000e-004	0.0131	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0279	0.0279	7.0000e-005		0.0297
Total	**0.1805**	**1.2000e-004**	**0.0131**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0279**	**0.0279**	**7.0000e-005**		**0.0297**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0213					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1580					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2200e-003	1.2000e-004	0.0131	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0279	0.0279	7.0000e-005		0.0297
Total	**0.1805**	**1.2000e-004**	**0.0131**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0279**	**0.0279**	**7.0000e-005**		**0.0297**

3855 Watseka Ave - Existing Ops - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

3855 Watseka Ave - Existing Ops - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3855 Watseka Ave - Existing Ops

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	7.37	1000sqft	0.29	7,370.00	0
Parking Lot	120.00	Space	0.77	33,769.00	0
City Park	0.07	Acre	0.06	2,729.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2021
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	691.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Updated default with project

Land Use - Updated defaults to project-specific values

Vehicle Trips - Operational mobile emissions calculated externally to account for EMFAC2021

Energy Use - Applied default parking lot lighting to the landscaped area.

Waste Mitigation -

3855 Watseka Ave - Existing Ops - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	0.00	0.35
tblLandUse	LandUseSquareFeet	48,000.00	33,769.00
tblLandUse	LandUseSquareFeet	3,049.20	2,729.00
tblLandUse	LotAcreage	0.17	0.29
tblLandUse	LotAcreage	1.08	0.77
tblLandUse	LotAcreage	0.07	0.06
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	9.74	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1805	1.2000e-004	0.0131	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0279	0.0279	7.0000e-005		0.0297
Energy	2.2500e-003	0.0204	0.0171	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003		24.4914	24.4914	4.7000e-004	4.5000e-004	24.6370
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1828**	**0.0205**	**0.0302**	**1.2000e-004**	**0.0000**	**1.6000e-003**	**1.6000e-003**	**0.0000**	**1.6000e-003**	**1.6000e-003**		**24.5193**	**24.5193**	**5.4000e-004**	**4.5000e-004**	**24.6667**

Date: 8/30/2021 10:16 AM

3855 Watseka Ave - Existing Ops - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1805	1.2000e-004	0.0131	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0279	0.0279	7.0000e-005		0.0297
Energy	2.2500e-003	0.0204	0.0171	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003		24.4914	24.4914	4.7000e-004	4.5000e-004	24.6370
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1828**	**0.0205**	**0.0302**	**1.2000e-004**	**0.0000**	**1.6000e-003**	**1.6000e-003**	**0.0000**	**1.6000e-003**	**1.6000e-003**		**24.5193**	**24.5193**	**5.4000e-004**	**4.5000e-004**	**24.6667**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile - MODELED EXTERNALLY

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

3855 Watseka Ave - Existing Ops - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
General Office Building	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Parking Lot	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425

3855 Watseka Ave - Existing Ops - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.2500e-003	0.0204	0.0171	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003		24.4914	24.4914	4.7000e-004	4.5000e-004	24.6370
NaturalGas Unmitigated	2.2500e-003	0.0204	0.0171	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003		24.4914	24.4914	4.7000e-004	4.5000e-004	24.6370

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	208.177	2.2500e-003	0.0204	0.0171	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003		24.4914	24.4914	4.7000e-004	4.5000e-004	24.6370
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.2500e-003**	**0.0204**	**0.0171**	**1.2000e-004**		**1.5500e-003**	**1.5500e-003**		**1.5500e-003**	**1.5500e-003**		**24.4914**	**24.4914**	**4.7000e-004**	**4.5000e-004**	**24.6370**

3855 Watseka Ave - Existing Ops - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0.208177	2.2500e-003	0.0204	0.0171	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003		24.4914	24.4914	4.7000e-004	4.5000e-004	24.6370
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.2500e-003**	**0.0204**	**0.0171**	**1.2000e-004**		**1.5500e-003**	**1.5500e-003**		**1.5500e-003**	**1.5500e-003**		**24.4914**	**24.4914**	**4.7000e-004**	**4.5000e-004**	**24.6370**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1805	1.2000e-004	0.0131	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0279	0.0279	7.0000e-005		0.0297
Unmitigated	0.1805	1.2000e-004	0.0131	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0279	0.0279	7.0000e-005		0.0297

3855 Watseka Ave - Existing Ops - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0213					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1580					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2200e-003	1.2000e-004	0.0131	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0279	0.0279	7.0000e-005		0.0297
Total	**0.1805**	**1.2000e-004**	**0.0131**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0279**	**0.0279**	**7.0000e-005**		**0.0297**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0213					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1580					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2200e-003	1.2000e-004	0.0131	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0279	0.0279	7.0000e-005		0.0297
Total	**0.1805**	**1.2000e-004**	**0.0131**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0279**	**0.0279**	**7.0000e-005**		**0.0297**

3855 Watseka Ave - Existing Ops - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

3855 Watseka Avenue
Air Quality and GHG Assessment
Operational Mobile Emissions

			Criteria Pollutant Emission Factors (lb/mile)										GHG Emissions (metric tons/mile)			
	Year	Weekday Daily VMT	ROG	NOx	CO	SOx	PM10 Road Dust	PM10	PM10 Total	PM2_5 Road Dust	PM2_5	PM2.5 Total	CO2	CH4	N2O	CO2e
Existing	2021	274	3.97E-04	6.30E-04	3.92E-03	8.76E-06	6.61E-04	5.81E-05	7.19E-04	1.62E-04	2.29E-05	1.85E-04	4.10E-04	2.37E-08	2.28E-08	4.18E-04
Project	2024	5,397	3.26E-04	4.56E-04	3.10E-03	8.24E-06	6.61E-04	5.68E-05	7.18E-04	1.62E-04	2.15E-05	1.84E-04	3.86E-04	2.00E-08	2.04E-08	3.93E-04

VMT Source: Raju Associates Traffic Study

3855 Watseka Avenue
Air Quality and GHG Assessment
Operational Mobile Emissions

			Criteria Pollutant Emissions (pounds/day)										GHG Emissions (metric tons/year)			
	Year	Weekday Daily VMT	ROG	NOx	CO	SOx	PM10 Road Dust	PM10	PM10 Total	PM2_5 Road Dust	PM2_5	PM2.5 Total	CO2	CH4	N2O	CO2e
													1	*25*	*298*	
Existing	2021	274	0.11	0.17	1.07	0.00	0.18	0.02	0.20	0.04	0.01	0.05	41.01	0.00	0.00	41.75
Project	2024	5,397	1.76	2.46	16.74	0.04	3.57	0.31	3.87	0.88	0.12	0.99	760.87	0.04	0.04	773.84

VMT Source: Raju Associates Traffic Study

3855 Watseka Avenue
Air Quality and GHG Assessment
Operational Mobile Emissions

Emissions Factors

	lbs/mile						MT/mile			
	ROG	NOx	CO	SOx	PM10	PM2_5	CO2	CH4	N2O	CO2e
2021	0.000397201	0.000630322	0.003919856	8.75855E-06	5.81332E-05	2.29018E-05	0.000410489	2.37137E-08	2.28454E-08	0.00041789
2024	0.000326315	0.000455699	0.003102207	8.23599E-06	5.67653E-05	2.14827E-05	0.000386271	1.99775E-08	2.04296E-08	0.000392858

3855 Watseka Avenue
Road Dust Emission Factors

Paved Road Dust Emission Factors (Assumes No Precipitation)

Formula: $EF_{Dust,P} = (k\ (sL)^{0.91} \times (W)^{1.02})$

Where:

$EF_{Dust,P}$ =	Paved Road Dust Emission Factor (having the same units as k)
k =	particle size multiplier
sL =	road surface silt loading (g/m^2)
W =	average fleet vehicle weight (tons) (CARB uses 2.4 tons as a fleet average vehicle weight factor)

	Emission Factor (grams per VMT)	
	PM10	PM2.5
k	0.9979	0.2449
sL	0.1	0.1
W	2.4	2.4
$EF_{Dust,P}$	3.00E-01	7.36E-02

Unpaved Road Dust Emission Factors (Assumes No Precipitation)

Formula: $EF_{Dust,U} = (k\ (s / 12)^{1} \times (Sp / 30)^{0.5} / (M / 0.5)^{0.2}) - C)$

Where:

$EF_{Dust,U}$ =	Unpaved Road Dust Emission Factor (having the same units as k)
k =	particle size multiplier
s =	surface material silt content (%)
Sp =	mean vehicle speed (mph)
M =	surface material moisture content (%)
C =	Emission Factor for 1980s vehicle fleet exhaust, brake wear, and tire wear

	Emission Factor (grams per VMT)	
	PM10	PM2.5
k	816.47	81.65
s	4.3%	4.3%
Sp	15	15
M	0.5%	0.5%
C	0.00047	0.00036
$EF_{Dust,U}$	5.20E+00	5.19E-01

Sources:

SCAQMD, CalEEMod, Version 2011.1.
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