Attachment 1

Air Quality and Greenhouse Gas Technical Report

ESA

600 FOOTHILL MIXED-USE PROJECT
LA CAÑADA FLINTRIDGE, CALIFORNIA
Air Quality and Greenhouse Gas Technical Report

Prepared for
City of La Cañada Flintridge
Community Development Department
One Civic Center Drive
La Cañada Flintridge, CA 91011-2137

February 2021

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TABLE OF CONTENTS

Air Quality and Greenhouse Gas Technical Report

Appendices

List of Figures

List of Tables

ACRONYMS AND ABBREVIATIONS

Acronym	Description
^{0}C	Degrees Celsius
^{0}F	Degrees Fahrenheit
AB	Assembly Bill
AQMP	Air Quality Management Plan
AR4	Fourth Assessment Report
ATCM	Airborne Toxic Control Measure
BACT	Vest available control technology
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy Standard
CALGreen	California Green Building Standards
CAPCOA	California Air Pollution Control Officers
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	Methane
CNRA	California Natural Resources Agency
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DPM	Diesel Particulate Matter
EISA	Energy Independence and Security Act
GHG	Greenhouse Gas
GWP	Global warming potential
HAP	Hazardous air pollutants
HFC	hydrofluorocarbons
HSC	Health and Safety Code
ICT	Innovative Clean Transit Program
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
LCFS	Low Carbon Fuel Standard
LED	Light emitting diode
mpg	Miles per gallon

Acronym	Description
$MTCO_2e$	Metric tons carbon dioxide equivalent
MMT	Million metric tons
MSAT	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standards
NHTSA	National highway traffic safety administration
N_2O	Nitrous Oxide
NO	Nitric oxide
NO_2	Nitrogen dioxide
NOx	Oxides of nitrogen
O_3	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
OPR	California Office of Planning and Research
Pavley	AB 1493
Pb	lead
PFC	perfluorocarbons
PM2.5	Particulate matter of 2.5 micrometers or less
PM10	Particulate matter of 10 micrometers or less
ppb	Parts per billion
ppm	Parts per million
PV	Photovoltaic
PVC	Polyvinyl chloride
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
SAFE	Safer Affordable Fuel-Efficient vehicle rule
SAR	Second Assessment Report
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SF_6	Sulfur hexafluoride
SIP	State implementation plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO_2	Sulfur dioxide
SO_4^{2-}	sulfates
SR	State Route
SRA	Source receptor area
SWP	State Water Project
TAC	Toxic air contaminant
UNFCCC	United Nations Framework Convention on Climate Change
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency

Acronym	Description
VMT	Vehicle miles traveled
VOC	Volatile organic compounds
ZE	Zero Emission
ZEV	Zero-emission vehicles
$\mu g/m^3$	Microgram per meter cubed
μm	micrometers

EXECUTIVE SUMMARY

The purpose of this Air Quality and Greenhouse Gas Technical Report is to assess and discuss the impacts of potential air quality and greenhouse gas (GHG) emission impacts that may occur with the implementation of the proposed 600 Foothill Boulevard Project (Proposed Project). The project site is a single parcel located at the southwest corner of Foothill Boulevard Woodleigh Lane. The site is located approximately 750 feet southwest of the I-210 freeway.

The analysis describes the existing air quality and GHG in the vicinity of the project limits, estimates future air pollutant and GHG emissions resulting from construction and operation of the project, and identifies the potential for significant impacts based on applicable threshold of significance. Calculation worksheets and technical data used in this analysis are provided in Appendix A of this report. The findings of the analyses are as follows:

- The incremental increase in regional emissions from construction of the project would not exceed the regional significance thresholds for criteria pollutants set forth by the South Coast Air Quality Management District (SCAQMD). Thus, construction of 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 increase in on-site emissions from construction of the Project would not exceed the localized significance thresholds set forth by the SCAQMD. Thus, construction of the Project would not result in a localized violation of applicable air quality standards or expose off-site receptors to substantial levels of regulated air contaminants.

- The incremental increase in regional emissions from operation of the Project would not exceed the regional significance thresholds set forth by the SCAQMD. Thus, operation of the Project would not result in a regional violation of applicable air quality standards or jeopardize the timely attainment of such standards in the Air Basin.

- The increase in on-site emissions from operation of the Project would not exceed the localized significance thresholds set forth by the SCAQMD. Thus, operation of the Project would not result in a localized violation of applicable air quality standards or expose off-site receptors to substantial levels of regulated air contaminants.

- 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. Thus, the Project would not result in a localized violation of CO air quality standards or expose off-site receptors to substantial levels of CO emissions.

- Construction of the Project would not generate emissions of toxic air contaminants (TAC) that would exceed the SCAQMD health risk significance threshold of an incremental

increase in cancer risk of 10 in one million. Thus, construction of the Project would not expose off-site receptors to substantial levels of regulated air contaminants.

- Operation of the Project would not generate TAC emissions that would exceed the SCAQMD health risk significance threshold of an incremental increase in cancer risk of 10 in one million. Thus, operation of the Project would not expose off-site receptors to substantial levels of regulated air contaminants.

- Construction and operation of the Project would not result in the generation of odors affecting a substantial number of people. Therefore, odor impacts would be less than significant.

- The Project would not conflict with applicable strategies in the SCAQMD Air Quality Management Plan and would not exceed growth projections for the area. The Project would not result in a significant cumulative air quality impact.

- The Project would not result in the generation of GHG emissions that would have a significant impact and would not conflict with applicable plans, policies and strategies to reduce GHG emissions. The Project would not result in significant GHG emission impacts.

SECTION 1
Introduction

The 600 Foothill Boulevard site (Project Site) is currently occupied by two structures, surface parking and landscaping. The Proposed Project will develop 47 senior housing units, with 12 hotel units, office space, and open space. Construction is anticipated to begin in mid-2022 with completion in late 2024.

This Air Quality and Greenhouse Gas Technical Report evaluates the Proposed Project's potential impacts from air quality and GHG emissions as well as its potential cumulative impacts. The Air Quality analysis describes and evaluates the pollutant emission and related air quality impacts that could result from construction and operation of the Proposed Project. The report contains: (1) a description of the existing land uses as they pertain to air emissions; (2) a summary of the federal, State, and local regulations related to air quality, including those set forth within the SCAQMD Air Quality Management Plan (AQMP), and applicable City of La Cañada Flintridge plans; and (3) an analysis of the potential impacts related to air quality associated with the implementation of the Proposed Project, as well as identification of potentially feasible measures that could mitigate significant impacts.

The GHG analysis addresses the potential impacts of GHG emissions from the Proposed Project. The section contains: (1) a summary of the relationship between GHG emissions and global climate change; (2) an overview of applicable plans, policies, and regulations related to GHG emissions; (3) an assessment of current GHG emissions at the City, State, national, and global levels; (4) a quantitative analysis of future GHG emissions associated with construction and operation of the Proposed Project; and (5) an analysis of the consistency of the Proposed Project with applicable regulations, plans, and policies to reduce GHGs as set forth by the State of California, SCAQMD, Southern California Association of Governments (SCAG) and the City of La Cañada Flintridge.

The objectives of this technical report are to:

1. Describe the existing environment and regulatory framework for the Proposed Project;

2. Evaluate the Proposed Project's construction and operational-related emissions and the potential for significant impacts;

3. For identified significant impacts, provide feasible mitigation measures to reduce impacts.

The analysis was developed based on a mixture of project-specific as well as default construction and operational characteristics of the Proposed Project as discussed in the methodology portion of Section 3. Calculations and modeling outputs are included in Appendix A.

1.1 Project Location

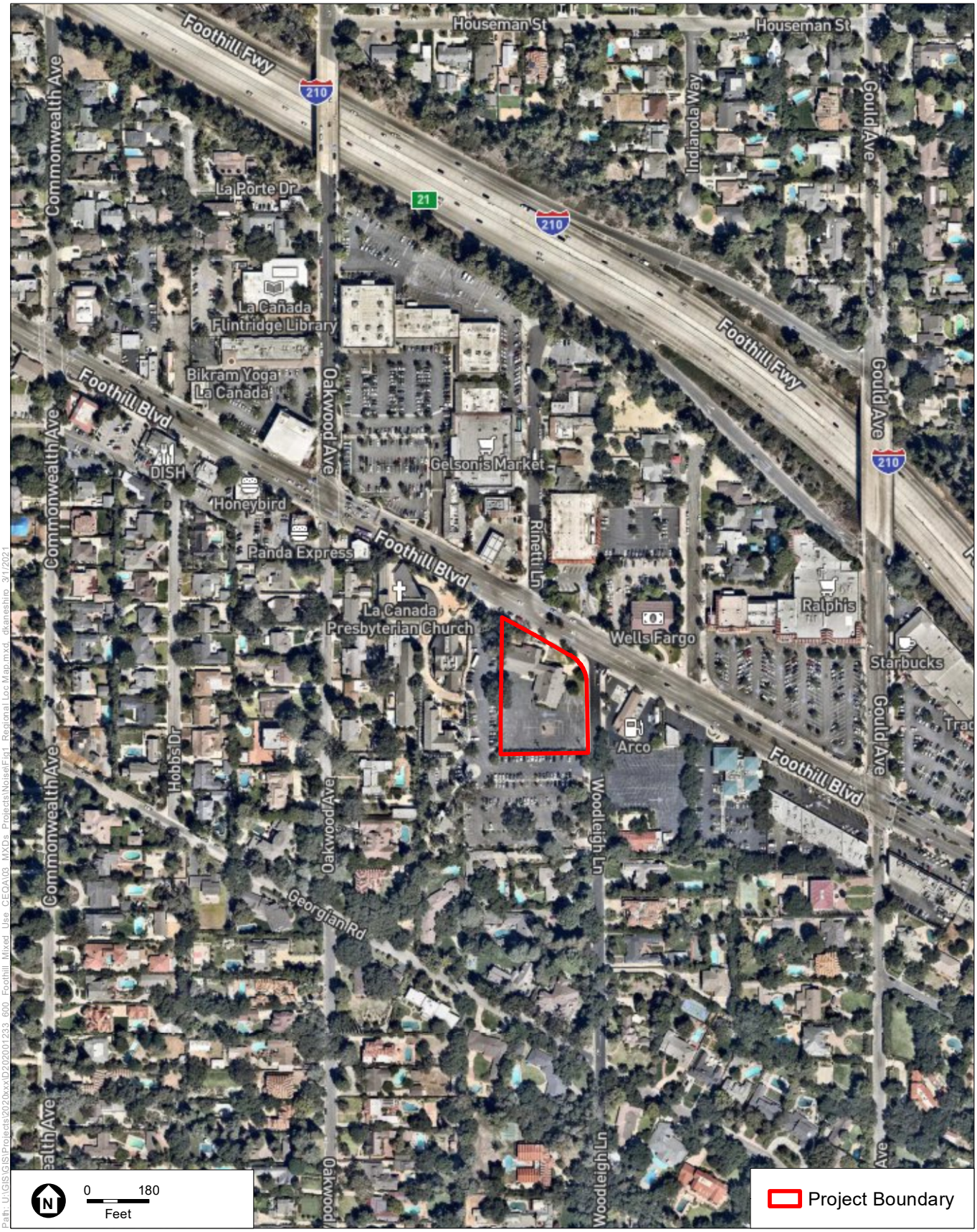
The Project Site is a single parcel located at the southwest corner of Foothill Boulevard Woodleigh Lane. The Project Site is located approximately 750 feet southwest of the I-210 freeway. The Project Site is identified by Assessor's Parcel Numbers (APN) 5814-028-009. **Figure 1**, *Regional Location Map,* illustrates the Project Site location.

1.2 Existing Site Conditions

The Project Site is bordered by Foothill to the north, single-family residences to the south, southeast, and southwest and the La Cañada Presbyterian Church adjacent to the Project Site on the east. The Project Site currently contains two existing structures, surface parking, 12 protected trees, and ornamental landscaping. The two structures include an approximately 4,530 square foot (sf) building containing reading rooms that is connected by a breezeway to the 5,200 sf sanctuary building. The existing structures total approximately 10,530 sf, not including the breezeway and a covered patio at the southeast corner of the sanctuary. The parking lot itself does not generate air pollutant emissions; however, operation of the onsite buildings and maintenance of the landscaped areas generate air pollutant emissions.

1.3 Project Description

The Proposed Project would demolish the two existing structures and surface parking lot and replace them with a 77,310 square foot (sf), three-story structure to be utilized for mixed-use purposes containing a senior living facility, non-service hotel, and office. The facility would include 47 senior housing units, 12 non-serviced hotel units, 7,600 sf of office uses, and one level of underground parking containing 107 vehicle parking spaces. **Figure 2**, *Project Layout Plan,* illustrates the site access locations for the Proposed Project.



SOURCE: Open Street Map, 2021

600 Foothill Boulevard Project

Figure 1
Regional Location Map

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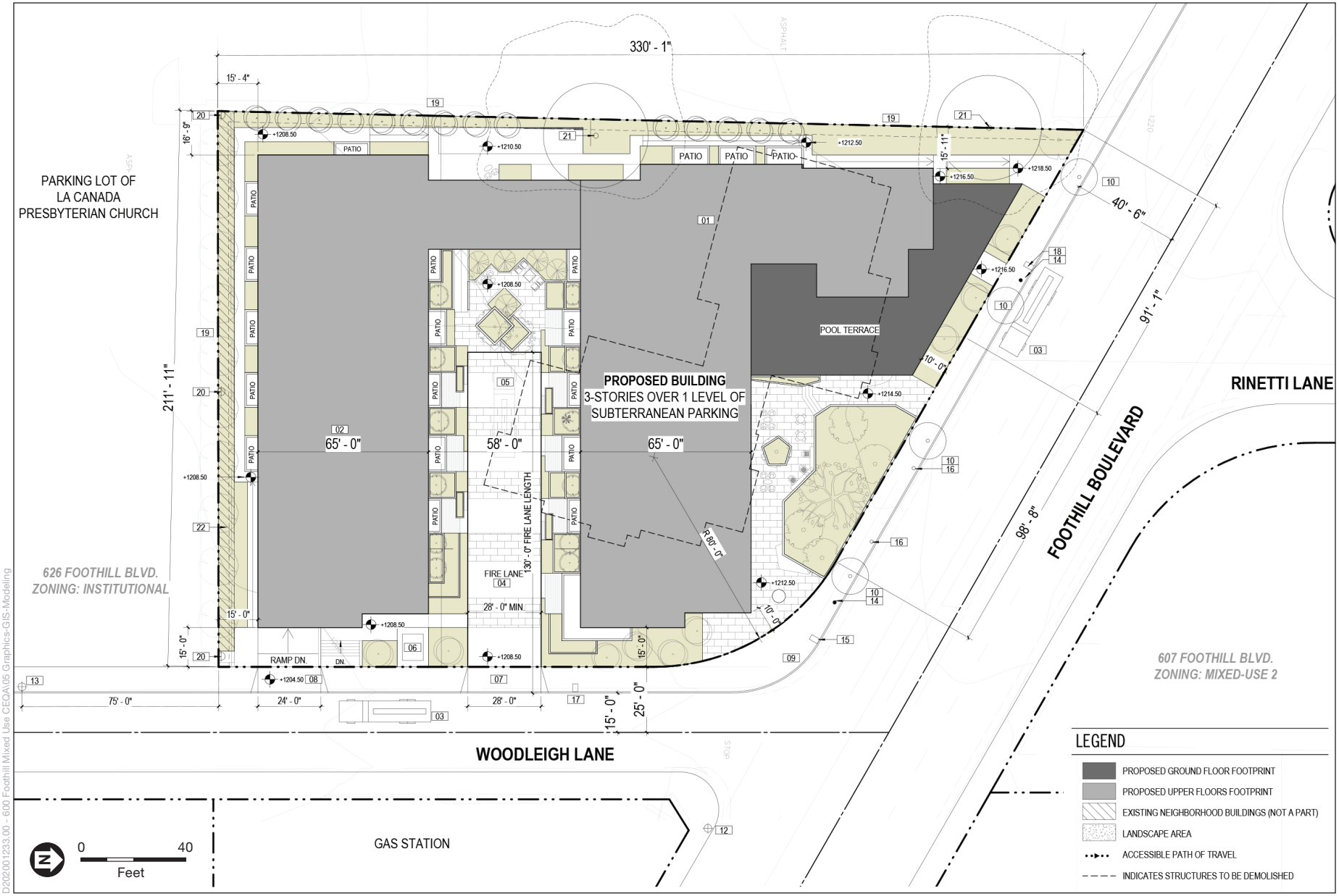

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SOURCE: KFA, Preliminary Entitlement Sbumital, 2021

600 Foothill Boulevard Project

Figure 2
Project Layout Plan

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1.4 Project Construction

Construction of the Proposed Project is estimated to last approximately 15 months, tentatively scheduled to begin March 2022 and conclude May 2023. Construction activities are anticipated to occur between 7:00 AM and 6:00 PM. Monday through Friday and 9:00 AM and 5:00 PM on Saturday. Construction is not anticipated on Sunday. Construction duration by phase is provided in **Table 1***, Estimated Construction Schedule.* It is anticipated that grading/excavation will overlap with the drainage/utilities/trenching phase; drainage/utilities/trenching will overlap with the foundation/concrete pour phase; and that the landscaping phase would overlap with the architectural coating phase. building construction, architectural coating, and paving phases may overlap. This inclusion of overlap provides the most flexibility for the schedule.

The provided schedule is an assumption of schedule and while phases will maintain the total number of construction days, the start and end dates may shift. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per CEQA guidelines. Site specific construction fleet may vary due to specific project needs at the time of construction. The duration of construction activity and associated construction equipment was estimated based on consultation with the Project applicant.

TABLE 1
ESTIMATED CONSTRUCTION SCHEDULE

Activity	Start Date	End Date	Duration (Days)
Demolition	3/02/2022	3/31/2022	30
Site Preparation	4/01/2022	4/10/2022	9
Grading/Excavation	4/11/2022	4/30/2022	19
Drainage/Utilities/Sub-Grade	4/20/2022	5/5/2022	15
Foundations/Concrete Pour	5/1/2022	5/31/2022	30
Building Construction	6/01/2022	2/28/2023	272
Architectural Coatings	3/01/2023	4/15/2023	45
Landscaping	3/01/2023	5/31/2023	91

SOURCE: City of La Cañada Flintridge, 2021.

The emissions are estimated based on the earliest potential construction schedule to provide a worst case, conservative emissions estimate. If construction were to start later than indicated, it is anticipated that emissions may actually be reduced due to the State required timed phase-in of cleaner equipment and vehicles.

1.5 Air Quality and Greenhouse Gas Fundamentals

1.5.1 Air Quality

Criteria Pollutants

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in air quality. The following pollutants are regulated by the United States Environmental Protection Agency (USEPA) and are subject to emissions control requirements adopted by federal, state and local regulatory agencies. These pollutants are referred to as "criteria air pollutants" as a result of the specific standards, or criteria, which have been adopted for them. A description of the health effects of these criteria air pollutants are provided below.

Ozone (O_3): Ozone is a secondary pollutant formed by the chemical reaction of volatile organic compounds (VOCs) and nitrogen oxides (NO_X) in the presence of sunlight under favorable meteorological conditions, such as high temperature and stagnation episodes. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. According to the USEPA, ozone can cause the muscles in the airways to constrict potentially leading to wheezing and shortness of breath.[1] Ozone can make it more difficult to breathe deeply and vigorously; cause shortness of breath and pain when taking a deep breath; cause coughing and sore or scratchy throat; inflame and damage the airways; aggravate lung diseases, such as asthma, emphysema, and chronic bronchitis; increase the frequency of asthma attacks; make the lungs more susceptible to infection; continue to damage the lungs even when the symptoms have disappeared; and cause chronic obstructive pulmonary disease.[2] Long-term exposure to ozone is linked to aggravation of asthma, and is likely to be one of many causes of asthma development and long-term exposures to higher concentrations of ozone may also be linked to permanent lung damage, such as abnormal lung development in children.[3] According to the California Air Resources Board (CARB), inhalation of ozone causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms and exposure to ozone can reduce the volume of air that the lungs breathe in and cause shortness of breath.[4] The USEPA states that people most at risk from breathing air containing ozone include people with asthma, children, older adults, and people, who are active outdoors, especially outdoor workers.[5] Children are at greatest risk from exposure to ozone because their lungs are still developing, and they are more likely to be active outdoors when ozone levels are high, which increases their exposure.[6] According to CARB, studies show that children are no more or less likely to suffer

1 United States Environmental Protection Agency (USEPA), Health Effects of Ozone Pollution, https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution. Accessed February 14, 2021.
2 USEPA, Health Effects of Ozone Pollution.
3 USEPA, Health Effects of Ozone Pollution.
4 California Air Resources Board (CARB), Ozone & Health, Health Effects of Ozone, https://ww2.arb.ca.gov/resources/ozone-and-health. Accessed February 14, 2021.
5 USEPA, Health Effects of Ozone Pollution.
6 USEPA, Health Effects of Ozone Pollution.

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. 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. Further research may be able to better distinguish between health effects in children and adults.

Volatile Organic Compounds (VOCs): Volatile Organic Compounds (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.[7] 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.[8] 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.).[9]

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 include nitrogen dioxide (NO_2) and nitric oxide (NO). Ambient air quality standards have been promulgated for NO_2, which is a reddish-brown, reactive gas. The principal 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.[10] Major sources of NO_X include emissions from cars, trucks and buses, power plants, and off-road equipment.[11] 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.[12] According to CARB, controlled human exposure studies show that NO_2 exposure can intensify responses to allergens in allergic asthmatics.[13] 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,

7 USEPA, Technical Overview of Volatile Organic Compounds, https://www.epa.gov/indoor-air-quality-iaq/technical-overview-volatile-organic-compounds. Accessed February 14, 2021.

8 CARB, Air Quality and Land Use Handbook: A Community Health Perspective, page A-4.

9 CARB, Air Quality and Land Use Handbook: A Community Health Perspective, page A-4.

10 CARB, Nitrogen Dioxide & Health.

11 USEPA, Nitrogen Dioxide (NO_2) Pollution, https://www.epa.gov/no2-pollution/basic-information-about-no2. Accessed February 14, 2021.

12 USEPA, Nitrogen Dioxide (NO_2) Pollution.

13 CARB, Nitrogen Dioxide & Health.

emergency room visits for asthma, and intensified allergic responses. 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. 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.[14]

Carbon Monoxide (CO): Carbon monoxide (CO) is primarily emitted from combustion processes and motor vehicles due to the incomplete combustion of fuel, such as natural gas, gasoline, or wood, with the majority of outdoor CO emissions from mobile sources.[15] According to the USEPA, breathing air with a high concentration of CO reduces the amount of oxygen that can be transported in the blood stream to critical organs like the heart and brain and at very high levels, which are possible indoors or in other enclosed environments, CO can cause dizziness, confusion, unconsciousness and death.[16] 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.[17] 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.[18] According to CARB, the most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain. 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. 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.[19]

Sulfur Dioxide (SO_2): According to the USEPA, the largest source of sulfur dioxide (SO_2) emissions in the atmosphere is the burning of fossil fuels by power plants and other industrial facilities, while smaller sources of SO_2 emissions include industrial processes, such as extracting metal from ore; natural sources, such as volcanoes; and locomotives, ships and other vehicles and heavy equipment that burn fuel with a high sulfur content.[20] In 2006, California phased-in the ultra-low-sulfur diesel regulation limiting vehicle diesel fuel to a sulfur content not exceeding 15 parts

14 CARB, Nitrogen Dioxide & Health.

15 CARB, Carbon Monoxide & Health, https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health. Accessed February 14, 2021.

16 USEPA, Carbon Monoxide (CO) Pollution in Outdoor Air, https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution. Accessed February 14, 2021.

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

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

19 CARB, Carbon Monoxide & Health.

20 USEPA, Sulfur Dioxide (SO_2) Pollution, https://www.epa.gov/so2-pollution/sulfur-dioxide-basics. Accessed February 14, 2021.

per million, down from the previous requirement of 500 parts per million, substantially reducing emissions of sulfur from diesel combustion.[21] According to the USEPA, short-term exposures to SO_2 can harm the human respiratory system and make breathing difficult.[22] 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 one part per million (ppm)) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.[23] Children, the elderly, and those with asthma, cardiovascular disease, or chronic lung disease (such as bronchitis or emphysema) are most likely to experience the adverse effects of SO_2.[24,25]

Particulate Matter (PM10 and PM2.5): Particulate matter air pollution is a mixture of solid particles and liquid droplets found in the air.[26] 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. Particles are defined by their diameter for air quality regulatory purposes: inhalable particles with diameters that are generally ten micrometers (μm) and smaller (PM10); and fine inhalable particles with diameters that are generally 2.5 μm and smaller (PM2.5).[27] 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.[28] Sources of PM2.5 emissions include combustion of gasoline, oil, diesel fuel, or wood. 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. 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. 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.[29] 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. Short-term exposure to PM2.5 has

21 CARB, Final Regulation Order, Amendments to the California Diesel Fuel Regulations, Amend Section 2281, Title 13, California Code of Regulations, approved July 15, 2004.

22 USEPA, Sulfur Dioxide (SO_2) Pollution.

23 CARB, Sulfur Dioxide & Health, https://ww2.arb.ca.gov/resources/sulfur-dioxide-and-health. Accessed February 14, 2021.

24 CARB, Sulfur Dioxide & Health.

25 USEPA, Sulfur Dioxide (SO_2) Pollution.

26 USEPA, Particulate Matter (PM) Pollution, https://www.epa.gov/pm-pollution/particulate-matter-pm-basics. Accessed February 14, 2021.

27 USEPA, Particulate Matter (PM) Pollution.

28 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10), https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health. Accessed February 14, 2021.

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

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. According to CARB, populations most likely to experience adverse health effects with exposure to PM10 and PM2.5 include older adults with chronic heart or lung disease, children, and asthmatics and children and infants are more susceptible to harm from inhaling pollutants such as PM10 and PM2.5 compared to healthy adults because they inhale more air per pound of body weight than do adults, spend more time outdoors, and have developing immune systems.[30]

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.[31] 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. 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.[32] 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.[33] 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.[34]

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.[35] A description of the health effects of the State-identified criteria air pollutants relevant to the Project is provided below. As the Project would not generate emissions of hydrogen sulfide or vinyl chloride, they are not discussed.

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).[36] Exposure to SO_4^{2-}, which are part of PM2.5, results in health effects similar to those from exposure to PM2.5 including reduced lung function, aggravated asthmatic symptoms, and increased risk of emergency department visits, hospitalizations, and death in people who have chronic heart or lung

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

31 USEPA, Lead Air Pollution, https://www.epa.gov/lead-air-pollution/basic-information-about-lead-air-pollution. Accessed February 14, 2021.

32 USEPA, Lead Air Pollution.

33 CARB, Lead & Health, https://ww2.arb.ca.gov/resources/lead-and-health. Accessed February 14, 2021.

34 CARB, Lead & Health.

35 CARB, California Ambient Air Quality Standards, https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards. Accessed February 14, 2021.

36 CARB, Sulfate & Health, https://ww2.arb.ca.gov/resources/sulfate-and-health. Accessed February 14, 2021.

diseases.[37] 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.[38]

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.[39] Exposure to some haze-causing pollutants have been linked to adverse health impacts similar to PM10 and PM2.5 as discussed above.[40]

Air Toxics

Toxic Air Contaminants

TACs, or hazardous air pollutants (HAPs) as defined by the USEPA, are defined as those contaminants that are known or suspected to cause serious health problems, but do not have a corresponding ambient air quality standard.[41] For consistency within this document they will be referred to as TACs. TACs are also defined as an air pollutant that may increase a person's risk of developing cancer and/or other serious health effects. TACs are emitted by a variety of industrial processes such as petroleum refining, electric utility and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. TACs may exist as PM10 and PM2.5 or as vapors (gases).[42] TACs include metals, other particles, gases absorbed by particles, and certain vapors from fuels and other sources. The emission of a TAC does not automatically create a health hazard. Other factors, such as the amount of the TAC, its toxicity, how it is released into the air, the weather, and the terrain, all influence whether the emission could be hazardous to human health. Emissions of TACs into the air can be damaging to human health and to the environment. Human exposure to TACs at sufficient concentrations and durations can result in cancer, poisoning, and rapid onset of sickness, such as nausea or difficulty in breathing. Other less measurable effects include immunological, neurological, reproductive, developmental, and respiratory problems. TACs deposited onto soil or into lakes and streams affect ecological systems and eventually human health through consumption of contaminated food. The carcinogenic potential of TACs is a particular public health concern because many scientists currently believe

37 CARB, Sulfate & Health.

38 CARB, Sulfate & Health.

39 CARB, Visibility-Reducing Particles and Health, https://ww2.arb.ca.gov/resources/visibility-reducing-particles-and-health. Accessed February 14, 2021.

40 CARB, Visibility-Reducing Particles and Health.

41 USEPA, Hazardous Air Pollutants, https://www.epa.gov/haps. Accessed February 14, 2021.

42 USEPA, Hazardous Air Pollutants: Sources and Exposure, https://www.epa.gov/haps/hazardous-air-pollutants-sources-and-exposure. Accessed February 14, 2021.

that there is no "safe" level of exposure to carcinogens. Any exposure to a carcinogen poses some risk of contracting cancer.[43]

The public's exposure to TACs is a significant public health issue in California. The Air Toxics "Hotspots" Information and Assessment Act is a State law requiring facilities to report emissions of TACs to air districts.[44] The program is designated to quantify the amounts of potentially HAPs released, the location of the release, the concentrations to which the public is exposed, and the resulting health risks. The State Air Toxics Program (AB 2588) identified over 200 TACs, including the 188 TACs identified in the Clean Air Act (CAA).[45]

The USEPA has assessed this expansive list and identified 21 TACs as Mobile Source Air Toxics (MSATs).[46] MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline. USEPA also extracted a subset of these 21 MSAT compounds that it now labels as the nine priority MSATs: 1,3-butaidene, acetaldehyde, acrolein, benzene, diesel particulate matter (DPM)/diesel exhaust organic gases, ethylbenzene, naphthalene, and polycyclic organic matter. While these nine MSATs are considered the priority transportation toxics, USEPA stresses that the lists are subject to change and may be adjusted in future rules.[47]

Diesel Exhaust

According to the California Almanac of Emissions and Air Quality, the majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from the exhaust of diesel-fueled engines, i.e., DPM.[48] DPM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances.

Diesel exhaust is composed of two phases, gas and particle, and both phases contribute to the health risk. The gas phase is composed of many of the urban HAPs, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde and polycyclic aromatic hydrocarbons. The particle phase is also composed of many different types of particles by size or composition. Fine and ultra-fine diesel particulates are of the greatest health concern and may be composed of elemental carbon with adsorbed compounds such as organic compounds, sulfate, nitrate, metals and other trace elements. Diesel exhaust is emitted from a broad range of diesel engines; the on-road diesel engines of trucks, buses and cars and the off-road diesel engines that include locomotives, marine vessels and heavy-duty equipment. Although DPM is emitted by diesel-fueled internal combustion engines, the

43 USEPA, Hazardous Air Pollutants.

44 CARB, General Information About "Hot Spots", https://www.arb.ca.gov/ab2588/general.htm. Accessed February 14, 2021.

45 CARB, AB 25188 Air Toxics "Hot Spots" Program, https://www.arb.ca.gov/ab2588/ab2588.htm. Accessed February 14, 2021.

46 USEPA, Air Toxics Risk Assessment Reference Library, Volume 1 Technical Resource Manual. April 2004. page 2-1.

47 U.S. Department of Transportation Federal Highway Administration, Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, October 18, 2016.

48 CARB, The California Almanac of Emissions and Air Quality, https://www.arb.ca.gov/aqd/almanac/almanac.htm. Accessed February 14, 2021.

composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present.

The most common exposure to DPM is breathing air that contains diesel exhaust. The fine and ultra-fine particles are respirable (similar to PM2.5), which means that they can avoid many of the human respiratory system defense mechanisms and enter deeply into the lung. Exposure to DPM comes from both on-road and off-road engine exhaust that is either directly emitted from the engines or lingering in the atmosphere.

Diesel exhaust causes health effects from long-term chronic exposures. The type and severity of health effects depends upon several factors including the amount of chemical exposure and the duration of exposure. Individuals also react differently to different levels of exposure. There is limited information on exposure to only DPM, but there is enough evidence to indicate that inhalation exposure to diesel exhaust causes chronic health effects as well as having cancer-causing potential.

Because it is part of PM2.5, DPM also contributes to the same non-cancer health effects as PM2.5 exposure. These effects include premature death, hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma, increased respiratory symptoms, and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies. Those most vulnerable to non-cancer health effects are children whose lungs are still developing and the elderly who often have chronic health problems.[49]

Gasoline Exhaust

Similar to diesel exhaust, gasoline is composed of two phases, gas and particle, and both phases contribute to the health risk. The gas phase is composed of the same HAPs, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde and polycyclic aromatic hydrocarbons. The particle phase is also composed of many different types of particles by size or composition. Fine and ultra-fine diesel particulates are of the greatest health concern and may be composed of elemental carbon with adsorbed compounds such as organic compounds, sulfate, nitrate, metals and other trace elements. Gasoline exhaust is primarily emitted from light-duty passenger vehicles. The compounds in the gas and particles phases can cause health effects from short- and long-term exposures.

1.5.2 Greenhouse Gases

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation and storms. Historical records indicate that global climate changes have occurred in the past due to natural phenomena; however, current data increasingly indicate that the current global conditions differ from past climate changes in rate and magnitude. Global climate change attributable to anthropogenic (human) GHG emissions is currently one of the most important and widely debated scientific, economic and political issues in the United States and the world. The extent to which increased concentrations of

[49] CARB, Overview: Diesel Exhaust & Health. https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health. Accessed February 14, 2021.

GHGs have caused or will cause climate change and the appropriate actions to limit and/or respond to climate change are the subject of significant and rapidly evolving regulatory efforts at the federal and state levels of government.

GHGs are those compounds in the Earth's atmosphere which play a critical role in determining temperature near the Earth's surface. More specifically, these gases allow high-frequency shortwave solar radiation to enter the Earth's atmosphere, but retain some of the low frequency infrared energy which is radiated back from the Earth towards space, resulting in a warming of the atmosphere. Not all GHGs possess the same ability to induce climate change; as a result, GHG contributions are commonly quantified in the units of equivalent mass of carbon dioxide (CO_2e). Mass emissions are calculated by converting pollutant specific emissions to CO_2e emissions by applying the proper global warming potential (GWP) value.[50] These GWP ratios are available from the Intergovernmental Panel on Climate Change (IPCC). Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (SAR). The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). The updated GWPs in the IPCC AR4 have begun to be used in recent GHG emissions inventories. By applying the GWP ratios, Project-related CO_2e emissions can be tabulated in metric tons per year. Typically, the GWP ratio corresponding to the warming potential of CO_2 over a 100-year period is used as a baseline. The CO_2e values are calculated for construction years as well as existing and Project build-out conditions in order to generate a net change in GHG emissions for construction and operation. Compounds that are regulated as GHGs are discussed below.[51,52]

- **Carbon Dioxide (CO_2):** CO_2 is the most abundant GHG in the atmosphere and is primarily generated from fossil fuel combustion from stationary and mobile sources. CO_2 is the reference gas (GWP of 1) for determining the GWPs of other GHGs.[53]

- **Methane (CH_4):** CH_4 is emitted from biogenic sources (i.e., resulting from the activity of living organisms), incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. The GWP of CH_4 is 21 in the IPCC SAR and 25 in the IPCC AR4.[54]

- **Nitrous Oxide (N_2O):** N_2O produced by human-related sources including agricultural soil management, animal manure management, sewage treatment, mobile and stationary

50 GWPs and associated CO_2e values were developed by the Intergovernmental Panel on Climate Change (IPCC), and published in its Second Assessment Report (SAR) in 1996. Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's SAR. The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). The California Air Resources Board (CARB) has begun reporting GHG emission inventories for California using the GWP values from the IPCC AR4.

51 Intergovernmental Panel on Climate Change (IPCC), Second Assessment Report, Working Group I: The Science of Climate Change, 1995, https://www.ipcc.ch/pdf/climate-changes-1995/ipcc-2nd-assessment/2nd-assessment-en.pdf. Accessed February 14, 2021.

52 IPCC, Fourth Assessment Report (AR4), Working Group I Report: The Physical Science Basis, Table 2.14, 2007, https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html. Accessed February 14, 2021.

53 IPCC, AR4, Working Group I Report: The Physical Science Basis, Table 2.14.

54 IPCC, AR4, Working Group I Report: The Physical Science Basis, Table 2.14.

combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of N_2O is 310 in the IPCC SAR and 298 in the IPCC AR4.[55]

- **Hydrofluorocarbons (HFCs):** HFCs are fluorinated compounds consisting of hydrogen, carbon, and fluorine. They are typically used as refrigerants in both stationary refrigeration and mobile air conditioning systems. The GWP of HFCs ranges from 140 for HFC-152a to 11,700 for HFC-23 in the IPCC SAR and 124 for HFC-152a to 14,800 for HFC-23 in the IPCC AR4.[56]

- **Perfluorocarbons (PFCs):** PFCs are fluorinated compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semiconductor manufacturing. The GWPs of PFCs range from 6,500 to 9,200 in the IPCC SAR and 7,390 to 17,700 in the IPCC AR4.[57]

- **Sulfur Hexafluoride (SF_6):** SF_6 is a fluorinated compound consisting of sulfur and fluoride. It is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. SF_6 has a GWP of 23,900 in the IPCC SAR and 22,800 in the IPCC AR4.[58]

Effects of Global Climate Change

Effects of Global Climate Change

The scientific community's understanding of the fundamental processes responsible for global climate change has improved over the past decade, and its predictive capabilities are advancing. However, there remain significant scientific uncertainties in, for example, predictions of local effects of climate change, occurrence, frequency, and magnitude of extreme weather events, effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation. Due to the complexity of the Earth's climate system and inability to accurately model it, the uncertainty surrounding climate change may never be completely eliminated. Nonetheless, the IPCC's *Fifth Assessment Report, Summary for Policy Makers* states that, "it is *extremely likely* that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in greenhouse gas concentrations and other anthropogenic forces [*sic*] together."[59] A report from the National Academy of Sciences concluded that 97 to 98 percent of the climate researchers most actively publishing in the field support the tenets of the IPCC in that climate change is very likely caused by human (i.e., anthropogenic) activity.[60]

55 IPCC, AR4, Working Group I Report: The Physical Science Basis, Table 2.14.

56 IPCC, AR4, Working Group I Report: The Physical Science Basis, Table 2.14.

57 IPCC, AR4, Working Group I Report: The Physical Science Basis, Table 2.14.

58 IPCC, AR4, Working Group I Report: The Physical Science Basis, Table 2.14.

59 IPCC, Climate Change 2014: Synthesis Report, Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Summary for Policy Makers, 2014, page 5, http://ipcc.ch/report/ar5/syr/. Accessed February 14, 2021.

60 Anderegg, William R. L., J.W. Prall, J. Harold, S.H., Schneider, Expert Credibility in Climate Change, Proceedings of the National Academy of Sciences of the United States of America, 2010, 107:12107-12109.

According to the California EPA, the potential impacts in California due to global climate change may include: loss in snow pack; sea level rise; more extreme heat days per year; more high ozone days; more large forest fires; more drought years; increased erosion of California's coastlines and sea water intrusion into the Sacramento and San Joaquin Deltas and associated levee systems; and increased pest infestation.[61] Data regarding potential future climate change impacts are available from the California Natural Resources Agency (CNRA), which in 2009 published the *California Climate Adaptation Strategy*[62] as a response to Executive Order S-13-2008. The CNRA report lists specific recommendations for state and local agencies to best adapt to the anticipated risks posed by a changing climate. In accordance with the *California Climate Adaptation Strategy*, the California Energy Commission (CEC) was directed to develop a website on climate change scenarios and impacts that would be beneficial for local decision makers.[63] The website, known as Cal-Adapt, became operational in 2011.[64] The information provided by the Cal-Adapt website represents a projection of potential future climate scenarios. The data are comprised of the average values from a variety of scenarios and models, and are meant to illustrate how the climate may change based on a variety of different potential social and economic factors. Below is a summary of some of the potential climate change effects and relevant Cal-Adapt data, reported by an array of studies that could be experienced in California as a result of global warming and climate change.

Air Quality

Higher temperatures, conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore, its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state.[65]

According to the Cal-Adapt website, the portion of the County in which the Project Site is located could result in an average increase in temperature of approximately 6 degrees (from an annual average of 74.8°F to 81.2°F) by 2070-2099, compared to the baseline 1961-1990 period.[66] Data

61 California Environmental Protection Agency, Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, 2006.

62 California Natural Resources Agency, Climate Action Team, 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008, 2009.

63 California Natural Resources Agency, Climate Action Team, 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008.

64 The Cal-Adapt website address is: http://cal-adapt.org.

65 California Energy Commission, Scenarios of Climate Change in California: An Overview, February 2006, https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.169.4744&rep=rep1&type=pdf. Accessed February 14, 2021.

66 Cal-Adapt, Annual Average Maximum Temperatures, https://cal-adapt.org/tools/annual-averages/. Accessed February 14, 2021.

suggests that the predicted future increase in temperatures as a result of climate change could potentially interfere with efforts to control and reduce ground-level ozone in the region.

Water Supply

Uncertainty remains with respect to the overall impact of global climate change on future water supplies in California. Studies have found that, "Considerable uncertainty about precise impacts of climate change on California hydrology and water resources will remain until we have more precise and consistent information about how precipitation patterns, timing, and intensity will change."[67] For example, some studies identify little change in total annual precipitation in projections for California while others show significantly more precipitation. [68] Warmer, wetter winters would increase the amount of runoff available for groundwater recharge; however, this additional runoff would occur at a time when some basins are either being recharged at their maximum capacity or are already full.[69] Conversely, reductions in spring runoff and higher evapotranspiration because of higher temperatures could reduce the amount of water available for recharge.[70]

The California Department of Water Resources report on climate change and effects on the State Water Project (SWP), the Central Valley Project, and the Sacramento-San Joaquin Delta, concludes that "climate change will likely have a significant effect on California's future water resources…[and] future water demand." It also reports that "much uncertainty about future water demand [remains], especially [for] those aspects of future demand that will be directly affected by climate change and warming. While climate change is expected to continue through at least the end of this century, the magnitude and, in some cases, the nature of future changes is uncertain." It also reports that the relationship between climate change and its potential effect on water demand is not well understood, but "[i]t is unlikely that this level of uncertainty will diminish significantly in the foreseeable future." Still, changes in water supply are expected to occur, and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows.[71] In its *Fifth Assessment Report*, the IPCC states "Changes in the global water cycle in response to the warming over the 21st century will not be uniform. The contrast in precipitation between wet and dry regions and between wet and dry seasons will increase, although there may be regional exceptions."[72]

Hydrology and Sea Level Rise

As discussed above, climate changes could potentially affect: the amount of snowfall, rainfall and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow

67 Pacific Institute for Studies in Development, Environment and Security, Climate Change and California Water Resources: A Survey and Summary of the Literature, July 2003, https://pacinst.org/wp-content/uploads/2003/07/climate_change_and_california_water_resources.pdf. Accessed February 14, 2021.

68 Pacific Institute for Studies in Development, Environment and Security, Climate Change and California Water Resources: A Survey and Summary of the Literature.

69 Pacific Institute for Studies in Development, Environment and Security, Climate Change and California Water Resources: A Survey and Summary of the Literature.

70 Pacific Institute for Studies in Development, Environment and Security, Climate Change and California Water Resources: A Survey and Summary of the Literature.

71 California Department of Water Resources Climate Change Report, Progress on Incorporating Climate Change into Planning and Management of California's Water Resources, July 2006, https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=6454. Accessed February 14, 2021.

72 IPCC, Fifth Assessment Report, Summary for Policy Makers, 2013, page 20.

events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise can be a product of global warming through two main processes: expansion of seawater as the oceans warm, and melting of ice over land. Absent planning and preparation, a rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply, and increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture

California has a $30 billion agricultural industry that produces one half of the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; without planning and preparations. Crop-yield could be threatened by a less reliable water supply. Also, greater ozone pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thus affect their quality.[73]

Ecosystems and Wildlife

Increases in global temperatures and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists expect that the average global surface temperature could rise by 2 to 11.5°F (1.1 to 6.4°C) by 2100, with significant regional variation.[74] Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Sea level could rise as much as 2 feet along most of the U.S. coast. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes such as carbon cycling and storage.[75,76]

1.6 Regulatory Framework

- This section provides a summary of pertinent federal, State, and local statutes, regulations, plans, and policies that have been adopted that address air quality.

1.6.1 Federal

Clean Air Act

The CAA of 1963 was the first federal legislation regarding air pollution control and has been amended numerous times in subsequent years, with the most recent amendments occurring in 1990. At the federal level, USEPA is responsible for implementation of certain portions of the CAA

[73] California Climate Change Center, Our Changing Climate: Assessing the Risks to California, 2006.

[74] National Research Council, Advancing the Science of Climate Change, 2010.

[75] Parmesan, C., Ecological and Evolutionary Response to Recent Climate Change, 2006.

[76] Parmesan, C and Galbraith, H, Observed Ecological Impacts of Climate Change in North America. Arlington, VA: Pew. Cent. Glob. Clim. Change, 2004.

including mobile source requirements. Other portions of the CAA, such as stationary source requirements, are implemented by state and local agencies.

The CAA establishes federal air quality standards and specifies future dates for achieving compliance. The CAA also mandates that the state submit and implement a State Implementation Plan (SIP) for areas not meeting these standards. SIPs must include pollution control measures that demonstrate how the NAAQS will be met. The 1990 amendments to the CAA identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA which are most applicable to the Project include Title I (Nonattainment Provisions).

Title I requirements are implemented for the purpose of attaining NAAQS for the following criteria air pollutants: O_3; NO_2; CO; SO_2; PM10; and lead. The NAAQS were amended in July 1997 to include an 8-hour standard for O_3 and to adopt a NAAQS for PM2.5. The NAAQS were also amended in September 2006 to include an established methodology for calculating PM2.5 as well as revoking the annual PM10 threshold. **Table 2,** *Ambient Air Quality Standards,* shows the NAAQS currently in effect for each criteria air pollutant.

TABLE 2
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)		
PM10[i]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
PM2.5[i]	24 Hour	No Separate State Standard	Gravimetric or Beta Attenuation	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3		12.0 µg/m^3 [k]	15 µg/m^3	
CO	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	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)		—	—	

TABLE 2
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]
NO_2[j]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemi-luminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		53 ppb (100 µg/m^3)	Same as Primary Standard	
SO_2[k]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	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]	—	
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	—		0.15 µg/m^3		
Visibility Reducing Particles[n]	8 Hour	See footnote n	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			

TABLE 2
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]

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

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

[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 measurement method which can be shown to the satisfaction of the ARB 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] On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24- hour PM2.5 standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[j] 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 parts per billion (ppb). Note that the national 1-hour standard is in units of 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.

[k] On June 2, 2010, a new 1-hour SO2 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 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of ppb. California standards are in units of ppm. To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

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

[m] The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment 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 ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

SOURCE: CARB, Ambient Air Quality Standards, May 4, 2016, https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf. Accessed February 19, 2021.

Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;

- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;

- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and

- While superseded by the USEPA and National Highway Traffic Safety Administration (NHTSA) actions described above, (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of green jobs.[77]

Executive Order 13432

In response to the *Massachusetts v. Environmental Protection Agency* ruling, the President signed Executive Order 13432 on May 14, 2007, directing the USEPA, along with the Departments of Transportation, Energy, and Agriculture, to initiate a regulatory process that responds to the Supreme Court's decision. Executive Order 13432 was codified into law by the 2009 Omnibus Appropriations Law signed on February 17, 2009. The order sets goals in the areas of energy efficiency, acquisition, renewable energy, toxics reductions, recycling, sustainable buildings, electronics stewardship, fleets, and water conservation. Light-Duty Vehicle Greenhouse Gas and Corporate Average Fuel Economy Standards

On May 19, 2009, President Obama announced a national policy for fuel efficiency and emissions standards in the United States auto industry. The adopted federal standard applies to passenger cars and light-duty trucks for model years 2012 through 2016. The rule surpasses the prior Corporate Average Fuel Economy standards (CAFE)[78] and requires an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO_2 per mile by model year 2016, based on USEPA calculation methods. These standards were formally adopted on April 1, 2010. In August 2012, standards were adopted for model year 2017 through 2025 for passenger cars and light-duty trucks. By 2025, vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO_2 per mile. According to the USEPA, a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010

[77] A green job, as defined by the United States Department of Labor, is a job in business that produces goods or provides services that benefit the environment or conserve natural resources.

[78] The Corporate Average Fuel Economy standards are regulations in the United States, first enacted by Congress in 1975, to improve the average fuel economy of cars and light trucks. The U.S Department of Transportation has delegated the National Highway Traffic Safety Administration as the regulatory agency for the Corporate Average Fuel Economy standards.

vehicle.[79] In 2017, the USEPA recommended no change to the GHG standards for light-duty vehicles for model years 2022-2025.

In August 2018, the USEPA and NHTSA proposed the Safer Affordable Fuel-Efficient Vehicles Rule that would, if adopted, maintain the CAFE and CO_2 standards applicable in model year 2020 for model years 2021 through 2026. The estimated CAFE and CO_2 standards for model year 2020 are 43.7 mpg and 204 grams of CO_2 per mile for passenger cars and 31.3 mpg and 284 grams of CO_2 per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012. The proposal, if adopted, would also exclude CO_2-equivalent emission improvements associated with air conditioning refrigerants and leakage (and, optionally, offsets for nitrous oxide and methane emissions) after model year 2020.[80]

1.6.2 State

California has promulgated a series of executive orders, laws, and regulations aimed at reducing both the level of air pollutants and GHGs in the atmosphere and emissions of pollutants from commercial and private activities within the state. The State also has implemented regulations governing energy consumption within the State. The major components of California's initiatives are reviewed below.

California Clean Air Act

The CCAA, signed into law in 1988, requires all areas of the State to achieve and maintain the CAAQS by the earliest practical date. The CAAQS are established to protect the health of the most sensitive groups and apply to the same criteria air pollutants as the federal CAA and also includes State-identified criteria air pollutants, which are sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride.[81] Table 2 provided above, shows the CAAQS currently in effect for each of the federally identified criteria air pollutants as well as state recognized pollutants, such as sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride.

Mobile Source Regulations

Mobile sources are a significant contributor to the air pollution in California. CARB has established exhaust emission standards for automobiles, which are more stringent than the federal emissions standards. Through its Mobile Sources Program, CARB has developed programs and policies to reduce emissions from on-road heavy-duty diesel vehicles. Specifically, the Truck and Bus regulation requires diesel trucks and buses that operate in the State to reduce NO_X, PM10, and PM2.5 emissions (Title 13 California Code of Regulations [CCR], Section 2025). By January 1, 2023, nearly all vehicles must have engines certified to 2010 model year engines or equivalent. The

[79] USEPA, EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks, August 2012, https://nepis.epa.gov/Exe/ZyPDF.cgi/P100EZ7C.PDF?Dockey=P100EZ7C.PDF. Accessed February 14, 2021.

[80] National Highway Traffic Safety Administration (NHTSA) and USEPA, 2018. Federal Register / Vol. 83, No. 165 / Friday, August 24, 2018 / Proposed Rules, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks 2018. Available at: https://www.gpo.gov/fdsys/pkg/FR-2018-08-24/pdf/2018-16820.pdf. Accessed February 14, 2021.

[81] CARB, California Ambient Air Quality Standards, https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards. Accessed February 14, 2021.

Innovative Clean Transit Program (ICT) sets emissions reduction standards for new public transit vehicles and requires major transit agencies to only purchase zero emission (ZE) buses after 2029. The Solid Waste Collection Vehicle Regulation requires solid waste collection vehicles and heavy diesel-fueled on-road single engine cranes to be upgraded. The Rule for On-Road Heavy-Duty Diesel-Fueled Public and Utility Fleets requires fleets to install emission control devices on vehicles or purchase vehicles that run on alternative fuels or use advanced technologies to achieve emissions requirements by specified implementation dates. CARB also established an In-Use Off-Road Diesel-Fueled Fleets Regulation to impose limits on idling and require fleets to retrofit or replace older engines.

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 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 5 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. The requirements were amended in December 2010 and apply to nearly all diesel fueled trucks and busses with a gross vehicle weight rating greater than 14,000 pounds. For the largest trucks in the fleet, those with a gross vehicle weight rating greater than 26,000 pounds, there are two methods to comply with the requirements. The first way 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 particulate matter by 2023. The second option, if chosen, requires fleet owners, starting in 2012, to retrofit a portion of their fleet with diesel particulate filters achieving at least 85 percent removal efficiency, so that by January 1, 2016 their entire fleet is equipped with diesel particulate filters. However, diesel particulate filters do not typically lower NO_X emissions. Thus, fleet owners choosing the second option must still comply with the 2010 engine emission standards for their trucks and busses by 2020.

In addition to limiting exhaust from idling trucks, CARB recently 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 installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models. 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 by January 1, 2014. 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 (e.g., engine retrofits) on a certain percentage of its total fleet horsepower. The compliance schedule requires that BACT turn overs or retrofits be fully implemented by 2023 in all equipment in large and medium fleets and across 100 percent of small fleets by 2028.

The CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, 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 Clean Air Act. In addition, CARB also has primary responsibility for adopting and implementing California's legislative policies and programs, including the Climate Change Scoping Plan discussed below, to reduce the State's greenhouse gas emissions to meet the State's goal of reducing GHG emissions to 1990 levels by 2020 and 40 percent below 1990 levels by 2030.

Climate Change Scoping Plan

As discussed below, AB 32 and SB 32 require CARB to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020 for AB 32 and 2030 for SB 32 (Health and Safety Code Section 38561(h)). CARB developed its initial Scoping Plan, which was approved in 2008; it contained a mix of recommended strategies to achieve the 2020 emissions cap that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 Statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives.[82]

As required by Health and Safety Code (HSC) Division 25.5, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions reduction target for 2020. The 2020 emissions reduction target was originally set at 427 million metric tons (MMT) of CO_2e using the GWP values from the IPCC SAR. CARB also projected the state's 2020 GHG emissions under no-action-taken conditions – that is, emissions that would occur without any plans, policies, or regulations to reduce GHG emissions. CARB originally used an average of the state's GHG emissions from 2002 through 2004 and projected the 2020 levels at approximately 596 $MMTCO_2e$ (using GWP values from the IPCC SAR). Therefore, under the original projections, the state would have had to reduce its 2020 no-action-taken emissions by 28.4 percent in order to meet the 1990 target of 427 $MMTCO_2e$.

[82] Office of Governor Edmund G. Brown Jr., Governor Brown Establishes Most Ambitious Greenhouse Gas Reduction Target in North America.

First Update to the Climate Change Scoping Plan

The First Update to the Scoping Plan was approved by CARB in May 2014 and built upon the initial Scoping Plan with new strategies and recommendations.[83] In 2014, CARB revised the target using the GWP values from the IPCC AR4 and determined the 1990 GHG emissions inventory and 2020 GHG emissions limit to be 431 $MMTCO_2e$. CARB also updated the State's 2020 NAT emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that had recently been adopted for motor vehicles and renewable energy. CARB's projected Statewide 2020 emissions estimate using the GWP values from the IPCC AR4 is 509.4 $MMTCO_2e$.

Therefore, under the first update to the Scoping Plan, the emission reductions necessary to achieve the 2020 emissions target of 431 $MMTCO_2e$ would have been 78.4 $MMTCO_2e$, or a reduction of GHG emissions by approximately 15.4 percent.

2017 Climate Change Scoping Plan

In response to the passage of SB 32 and the identification of the 2030 GHG reduction target, CARB adopted the 2017 Climate Change Scoping Plan at a public meeting held in December 2017.[84] The 2017 Scoping Plan outlines the strategies the State will implement to achieve the 2030 GHG reduction target of 40 percent below 1990 levels, which build on the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, improved vehicle, truck and freight movement emissions standards, increasing renewable energy, and strategies to reduce methane emissions from agricultural and other wastes by using it to meet California's energy needs. Accounting for all GHG emissions sectors in the State, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32, CARB recommends statewide targets of no more than six metric tons CO_2e per capita by 2030.[85] CARB's projected Statewide 2030 emissions takes into account 2020 GHG reduction policies and programs.[86] The 2017 Scoping Plan also addresses GHG emissions from natural and working lands of California, including the agriculture and forestry sectors.

CARB states that the approved Scoping Plan "is the best choice to achieve the State's climate and clean air goals."[87] Under the Scoping Plan, the majority of the reductions would result from the continuation of the Cap-and-Trade regulation. Additional reductions would be achieved from electricity sector standards (i.e., utility providers to supply 50 percent renewable electricity by 2030), doubling the energy efficiency savings at end uses, additional reductions from the Low Carbon Fuel Standard (LCFS), implementing the short-lived GHG strategy (e.g., hydrofluorocarbons), and implementing the mobile source strategy and sustainable freight action plan. In July 2017, the California Legislature voted to extend the Cap-and-Trade regulation to 2030.

83 CARB, First Update to the AB 32 Scoping Plan https://ww3.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf. Accessed February 14, 2021.

84 CARB, California's 2017 Climate Change Scoping Plan, November 2017.

85 CARB, California's 2017 Climate Change Scoping Plan.

86 CARB, California's 2017 Climate Change Scoping Plan.

87 CARB, California's 2017 Climate Change Scoping Plan.

The 2017 Scoping Plan discusses the role of local governments in meeting the State's greenhouse gas reductions goals because local governments have jurisdiction and land use authority related to: community-scale planning and permitting processes, local codes and actions, outreach and education programs, and municipal operations.[88] Furthermore, local governments may have the ability to incentivize renewable energy, energy efficiency, and water efficiency measures.[89]

For individual projects under CEQA, the 2017 Scoping Plan states that local governments can support climate action when considering discretionary approvals and entitlements. According to the 2017 Scoping Plan, lead agencies have the discretion to develop evidence-based numeric thresholds consistent with the Scoping Plan, the State's long-term goals, and climate change science.[90]

A summary of the GHG emissions reductions required under HSC Division 25.5 is provided in **Table 3**, *Estimated Greenhouse Gas Emissions Reductions Required by HSC Division 25.5*.

Under the Scoping Plan Scenario, continuation of the Cap-and-Trade regulation (or carbon tax) is expected to cover approximately 34 to 79 $MMTCO_2$ of the 2030 reduction obligation.[91] The State's short-lived climate pollutants strategy, which is for GHGs that remain in the atmosphere for shorter periods of time compared to longer-lived GHGs like CO_2, is expected to cover approximately 17 to 35 $MMTCO_2e$. The Renewables Portfolio Standard with 50 percent renewable electricity by 2030 is expected to cover approximately 3 $MMTCO_2$. The mobile source strategy and sustainable freight action plan includes maintaining the existing vehicle GHG emissions standards, increasing the number of zero emission vehicles (ZEVs) and improving the freight system efficiency, and is expected to cover approximately 11 to 13 $MMTCO_2$. Under the Scoping Plan Scenario, CARB expects that the reduction in GHGs from doubling of the energy efficiency savings in natural gas and electricity end uses in the CEC 2015 Integrated Energy Policy Report by 2030 would cover approximately 7 to 9 $MMTCO_2$ of the 2030 reduction obligation. The other strategies would be expected to cover the remaining 2030 reduction obligations.

TABLE 3
ESTIMATED GREENHOUSE GAS EMISSIONS REDUCTIONS REQUIRED BY HSC DIVISION 25.5

Emissions Scenario	GHG Emissions ($MMTCO_2e$)
2008 Scoping Plan (IPCC SAR)	
2020 BAU Forecast (CARB 2008 Scoping Plan Estimate)	596
2020 Emissions Target Set by AB 32 (i.e., 1990 level)	427
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2020	169 (28.4%) [a]
2011 Scoping Plan (IPCC AR4)	

88 CARB, California's 2017 Climate Change Scoping Plan, page 97.

89 CARB, California's 2017 Climate Change Scoping Plan, page 97.

90 CARB, California's 2017 Climate Change Scoping Plan, page 100.

91 CARB, California's 2017 Climate Change Scoping Plan, Appendix G, November 2017, https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/2030sp_appg_alt-ab197aq-health_final.pdf. Accessed February 14, 2021.

2020 BAU Forecast (CARB 2011 Scoping Plan Estimate)	509.4
2020 Emissions Target Set by AB 32 (i.e., 1990 level)	431
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2020	78.4 (15.4%) [b]
2017 Scoping Plan Update	
2030 BAU Forecast ("Reference Scenario" which includes 2020 GHG reduction policies and programs)	389
2030 Emissions Target Set by HSC Division 25.5 (i.e., 40% below 1990 Level)	260
Reduction below Business-As-Usual Necessary to Achieve 40% below 1990 Level by 2030	129 (33.2%) [c]

$MMTCO_2e$ = million metric tons of carbon dioxide equivalents

a 596 – 427 = 169 / 596 = 28.4%
b 509.4 – 431 = 78.4 / 509.4 = 15.4%
c 389 – 260 = 129 / 389 = 33.2%

SOURCE: CARB, Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED), Attachment D, August 19, 2011; CARB, 2020 Business-as-Usual (BAU) Emissions Projection, 2014 Edition, 2017, https://ww2.arb.ca.gov/ghg-bau. Accessed February 14, 2021; CARB, California's 2017 Climate Change Scoping Plan, November 2017, https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/scoping_plan_2017.pdf. Accessed February 14, 2021.

CARB's Advanced Clean Car Program

The Advanced Clean Cars emissions-control program was approved by CARB in 2012 and is closely associated with the Pavley regulations.[92] The program requires a greater number of ZEV models for years 2015 through 2025 to control smog, soot and GHG emissions. This program includes the Low-Emissions Vehicle regulations to reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles; and the ZEV regulations to require manufactures to produce an increasing number of pure ZEV's (meaning battery and fuel cell electric vehicles) with the provision to produce plug-in hybrid electric vehicles between 2018 and 2025.

California Air Toxics Program

The California Air Toxics Program was established in 1983, when the California Legislature adopted AB 1807 to establish a two-step process of risk identification and risk management to address potential health effects from exposure to toxic substances in the air. In the risk identification step, CARB and the Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified, or "listed", as a TAC in California. Since inception of the program, a number of such substances have been listed.[93] 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 assessment be performed for construction exposures to TAC emissions.[94]

92 CARB, Clean Car Standards – Pavley, Assembly Bill 1493.

93 CARB, CARB Identified Toxic Air Contaminants. Available at https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants. Accessed February 14, 2021.

94 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.

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 idling of heavy-duty diesel motor vehicles weighing greater than 10,000 pounds to no more than 5 minutes at any location in order to reduce public exposure to DPM and other TACs.

The AB 1807 program is supplemented by the AB 2588 Air Toxics "Hot Spots" program, which was established by the California Legislature in 1987. Under this program, facilities are required to report their air toxics emissions, assess health risks, and notify nearby residents and workers of significant risks if present. In 1992, the AB 2588 program was amended by Senate Bill (SB) 1731 to require facilities that pose a significant health risk to the community to reduce their risk through implementation of a risk management plan.

Executive Order S-3-05, Executive Order B-30-15, and Executive Order B-55-18

In June, 2005, through Executive Order S-3-05,[95] the following GHG emission reduction targets were established:

- By 2010, California shall reduce GHG emissions to 2000 levels;
- By 2020, California shall reduce GHG emissions to 1990 levels; and
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

In April, 2015, Governor Brown issued Executive Order B-30-15 that:[96]

- Established a new interim Statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030.
- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets.
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

In September 2018, Governor Brown issued Executive Order B-55-18, which establishes a statewide goal of achieving carbon neutrality as soon as possible and no later than 2045.[97]

95 The Center for Climate Strategies, Executive Order S-3-05 http://www.climatestrategies.us/library/library/view/294. Accessed February 14, 2021.

96 Office of Governor Edmund G. Brown Jr., Governor Brown Establishes Most Ambitious Greenhouse Gas Reduction Target in North America, 2015, https://www.ca.gov/archive/gov39/2015/04/29/news18938/index.html. Accessed February 14, 2021.

97 California State Government, Executive Order B-55-18 to Achieve Carbon Neutrality, https://www.ca.gov/archive/gov39/wp-content/uploads/2018/09/9.10.18-Executive-Order.pdf. Accessed February 14, 2021.

Health and Safety Code, Division 25.5 – California Global Warming Solutions Act of 2006 (AB 32) and Emissions Limit (SB 32 / AB 197)

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (codified in the California HSC, Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. HSC Division 25.5 defines regulated GHGs as CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6 and represents the first enforceable Statewide program to limit emissions of these GHGs from all major industries, with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under HSC Division 25.5, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing state actions that would achieve GHG emissions reductions equivalent to 1990 Statewide levels by 2020.

In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197, and both were signed by Governor Brown. SB 32 and AB 197 amend HSC Division 25.5, establish a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and include provisions to ensure that the benefits of state climate policies reach into disadvantaged communities.

California Assembly Bill No. 1493 (AB 1493, Pavley) (Chapter 200, Statutes of 2002)

In response to the transportation sector accounting for more than half of California's CO_2 emissions, AB 1493 (Chapter 200, Statutes of 2002), enacted on July 22, 2002, required CARB to set GHG emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use is non-commercial personal transportation manufactured in and after 2009. In setting these standards, CARB must consider cost effectiveness, technological feasibility, economic impacts, and provide maximum flexibility to manufacturers.[98] As discussed previously, the USEPA and United States Department of Transportation (USDOT) have adopted federal standards for model year 2012 through 2016 light-duty vehicles. In light of the USEPA and USDOT standards, California - and states adopting California emissions standards - have agreed to defer to the proposed national standard through model year 2016. The 2016 endpoint of the federal and state standards is similar, although the federal standard ramps up slightly more slowly than required under the state standard. The state standards (called the Pavley standards) require additional reductions in CO_2 emissions beyond model year 2016 (referred to as Pavley Phase II standards).[99] As noted above, the USEPA and USDOT have adopted GHG emission standards for model year 2017 through 2025 vehicles. These standards are slightly different from the Pavley Phase II standards, but the State of California has agreed not to contest these standards, in part due to the fact that while the national standard would achieve slightly lower reductions in California, it would achieve greater reductions nationally and is stringent enough to meet state GHG emission reduction

98 CARB, Regulations to Control Greenhouse Gas Emissions from Motor Vehicles, Final Statement of Reasons, 2005, https://ww3.arb.ca.gov/regact/grnhsgas/fsor.pdf. Accessed February 14, 2021.

99 On March 24, 2017, CARB voted unanimously to uphold the State's model year 2017-2025 cars and light truck emissions standards. See: CARB, CARB finds vehicle standards are achievable and cost-effective, March 24, 2017, https://ww2.arb.ca.gov/news/carb-finds-vehicle-standards-are-achievable-and-cost-effective. Accessed February 14, 2021.

goals.[100] On November 15, 2012, CARB approved an amendment that allows manufacturers to comply with the 2017-2025 national standards to meet state law.

Executive Order S-01-07

Executive Order S-01-07 was enacted on January 18, 2007.[101] The order mandates the following: (1) that a Statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) that a LCFS for transportation fuels be established in California. In September 2015, CARB approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted.[102] In the proposed 2017 Climate Change Scoping Plan Update, CARB's preferred recommendation includes increasing the stringency of the LCFS by reducing the carbon intensity of transportation fuels by 18 percent by 2030, up from the current target of 10 percent by 2020.[103] In April 2017, the LCFS was brought before the Court of Appeal challenging the analysis of potential nitrogen dioxide impacts from biodiesel fuels. The Court directed CARB to conduct an analysis of nitrogen dioxide impacts from biodiesel fuels and froze the carbon intensity targets for diesel and biodiesel fuel provisions at 2017 levels until CARB has completed this analysis. On March 6, 2018 CARB issued its *Draft Supplemental Disclosure Discussion of Oxides of Nitrogen Potentially Caused by the Low Carbon Fuel Standard Regulation*.[104] CARB posted modifications to the amendments on August 13, 2018, with a public comment period through August 30, 2018. Final approval of regulatory changes from CARB's analysis of nitrogen dioxide impacts from biodiesel fuels was made on January 4, 2019.[105]

Senate Bill 97 (SB 97, Dutton) (Chapter 185, Statutes of 2007)

SB 97 (Chapter 185, Statutes of 2007), enacted in 2007, amended CEQA to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. It directed the California Office of Planning and Research (OPR) to develop revisions to the State CEQA Guidelines "for the mitigation of GHG emissions or the effects of GHG emissions" and directed the Resources Agency to certify and adopt these revised State CEQA Guidelines by January 2010. The revisions were completed in March 2010 and codified into the California Code of Regulations and became effective within 120 days pursuant to CEQA. The amendments provide regulatory guidance for the analysis and mitigation of the potential effects of GHG emissions. The CEQA Guidelines require:

[100] CARB, Advanced Clean Cars Summary, https://ww2.arb.ca.gov/sites/default/files/2019-12/acc%20summary-final_ac.pdf. Accessed February 14, 2021.

[101] Office of the Governor Arnold Schwarzenegger, Executive Order S-01-07, 2007 https://web.archive.org/web/20081026081001/http://gov.ca.gov/executive-order/5172/. Accessed February 14, 2021.

[102] CARB, Low Carbon Fuel Standard, 2018, https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard. Accessed February 14, 2021.

[103] CARB, AB 32 Scoping Plan, 2017, https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan. Accessed February 14, 2021.

[104] CARB, Low Carbon Fuel Standard and Alternative Diesel Fuels Regulation 2018, https://ww2.arb.ca.gov/rulemaking/2018/low-carbon-fuel-standard-and-alternative-diesel-fuels-regulation-2018. Accessed February 14, 2021.

[105] CARB, Low Carbon Fuel Standard and Alternative Diesel Fuels Regulation 2019.

- Inclusion of GHG analyses in CEQA documents;
- Determination of significance of GHG emissions; and
- If significant GHG emissions would occur, adoption of mitigation to address significant emissions.

Senate Bill 375 (SB 375, Steinberg) (Chapter 728, Statutes of 2008)

SB 375 (Chapter 728, Statutes of 2008), which establishes mechanisms for the development of regional targets for reducing passenger vehicle greenhouse gas emissions, was adopted by the State on September 30, 2008. SB 375 finds that the "transportation sector is the single largest contributor of greenhouse gases of any sector."[106] Under SB 375, CARB is required, in consultation with the Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. In February 2011, CARB adopted GHG emissions reduction targets for the SCAG, which is the Metropolitan Planning Organization for the region in which the City of La Cañada Flintridge is located.[107]

In March 2018, the CARB updated the SB 375 targets to require an 8 percent reduction by 2020 and a 19 percent reduction by 2035 in per capita passenger vehicle GHG emissions.[108] As these reduction targets were updated after the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016 RTP/SCS) was adopted, it is expected that the next iteration of the RTP/SCS will be updated to meet them.

Meeting SB 375 goals and targets is crucial for the State to meet its climate goals and to reduce GHG emissions as it supports coordinated transportation and land use planning with the goal of more sustainable communities.[109] Under SB 375, the target must be incorporated within that region's RTP, which is used for long-term transportation planning, in a SCS. Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plans) are not required to be consistent with either the RTP or SCS.

Title 24, Building Standards Code and CALGreen Code

The California Energy Commission first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and

[106] State of California, Senate Bill No. 375, September 30, 2008, https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200720080SB375. Accessed February 14, 2021.

[107] CARB, Sustainable Communities, March 28, 2017, https://ww2.arb.ca.gov/our-work/topics/sustainable-communities. Accessed February 14, 2021.

[108] CARB, SB 375 Regional Greenhouse Gas Emissions Reduction Targets, https://ww3.arb.ca.gov/cc/sb375/finaltargets2018.pdf. Accessed February 14, 2021.

[109] CARB, Sustainable Communities, https://ww2.arb.ca.gov/our-work/topics/sustainable-communities. Accessed February 14, 2021.

nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards is referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality." The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. When the CALGreen Code went into effect in 2009, compliance through 2010 was voluntary. As of January 1, 2011, the CALGreen Code is mandatory for all new buildings constructed in the state. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality. The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality. The CALGreen Code was most recently updated in 2019 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2020.

Renewables Portfolio Standard

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, Executive Order S-14-08 was signed, which expands the State's Renewables Portfolio Standard (RPS) to 33 percent renewable power by 2020. Pursuant to Executive Order S-21-09, CARB was also preparing regulations to supplement the RPS with a Renewable Energy Standard that would result in a total renewable energy requirement for utilities of 33 percent by 2020. On April 12, 2011, SB X1-2 was signed to increase California's RPS to 33 percent by 2020. SB 350 (Chapter 547, Statues of 2015) further increased the RPS to 50 percent by 2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027. SB 350 was signed into law on October 7, 2015.

On September 10, 2018, Governor Jerry Brown signed SB 100, which further increased California's Renewables Portfolio Standard and requires retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, and that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045.[110]

Senate Bill 1389

SB 1389 (Public Resources Code Sections [PRC] 25300–25323; SB 1389) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (PRC Section 25301[a]). The 2019 Integrated Energy Policy Report provides the results of the CEC's assessments related to energy sector trends, building decarbonization and energy efficiency, ZEV, energy equity, climate change adaptation, electricity reliability in Southern California, natural gas assessment, and electricity, natural gas, and transportation energy demand forecasts.

California Building Standards Code (Title 24)

California Building Energy Efficiency Standards (Title 24, Part 6)

The California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) were adopted to ensure that building construction and system design and installation achieve energy efficiency and preserve outdoor and indoor environmental quality. The current California Building Energy Efficiency Standards (Title 24 standards) are the 2019 Title 24 standards, which became effective on January 1, 2020.[111] The 2019 Title 24 standards include efficiency improvements to the residential and non-residential standards.[112]

California Green Building Standards (Title 24, Part 11)

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, includes mandatory measures for non-residential development related to site development; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. Most changes to the mandatory measure, compared to the previously 2016 CALGreen Code, included requirements for solar photovoltaic (PV) systems in all new homes (low-rise and single-family), requirements for newly constructed healthcare facilities that were previously not included, the encouragement of demand response and light-emitting diode (LED) technology for both residential and nonresidential

110 California Legislative Information, SB-100 California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases.

111 California Energy Commission (CEC), 2019 Building Energy Efficiency Standards, 2020. Available at https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency. Accessed February 14, 2021.

112 CEC, 2019 Building Energy Efficiency Standards, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency. Accessed February 14, 2021.

buildings, and the use of more efficient air filters to trap hazardous particulates.[113] For new multifamily dwelling units, the residential mandatory measures were revised to provide additional EV charging requirements, including quantity, location, size, single EV space, multiple EV spaces, and identification. For non-residential mandatory measures, Table 5.106.5.3.3 of the CALGreen Code, identifying the number of required EV charging spaces, has been revised in its entirety.

Senate Bill 350

SB 350, signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. SB 350 is the implementation of some of the goals of Executive Order B-30-15. Building off of AB 32, SB 350 established California's 2030 greenhouse gas reduction target of 40 percent below 1990 levels. To achieve this goal, SB 350 set ambitious 2030 targets for energy efficiency and renewable electricity, among other actions aimed at reducing greenhouse gas emissions. SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This will increase the use of RPS eligible resources, including solar, wind, biomass, geothermal, and others. In addition, SB 350 requires the state to double statewide energy efficiency savings in electricity and natural gas end uses by 2030.

1.6.3 Regional

South Coast Air Quality Management District

The SCAQMD is primarily responsible for planning, implementing, and enforcing air quality standards for the 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.

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.[114] CARB approved the 2016 AQMP on March 23, 2017.[115] 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.[116] The strategies included in the 2016 AQMP build on the strategies from the previous 2012 AQMP and

[113] CEC, 2019 Building Energy Efficiency Standards, 2020, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency. Accessed February 14, 2021.

[114] SCAQMD, 2016 AQMP, March 2017.

[115] CARB, News Release - CARB establishes next generation of emission controls needed to improve state's air quality, https://ww2.arb.ca.gov/news/carb-establishes-next-generation-emission-controls-needed-improve-states-air-quality. Accessed February 14, 2021.

[116] SCAQMD, 2016 AQMP, March 2017.

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,[117] for the federal non-attainment pollutants ozone and PM2.5 while accounting for regional growth, increasing development, and maintaining a healthy economy.[118] 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.[119] Descriptions of measures MOB-08 and MOB-10 are provided below:

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

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

SCAQMD CEQA Guidelines

SCAQMD's CEQA guidelines are voluntary initiatives recommended for consideration by local planning agencies. The CEQA Air Quality Handbook (Handbook) published by SCAQMD provides local governments with guidance for analyzing and mitigating project-specific air quality impacts.[120] SCAQMD is currently updating some of the information and methods in the Handbook, such as the screening tables for determining the air quality significance of a project and the on-road mobile source emission factors. While this process is underway, SCAQMD recommends using other approved models to calculate emissions from land use projects, such as CalEEMod.[121]

The SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning considers impacts to air quality sensitive receptors from TAC-emitting facilities.[122] SCAQMD's siting distance recommendations are the same as those provided by CARB (e.g., a

[117] USEPA, NAAQS Table, https://www.epa.gov/criteria-air-pollutants/naaqs-table. Accessed February 14, 2021.
[118] SCAQMD, NAAQS/CAAQS and Attainment Status for South Coast Air Basin, 2016.
[119] SCAQMD, 2016 AQMP, March 2017.
[120] SCAQMD, CEQA Air Quality Handbook, November 1993.
[121] SCAQMD, Air Quality Modeling, https://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-modeling. Accessed February 14, 2021.
[122] SCAQMD, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, May 06, 2005.

500-foot siting distance for air quality sensitive receptors proposed in proximity to freeways and high-traffic roads, and the same siting criteria for distribution centers and dry cleaning facilities).

The SCAQMD Final Localized Significance Threshold Methodology and Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM2.5 Significance Thresholds provides guidance when evaluating the localized effects of emissions in the CEQA evaluation.[123,124] These guidance documents were promulgated by the SCAQMD Governing Board as a tool to assist lead agencies to analyzed localized impacts associated with project-specific level proposed projects. The guidance documents establish mass emission rate "look up tables" as significance thresholds for projects that are five acres or less. For projects that are larger than five acres it is recommended that project-specific air quality dispersion modeling is completed to determine localized air quality.

SCAQMD Rules and Regulations

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

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

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

  - Rule 1113 – Architectural Coatings: This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
  - Rule 1121 – Control of Nitrogen Oxides from Residential Type, Natural Gas-Fired Water Heaters: This rule specifies NO_X emission limits for natural gas-fired water heaters, with heat input rates less than 75,000 British thermal units (BTUs) per hour.
  - Rule 1186 – PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations: This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM10 emissions by requiring the cleanup of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).

- **Regulation XIV – Toxics and Other Non-Criteria Pollutants:** Regulation XIV sets requirements for new permit units, relocations, or modifications to existing permit units which emit toxic air contaminants or other non-criteria pollutants. The following is a list of rules which may apply to the Project:
  - Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities: This rule requires owners and operators of any demolition or renovation activity and the associated disturbance of asbestos-containing materials, any asbestos storage facility, or any active waste disposal site to implement work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.

SCAQMD Global Warming and Stratospheric Ozone Depletion

SCAQMD adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" on April 6, 1990.[125] The policy commits SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan. In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:[126]

- Phase out the use and corresponding emissions of chlorofluorocarbons, methyl chloroform (1,1,1-trichloroethane or TCA), carbon tetrachloride, and halons by December 1995;
- Phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons by the year 2000;
- Develop recycling regulations for hydrochlorofluorocarbons (e.g., SCAQMD Rules 1411 and 1415);
- Develop an emissions inventory and control strategy for methyl bromide; and
- Support the adoption of a California GHG emission reduction goal.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds.[127] On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal

[125] SCAQMD, SCAQMD's Historical Activity on Climate Change, 2014, http://www.aqmd.gov/nav/about/initiatives/climate-change. Accessed February 14, 2021.

[126] SCAQMD, CEQA Air Quality Handbook, April 1993, pages 3-7.

[127] SCAQMD, Board Meeting, December 5, 2008, Agenda No. 31, http://www3.aqmd.gov/hb/2008/December/0812ag.html. Accessed February 14, 2021.

for an interim GHG significance threshold for stationary source/industrial projects where SCAQMD is the Lead Agency. However, SCAQMD has not adopted a GHG significance threshold for land use development projects (e.g., mixed-use/commercial projects). A GHG Significance Threshold Working Group was formed to further evaluate potential GHG significance thresholds.[128] The aforementioned Working Group has been inactive since 2011, however, and SCAQMD has not formally adopted any GHG significance threshold for land use development projects.

Southern California Association of Governments

On September 3, 2020, the SCAG's Regional Council formally adopted the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) also known as the Connect SoCal, which is an update to the previous 2012-2035 RTP/SCS and 2016-2040 RTP/SCS. [129] Using growth forecasts and economic trends, both the 2016-2040 RTP/SCS and 2020–2045 RTP/SCS provide a vision for transportation throughout the region for the next several decades by considering the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address mobility needs. Both the 2016-2040 RTP/SCS and 2020-2045 RTP/SCS describe how the region can attain the GHG emission-reduction targets set by CARB by achieving an 8 percent reduction in per capita transportation GHG emissions by 2020 and a 19 percent reduction in per capita transportation emissions by 2035 compared to the 2005 level on a per capita basis.[130] Compliance with and implementation of the 2016-2040 RTP/SCS and 2020-2045 RTP/SCS policies and strategies would have co-benefits of reducing per capita criteria air pollutant emissions (e.g. nitrogen dioxide, carbon monoxide, etc.) associated with reduced per capita vehicle miles traveled (VMT).

The 2020-2045 RTP/SCS states that the SCAG region was home to approximately 18.8 million people in 2016 and included approximately 6.0 million homes and 8.4 million jobs.[131] By 2045, the integrated growth forecast projects that these figures will increase by 3.7 million people, with approximately 1.6 million more homes and 1.7 million more jobs. High Quality Transit Areas (HQTAs), which are defined by the 2020-2045 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours, will account for 2.4 percent of regional total land, but are projected to accommodate 51 percent and 60 percent of future household growth respectively between 2016 and 2045.[132] Like the 2016-2040 RTP/SCS, the 2020-2045 RTP/SCS overall land use pattern reinforces the trend of focusing new housing and employment in the region's HQTAs. 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

[128] SCAQMD, Greenhouse Gases CEQA Significance Thresholds, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds. Accessed February 14, 2021.

[129] Southern California Association of Governments (SCAG), 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020-2045 RTP/SCS), September 2020.

[130] SCAG, 2020-2045 RTP/SCS, September 2020.

[131] SCAG, 2020-2045 RTP/SCS Demographics and Growth Forecast Technical Report, September 2020.

[132] SCAG, 2016-2040 RTP/SCS, April 2016, pages 20, 75-77.

investments, reduce regional life cycle infrastructure costs, improve accessibility, create local jobs, and have the potential to improve public health and housing affordability.

SCAG's 2016-2040 RTP/SCS and 2020-2045 RTP/SCS provide specific 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.[133]

In addition, both the 2016-2040 RTP/SCS and the 2020-2045 RTP/SCS include strategies to promote active transportation, support local planning and projects that serve short trips, promote transportation investments, investments in active transportation, more walkable and bikeable communities, that will result in improved air quality and public health, and reduced greenhouse gas emissions, and supports building physical infrastructure, regional greenways and first-last mile connections to transit, including to light rail and bus stations. The 2016-2040 RTP/SCS and 2020-2045 RTP/SCS align active transportation investments with land use and transportation strategies, increase competitiveness of local agencies for federal and state funding, and to expand the potential for all people to use active transportation. CARB has accepted the SCAG GHG quantification determinations in the 2016-2040 RTP/SCS and the 2020-2045 RTP/SCS and both demonstrate achievement of the GHG emission reduction targets established by CARB.[134,135]

Although there are GHG emission reduction targets for passenger vehicles set by CARB for 2045, the 2020-2045 RTP/SCS GHG emission reduction trajectory shows that more aggressive GHG emission reductions are projected for 2045. By meeting and exceeding the SB 375 targets for 2020 and 2035, as well as achieving an additional 4.1-percent reduction in GHG from transportation-related sources in the ten years between 2035 and 2045, the 2020-2045 RTP/SCS is expected to fulfill and exceed its portion of SB 375 compliance with respect to meeting the State's GHG emission reduction goals.[136]

1.6.4 Local

General Plan

The City of La Cañada Flintridge has adopted the General Plan in 2015. The 2015 General Plan includes the following applicable goals related to improving air quality that may co-benefit climate

133 SCAG, 2016-2040 RTP/SCS, April 2016, pages 170-181.

134 SCAG, 2025-2040 RTP/SCS, September 2020, pages 48-86.

135 CARB, Southern California Association of Governments' (SCAG) 2016 Sustainable Communities Strategy (SCS) ARB Acceptance of GHG Quantification Determination, June 2016.

136 SCAG, 2020-2045 RTP/SCS Public Health Technical Report, September 2020, page 53.

change impacts. Each goal is implemented by several policies that can be found in the General Plan for further detail.[137]

The Air Quality Element establishes policies that directly pertaining to the Proposed Project:

AQ Goal 1: Improve air quality and reduce GHG emissions locally and within the Basin through implementation of land use planning and circulation infrastructure policies and programs that foster sustainable, compact, multi-modal oriented development.

AQ Objective 1.2: Reduce air pollution and GHG emissions by proper planning for, and implementation of, the City's circulation infrastructure.

AQ Policy 1.2.2: Expand the use of traffic calming techniques and changes to sidewalk and roadway configurations identified in the DVSP along other parts of Foothill Boulevard to enhance a pedestrian-oriented environment.

AQ Policy 1.2.3: Promote efficient use of the street system by making improvements, such as coordination of signal time and other intersection improvements, to improve circulation patterns and flow of traffic in the City.

AQ Policy 1.2.4: Implement the Bicycle Transportation Plan to support and encourage bicycle use as an alternative to passenger vehicle transportation.

AQ Policy 2.5: Implement the recommendations of the Parking Study for the DVSP to locate parking appropriately to encourage pedestrian movement.

AQ Goal 2: Improve air quality and reduce GHG emissions locally and within the Basin by reducing use or passenger vehicles.

AQ Objective 2.2: Encourage local employers and businesses to implement policies and programs that reduce their employees' dependence on single-passenger vehicles for travel to and from work.

AQ Policy 2.2.1: Continue to cooperate with the La Cañada Unified School District to explore opportunities for establishing trip-reduction programs and guidelines for schools. These programs may include evaluating the potential use of Prop-A funds for establishing bus service and trip-reduction programs for the school district or school-oriented trips, such as after-school programs for youth; and/or establishing fixed-route bus routes to serve school sites and residential areas by the City and/or the school district.

AQ Policy 2.2.2: Encourage employers and businesses to implement transportation demand management strategies, such as telecommuting, ridesharing, work schedule changes (including flex time, compressed work week, staggered work schedule, etc.), and employer-based transportation programs (including employer-subsidized bus passes, guaranteed ride home programs, and vanpool programs).

AQ Policy 2.2.3: Support voluntary, employer-based trip reduction programs, including:

[137] City of La Cañada Flintridge General Plan, 2015, https://cityoflcf.org/wp-content/uploads/2019/09/General_Plan_Air-Quality.pdf. Accessed February 19, 2021.

a) providing assistance to regional and local ridesharing organizations;

b) advocating for legislation to maintain and expand incentives for employer ridesharing programs;

c) requiring the development of Transportation Management Associations for la rge employers and commercial complexes; and

d) providing public recognition of effective programs through awards, top ten lists, and other mechanisms.

AQ GOAL 3: Reduce air pollution and GHG emissions through conservation activities, policies and programs, regulations, and use of technology.

AQ Objective 3.1: Reduce the amount of fugitive dust emitted into the atmosphere.

AQ Policy
3.1.1: Develop and implement plans to minimize dust from areas within the City that are prone to soil erosion from wind.

AQ Policy
3.1.2: Require stabilization of land disturbed as a result of construction projects, including short-term methods during construction (e.g., watering active construction areas, covering open stockpiles, applying non-toxic soil stabilizers on unpaved access roads and temporary parking areas) and permanent methods post-construction (e.g., vegetation or revegetation, installation of hardscape, etc.).

AQ Objective 3.4: Reduce air pollution and GHG emissions through energy conservation.

AQ Policy 3.4.1: Conduct energy audits at municipal facilities to identify areas where energy efficiency can be increased, and encourage owners and/or operators of other facilities to do the same.

AQ Policy 3.4.2: Purchase energy efficient products that either meet Energy Star® specifications or are in the upper 25 percent of energy efficiency standards, and encourage residents and businesses to do the same.

AQ Objective 3.5: Reduce air pollution and GHG emissions through waste reduction, diversion of solid waste from landfill operations, and recycling.

AQ Policy 3.5.1: Continue to participate in enhancement and expansion of the existing area-wide hazardous waste collection programs.

AQ Policy 3.5.2: Maintain efforts to reduce municipal use of hazardous materials and ozone-depleting compounds.

AQ Policy 3.5.3: Continue the City's mandatory green waste collection and recycling program for all single-family residences.

AQ Policy 3.5.4: Consider adopting a mandatory green waste collection program for multi-family residences and commercial operations.

AQ Policy 3.5.5: Adopt a recycling program for multi-family residences and commercial operations pursuant to the Mandatory Commercial Recycling Measure being developed pursuant to the Scoping Plan adopted by the ARB to implement the AB 32.

AQ Policy 3.5.6: Continue to implement the City's Recycling and Diversion of Construction and Demolition Debris Ordinance (Chapter 9.14 of the LCFMC) to reduce the amount of GHG emissions associated with the disposal of solid waste into landfills.

AQ Policy 3.5.7: Promote diversion of reusable furniture, appliances, building materials, clothing, household and other items to local reuse enterprises such as thrift stores, Habitat for Humanity ReStore, Goodwill, Salvation Army, and the California Materials Exchange (CalMAX).

AQ Policy 3.5.8: Encourage the community to produce less waste by reducing, reusing, and recycling and to purchase reusable and recyclable products and products made from recycled materials.

AQ Policy 3.5.9: Consider adopting a program to increase asphalt recycling and the use of recycled asphalt and cement, including:

a) requiring recycled asphalt pavement (RAP) for streets and roads;

b) requiring RAP for community and commercial parking lots, where feasible;

c) encouraging schools and public agencies to use RAP for parking lots;

d) for City-sponsored projects, requiring 100 percent in-place recycling of recovered asphalt concrete and Portland cement, where feasible; and

e) considering modification of the City's Construction and Demolition Debris Ordinance to increase the minimum diversion rate for asphalt and concrete.

AQ Policy 3.5.10: Continue to work closely with solid waste disposal companies in providing trash pick-up services, and reduce the per capita production of solid waste as defined in the City's Source Reduction and Recycling Element.

AQ Policy 3.5.11: Continue to comply with the Integrated Waste Management Act by maintaining and implementing an up-to-date Source Reduction and Recycling Element and Non-Disposal Facility Element.

AQ Policy 3.5.12: Seek public input in the development of solid waste management programs as needed.

AQ GOAL 4: Reduce GHG emissions from all activities within the City boundaries to support the State's efforts under AB 32 and to mitigate the impact of climate change.

AQ Objective 4.1: By 2020, reduce GHG emissions from within the City's boundaries to a level 15 percent less than the level that would otherwise occur if all activities continued under a "business as usual" scenario.

AQ Policy 4.1.1: Prepare a Community Climate Action Plan (CCAP), in collaboration with the stakeholders from the community at large, which will include measures to incentivize and support reductions in GHG emissions from community activities, and which will seek to reduce emissions by at least 15 percent by 2020 compared to the 2007 baseline community emissions inventory (including any reductions required by the ARB under AB 32.

AQ Policy 4.1.2: Establish a Municipal Climate Action Plan (MCAP), which will include measures to reduce GHG emissions from municipal activities by at least 15 percent by 2020 compared to the 2007 baseline municipal emissions inventory (including any reductions required by the ARB under AB 32).

AQ Policy 4.1.3: Update the City's GHG emissions inventories, which include emissions from all sectors within the City, as necessary to incorporate improved methods, better data, and more accurate tools and methods, and to assess progress.

AQ GOAL 5: Reduce GHG emissions from municipal (City-owned facilities and operations, and by purchasing goods and services that embody or create fewer GHG emissions.

AQ Objective 5.1: Enhance the energy efficiency of City facilities.

AQ Policy 5.1.1: Prepare and implement a comprehensive plan to improve energy efficiency of municipal facilities, including:

a) conducting energy audits for all municipal facilities;

b) retrofitting facilities for energy efficiency where feasible and when remodeling or replacing components, including increasing insulation, and installing green or reflective roofs and low-emissive window glass;

c) implementing an energy tracking and management system;

d) installing energy-efficient exit signs, street signs, and traffic lighting;

e) installing energy-efficient lighting retrofits and occupancy sensors, and instituting a "lights out at night" policy;

f) retrofitting heating and cooling systems to optimize efficiency (e.g., replace chillers, boilers, fans, pumps, belts, etc.);

g) installing Energy Star appliances and energy-efficient vending machines;

h) improving efficiency of water pumping and use at municipal facilities, including a schedule to replace or retrofit system components with high-efficiency units (i.e., ultra-low-flow toilets, fixtures, etc.);

i) providing chilled, filtered water at water fountains and taps in lieu of bottled water;

j) installing a central irrigation control system and time its operation for off-peak use; and

k) adopting an accelerated replacement schedule for energy inefficient systems and components.

AQ Policy 5.1.2: Require that any newly constructed, purchased, or leased municipal space meet one or more of the following minimum standards as appropriate, including:

a) requiring buildings to meet LEED criteria established by the U.S. Green Building Council;

b) incorporating passive solar design features in new buildings, including daylighting and passive solar heating;

c) retrofitting existing buildings to meet standards under Title 24 of the California Building Energy Code, or to achieve a higher performance standard as established by the City/County; and

d) retrofitting existing buildings to decrease heat gain from non-roof impervious surfaces with cool paving, landscaping, and other techniques.

AQ Policy 5.1.3: Ensure that staff receives appropriate training and support to implement objectives and policies to reduce GHG emissions, including:

a) providing energy efficiency training to design, engineering, building operations, and maintenance staff; and

b) providing information on energy use and management, including data from the tracking and management system, to managers and others making decisions that influence energy use.

AQ Objective
5.4: Use the City's purchasing power to promote reductions in GHG emissions by the suppliers of its goods and services.

AQ Policy 5.4.1: Adopt purchasing practices and standards to support reductions in GHG emissions, including preferences for energy-efficient office equipment and the use of recycled materials and manufacturers that have implemented green management practices.

AQ Policy 5.4.2: Establish bidding standards and contracting practices that encourage GHG emissions reductions, including preferences or points for the use of low or zero emission vehicles and equipment, recycled materials, and provider implementation of other green management practices.

Climate Action Plan

The City adopted a Climate Action Plan in 2016. The City of La Cañada Flintridge has established the following GHG reduction targets, which are consistent with AB 32 and Executive Order B-30-15, and in line with the GHG reduction trajectory necessary to achieve the 2050 long-term, 80 percent reduction goal identified in Executive Order S-3-05. The City's targets are:

- Reduce GHG emissions 15 percent below 2007 levels by 2020 (the AB 32 target year)
- Reduce GHG emissions 58 percent below 2007 levels by 2035 (general plan horizon year)

The Climate Action Plan includes the following implementation plans and policies related to GHG emission reduction.

Energy Action Plan-Implementation Actions

- **E-1:** City of La Cañada Flintridge Energy Action Plan Community Implementation
- **E-2:** Promote residential and commercial PV installation to reduce energy usage and improve reliability of service without conflicting with the urban forest
- **E-3:** Energy Action Plan Municipal Implemeantaion

Transportation

- **T-1:** Expand and improve the city's bicycle, pedestrian, and equestrian networks
- **T-2:** Improve safety and comfort for bicyclists, pedestrians, and equestrians
- **T-3:** Expand and improve the transit network and its accessibility
- **T-4:** Reduce commute trips
- **T-5:** Improve traffic flow and reduce vehicle idling
- **T-6:** Encourage low-carbon and alternative fuel vehicles
- **T-7:** Implement low-emissions fleet vehicles
- **T-8:** Facilitate high-density, mixed-use, transit-oriented and infill development in appropriate locations consistent with community character
- **T-9:** Reduce emissions from construction equipment and vehicles
- **T-10:** Reduce emissions from lawn and garden equipment

1.7 Environmental Setting

1.7.1 Regional Air Quality

The Project Site is located within the Air Basin, which is an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Air Basin consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside counties, 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 connecting 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.

The Air Basin's meteorological conditions, in combination with regional topography, are conducive to the formation and retention of ozone. 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.[138] The worst air pollution conditions throughout the Air Basin typically occur from June through September.

Attainment Status

California Health and Safety Code section 39607(e) requires CARB to establish and periodically review area designation criteria. **Table 4,** *South Coast Air Basin Attainment Status,* provides a summary of the attainment status for the Air Basin with respect to the federal and State standards. As shown in Table 4, the Air Basin is designated under federal or State ambient air quality standards as nonattainment for ozone, PM10, and fine particulate matter PM2.5. It is noteworthy to mention that air quality in the Air Basin has improved substantially over the years, primarily due to the impacts of air quality control programs at the federal, State and local levels. The ozone and particulate matter levels have fallen significantly compared to the worst years and are expected to continue to trend downward in the future despite increases in the economy and population in the Air Basin.[139]

With respect to the State-identified criteria air pollutants (sulfates, hydrogen sulfide, visibility reducing particles, and vinyl chloride) present in Table 4, the Proposed Project would either not use these pollutants in the day to day operations or during construction and therefore would not have emissions of those pollutants (hydrogen sulfide, vinyl chloride, and lead), or such emissions would be accounted for as part of the pollutants estimated in this analysis (visibility reducing particles are associated with particulate matter emissions, and sulfates are associated with SO_2).

[138] SCAQMD, Final 2016 Air Quality Management Plan (AQMP), March 2017.
[139] SCAQMD, Final 2016 AQMP, page 1-6.

Vinyl chloride is used in the process of making polyvinyl chloride (PVC) plastic and vinyl products and is primarily emitted from industrial processes.[140] Vinyl chloride would not be emitted directly during operations or during construction; therefore, there would be no project emissions of vinyl chloride. In addition, CARB determined there is not sufficient scientific evidence available to support the identification of a threshold exposure level for vinyl chloride, therefore, CARB does not monitor or make status designations for this pollutant.[141]

TABLE 4
SOUTH COAST AIR BASIN ATTAINMENT STATUS

Pollutant	Federal Standards	California Standards
O_3 (1-hour standard)	N/A[a]	Non-attainment
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	Non-attainment
Lead	Non-attainment (Partial, Los Angeles County)[b]	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Unclassified
Vinyl Chloride	N/A	N/A[c]

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 Nonattainment designation – Los Angeles County portion of the Air Basin only for near-source monitors.

[c] In 1990, CARB identified vinyl chloride as a TAC and determined that it does not have an identifiable threshold. Therefore, CARB does not monitor or make status designations for this pollutant.

SOURCE: USEPA, The Green Book Non-Attainment Areas for Criteria Air Pollutants, https://www.epa.gov/green-book; CARB, Area Designations Maps/State and National, http://www.arb.ca.gov/desig/adm/adm.htm. Accessed February 19, 2021.

Sources of Emissions

As detailed in the AQMP, the major sources of air pollution in the Air Basin are divided into four major source classifications: point stationary sources, area stationary sources, on-road mobile sources, and off-road mobile sources. Point and area sources are the two major subcategories of stationary sources.[142] 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, and consumer products,), which are distributed across the region. Mobile sources consist

[140] CARB, Vinyl Chloride & Health, https://ww2.arb.ca.gov/resources/vinyl-chloride-and-health. Accessed February 21, 2021.

[141] CARB, Toxic Air Contaminant Board, Toxic Air Contaminant Identification List, https://www.arb.ca.gov/toxics/id/taclist.htm, last reviewed July 18, 2011. Accessed February 21, 2021.

[142] SCAQMD, Final 2016 AQMP, page 3-32.

of two main subcategories: On-road sources (such as cars and trucks) and off-road sources (such as heavy construction equipment).

1.7.2 Local Air Quality

Local Air Quality

Existing Criteria Pollutants Levels at Nearby Monitoring Stations

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 SRA 8; therefore, the monitoring station most representative of the Project Site is the West San Gabriel Valley monitoring station. Criteria pollutants monitored at this station include CO, ozone, NO_2, and PM2.5. The Central Los Angeles monitoring station, southwest of the Project Site was used to report data for SO_2 and PM10. The most recent data available from the SCAQMD for these monitoring stations are from years 2016 to 2019. The pollutant concentration data for these years are summarized in **Table 5**, *Ambient Air Quality Data.*

Toxic Air Contaminants

To date, the most comprehensive study on air toxics in the Air Basin is the Multiple Air Toxics Exposure Study (MATES-IV), conducted by the SCAQMD. The monitoring program measured more than 30 air pollutants, including both gases and particulates. The monitoring study was accompanied by a computer modeling study in which SCAQMD estimated the risk of cancer from breathing toxic air pollution throughout the region based on emissions and weather data. MATES-IV found that the average background cancer risk from carcinogenic air pollutants is approximately 619 in 1 million at the Project Site, compared to an average Air Basin-wide risk of approximately 1,023 in 1 million. Approximately 90 percent of the risk is from DPM.[143,144] The risk levels determined in the MATES-IV is approximately 65 percent lower than the risk levels in the previous MATES-III study, with DPM showing a reduction of approximately 70 percent.[145] The reductions were attributed to air quality control regulations and improved emission control technologies.

[143] SCAQMD, Final Report – Multiple Air Toxics Exposure Study in the South Coast SCAB, ES-2, 2-11, page 6-1, http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-iv. Accessed February 19, 2021.

[144] SCAQMD, Mates IV Estimated Risk, https://scaqmd-online.maps.arcgis.com/apps/webappviewer/index.html?id=470c30bc6daf4ef6a43f0082973ff45f. Accessed February 19, 2021.

[145] SCAQMD, Final Report – Multiple Air Toxics Exposure Study in the South Coast SCAB, ES-2, 2-11, 6-1.

TABLE 5
AMBIENT AIR QUALITY DATA

Pollutant/Standard	2016	2017	2018	2019
O_3 (1-hour)				
Maximum Concentration (ppm)	0.126	0.139	0.112	0.120
Days > CAAQS (0.09 ppm)	12	18	8	4
O_3 (8-hour)				
Maximum Concentration (ppm)	0.090	0.100	0.090	0.098
4th High 8-hour Concentration (ppm)	0.082	0.092	0.085	0.086
Days > CAAQS (0.070 ppm)	19	36	19	12
Days > NAAQS (0.075 ppm)	15	25	8	8
NO_2 (1-hour)				
Maximum Concentration (ppm)	0.072	0.072	0.068	0.059
98th Percentile Concentration (ppm)	0.058	0.059	0.054	0.051
NO_2 (Annual)				
Annual Arithmetic Mean (0.030 ppm)	0.015	0.015	0.014	0.013
CO (1-hour)				
Maximum Concentration (ppm)	1.5	2.2	2.0	1.5
CO (8-hour)				
Maximum Concentration (ppm)	1.0	1.7	1.4	1.2
SO_2 (1-hour)				
Maximum Concentration (ppm)	0.013	0.006	0.018	0.010
99th Percentile Concentration (ppm)	0.003	0.003	0.003	0.002
PM10 (24-hour)				
Maximum Concentration (µg/m^3)	67	96	81	62
Samples > CAAQS (50 µg/m^3)	18	41	31	3
Samples > NAAQS (150 µg/m^3)	0	0	0	0
PM10 (Annual Average)				
Annual Arithmetic Mean (20 µg/m^3)	32.4	34.4	31.1	25.5
PM2.5 (24-hour)				
Maximum Concentration (µg/m^3)	29.21	22.80	32.50	30.90
98th Percentile Concentration (µg/m^3)	25.38	18.80	29.50	24.60
Samples > NAAQS (35 µg/m^3)	0	0	0	0
PM2.5 (Annual)				
Annual Arithmetic Mean (12 µg/m^3)	9.59	9.68	10.28	8.90

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

[b] The monitoring station most representative of the Project Site is the West San Gabriel Valley, which is used to establish ambient CO, ozone, NO_2, and PM2.5 levels. Since SO_2, and PM10 data were not available at the West San Gabriel Valley station, the monitoring data collected at the station Central Los Angeles monitoring station were used. The most recent data available from SCAQMD for these two 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; Accessed February 19, 2021.

Sensitive Receptors and Locations

Certain population groups, such as children, elderly, and acutely and chronically ill persons

(especially those with cardio-respiratory diseases), are considered more sensitive to the potential effects of air pollution than others. As a result, certain land uses that are occupied by these population groups, such as residences, hospitals and schools, are considered to be air quality-sensitive land uses. Sensitive receptors in the vicinity of the project site consist mostly of single-family residences to the south, southeast and southwest with the nearest sensitive receptor located approximately 225 feet south of the project site. All other air quality-sensitive uses are located at greater distances from the Proposed Project site and would experience lower air pollutant impacts from potential sources of pollutants from the Proposed Project site due to atmospheric dispersion effects.

1.7.3 Greenhouse Gases

Global Emissions Inventory

Global GHG estimates are based on country inventories developed as part of programs of the United Nations Framework Convention on Climate Change (UNFCCC). Worldwide man-made emissions of GHGs were approximately 49 billion metric tons CO_2e in 2010, including ongoing emissions from industrial and agricultural sources and emissions from land use changes (e.g., deforestation). Emissions of CO_2, primarily from fossil fuel use and industrial processes, account for 76 percent of total GHG (CO_2e) emissions. Methane emissions account for 16 percent and N_2O emissions for 6.2 percent. For comparison, worldwide emissions of GHGs in 1970 were 27 billion metric tons of CO_2e per year.[146]

United States Emissions Inventory

In 2018, the United States emitted about 6,677 MMT of CO_2e, with 75.4 percent of those emissions coming from fossil fuel combustion. Of the major sectors nationwide, transportation accounts for the highest amount of GHG emissions (approximately 28 percent), followed by electricity (27 percent), industry (22 percent), agriculture (10 percent), commercial and residential buildings (12 percent). Between 1990 and 2018, total US GHG emissions rose by 3.7 percent, but emissions have generally decreased since peaking in 2005. GHG emissions in 2018 are approximately 10 percent below 2005 levels. Since 1990, US emissions have increased at an average annual rate of 0.2 percent, however have been decreasing at an average annual rate of 0.7 percent since 2005.

[146] IPCC, Climate Change 2014: Synthesis Report, Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Summary for Policy Makers, 2014, page 5, http://ipcc.ch/report/ar5/syr/. Accessed February 14, 2021.

California Greenhouse Gas Emissions Inventory

CARB compiles GHG inventories for the State of California. Based on the year 2018 GHG inventory data (the latest year for which data are available), California emitted 425.3 $MMTCO_2e$ which includes emissions resulting from imported electrical power.[147] Between 1990 and 2018, the population of California grew by approximately 9.7 million (from 29.8 to 39.5 million).[148,149] This represents an increase of approximately 33 percent from 1990 population levels. In addition, the California economy, measured as gross state product, grew from $773 billion in 1990 to $2.99 trillion in 2018, representing an increase of almost four times the 1990 gross state product.[150] Despite the population and economic growth, California's net GHG emissions were reduced to below 1990 levels in 2016. According to CARB, the declining trend coupled with the state's GHG reduction programs (such as the Renewables Portfolio Standard, LCFS, vehicle efficiency standards, and declining caps under the Cap and Trade Program) demonstrate that California is on track to meet the 2020 GHG reduction target codified in HSC, Division 25.5, also known as AB 32 and amended by SB 32.[151].

147 CARB, Current California GHG Emission Inventory Data - 2000-2018 GHG Inventory (2020 Edition).

148 United States Census Bureau, National and State Population Estimates: 1990-1994, 1995; 2019 National and State Population Estimates.

149 California Department of Finance, American Community Survey, 2017, http://www.dof.ca.gov/Reports/Demographic_Reports/American_Community_Survey/documents/Web_ACS2017_Pop-Race.xlsx. Accessed February 14, 2021.

150 California Department of Finance, Gross State Product, http://www.dof.ca.gov/Forecasting/Economics/Indicators/Gross_State_Product/documents/CA_GDP.xlsx. Accessed February 14, 2021. Amounts are based on current dollars as of the date of the report (February 2021).

151 CARB, Frequently Asked Questions for the 2016 Edition California Greenhouse Gas Emission Inventory, 2016.

SECTION 2
Thresholds of Significance

The significance thresholds below are derived from the Environmental Checklist questions in Appendix G of the CEQA Guidelines. Accordingly, a significant impact associated with air quality would occur based on the following thresholds described below:

AIR-1: Conflict with or obstruct implementation of the applicable air quality plan;

AIR-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;

AIR-3: Expose sensitive receptors to substantial pollutant concentrations; or

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

A significant impact associated with GHG emissions would occur based on the following thresholds described below:

GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

GHG-2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

In addition to the Appendix G significant impacts listed above, cumulative impacts with respect to air quality, GHGs, and Energy are also addressed as part of the analysis.

Pursuant to CEQA Guidelines Section 15064.7, a lead agency may consider using, when available, significance thresholds established by the applicable air quality management district or air pollution control district when making determinations of significance. For purposes of this analysis, the potential air quality impacts of the project are assessed in accordance with the most recent thresholds adopted by the SCAQMD in connection with its CEQA Air Quality Handbook, Air Quality Analysis Guidance Handbook, and subsequent SCAQMD guidance, as discussed below.[152]

[152] While the SCAQMD CEQA Air Quality Handbook contains significance thresholds for lead, project construction and operation would not include sources of lead emissions and would not exceed the significance thresholds for lead. Unleaded fuel and unleaded paints have virtually eliminated lead emissions from projects. As a result, lead emissions are not further evaluated.

2.1 Regional Criteria Air Pollutant Emissions Thresholds

SCAQMD has established numerical significance thresholds for regional emissions during construction and operation. The numerical significance 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.[153]

Given that construction impacts are temporary, SCAQMD has established significance thresholds specific to construction activity. Based on the indicators in the SCAQMD CEQA Air Quality Analysis Handbook,[154] the Proposed Project would potentially cause or contribute to an exceedance of an ambient 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 emissions thresholds:[155]

- 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_X
- 150 pounds per day for PM10
- 55 pounds per day for PM2.5

SCAQMD has also established numeric significance thresholds for operations. SCAQMD has established significance thresholds in part based on CAA section 182(e), which identifies 10 tons per year of VOC and NO_X as a significance level for stationary source emissions in extreme non-attainment areas for ozone. The numeric significance thresholds for other pollutants are also based on federal major source thresholds, which vary depending on regional attainment status. For example, the Air Basin is in attainment for carbon monoxide, which yields a corresponding major source threshold of 100 tons per year, or 550 pounds per day.[156] These "major source" significance thresholds were developed under the Federal Title V Operating Permit Program.[157] SCAQMD converted these significance levels to pounds per day. The attainment status designation is based

[153] SCAQMD, CEQA Air Quality Handbook.

[154] SCAQMD, Air Quality Analysis Handbook. www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook. Accessed February 19, 2021.

[155] SCAQMD, SCAQMD Air Quality Significance Thresholds, revised 2019, www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf. Accessed February 19, 2021.

[156] USEPA, Title V Operating Permits, https://www.epa.gov/title-v-operating-permits/who-has-obtain-title-v-permit. Accessed February 19, 2021.

[157] SCAQMD, What is Title V?, http://www.aqmd.gov/home/permits/title-v/what-is-title-v-. Accessed February 19, 2021.

on the healthfulness of air quality and the corresponding significance thresholds are intended to be health protective.[158]

A similar approach is applied to PM2.5, where the daily limit of 55 pounds per day is based on the USEPA proposed rule to implement a PM2.5 NAAQS, with a significant emission rate of 10 tons per year.[159]

The Proposed Project would potentially cause or contribute to an exceedance of an ambient air quality standard if regional operational emissions exceed any of the following SCAQMD prescribed daily emissions thresholds:[160]

- 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_X,
- 150 pounds per day for PM10, and
- 55 pounds per day for PM2.5.

SCAQMD has set its CEQA significance threshold for NO_X and VOC at 10 tons per year (expressed as 55 lb/day). because the federal CAA defines a major stationary source for extreme ozone nonattainment areas such as SCAQMD as one emitting 10 tons/year.[161] Under the federal CAA, such sources are subject to enhanced control requirements,[162] so SCAQMD determined that 55 lb/day was an appropriate threshold for making a CEQA significance finding and requiring feasible mitigation. As, SCAQMD has stated:

> *"… a project source that emits 10 tons/year of NO_X or VOC is small enough that its regional impact on ambient ozone levels may not be detected in the regional air quality models that are currently used to determine ozone levels. Thus, in this case it would not be feasible to directly correlate project emissions of VOC or NO_X with specific health impacts from ozone."*[163]

Therefore, lead agencies that use SCAQMD thresholds of significance may determine that projects have a significant air quality impact and correspondingly are required to implement all feasible mitigation measures, yet are not able to correlate the project impact to quantifiable health effects.

[158] CARB, Air Quality Standards and Area Designations, https://www.arb.ca.gov/desig/desig.htm. Accessed February 19, 2021.

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

[160] SCAQMD, SCAQMD Air Quality Significance Thresholds.

[161] 42 U.S.C. §§ 75lla(e), 7511a(f); CAA §§ 182(e), 182(f)

[162] 42 U.S.C. §§ 7502(c)(5), 7503; CAA §§ 172(c)(5), 173

[163] SCAQMD, Amicus Brief in Support of Neither Party, *Sierra Club v. County of Fresno*, 2015.

2.2 Localized Significance Thresholds

SCAQMD published its Final Localized Significance Threshold Methodology in June 2003, (revised July 2008) and Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM2.5 Significance Thresholds in October 2006, recommending that all air quality analyses include a localized assessment of both construction and operational impacts on the air quality of nearby air quality sensitive receptors.[164,165] LSTs represent the maximum emissions from a project site that are not expected to result in an exceedance of a NAAQS or CAAQS. LSTs are based on the ambient concentrations of that pollutant within the SRA where a project is located and the distance to the nearest air quality sensitive receptor. LSTs are only applicable to the following criteria air pollutants: NO_X, CO, PM10, and PM2.5. As previously stated, the Project Site is located in the northern portion of SRA 8 (West San Gabriel Valley).[166]

The Basin is in attainment for NO_2 and CO, meaning their ambient concentrations are below their respective air quality standards. When evaluating localized impacts for NO_2 and CO, the local ambient concentrations and the Proposed Project related concentrations are summed and then compared to the NAAQS and CAAQS. If the sum of the ambient concentrations and Proposed Project concentrations are greater than the air quality standard, this would result in a significant impact.

The Basin is in nonattainment for PM10 and PM2.5, meaning their ambient concentrations are above their respective air quality standards. If ambient levels already exceed a NAAQS or CAAQS, then project impacts may be considered significant if they increase ambient concentrations in excess of the allowable increase established by SCAQMD. This would apply to PM10 and PM2.5, both of which are nonattainment pollutants in the Basin. For these latter two pollutants, the significance criteria are the pollutant concentration thresholds presented in SCAQMD Rules 403 and 1301. The Rule 403 threshold of 10.4 $\mu g/m^3$ applies to construction emissions (and may apply to operational emissions at aggregate handling facilities). The Rule 1301 threshold of 2.5 $\mu g/m^3$ applies to non-aggregate handling operational activities.

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 the screening criteria to evaluate impacts from localized emissions. If the Project would result in exceedance of the following screening criteria LSTs for the above pollutants, this would constitute a significant impact, unless dispersion modeling demonstrates no exceedance of the concentration based standards.

- Construction:[167]

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

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

[166] SCAQMD, Map of Monitoring Areas, http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf. Accessed February 19, 2021.

[167] SCAQMD, Appendix C - Mass Rate LST Look-up Table, 2009, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds. Accessed February 19, 2021.

- 43 pounds per day for NO_X[168]
- 882 pounds per day for CO
- 13 pounds per day for PM10
- 4 pounds per day for PM2.5

- Operation:[169]
  - 43 pounds per day for NO_X[170]
  - 882 pounds per day for CO
  - 4 pounds per day for PM10
  - 1 pound per day for PM2.5

2.3 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:[171]

- The Project would emit 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 1 in 1 million) or an acute or chronic hazard index of 1.0.

As discussed in the methodology, construction and operational impacts from TACs are evaluated qualitatively in this analysis.

2.4 CO Hotspots

Emissions of CO are generated in greatest quantities from motor vehicle combustion of fossil fuels, and are usually concentrated at or near ground level because they do not readily disperse into the atmosphere, particularly under cool, stable (i.e., low or no wind) atmospheric conditions. Localized areas where ambient concentrations exceed state and/or federal standards are termed CO hotspots. The potential for the Project to cause or contribute to the formation of offsite CO hotspots are

168 The screening criteria for NOx were developed based on the 1-hour NO_2 CAAQS of 0.18 ppm. However, since the publication of the SCAQMD's guidance, the USEPA has promulgated a 1-hour NO_2 NAAQS of 0.100 ppm based on a 98th percentile value, which is more stringent than the CAAQS. In order to determine if Project emissions would result in an exceedance of the 1 hour NO_2 NAAQS, an approximated LST was estimated to evaluate the federal 1-hour NO_2 standard, as the SCAQMD significance threshold has not been updated to reflect this standard. Calculated by scaling the NO_2 LST for by the ratio of 1-hour NO_2 standards (federal/state) (i.e., 221 lb/day * (0.10/0.18) =123 lb/day).

169 SCAQMD, Appendix C - Mass Rate LST Look-up Table.

170 The screening criteria for NOx were developed based on the 1-hour NO_2 CAAQS of 0.18 ppm. However, since the publication of the SCAQMD's guidance, the USEPA has promulgated a 1-hour NO_2 NAAQS of 0.100 ppm based on a 98th percentile value, which is more stringent than the CAAQS. In order to determine if Project emissions would result in an exceedance of the 1 hour NO_2 NAAQS, an approximated LST was estimated to evaluate the federal 1-hour NO2 standard, as the SCAQMD significance threshold has not been updated to reflect this standard. Calculated by scaling the NO_2 LST for by the ratio of 1-hour NO_2 standards (federal/state)(i.e., 221 lb/day * (0.10/0.18) =123 lb/day).

171 SCAQMD, 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 February 19, 2021.

evaluated based on prior dispersion modeling of the four busiest intersections in the SCAB that has been conducted by SCAQMD for its CO Attainment Demonstration Plan in the AQMP. SCAQMD conducted CO modeling for the 2003 AQMP for the four worst-case intersections in the SCAB that include: Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; La Cienega Boulevard and Century Boulevard; and Long Beach Boulevard and Imperial Highway. In the 2003 AQMP, 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 approximately 100,000 vehicles per day. This intersection is located near the on- and off-ramps to Interstate (I) 405 in Westwood. 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 at these four intersections was 4.6 ppm (1-hour average) and 3.2 (8-hour average) at Wilshire Boulevard and Veteran Avenue. When added to the existing background CO concentrations, the screening values would be 7.6 ppm (1-hour average) and 5.6 ppm (8-hour average). Project-impacted intersections with peak-hour traffic volumes that are lower than the intersections modeled by SCAQMD, in conjunction with lower background CO levels, would result in lower overall CO concentrations compared to the SCAQMD modeled values in its AQMP.

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.

Based on the SCAQMD's 2003 AQMP CO hotspot analysis as discussed above, a screening level of 100,000 vehicles per day through an intersection would result in less than significant localized CO impacts. Therefore, any intersection that does not exceed 100,000 vehicles per day would not have the potential to exceed the CAAQS.

2.5 Health Impacts

In *Sierra Club v. County of Fresno* (S219783) (Sierra Club) the Supreme Court held that CEQA requires lead agencies to either (i) make a "reasonable effort" to substantively connect the estimated amount of a given air pollutant a project will produce and the health effects associated with that pollutant, or (ii) explain why such an analysis is infeasible (6 Cal.5th at 1165-66). However, the Court also clarified that that CEQA "does not mandate" that EIRs include "an in-depth risk assessment" that provides "a detailed comprehensive analysis … to evaluate and predict the dispersion of hazardous substances in the environment and the potential for exposure of human populations and to assess and quantify both the individual and population wide health risks associated with those levels of exposure (*Sierra Club v. County of Fresno*. 6 Cal.5th 502, 517-522 (2018))."

USEPA and CARB have established AAQS at levels above which concentrations could be harmful to human health and welfare, with an adequate margin of safety. Further, California air districts, like SCAQMD, have established emission-based thresholds that provide project-level estimates of criteria air pollutant quantities that air basins can accommodate without affecting the attainment dates for the AAQS, and therefore, providing thresholds of significance for regional and localized

air quality impacts from both construction and operation of projects. SCAQMD thresholds take into account that the Air Basin is a distinct geographic area that has critical air pollution problems for which AAQS have been established to protect human health and welfare.[172]

Typically, the health effect of a particular criteria pollutant is analyzed by air districts on a regional scale based on how close the area is to attaining the NAAQS. As shown by the attainment plan emissions data, it takes a large amount of additional precursor emissions to demonstrate a modeled increase in ambient levels over an entire region. Because air districts' attainment plans and supporting air model tools are regional in nature, they are not typically used to evaluate the impacts to ambient concentrations of criteria air pollutants, or to correlate those impacts to the potential resultant impacts to public health effects, from an individual project. The complex nature of criteria air pollutant dispersion and the complex atmospheric chemistry that occurs (especially in the case of ozone and fine particulate matter) limits the usefulness of applying the available models to predict health effects at a project-level. Therefore, correlating a project's criteria air pollutant emissions to specific health effects, particularly with respect to ozone, is speculative.

Generally, models that correlate criteria air pollutant concentrations with specific health effects focus on regulatory decision-making that will apply throughout an entire air basin or region. These models focus on the region-wide health effects of pollutants so that regulators can assess the costs and benefits of adopting a proposed regulation that applies to an entire category of air pollutant sources, rather than the health effects related to emissions from a specific project or source. Because of the scale of these analyses, any one project is likely to have only very small incremental effects which may be difficult to differentiate from the effects of air pollutant concentrations in an entire air basin. In addition, such modeling efforts are costly, and the value of a project-specific analysis may be modest in relation to that cost. Furthermore, the results, while costly to produce, may not be particularly useful. For regional pollutants, it is difficult to trace a particular project's criteria air pollutant emissions to a specific health effect. Moreover, the modeled results may be misleading because the margin of error in such modeling is large enough that, even if the modeled results report a given health effect, the model is sufficiently imprecise that the actual effect may differ from the reported results; that is, the modeled results suggest precision, when in fact available models cannot be that precise on a project level.

Writing as amicus curiae in Sierra Club, the SJVAPCD explained that "[r]unning the photochemical grid model used for predicting ozone attainment with emissions solely from one project would thus not be likely to yield valid information given the relative scale involved".[173] Ozone is not directly emitted into the air, but is instead formed as ozone precursors undergo complex chemical reactions through sunlight exposure.[174] Given the complex nature of this

[172] SCAQMD, SCAQMD Air Quality Significance Thresholds.

[173] SJVAPCD. 2015. Application for Leave to File Brief of Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party In Interest and Respondent, Friant Ranch, L.P. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

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

process, and the fact that ozone can be transported by wind over long distances, "a specific tonnage amount of NOx or VOCs emitted in a particular area does not equate to a particular concentration of ozone in that area".[175] For this reason, the photochemical analysis for ozone is done on a regional scale, and it is inappropriate to analyze ozone impacts at a local or project-level basis because a localized analysis would at most be speculative, and at worst be misleading.

Speculative analysis is not required by CEQA. The SJVAPCD stated that even a project with criteria pollutant emissions above its CEQA thresholds does not necessarily cause localized human health effects as, even with relatively high levels of emissions, the SJVAPCD cannot determine "whether and to what extent emissions from an individual project directly impact human health in a particular area".[176] The SCAQMD also, as amicus curiae in Sierra Club, made similar points, reiterating that "an agency should not be required to perform analyses that do not produce reliable or meaningful results".[177] With regard to particulate matter, the SCAQMD noted that while the CARB has created a methodology to predict expected mortality from large amount of PM2.5, the primary author of the methodology has reported that it "may yield unreliable results due to various uncertainties" and CARB staff has been directed by its Governing Board to reassess and improve it, which factor "also counsels against setting any hard-and-fast rule" about conducting this type of analysis.[178] SCAQMD agrees that it is very difficult to quantify health effects, opining that the only possible means of successfully doing so is for a project so large that emissions would essentially equate to levels comparable to all combined regional emission increases.[179] Because the Proposed Project would not emit that magnitude of daily emissions, the usage of photochemical modeling to determine specific health effects of this individual project is not warranted.

The mass emissions thresholds developed by the SCAQMD and used by CEQA lead agencies throughout the SCAQMD to determine potential significance of project-related regional changes in the environment are not directly indicative of exceedances of applicable ambient air standards. Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone or PM. The effects on ground-level ambient concentrations of pollutants that may be breathed by people are also influenced by the spatial and temporal patterns of the emission sources. In other words, the effect on ozone and PM

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

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

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

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

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

concentrations from a given mass of pollutants emitted in one location may vary from the effect if that same mass of pollutants was emitted in an entirely different location in the Air Basin. The same effect may be observed when the daily and seasonal variation of emissions is taken into account. Regional-scale photochemical modeling, typically performed only for NAAQS attainment demonstration and rule promulgation, account for these changes in the spatial, temporal, and chemical nature of regional emissions.

As an example of the relationship between modeled regional mass emissions and modeled air basin pollutant concentrations, the most recent EPA-approved SCAQMD basin-wide emissions inventory shows VOC emissions at 162.4 tons per day and NOx emissions at 293.1 tons per day for the baseline year of 2012.[180] SCAQMD's AQMP shows that reducing the baseline 2008 NO_X and VOC emissions by 432 tons per day and 187 tons per day respectively, would only reduce ozone levels at the monitor stations with the greatest ozone concentrations by 9 parts per billion (ppb).[181] Additionally, SCAQMD modeling that accounts for increases in emissions due to new or modified sources within the SCAQMD between 2010 and 2030 show an increase of 6,620 pounds per day of NOx and 89,947 pounds per day of VOC. The results of this analysis show that this level of daily pollutant increase would only increase ozone concentrations in the Air Basin by 2.6 ppb and less than 1 ppb of NO_2.[182]

Currently, the health impact of a particular criteria air pollutant is analyzed by air districts on a regional scale based on how close the area is to attaining the NAAQS. Such an analysis has generally not been performed at the project level. The SCAQMD states that an exceedance of the significance thresholds does not necessarily cause localized human health effects as, even with relatively high levels of emissions. However, the Air Basin is a distinct geographic area that has critical air pollution problems for which AAQS have been established to protect human health and welfare. Therefore, analyzing a project against these thresholds conservatively assesses whether these emissions directly contribute to regional or local exceedances of AAQS and assesses their potential to be harmful to human health. Thus, in order to determine the potential for adverse health effects, project emissions are compared to the SCAQMD's regional emissions thresholds of significance.

2.6 Greenhouse Gas

Amendments to Section 15064.4 of the CEQA Guidelines were adopted to assist lead agencies in determining the significance of the impacts of GHG emissions. Consistent with existing CEQA practice, Section 15064.4 gives lead agencies the discretion to determine whether to assess those emissions quantitatively or qualitatively. If a qualitative analysis is used, in addition to quantification, this section recommends certain qualitative factors that may be used in the determination of significance (i.e., extent to which the project may increase or reduce GHG

[180] SCAQMD, Final 2016 AQMP.

[181] SCAQMD, Final 2012 Air Quality Management Plan. February 2013, http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/aqmp-archive. Accessed February 21, 2021.

[182] SCAQMD, Final Program Environmental Assessment for Re-Adoption of Proposed Rule 1315, page 1-11, https://www.aqmd.gov/home/research/documents-reports/lead-agency-scaqmd-projects/aqmd-projects---year-2011/re-adoption-of-proposed-rule-1315. Accessed February 21, 2021.

emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and extent to which the project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs). The amendments do not establish a threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), so long as any threshold chosen is supported by substantial evidence (see Section 15064.7(c)). The California Natural Resources Agency has also clarified that the State CEQA Guidelines amendments focus on the effects of GHG emissions as cumulative impacts, and that they should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see Section 15064(h)(3)).

The justification for the quantitative threshold is provided in SCAQMD's *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans* ("SCAQMD Interim GHG Threshold"). The SCAQMD Interim GHG Threshold identifies a screening threshold to determine whether additional analysis is required. As stated by the SCAQMD:

> *the…screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects…the policy objective of [SCAQMD's] recommended interim GHG significance threshold proposal is to achieve an emission capture rate of 90 percent of all new or modified stationary source projects. A GHG significance threshold based on a 90 percent emission capture rate may be more appropriate to address the long-term adverse impacts associated with global climate change because most projects will be required to implement GHG reduction measures. Further, a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. This assertion is based on the fact that [SCAQMD] staff estimates that these GHG emissions would account for slightly less than one percent of future 2050 statewide GHG emissions target (85 [MMTCO$_2$e per year]). In addition, these small projects may be subject to future applicable GHG control regulations that would further reduce their overall future contribution to the statewide GHG inventory. Finally, these small sources are already subject to [Best Available Control Technology (BACT)] for criteria pollutants and are more likely to be single-permit facilities, so they are more likely to have few opportunities readily available to reduce GHG emissions from other parts of their facility.*

Thus, based on guidance from the SCAQMD, if a mixed use project would emit GHGs less than 3,000 MTCO$_2$e per year, the project would not be considered a substantial GHG emitter and GHG emission impact would be less than significant, requiring no additional analysis and no mitigation.

In addition, the Project would not have a significant effect on the environment if the Project is found to be consistent with the applicable regulatory plans and policies to reduce GHG emissions, including the emissions reduction measures discussed within CARB's Climate Change Scoping Plan, SCAG's 2016 RTP/SCS and 2020-2045 RTP/SCS, and the City of La Cañada Flintridge polices established for the purpose of reducing GHG emissions for new developments by increasing energy efficiency, conserving water, and reducing solid waste.

CEQA Guidelines 15064.4 (b)(1) states that a lead agency may use a model or methodology to quantify GHGs associated with a project. In September 2016, the SCAQMD in conjunction with CAPCOA released the latest version of the CalEEMod (Version 2016.3.2). The purpose of this model is to estimate construction-source and operational-source emissions from direct and indirect sources. Accordingly, the latest version of CalEEMod has been used for this project to estimate the project's emission impacts.

SECTION 3
Impact Analysis

3.1 Methodology

The evaluation of potential impacts to regional and local air quality that may result from the construction and long-term operations of the Proposed Project is discussed below.

3.1.1 Construction Impacts

Regional Construction Emissions

Project construction activities that would have the potential to create regional air quality impacts including vehicle trips generated by construction workers, vendor trucks, and haul trucks traveling to and from the Proposed Project site and building activities such as the application of paint and other surface coatings. The Proposed Project's daily regional criteria pollutant emissions during construction have been estimated by assuming a conservative scenario for construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors.

The emissions have been estimated using the CalEEMod software, an emissions inventory software program recommended by the SCAQMD for off-road construction equipment emissions.[183] On-road mobile source emissions were estimated using the 2017 CARB on-road vehicle emissions factor model (EMFAC) and incorporating the adjustment factors for the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part I: One National Program (SAFE Rule Part I).

Project construction is estimated to start in March 2022 and continue for approximately 15 months, ending in May 2023. Construction phasing would include site preparation, demolition, grading, excavation, utilities installation, concrete pouring, building construction, landscaping, and architectural coating. The Proposed Project is anticipated to export approximately 1,646 cubic yards (cy) of demolition debris and approximately 19,000 cy of soil. Worker and vendor deliveries vary by phase with a maximum of 30 worker vehicles and 7 vendor trucks accessing the site daily.

[183] CalEEMod was developed in collaboration with the air districts of California and is recommended by SCAQMD for evaluating GHG emissions for projects under CEQA. Regional data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) were provided by the various California air districts to account for local requirements and conditions. According to CAPCOA, the model is an established, accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.

The input values used in this analysis are based on CalEEMod default information and applicant provided. Haul, vendor and worker trips are based on CalEEMod default estimates based on equipment use.

Emissions from Proposed Project construction activities were estimated based on the construction phase in which the activity would be occurring. The maximum daily emissions estimate the worst-case day and do not represent the emissions that would occur for every day of Proposed Project construction. The maximum daily emissions are compared to SCAQMD daily regional thresholds of significance. Emissions calculations and modeling output are included in Appendix A of this technical report.

Localized Construction Emissions

Proposed project construction activities that would have the potential to create local air quality impacts including fugitive dust from demolition, grading, and building activities such as the application of paint and other surface coatings. The localized effects from the on-site portion of the Proposed Project's construction emissions were evaluated at the nearby sensitive receptor locations that would be potentially impacted by Proposed Project construction in accordance with the SCAQMD's *Final Localized Significance Threshold Methodology* (June 2003, revised July 2008). The localized significance thresholds only address NO_X, CO, PM10, and PM2.5 emissions. The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards without the need for Proposed Project-specific dispersion modeling. The localized analysis for the Proposed Project is based on this SCAQMD screening criteria. The maximum daily onsite emissions from construction of the Proposed Project were compared to these screening criteria. To provide a conservative assessment of localized construction and operational emissions, the screening criteria used in the analysis were linearly interpolated based on those applicable to 1 and 2-acre sites, in the SRA 8 (West San Gabriel Valley) area with sensitive receptors located 50 meters (164 feet) away. The maximum daily emissions from construction of the Project were compared to these screening criteria. Emissions calculations and modeling output are included in Appendix A of this technical report.

Greenhouse Gas Emissions

The evaluation of potential impacts to GHG emissions that may result from the construction of the Proposed Project is consistent with CEQA Guidelines Section 15064.4(a) and recent related guidance from OPR. This analysis considered GHG emissions resulting from construction activities associated with the Proposed Project as detailed under Regional Construction Emissions above. Because potential impacts resulting from GHG emissions would be long-term rather than acute, GHG emissions were calculated on an annual basis. In accordance with SCAQMD guidance, GHG emissions from construction have been amortized (i.e., averaged annually) over the lifetime of the project. SCAQMD defines the lifetime of a project as 30 years. Therefore, the project's total construction GHG emissions are divided by 30 to determine an annual construction emissions estimate comparable to operational emissions.

GHG quantification methods rely on guidance from State and regional agencies with scientific expertise in quantifying GHG emissions, including CARB and SCAQMD. Along with the air quality emissions, GHG emissions were estimated using CalEEMod Version 2016.3.2 for off-road construction equipment and Safe Rule 1 adjusted EMFAC2017 emissions for on-road vehicles as detailed above. Emissions calculations and modeling output are included in Appendix A of this technical report.

3.1.2 Operational Impacts

Regional Operational Emissions

Operation of the Project would generate criteria pollutant emissions from Project-generated vehicles trips traveling to and from the Project Site, energy sources on-site such as natural gas combustion, area sources such as landscaping equipment and use of consumer products including solvents used in non-industrial applications which emit VOCs during their product use, such as cleaning supplies and kitchen aerosols. Operational impacts were assessed for the first full Project buildout year (i.e., as early as 2024 assuming construction begins at the earliest possible time anticipated in the first quarter of 2022).

The operational emissions are also estimated using the CalEEMod software. CalEEMod was used to forecast the Project's daily regional emissions from area sources that would occur during long-term Project operations. Mobile source emissions are estimated based on EMFAC2017 model. Mobile source emissions are based on the vehicle emission factors from EMFAC2017 and the default trip length values for the project land uses in CalEEMod, which are Air Basin-wide average trip distance values. Weekday, Saturday, and Sunday daily trip generation rates were taken from the project's Trip Generation Analysis Memorandum.[184] The existing average daily trip rate was used in place of the peak daily trip rate because the Sunday trip rate for the Church land use was approximately three times higher than the weekday or Saturday trip rates. Therefore, use of the existing average daily trip rate represents a conservative net mobile emissions calculation.

Area source emissions are based on natural gas (building heating and water heaters), landscaping equipment, and consumer product usage rates provided in CalEEMod. Natural gas usage factors in CalEEMod were based on the California Energy Commission California Commercial End Use Survey (CEUS) data set, which provides energy demand by building type and climate zone. However, since the data from the CEUS is from 2002, correction factors were incorporated into CalEEMod to account for the most recent 2019 Title 24 Building Energy Efficiency Standards that would be applicable to the Project.

Localized Operational Emissions

The localized effects from the onsite portion of the operational emissions are evaluated at nearby sensitive receptor locations potentially impacted by the Project according to the SCAQMD's LST methodology, which relies on on-site mass emission rate screening tables and project-specific dispersion modeling, where appropriate. Similar to construction, the SCAQMD LST screening

[184] Gibson Transportation Consulting, Inc., Trip Generation Analysis for the Refinements to the 600 Foothill Boulevard Project, December 11, 2020, Revised April 15, 2021, Table 1.

criteria used in the analysis were linearly interpolated based on those applicable to 1 and 2-acre sites, in the SRA 8 (West San Gabriel Valley) area with sensitive receptors located 50 meters (164 feet) away.

Carbon Monoxide Hotspots

The greatest quantities of CO are produced from motor vehicle combustion and are usually concentrated at or near ground level because they do not readily disperse into the atmosphere, particularly under cool, stable (i.e., low or no wind) atmospheric conditions. Localized areas where ambient concentrations exceed State and/or federal standards are termed "CO hotspots."

As shown previously in Table 5, CO levels in the Project area are substantially below the federal and state standards. Maximum CO levels in recent years are 2.2 ppm or less (one-hour average) and 1.7 ppm or less (eight-hour average) compared to the thresholds of 20 ppm (one-hour average) and 9.0 ppm (eight-hour average). CO levels decreased dramatically in the Air Basin with the introduction of the catalytic converter in 1975. No exceedances of CO have been recorded at monitoring stations in the Air Basin for some time and the Air Basin is currently designated as a CO attainment area for both the CAAQS and NAAQS. Thus, it is not expected that CO levels at Project-impacted intersections would rise to the level of an exceedance of these standards.

Additionally, SCAQMD conducted CO modeling for the 2003 AQMP for the four worst-case intersections in the Air Basin: (1) Wilshire Boulevard and Veteran Avenue; (2) Sunset Boulevard and Highland Avenue; (3) La Cienega Boulevard and Century Boulevard; and (4) Long Beach Boulevard and Imperial Highway. In the 2003 AQMP, 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 approximately 100,000 vehicles per day. This intersection is located near the on- and off-ramps to Interstate 405 in West Los Angeles. The evidence provided in the 2003 AQMP (Table 4-10 of Appendix V) shows that the peak modeled CO concentration due to vehicle emissions at these four intersections was 4.6 ppm (one-hour average) and 3.2 (eight-hour average) at Wilshire Boulevard and Veteran Avenue. When added to the existing background CO concentrations, the screening values would be 6.6 ppm (one-hour average) and 4.6 ppm (eight-hour average).

Average daily traffic counts were provided for the Project area. Significance is determined by comparing the average daily traffic counts at each intersection from the cumulative plus project scenario to the 100,000 vehicle per day screening level identified above. If the Project results in less than 100,000 vehicles per day at any intersection, it is assumed the Project would not result in a CO hotspot.

Greenhouse Gas Emissions

Operation of the Project would generate GHG emissions from on-site operations such as natural gas combustion for heating/cooking, landscaping equipment and the use of consumer products. CalEEMod was used to estimate operational GHG emissions from electricity, natural gas, solid waste, water and wastewater, and landscaping equipment. GHG emissions would also be generated

by Project-generated vehicle trips. Operational impacts were assessed for the full Project buildout year of 2024.

With regard to energy demand, the consumption of fossil fuels to generate electricity and to provide heating and hot water generates GHG emissions. Energy demand rates were estimated based on specific square footage of the residential, hotel, and commercial uses, as well as predicted water supply needs for these uses. The Project electricity demands are supplied by SCE. CalEEMod default intensity factors for CO_2, CH_4, and N_2O for SCE were used to calculate an overall CO_2e intensity factor. For 2017, SCE had 32 percent renewables and this was used to back calculate a CO_2 intensity factor where SCE had zero percent renewable. This value was then adjusted to reflect a CO_2 intensity factor with 46.7 percent renewables. Building electricity and natural gas usage rates were adjusted to account for the 2019 Title 24 Building Energy Efficiency Standards.

Mobile emissions were estimated based on emission factors from EMFAC along with VMT calculated from the daily trip generation rates in the provided traffic information to estimate on-road mobile source GHG emissions, as described above.

GHG emissions from solid waste disposal are also calculated using CalEEMod. Emissions are based on solid waste calculated for the Project and the GHG emission factors for solid waste decomposition. The GHG emission factors, particularly for CH_4, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. The default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery) are statewide averages and are used in this assessment. In addition, it was assumed 65 percent of solid waste will be diverted from landfills.

Emissions of GHGs from water and wastewater result from the required energy to supply and distribute the water and treat the wastewater. Wastewater also results in emissions of GHGs from wastewater treatment systems. Emissions were calculated using CalEEMod and were based on the water usage rate for the land uses, the electrical intensity factors for water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider, and the emission factors for the wastewater treatment process. Water consumption and wastewater generation were based on CalEEMod defaults.

Other sources of GHG emissions from operation of the Project include equipment used to maintain landscaping, such as lawnmowers and trimmers. The CalEEMod software uses landscaping equipment GHG emission factors from the CARB OFFROAD model and the CARB Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment (6/13/2003). CalEEMod default emission rates were used in calculating GHG emissions from these additional sources.

Operational GHG impacts are assessed based on the Project-related incremental increase in GHG emissions compared to baseline conditions. Under CEQA, the baseline environmental setting is established as the time the Notice of Preparation.

Consistency with Greenhouse Gas Reduction Plan, Policies, and Actions

The Project's GHG emissions are also evaluated by assessing the Project's consistency with applicable GHG reduction strategies and local actions adopted by the City of La Cañada Flintridge. As discussed previously, the City has adopted a Climate Action Plan which contains targets that include a 15 percent reduction below 2007 levels by 2020 and a 58 percent reduction below 2007 levels by 2035. The trajectory set aims for the City to exceed the 2030 target (175,309 MT CO_2e) by approximately 6 percent (164,595).[185] The proposed project would incorporate GHG reduction measures that are consistent with the CAP by increasing energy efficiency, conserving water, and reducing solid waste.

In addition, the California CAT Report provides recommendations for specific emission reduction strategies for reducing GHG emissions and reaching the targets established in AB 32 and Executive Order S-3-05. Thus, if the Project is designed in accordance with these policies and regulations, it would result in a less than significant impact, because it would be consistent with the overarching State regulations on GHG reduction (AB 32).

3.1.4 Cumulative Impacts

Air Quality

A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or California non-attainment pollutant. Because the City of La Cañada Flintridge portion of the Air Basin is currently in non-attainment for ozone, PM10, and PM2.5, 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 as detailed under the construction analysis above.

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's adopted 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. Operational air quality impacts are therefore assessed based on the incremental increase in emissions compared to baseline conditions. Under CEQA, the baseline environmental setting for an Initial Study (IS) is established at or around the time that the Notice of Preparation for the IS was published. As discussed previously, the Project Site is currently occupied by two buildings used as a sanctuary and reading room, surface parking, and ornamental landscaping. Baseline emissions for these existing uses were calculated and subtracted from the Project emissions to demonstrate the increase from baseline conditions. The maximum daily

[185] City of La Cañada Flintridge, Climate Action Plan, 2016, https://cityoflcf.org/wp-content/uploads/2020/01/LCF_Env_Action_Plan_2016.pdf. Accessed February 21, 2021.

emissions net emissions from operation of the Project are compared to the SCAQMD daily regional numeric thresholds.

Greenhouse Gas

CEQA requires that lead agencies consider the cumulative impacts of GHG emissions from even relatively small (on a global basis) increases in GHG emissions. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable and therefore significant. In the case of global climate change, the proximity of the Project to other GHG emission generating activities is not directly relevant to the determination of a cumulative impact because climate change is a global condition. As stated above, GHG emission impacts are, by their very nature cumulative, as both the California Natural Resources Agency and CAPCOA have recognized.[186] Therefore, an analysis of a project's GHG emission impacts also serves as a cumulative impact assessment.

3.2 Air Quality Impacts

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

Impact AIR-1

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

The Proposed 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 Proposed Project. Projects that are consistent with the regional population, housing, and employment forecasts identified by SCAG are considered to be consistent with the AQMP growth projections, since the forecast assumptions by SCAG forms the basis of the land use and transportation control portions of the AQMP. Additionally, because SCAG's regional growth forecasts are based upon, among other things, land uses designated in general plans, a project that is consistent with the land use designated in a general plan would also be consistent with the SCAG's regional forecast projections, and thus also with the AQMP growth projections.

Construction

The Proposed Project would result in an increase in short-term employment compared to existing conditions. Also, construction employees are typically employees of the construction firm and are not hired specifically for any one construction job. Being relatively small in number and temporary in nature, construction jobs under the project would not conflict with the long-term employment projections upon which the AQMP is based. Control strategies in the AQMP with applicability to short-term emissions from construction activities include strategies denoted in the 2016 AQMP as MOB-08 and MOB-10 and are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment by accelerating replacement of older, emissions-prone engines with newer

[186] CAPCOA, CEQA & Climate change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, 2008.

engines meeting more stringent emission standards. Construction contractors would be required to comply with the CARB Air Toxic Control Measure that limits heavy duty diesel motor vehicle idling to no more than five minutes at any given location with certain limited exceptions defined in the regulation for equipment in which idling is integral to the function of the equipment or activity (such as concrete trucks and concrete pouring). In addition, contractors would be required to comply with required and applicable BACT and the CARB In-Use Off-Road Diesel Vehicle Regulation to use lower emitting equipment in accordance with the phased-in compliance schedule for equipment fleet operators. The Project would not conflict with implementation of these strategies. The Project is also required to comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403. Compliance with these requirements is consistent with and meets or exceeds the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities.

As discussed further below in the analysis for Impact AIR-2, in addition to the Proposed Project being consistent with applicable strategies in the AQMP, local and state regulations, and other voluntary measures designed to reduce non-attainment pollutants, regional emissions during construction of the Proposed Project would not exceed the significance threshold for any criteria pollutants. Therefore, impacts related to consistency with air quality plans during construction of the Proposed Project would be less than significant.

Operation

The AQMP was prepared to accommodate growth, reduce the levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are considered consistent with the AQMP would not interfere with attainment because this growth is included in the projections used in the formulation of the AQMP. The Project would include a multi-family residential uses.

The Project would generate indirect growth associated with the 47 new dwelling units. As such, the 47 new units would result in approximately 140 new residents. Even if all residents accommodated by the Proposed Project are new to the City, this represents only 1.5 percent of the projected increase in population between 2016 and 2045 for the City.[187] As such, the Project would not generate growth beyond the range of development anticipated within the established SCAG regional forecast. The Project would not increase or induce residential density growth not otherwise anticipated. Consequently, the Project would not foster growth inducing impacts.

The 2016 AQMP was prepared to accommodate growth, reduce the levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are considered consistent with the AQMP would not interfere with attainment because this growth is included in the projections used in the formulation of the AQMP. As detailed in *Impact AIR-2* below and shown in Table 10, the projected operational emissions would not exceed the SCAQMD's regional significance thresholds. As a result, the Project would

[187] SCAG, Connect SoCal, Demographics and Growth Forecast Technical Report, page 34.

not conflict with or obstruct implementation of the AQMP. Therefore, regional operational impacts would be less than significant.

Mitigation:

None Required

Significance Determination: Less than Significant.

Threshold AIR-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 AIR-2

Implementation of the Proposed 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)

The Proposed Project would contribute to local and regional air pollutant emissions during construction (short-term or temporary) and operation (long-term).

Construction

Regional Emissions Analysis

Construction of the Proposed Project has the potential to generate temporary regional criteria pollutant emissions through the use of heavy-duty construction equipment, such as grader, excavator, rubber tired dozer, crane, concrete/industrial saws, and loaders, and through vehicle trips generated by workers and haul trucks traveling to and from the Proposed Project site, and through building activities such as the application of paint and other surface coatings. In addition, fugitive dust emissions would result from site preparation and various soil-handling activities. Mobile source emissions, primarily NO_X, would result from the use of construction equipment such as excavators, 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 maximum daily construction emissions for the Proposed Project were estimated for each construction phase. Some individual construction phases could potentially overlap; therefore, the estimated maximum daily emissions include these potential overlaps by combining the relevant construction phase emissions. The maximum daily emissions are predicted values for a representative worst-case day, and do not represent the actual emissions that would occur for every day of construction, which would likely be lower on many days. As stated above construction emissions were modeled beginning in March 2022. Detailed emissions calculations are provided in Appendix A of this report.

The results of the criteria pollutant calculations are presented in **Table 6,** *Estimated Maximum Unmitigated Regional Construction Emissions,* and include dust control measures required to be implemented by SCAQMD Rule 403 (Control of Fugitive Dust), including subsection (e) – Additional Requirements for Large Operations, and fugitive VOC control measures required to be implemented by architectural coating emission factors based on SCAQMD Rule 1113 (Architectural Coatings). As shown in Table 6, construction-related daily emissions would not exceed the SCAQMD threshold of significance for any criteria pollutant. Therefore, regional construction emissions impacts would be less-than-significant.

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

	Emissions (pounds per day)					
Year	**VOC**	**NO_X**	**CO**	**SO_X**	**PM10**	**PM2.5**
Construction Phases						
Demolition – 2022	2	20	16	<1	2	1
Site Preparation – 2022	1	15	8	<1	3	2
Grading/Excavation – 2022	4	65	34	<1	8	4
Drainage/Utilities/Trenching - 2022	1	6	5	<1	<1	<1
Foundations/Concrete Pour - 2022	1	24	16	<1	2	1
Building Construction - 2022	1	9	11	<1	1	1
Building Construction - 2023	1	8	10	<1	1	1
Landscaping - 2023	<1	2	3	<1	<1	<1
Architectural Coating - 2023	14	2	2	<1	<1	<1
Overlapping Phases						
Grading/Excavation – 2022 and Drainage/Utilities/Trenching - 2022	4	70	40	<1	8	4
Drainage/Utilities/Trenching – 2022 and Foundations/Concrete Pour – 2022	2	30	21	<1	2	1
Landscaping – 2023 and Architectural Coating – 2023	14	4	5	<1	1	<1
Maximum Daily Regional Emissions	**14**	**70**	**40**	**<1**	**8**	**4**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

SOURCE: ESA, 2021.

Operations

Regional Emissions Analysis

As discussed under methodology above, operation of the Project would generate criteria pollutant emissions from Project-generated vehicles trips traveling to and from the Project Site, energy sources on-site such as natural gas combustion, area sources such as landscaping equipment and use of consumer products including solvents used in non-industrial applications which emit VOCs during their product use, such as cleaning supplies and kitchen aerosols. Detailed emissions calculations are provided in Appendix A of this report.

Results of the criteria pollutant calculations are presented in **Table 7**, *Unmitigated Regional Maximum Daily Operational Emissions*. The increase in operational-related daily emissions for the criteria and precursor pollutants (VOC, NO_X, CO, SO_X, PM10, and PM2.5) would not exceed the SCAQMD threshold of significance for any non-attainment pollutants. Therefore, impacts would be less than significant.

TABLE 7
UNMITIGATED REGIONAL MAXIMUM DAILY OPERATIONAL EMISSIONS (POUNDS PER DAY)[a]

	Emissions (pounds per day)					
Year	**VOC**	**NO_X**	**CO**	**SO_X**	**PM10**	**PM2.5**
Source						
Area (Consumer Products, Landscaping)	1.7	<1	4.2	<1	<1	<1
Energy (Natural Gas)	<1	<1	<1	<1	<1	<1
Motor Vehicles	<1	<1	5.2	<1	1.6	<1
Total Project On-Site and Off-Site Emissions	**2**	**2**	**9**	<1	2	1
Existing On-Site and Off-Site Emissions	<1	<1	2	<1	<1	<1
Net On-Site and Off-Site Emissions	**2**	**1**	**8**	<1	1	<1
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

SOURCE: ESA, 2021.

Mitigation:

None Required

Significance Determination: Less than Significant.

Threshold AIR-3 Expose sensitive receptors to substantial pollutant concentrations.

Impact AIR-3

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

Localized Construction

The maximum daily localized emissions for each of the construction phases and the localized significance thresholds are presented in **Table 8**, *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 8, maximum localized construction emissions for sensitive receptors would not exceed the localized threshold of significance for any criteria pollutant. As the Proposed Project's maximum localized emissions from construction would not exceed the localized

thresholds of significance, localized construction emissions impacts would be less than significant. Detailed emissions calculations are provided in Appendix A of this report.

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

	Emissions (pounds per day)			
Year	**NO_X**	**CO**	**PM10**	**PM2.5**
Construction Phases				
Demolition – 2022	17	14	1	1
Site Preparation – 2022	15	7	3	2
Grading/Excavation – 2022	21	14	4	2
Drainage/Utilities/Trenching - 2022	5	5	<1	<1
Foundations/Concrete Pour - 2022	8	8	<1	<1
Building Construction - 2022	8	8	<1	<1
Building Construction - 2023	7	8	<1	<1
Landscaping - 2023	2	2	<1	<1
Architectural Coating - 2023	20	16	2	1
Overlapping Phases				
Grading/Excavation – 2022 and Drainage/Utilities/Trenching - 2022	26	19	4	3
Drainage/Utilities/Trenching – 2022 and Foundations/Concrete Pour – 2022	13	12	1	1
Landscaping – 2023 and Architectural Coating – 2023	22	18	2	1
Maximum Daily Regional Emissions	**26**	**19**	**4**	**3**
SCAQMD Regional Threshold	43	882	13	4
Threshold Exceeded?	No	No	No	No

SOURCE: ESA, 2021.

Localized Operations

The maximum daily localized emissions operational activities as compared to the significance thresholds are presented in **Table 9,** *Estimated Maximum Localized Operational Emissions*. As shown in Table 9, maximum localized operational emissions would not exceed the localized threshold of significance. Therefore, with the implementation of mitigation the Proposed Project's maximum localized emissions from emissions impacts would be less than significant. Detailed emissions calculations are provided in Appendix A of this report.

TABLE 9
ESTIMATED MAXIMUM LOCALIZED OPERATIONAL EMISSIONS (POUNDS PER DAY) [a]

	Emissions (pounds per day)			
Year	**NO_X**	**CO**	**PM10**	**PM2.5**
Source				
Area (Consumer Products, Landscaping)	0.71	4.17	0.08	0.08
Energy (Natural Gas)	0.2	0.1	0.02	0.02
Total Project On-Site Emissions	**0.91**	**4.26**	**0.09**	**0.09**
Existing On-Site Emissions	0.24	0.05	0.04	0.00
Net On-Site Emissions	**0.67**	**4.21**	**0.05**	**0.09**
SCAQMD Regional Threshold	**43**	**882**	**4**	**1**
Threshold Exceeded?	No	No	No	No

SOURCE: ESA, 2021.

Toxic Air Contaminants

Construction

Excess lifetime cancer risk is estimated as the upper-bound incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to carcinogens. As the individual incremental increase in lifetime cancer risk is assessed over long exposure time periods (i.e., 30-year for residential receptors), the potential effects of Proposed Project-related carcinogenic TAC emissions must include the combination of exposure to construction-related activities and exposure to operation-related activities. For cancer risk, SCAQMD guidance identifies a significant impact if a project would result in an incremental cancer risk that is greater than 10 in one million for any receptor. A chronic HI equal to or greater than 1.0 represents a significant chronic health hazard. A chronic health effect could include irritation to eyes, throat, lungs or neurological damage.

The TAC emissions of the Proposed Project would be generated from mobile sources including diesel-powered heavy-duty trucks and construction equipment. These sources generate DPM from combustion of diesel fuels. The potential emission sources of DPM would be diesel-fueled heavy-duty equipment, on-road travel and idling emissions from diesel-fueled haul trucks.

Sensitive receptors are located approximately 225 feet from the project site. SCAQMD recommends that construction health risk assessments be conducted for substantial sources of diesel particulate matter (DPM) emissions (e.g., earth-moving construction activities) in proximity to sensitive receptors and has provided guidance for analyzing mobile source diesel emissions. However, localized DPM emissions (strongly correlated with PM2.5 emissions) are less than significant (as shown in Table 8, 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 short-term duration of construction activity anticipated at 15 months resulted in an overall low level of DPM

concentrations in the project area. Furthermore, compliance with the CARB's ATCM anti-idling measure, which limits idling to no more than five minutes at any location for diesel-fueled commercial vehicles, further minimized DPM emissions in the project area. Sensitive receptors would be exposed to emissions below thresholds, and construction TAC impacts would be less-than-significant.

Operational

SCAQMD recommends that health risk assessments be conducted for substantial sources of TAC emissions (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions. The Project is not anticipated to generate a substantial number of daily truck trips, nor would it result in the emission of other TACs at a level where concern would be raised regarding health risk. Therefore, the Project would not warrant the need for a health risk assessment associated with on-site operational activities, and potential TAC impacts are expected to be less than significant.

Typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes and automotive repair facilities. The Project would provide 47 senior housing units, 12 hotel units, office space, and open space resulting in emissions of TAC from the use of consumer products (e.g., aerosol sprays) and delivery and/or waste collection truck trips. Therefore, the Project is not expected to release substantial amounts of TACs during operational activities, and no significant impact on human health would occur.

Mitigation:

None Required

Significance Determination: Less than Significant.

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

Impact AIR-4

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

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 Proposed Project would comply with the applicable provisions of the CARB Air Toxics Control Measure regarding idling limitations for diesel trucks. 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 6, construction emissions would not exceed the SCAQMD regional significance thresholds for attainment, maintenance, or

unclassifiable criteria air pollutants (i.e., CO and SO_2). Therefore, construction 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 Proposed Project would not include any uses identified by the SCAQMD as being associated with substantial odors. As a result, the Proposed 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 discussed under Impact AIR-2 above, operational emissions would not exceed the SCAQMD regional significance thresholds for attainment, maintenance, or unclassifiable criteria air pollutants (i.e., CO and SO_2). Therefore, operation of the Proposed Project would result in less than significant impacts with respect to other emissions, including those leading to odors.

Mitigation: None required.

Significance Determination: Less Than Significant.

3.3 Greenhouse Gas Impacts

Threshold GHG-1 Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

Impact GHG-1

Implementation of the Proposed Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. (Less than Significant)

Construction

According to SCAQMD methodology, because GHG emissions are a cumulative impact, Project significance is determined by the combined amortized construction and operational emissions. The Proposed Project's total estimated GHG emissions during construction are identified in **Table 10,** *Amortized Annual Construction GHG Emissions.* As shown, estimated GHG emissions would be approximately 580 $MTCO_2e$ over the entire lifetime of the project. This would equal approximately 19 $MTCO_2e$ per year after amortization over 30 years per SCAQMD methodology. Detailed calculations and modeling output are included in Appendix A of this report.

Operational

Area source emissions would be generated by the consumption of natural gas for space and water heating devices while mobile emissions would be generated by the motor vehicles traveling to and from the project site. Indirect GHG emissions due to electricity demand, water consumption, and waste generation were also calculated. **Table 11,** *Annual Project GHG Emissions,* shows the total

annual GHG emissions associated with the combined construction and operation of the Proposed Project. As shown in Table 11, operational emissions result in 673 $MTCO_2e$ annually.

TABLE 10
AMORTIZED ANNUAL CONSTRUCTION GHG EMISSIONS

Source	$MTCO_2e$
Demolition	46
Site Preparation	7
Grading/Excavation	153
Drainage/Trenching/Utilities	6
Foundations/Concrete Pour	89
Building Construction - 2022	198
Building Construction - 2023	53
Landscaping	19
Architectural Coating	10
2022 Maximum	498
2023 Maximum	82
Total	**580**
Amortized Project Construction Emissions	**19**

SOURCE: ESA, 2021.

TABLE 11
ANNUAL PROJECT GHG EMISSIONS

Emissions Sources	CO_2e (Metric Tons per Year) [a]
Area	10
Energy	243
Mobile	359
EV Charging	<1
Waste	6
Water	35
Construction[b]	19
Project Total	**673**
Existing	168
Project Net Total GHG Emissions	**505**
SCAQMD GHG Significance Threshold	3,000
Exceeds Threshold?	**No**

[a] Totals may not add up exactly due to rounding in the modeling calculations.
[b] Construction emissions are amortized over 30 years.

SOURCE: ESA, 2021.

Mitigation: None required.

Significance Determination: Less Than Significant.

Threshold GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

Impact GHG-2

Implementation of the Proposed Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. (Less than Significant)

Consistency with the Climate Change Scoping Plan

The CARB Climate Change Scoping Plan was designed to reduce GHG emissions from new land use projects. The Proposed Project would be subject to the Scoping Plan requirements. Out of the Recommended Actions contained in CARB's Scoping Plan, the actions that are most applicable to the proposed program would be reducing diesel-fueled commercial motor vehicle idling, and reducing energy associated with water use. The Proposed Project would be designed to comply with the California regulations to limit idling of onsite vehicles to 5 minutes or less per location.

In support of AB 32, the state has promulgated specific laws aimed at GHG reductions applicable to the Project. The heating, ventilation, and air conditioning (HVAC) system would be sized and designed in compliance with the CALGreen Code to maximize energy efficiency caused by heat loss and heat gain. The Project would generate GHG emissions due to construction and operational activities; however, its annual GHG emissions, would be generated due to development located and designed to be consistent with relevant goals and actions designed to encourage development that results in the efficient use of public and private resources. Therefore, the Project's GHG emissions and associated impacts would be less than significant.

Consistency with SB 375

The key goal of the Sustainable Communities Standard is to achieve GHG emission reduction targets through integrated land use and transportation strategies. The focus of these reductions is on transportation and land use strategies that influence vehicle travel. The Proposed Project would increase vehicle traffic in the region however, it would also be consistent with the anticipated growth for the Project Area and would occur in a densely developed portion of the City. The Project would be consistent with all state and local regulations with respect to vehicle emissions and efficiencies. Therefore, the Proposed Project would not conflict with the implementation of SB 375 and impacts would be less than significant.

Consistency with Applicable Regulations

The Heavy-Duty Vehicle and Light-Duty vehicle rules have been established to reduce CO2 emissions from the combustion of fossil fuels. The Proposed Project would not involve the manufacture of vehicles or production of vehicle fuels. However, vehicles that are purchased and used within the project site would comply with any vehicle and fuel standards that the CARB adopts

or has adopted. Therefore, the construction and operation of the Proposed Project would not conflict with these regulations.

CARB's ATCM limits heavy-duty diesel motor vehicle idling to reduce DPM and other TACs and applies to all the haul trucks, heavy duty vendor trucks, and construction equipment that would be used on the project site. CARB also implemented the Truck and Bus Regulation to further reduce NOx, PM10 and PM2.5 from on-road diesel operating vehicles. CARB has also promulgated emissions standards for off-road diesel construction equipment greater than 24 horsepower to reduce criteria pollutant emissions. The Proposed Project would operate both on- and off-road trucks and construction equipment. These vehicles would comply with all of the CARB regulations and onsite trucks and equipment would be monitored to ensure that idling would occur for only five minutes at any given time. Therefore, the Proposed Project would be consistent with the applicable regulations for heavy-duty, light-duty and off-road vehicles and equipment and impacts would be less than significant.

Consistency with City of La Cañada Flintridge Policies

Climate Action Plan

In 2016, the City adopted a Climate Action Plan (CAP) which is a long range plan to reduce GHGs from City government operations and community activities.[188] The CAP contains targets that include a 15 percent reduction below 2007 levels by 2020 and a 58 percent reduction below 2007 levels by 2035. The trajectory set aims for the City to exceed the 2030 target (175,309 MT CO2e) by approximately 6 percent (164,595).

GHG reduction measures, which include performance objectives, which if implemented, would collectively achieve the specified emissions reduction targets. Climate action measures are organized into six focus areas: (1) energy; (2) water; (3) transportation; (4) solid waste; (5) urban greening; and (6) adaptation.

The proposed project would incorporate GHG reduction measures that are consistent with the CAP by increasing energy efficiency, conserving water, and reducing solid waste. The proposed project would incorporate energy and water efficiency design features to enhance efficiency in all aspects of a building's life-cycle. These designs would increase the structures energy efficiency, water efficiency, and overall sustainability.

Energy Action Plan

In addition to the CAP, in 2013 the City adopted an Energy Action Plan and an update to its General Plan. The Energy Action Plan focused on policies involving energy efficiency in existing buildings and construction of high performance new buildings. The proposed new facilities would be designed in conformance with the policies in this plan. The proposed project would also be consistent with the goals and policies identified in the City's General Plan Air Quality Element.

[188] City of La Cañada Flintridge, Climate Action Plan, 2016, https://cityoflcf.org/wp-content/uploads/2020/01/LCF_Env_Action_Plan_2016.pdf. Accessed: February 19, 2021.

Specifically, the proposed project would be consistent with AQ Goal 3 to reduce air pollution and GHG emissions through conservation activities, policies and programs, regulations, and use of technology. As mentioned previously, the proposed project would implement standard construction practices, such as compliance with SCAQMD Rule 403 – Fugitive Dust, which requires all unpaved demolition and construction areas to be wetted at least three times a day during excavation and construction to minimize the generation of fugitive dust.

Mitigation: None required.

Significance Determination: Less Than Significant.

3.4 Cumulative Air Quality Impacts

The following cumulative impact analysis is based on the recommendations provided by SCAQMD in the Potential Control Strategies to Address Cumulative Impacts from Air Pollution White Paper. SCAQMD's guidance for assessing a project's cumulative impacts recommends the use of two alternative methodologies: (1) that project-specific air quality impacts be used to determine the project's potential cumulative impacts to regional air quality; or (2) that a project's consistency with the AQMPs are used to determine its potential cumulative impacts.

Under SCAQMD's guidance, "[p]rojects that exceed the project-specific significance thresholds are considered by SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant." Therefore, consistent with this guidance, the potential for the Proposed Project to results in cumulative impacts from regional emissions is assessed based on SCAQMD thresholds.

Consistency with AQMP

As described above under *Impact AIR-1*, construction of the Proposed Project would be consistent with the AQMP as the Proposed Project would not generate emissions of nonattainment pollutants or precursors (i.e., NO_X) that exceed the applicable significance thresholds. As the Proposed Project's maximum regional emissions from construction would not exceed the regional thresholds of significance (Table 6), the Proposed Project would be consistent with the AQMP and cumulative impacts would be less than significant.

Operation of the Proposed Project would be consistent with the AQMP as the Proposed Project would not generate emissions of nonattainment pollutants or precursors (i.e., VOC, NO_X, CO, SOx, PM10, and PM2.5) that exceed the applicable significance thresholds (Table 7). Therefore, the Proposed Project would result in a less than significant cumulative operational impact.

Mitigation

None Required.

Significance Determination: Less than Significant

Project-Specific Impacts

Construction

As described above under *Impact AIR-2* and *Impact AIR-3*, regional and localized emissions during construction of the Proposed Project would not exceed the SCAQMD significance thresholds. Thus, based on SCAQMD methodology, the Proposed Project's construction emissions would not represent a considerable contribution to a cumulative impact. As the Proposed Project's maximum mitigated regional emissions from construction would not exceed the regional thresholds of significance, the Proposed Project would not represent a considerable contribution to a cumulative impact, resulting in a less than significant cumulative impact.

Operation

As discussed above, regional and localized operational emissions of VOC, NO_X, CO, PM10, and PM2.5 would not exceed the SCAQMD significance thresholds. Thus, based on SCAQMD methodology, the Proposed Project operational emissions would not represent a considerable contribution to a cumulative impact, resulting in a less than significant cumulative impact.

Mitigation

None Required.

Significance Determination: Less than Significant

3.5 Cumulative GHG Impacts

The GHG emissions of the project alone would not cause a direct physical change in the environment. According to CAPCOA, "GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective."[189] It is global GHG emissions in their aggregate that contribute to climate change, not any single source of GHG emissions alone. The impact analysis of the project's GHG emissions and consistency with existing plans and policies related to GHG emissions provided above for the Project serves as a cumulative impact analysis. Therefore, as discussed under Section 3.4 above, the Project would be consistent with applicable plans, policies or regulations adopted for the purpose of reducing GHG emissions, and the Project would not generate GHG emissions that would have a significant impact on the environment. As such, the Project would result in a less than cumulatively considerable impact related to GHG, and cumulative impacts would be less than significant.

Mitigation

None Required.

Significance Determination: Less than Significant

[189] CAPCOA, CEQA & Climate change: Evaluating and Addressing Greenhous Gas Emissions from Projects Subject to the California Environmental Quality Act, January 2008, http://capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA-White-Paper.pdf. Accessed February 21, 2021.

APPENDIX A

Air Quality and GHG Calculations and Output Files

Project: Conditional Use Permit 511, Variance 15-01, Tree Removal Permit 17-33 (600 Foothill Boulevard)
Sheet: California Emissions Estimator Model Analysis Inputs
Date: 1/29/2021

Existing Land Uses

Land Use Type	CalEEMod LandUse Type	CalEEMod LandUse Subtype	Amount	Unit	Building SF	Notes
Church	Educational	Place of Worship	10.530	1000 sf	10,530	Existing building sf based on LA County Assessor Parcel Map Data

Project Land Uses

Land Use Type	CalEEMod LandUse Type	CalEEMod LandUse Subtype	Amount	Unit	Building SF	Acres	Population[6]	Notes
								Project information provided in GPA Application
Senior Multifamily Housing	Residential	Retirement Community	47	DU	62,688	0.400	142	Population: SCAG 2020-2045 RTP/SCS
		Studios	*3*	*DU*				
		One-Bedroom	*29*	*DU*				
		Two-Bedroom	*9*	*DU*				
		Three-Bedroom	*6*	*DU*				
Hotel	Recreational	Hotel	12	Rooms	7,008	0.050		
Office	Commercial	General Office	7.614	1000 sf	7,614	0.050		
Secured Storage	Industrial	Unrefrigerated Warehouse-No Rail	1.500	1000 sf	1,500	0.100		
Landscaping	Recreational	City Park	10.974	1000 sf	10,974	0.300		
Open Space	Recreational	City Park	15.466	1000 sf	15,466	0.300		
Subterranean Parking	Parking	0	107	Spaces	42,800	0.094		Parking SF currently based on default
					Total Acres:	1.294		

Construction Data [1]

Start	End	Total Duration
2022, Qtr 2	2023, Qtr 3	15 months
Total Construction Site Area (acres)	1.294	

Construction Phase	CalEEMod Phase Type	Start Date	End Date	Total Calendar Days	Workdays (6 days/week)	Worker Trips/Day (In/Out)	Vendor Trips/Day (In/Out)	Total Haul (or Concrete) Trips (In/Out)	Daily Haul (or Concrete) Truck Trips (In/Out)
Demolition	Demolition	3/1/2022	3/31/2022	30	27	20	6	330	14
Site Preparation	Site Preparation	4/1/2022	4/10/2022	9	8	10	6		
Grading/Excavation	Grading	4/11/2022	4/30/2022	19	18	20	6	3,257	182
Drainage/Utilities/Trenching	Trenching	4/20/2022	5/5/2022	15	14	10	6		
Foundations/Concrete Pour	Building Construction	5/1/2022	5/31/2022	30	26	20	0	1,762	68
Building Construction	Building Construction	6/1/2022	2/28/2023	272	234	60	14		
Architectural Coating	Architectural Coating	3/1/2023	4/15/2023	45	40	18	4		
Landscaping	Building Construction	3/1/2023	5/31/2023	91	79	10	6		

Demolition Quantities

Buildings	Amount	
Building Area (sf)	10,530	
Building Height (ft)	15	
Building Volume (cf)	157,950	
Building Waste Volume (cy) [2]	1,463	
Building Waste Weight (tons) [2]	731	
Hardscape	**Amount**	
Hardscape Area (sf) [1]	14,879	
Thickness (ft)	0.33	
Hardscape Debris Volume (cy)	184	
Debris weight (lb):Volume (cy) [3]	2,400	
Hardscape Debris Weight (tons)	220	
Total Demolition Quantities	**Amount**	
Total Demolition Debris (cy)	1,646	
Total Debris Weight (tons)	952	
Demolition Trucks	**Amount**	
Haul Truck Debris Carrying Capacity (cy)	10	
Total Haul Trucks Required	165	
Total Haul Truck Trips (In/Out)	330	<--Enter in CalEEMod
Daily Haul Truck Trips (In/Out)	14	

Excavation Quantities

Parameters	Amount	
Excavation Volume (in-situ) (cy)[1]	19,000	<--Enter in CalEEMod
Soil Expansion	20%	
Excavation Volume (export) (cy)	22,800	
Haul Truck Carrying Capacity (cy)	14	
Total Haul Trucks Required	1,629	
Total Haul Truck Trips (In/Out)	3,257	<--Enter in CalEEMod
Daily Haul Truck Trips (In/Out)	182	

Concrete Quantities

Parameters	Amount	
Foundation Area (sf)	42,800	
Footing Depth (ft)	5	Assumed
Total Concrete Volume (CY)	7,926	
Concrete Truck Capacity (CY)	9	
Total Concrete Trucks Required	881	
Total Concrete Truck Trips (In/Out)	1,762	
Daily Concrete Truck Trips (In/Out)	68	

Notes:

1 Based on information received from Project Applicant.

2 CalEEMod User's Guide, Appendix A.

3 CalRecycle Weights and Volumes

Project: Conditional Use Permit 511, Variance 15-01, Tree Removal Permit 17-33 (600 Foothill Boulevard)
Sheet: Construction Equipment
Date: 1/29/2021

Phase[4]	CalEEMod Phase Type	Equipment Type[4]	# of Equipment	Hours/day	HP	Load Factor	Notes
Demolition	Demolition	Concrete/Industrial Saw	1	8			defaults
Demolition	Demolition	Rubber Tired Dozer	1	8			
Demolition	Demolition	Tractor/Loader/Backhoe	3	8			
Site Preparation	Site Preparation	Grader	1	8			defaults
Site Preparation	Site Preparation	Rubber Tired Dozer	1	7			
Site Preparation	Site Preparation	Tractor/Loader/Backhoe	1	8			
Grading/Excavation	Grading	Bore/Drill Rig	1	8			
Grading/Excavation	Grading	Excavator	1	8			
Grading/Excavation	Grading	Grader	1	8			
Grading/Excavation	Grading	Rubber Tired Dozer	1	8			
Grading/Excavation	Grading	Sweeper/Scrubber	1	4			
Grading/Excavation	Grading	Tractor/Loader/Backhoe	1	8			
Drainage/Utilities	Trenching	Tractor/Loader/Backhoe	1	8			
Drainage/Utilities	Trenching	Trencher	1	8			
Foundation/Concrete	Building Construction	Crane	2	4			
Foundation/Concrete	Building Construction	Pump	2	8			
Building Construction	Building Construction	Crane	1	4			
Building Construction	Building Construction	Forklift	1	8			
Building Construction	Building Construction	Generator Set	1	8			
Building Construction	Building Construction	Tractors/Loaders/Backhoes	1	8			
Building Construction	Building Construction	Welder	3	8			
Architectural Coating	Architectural Coating	Air Compressors	1	6			
Landscaping	Building Construction	Forklift	1	8			
Landscaping	Building Construction	Sweeper/Scrubber	1	4			

Worker/Vendors Amounts

Phase	# of workers[1]	# of worker trips/day (In/Out)[2,3]	Vendor Trips/day (In/Out)[2]	
Demolition	10	20	6	(Water Trucks)
Site Preparation	5	10	6	(Water Trucks)
Grading/Excavation	10	20	6	(Water Trucks)
Drainage/Utilities	5	10	6	(Water Trucks)
Foundation/Concrete	10	20	0	
Building Construction	30	60	14	
Architectural Coating	9	18	4	
Landscaping	5	10	6	

Notes:

1 Worker trips for all construction phases except building construction and architectural coating is based on 1.25 workers per equipment in that phase resulting in one roundtrip per worker.

2 For building construction workers, the trip number is estimated using the trip generation rate from a survey conducted by SMAQMD. Office/Inudstrial rates used for Project construction

3 Architectural coating worker trips are 20% of building construction phase trips. Vendor trips are only associated with building construction and is based on the land uses and trip rate indicated in the table above.

4 Information received from client and CalEEMod defaults

Building Construction Worker and Vendor Trip Rates

Land Use SubType	Rate Metric	Worker Trip Rate	Vendor Trip Rate
Single Family	Daily Trips per DU*	0.36	0.1069
Multi-Family	Daily Trips per DU*	0.72	0.1069
Commercial/Retail	Daily Trips per 1000 sq. ft.	0.32	0.1639
Office/Industrial	Daily Trips per 1000 sq. ft.	0.42	0.1639

Source: SCAQMD's analysis of SMAQMD Building Construction Worker and Vendor trip rates found in Appendix E.

*DU = dwelling unit

600 Foothill

Air Quality Construction Analysis

Unmitigated Construction Scenario

Regional Emissions Summary	ROG	NOX	CO	SO2	Total PM10	Total PM2.5
Source	lb/day					
3.2 Demolition - 2022	2	20	16	<1	2	1
3.3 Site Preparation - 2022	1	15	8	<1	3	2
3.4 Grading/Excavation - 2022	4	65	34	<1	8	4
3.5 Drainage/Utilities/Trenching - 2022	1	6	5	<1	<1	<1
3.6 Foundations/Concrete Pour - 2022	1	24	16	<1	2	1
3.7 Building Construction - 2022	1	9	11	<1	1	1
3.7 Building Construction - 2023	1	8	10	<1	1	1
3.8 Landscaping - 2023	<1	2	3	<1	<1	<1
3.9 Architectural Coating - 2023	14	2	2	<1	<1	<1
Overlapping Phases						
	ROG	**NOX**	**CO**	**SO2**	**Total PM10**	**Total PM2.5**
3.4 Grading/Excavation - 2022 and 3.5 Drainage/Utilities/Trenching - 2022	4	70	40	<1	8	4
3.5 Drainage/Utilities/Trenching - 2022 and 3.6 Foundations/Concrete Pour - 2022	2	30	21	<1	2	1
3.8 Landscaping - 2023 and 3.9 Architectural Coating - 2023	14	4	5	<1	1	<1
Project Daily Maximum Emissions	14	70	40	<1	8	4
SCAQMD Regional Significance Threholds	75	100	550	150	150	55
Exceeds Thresholds?	No	No	No	No	No	No

Localized Emissions Summary	NOX	CO	Total PM10	Total PM2.5
Source	lb/day			
3.2 Demolition - 2022	17	14	1	1
3.3 Site Preparation - 2022	15	7	3	2
3.4 Grading/Excavation - 2022	21	14	4	2
3.5 Drainage/Utilities/Trenching - 2022	5	5	<1	<1
3.6 Foundations/Concrete Pour - 2022	8	8	<1	<1
3.7 Building Construction - 2022	8	8	<1	<1
3.7 Building Construction - 2023	7	8	<1	<1
3.8 Landscaping - 2023	2	2	<1	<1
3.9 Architectural Coating - 2023	20	16	2	1
Overlapping Phases				
Grading/Excavation – 2022 and Drainage/Utilities/Trenching - 2022	26	19	4	3
Drainage/Utilities/Trenching – 2022 and Foundations/Concrete Pour – 2022	13	12	1	1
Landscaping – 2023 and Architectural Coating – 2023	22	18	2	1
Project Daily Localized Maximum Emissions	26	19	4	3
SCAQMD Localized Significance Threholds	43	882	13	4
Exceeds Thresholds?	No	No	No	No

600 Foothill

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	1.9	20.3	16.3	0.037	0.7	0.9	1.6	0.2	0.8	1.0
3.3 Site Preparation - 2022	1.3	15.2	7.7	0.020	2.8	0.6	3.4	1.4	0.6	1.9
3.4 Grading/Excavation - 2022	3.7	64.7	34.1	0.171	6.4	1.1	7.6	2.5	1.0	3.5
3.5 Drainage/Utilities/Trenching - 2022	0.6	5.6	5.5	0.009	0.1	0.3	0.5	0.0	0.3	0.3
3.6 Foundations/Concrete Pour - 2022	1.5	24.1	15.5	0.069	1.4	0.4	1.8	0.4	0.4	0.8
3.7 Building Construction - 2022	0.9	9.1	10.7	0.023	0.8	0.4	1.2	0.2	0.4	0.6
3.7 Building Construction - 2023	0.8	8.2	10.4	0.023	0.8	0.3	1.1	0.2	0.3	0.5
3.8 Landscaping - 2023	0.2	2.1	2.8	0.005	0.2	0.1	0.3	0.1	0.1	0.2
3.9 Architectural Coating - 2023	14.1	1.7	2.4	0.005	0.1	0.1	0.2	0.0	0.1	0.1

Overlapping Phases										
	ROG	NOX	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5
3.4 Grading/Excavation - 2022 and 3.5 Drainage/Utilities/Trenching - 2022	4.3	70.2	39.6	0.2	6.6	1.5	8.1	2.5	1.4	3.9
3.5 Drainage/Utilities/Trenching - 2022 and 3.6 Foundations/Concrete Pour - 2022	2.1	29.7	21.0	0.1	1.6	0.8	2.3	0.4	0.7	1.1
3.8 Landscaping - 2023 and 3.9 Architectural Coating - 2023	14.3	3.9	5.3	0.0	0.4	0.2	0.6	0.1	0.2	0.3
Project Daily Maximum Emissions	**14.3**	**70.2**	**39.6**	**0.2**	**6.6**	**1.5**	**8.1**	**2.5**	**1.4**	**3.9**

600 Foothill

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	1.69	16.62	13.96	0.02	0.26	0.84	1.10	0.04	0.78	0.82	0.16	3.67	2.34	0.013	0.49	0.02	0.51	0.13	0.02	0.15
3.3 Site Preparation - 2022	1.31	14.63	7.09	0.02	2.61	0.62	3.23	1.33	0.57	1.90	0.03	0.53	0.63	0.003	0.15	0.00	0.15	0.04	0.00	0.04
3.4 Grading/Excavation - 2022	1.94	20.67	13.80	0.03	3.01	0.89	3.91	1.53	0.82	2.35	1.76	43.99	20.33	0.137	3.43	0.24	3.66	0.94	0.23	1.16
3.5 Drainage/Utilities/Trenching - 2022	0.53	5.06	4.84	0.01	0.00	0.33	0.33	0.00	0.30	0.30	0.03	0.53	0.63	0.003	0.15	0.00	0.15	0.04	0.00	0.04
3.6 Foundations/Concrete Pour - 2022	0.84	7.77	7.61	0.02	0.00	0.34	0.34	0.00	0.32	0.32	0.66	16.36	7.92	0.052	1.41	0.09	1.50	0.39	0.08	0.47
3.7 Building Construction - 2022	0.79	7.75	8.01	0.01	0.00	0.39	0.39	0.00	0.37	0.37	0.10	1.32	2.64	0.009	0.76	0.01	0.77	0.20	0.01	0.21
3.7 Building Construction - 2023	0.74	7.12	7.96	0.01	0.00	0.34	0.34	0.00	0.33	0.33	0.08	1.09	2.48	0.009	0.76	0.01	0.77	0.20	0.01	0.21
3.8 Landscaping - 2023	0.19	1.81	2.10	0.00	0.00	0.11	0.11	0.00	0.10	0.10	0.02	0.31	0.73	0.003	0.23	0.00	0.23	0.06	0.00	0.06
3.9 Architectural Coating - 2023	14.03	1.30	1.81	0.00	0.00	0.07	0.07	0.00	0.07	0.07	0.03	0.43	0.61	0.002	0.15	0.00	0.15	0.04	0.00	0.04

Note: Offsite emissions pasted over from EMFAC2017

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	1.9	20.3	16.3	0.0	0.7	0.9	1.6	0.2	0.8	1.0
3.3 Site Preparation - 2022	1.3	15.2	7.7	0.0	2.8	0.6	3.4	1.4	0.6	1.9
3.4 Grading/Excavation - 2022	3.7	64.7	34.1	0.2	6.4	1.1	7.6	2.5	1.0	3.5
3.5 Drainage/Utilities/Trenching - 2022	0.6	5.6	5.5	0.0	0.1	0.3	0.5	0.0	0.3	0.3
3.6 Foundations/Concrete Pour - 2022	1.5	24.1	15.5	0.1	1.4	0.4	1.8	0.4	0.4	0.8
3.7 Building Construction - 2022	0.9	9.1	10.7	0.0	0.8	0.4	1.2	0.2	0.4	0.6
3.7 Building Construction - 2023	0.8	8.2	10.4	0.0	0.8	0.3	1.1	0.2	0.3	0.5
3.8 Landscaping - 2023	0.2	2.1	2.8	0.0	0.2	0.1	0.3	0.1	0.1	0.2
3.9 Architectural Coating - 2023	14.1	1.7	2.4	0.0	0.1	0.1	0.2	0.0	0.1	0.1

Overlapping Phases

	ROG	NOX	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5
3.4 Grading/Excavation - 2022 and 3.5 Drainage/Utilities/Trenching - 2022	4.3	70.2	39.6	0.2	6.6	1.5	8.1	2.5	1.4	3.9
3.5 Drainage/Utilities/Trenching - 2022 and 3.6 Foundations/Concrete Pour - 2022	2.1	29.7	21.0	0.1	1.6	0.8	2.3	0.4	0.7	1.1
3.8 Landscaping - 2023 and 3.9 Architectural Coating - 2023	14.3	3.9	5.3	0.0	0.4	0.2	0.6	0.1	0.2	0.3
Project Daily Maximum Emissions	**14.2753**	**70.2438**	**39.5929**	**0.1799**	**6.5889**	**1.4636**	**8.0525**	**2.5031**	**1.3552**	**3.8585**

600 Foothill

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	1.69	16.62	13.96	0.02	0.26	0.84	1.10	0.04	0.78	0.82	0.16	3.67	2.34	0.013	0.49	0.02	0.51	0.13	0.02	0.15
3.3 Site Preparation - 2022	1.31	14.63	7.09	0.02	2.61	0.62	3.23	1.33	0.57	1.90	0.03	0.53	0.63	0.003	0.15	0.00	0.15	0.04	0.00	0.04
3.4 Grading/Excavation - 2022	1.94	20.67	13.80	0.03	3.01	0.89	3.91	1.53	0.82	2.35	1.76	43.99	20.33	0.137	3.43	0.24	3.66	0.94	0.23	1.16
3.5 Drainage/Utilities/Trenching - 2022	0.53	5.06	4.84	0.01	0.00	0.33	0.33	0.00	0.30	0.30	0.03	0.53	0.63	0.003	0.15	0.00	0.15	0.04	0.00	0.04
3.6 Foundations/Concrete Pour - 2022	0.84	7.77	7.61	0.02	0.00	0.34	0.34	0.00	0.32	0.32	0.66	16.36	7.92	0.052	1.41	0.09	1.50	0.39	0.08	0.47
3.7 Building Construction - 2022	0.79	7.75	8.01	0.01	0.00	0.39	0.39	0.00	0.37	0.37	0.10	1.32	2.64	0.009	0.76	0.01	0.77	0.20	0.01	0.21
3.7 Building Construction - 2023	0.74	7.12	7.96	0.01	0.00	0.34	0.34	0.00	0.33	0.33	0.08	1.09	2.48	0.009	0.76	0.01	0.77	0.20	0.01	0.21
3.8 Landscaping - 2023	0.19	1.81	2.10	0.00	0.00	0.11	0.11	0.00	0.10	0.10	0.03	0.43	0.61	0.002	0.15	0.00	0.15	0.04	0.00	0.04
3.9 Architectural Coating - 2023	14.03	1.30	1.81	0.00	0.00	0.07	0.07	0.00	0.07	0.07	0.02	0.31	0.73	0.003	0.23	0.00	0.23	0.06	0.00	0.06

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	1.9	20.3	16.3	0.0	0.7	0.9	1.6	0.2	0.8	1.0
3.3 Site Preparation - 2022	1.3	15.2	7.7	0.0	2.8	0.6	3.4	1.4	0.6	1.9
3.4 Grading/Excavation - 2022	3.7	64.7	34.1	0.2	6.4	1.1	7.6	2.5	1.0	3.5
3.5 Drainage/Utilities/Trenching - 2022	0.6	5.6	5.5	0.0	0.1	0.3	0.5	0.0	0.3	0.3
3.6 Foundations/Concrete Pour - 2022	1.5	24.1	15.5	0.1	1.4	0.4	1.8	0.4	0.4	0.8
3.7 Building Construction - 2022	0.9	9.1	10.7	0.0	0.8	0.4	1.2	0.2	0.4	0.6
3.7 Building Construction - 2023	0.8	8.2	10.4	0.0	0.8	0.3	1.1	0.2	0.3	0.5
3.8 Landscaping - 2023	0.2	2.2	2.7	0.0	0.1	0.1	0.3	0.0	0.1	0.1
3.9 Architectural Coating - 2023	14.1	1.6	2.5	0.0	0.2	0.1	0.3	0.1	0.1	0.1

Note: Offsite emissions pasted over from EMFAC2017

Overlapping Phases

	ROG	NOX	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5
3.4 Grading/Excavation - 2022 and 3.5 Drainage/Utilities/Trenching - 2022	4.3	70.2	39.6	0.2	6.6	1.5	8.1	2.5	1.4	3.9
3.5 Drainage/Utilities/Trenching - 2022 and 3.6 Foundations/Concrete Pour - 2022	2.1	29.7	21.0	0.1	1.6	0.8	2.3	0.4	0.7	1.1
3.8 Landscaping - 2023 and 3.9 Architectural Coating - 2023	14.3	3.9	5.3	0.0	0.4	0.2	0.6	0.1	0.2	0.3
Project Daily Maximum Emissions	**14.2753**	**70.2438**	**39.5929**	**0.1799**	**6.5889**	**1.4636**	**8.0525**	**2.5031**	**1.3552**	**3.8585**

600 Foothill
Air Quality Assessment

Localized Significance Thresholds
(SCAQMD, Final Localized Significance Threshold Methodology, Appendix C (2008))

Source Receptor Area 8
Screening Distance to Sensitive Receptors 50 meters [a]

	Screening Values		Project Site [b]
Acres	1	2	**1.29**
Construction LSTs			
NOX [c]	69	95	**43**
CO	783	1,125	**882**
PM10	11	19	**13**
PM2.5	4	5	**4**
Operational LSTs			
NOX [c]	69	95	**43**
CO	783	1,125	**882**
PM10	3	5	**4**
PM2.5	1	2	**1**

Notes:

a. The nearest air quality sensitive receptors during Project construction are conservatively assumed to be 50 meters away from the project site.

b. Project site is 1.29 acres.

c. The screening criteria for NOx were developed based on the 1-hour NO2 CAAQS of 0.18 ppm. However, since the publication of the SCAQMD's guidance, the USEPA has promulgated a 1-hour NO2 NAAQS of 0.100 ppm based on a 98th percentile value, which is more stringent than the CAAQS. In order to determine if Project emissions would result in an exceedance of the 1 hour NO2 NAAQS, an approximated LST was estimated to evaluate the federal 1-hour NO2 standard, as the SCAQMD significance threshold has not been updated to reflect this standard. Calculated by scaling the NO2 LST for by the ratio of 1-hour NO2 standards (federal/state)(i.e., 780 lb/day * (0.10/0.18) =433 lb/day).

Construction GHG Summary

	GHG (MTCO2e/year)
Demolition	46
Site Preparation	7
Grading/Excavation	153
Drainage/Utilities/Trenching	6
Foundations/Concrete Pour	89
Building Construction -2022	198
Building Construction -2023	53
Landscaping	19
Architectural Coating	10
2022 Maximum	498
2023 Maximum	82
Total	**580**
Amoritized GHG Emission	19

Source: EMFAC2017 (v1.0.3) Emissions Inventory
Region Type: County
Region: Los Angeles
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Vendor:

VMT	Fuel Consumption (gal/day)
11290933	1473112
gal/mi	
0.13	

Haul:

VMT	Fuel Consumption (gal/day)
7034024	1068798
gal/mi	
0.15	

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	VMT	Trips	NOx_RUNE	NOx_IDLEX	NOx_STREX	NOx_TOTEX	PM2.5_RU	PM2.5_IDL	PM2.5_STREX	PM2.5_TO	PM2.5_PM	PM2.5_PM	PM2.5_TO
Los Angele	2022	HHDT	Aggregate	Aggregate	Diesel	58358.52	7034024.324	585290.7	27.72998	4.127484	1.359624937	33.21708453	0.210176	0.002347	0	0.212523	0.068997	0.202852	0.484373
Los Angele	2022	MHDT	Aggregate	Aggregate	Diesel	66663.52	4256908.395	655923.5	8.71098	0.496568	1.232676733	10.44022491	0.169241	0.001078	0	0.170319	0.014077	0.26212	0.446516

PM10_RUN	PM10_IDLE	PM10_STR	PM10_TOT	PM10_PM	PM10_PM	PM10_TOT	CO2_RUNE	CO2_IDLEX	CO2_STRE	CO2_TOTE	CH4_RUNE	CH4_IDLEX	CH4_STRE	CH4_TOTE	N2O_RUNE	N2O_IDLE	N2O_STRE	N2O_TOTE	ROG_RUNE	ROG_IDLE	ROG_STRE	ROG_TOTE	ROG_DIUR	ROG_HOTS	ROG_RUNI	ROG_REST
0.219679	0.002453	0	0.222132	0.275989	0.473322	0.971444	11223.72	768.6711	0	11992.39	0.027566	0.014049	0	0.041615	1.764212	0.120824	0	1.885036	0.593482	0.302475	0	0.895957	0	0	0	0
0.176894	0.001127	0	0.17802	0.056309	0.611612	0.845942	4474.884	61.70286	0	4536.587	0.013487	0.00032	0	0.013807	0.703389	0.009699	0	0.713088	0.290374	0.006896	0	0.29727	0	0	0	0

ROG_TOTA	TOG_RUNE	TOG_IDLE	TOG_STRE	TOG_TOTE	TOG_DIUR	TOG_HOTS	TOG_RUNL	TOG_RESTI	TOG_TOTA	CO_RUNEX	CO_IDLEX	CO_STREX	CO_TOTEX	SOx_RUNE	SOx_IDLEX	SOx_STREX	SOx_TOTE	Fuel Consumption
0.895957	0.675634	0.344345	0	1.019979	0	0	0	0	1.019979	2.730681	4.098887	0	6.829567	0.106036	0.007262	0	0.113298	1068.797832
0.29727	0.330569	0.00785	0	0.33842	0	0	0	0	0.33842	1.137391	0.178725	0	1.316115	0.042276	0.000583	0	0.042859	404.3143567

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Total On-Road Emissions

	300	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)**
Demolition	2022				
Total Haul Trips	330				
Hauling	13	27	10	20	15
Vendor	6	27	10	6.9	15
Worker	20	27	10	14.7	0
					Total
Site Preparation	2022				
Total Haul Trips	0				
Hauling	0	8	10	20	15
Vendor	6	8	10	6.9	15
Worker	10	8	10	14.7	0
					Total
Grading/Excavation	2022				
Total Haul Trips	3257				
Hauling	181	18	10	20	15
Vendor	6	18	10	6.9	15
Worker	20	18	10	14.7	0
					Total
Drainage/Utilities/Trenching	2022				
Total Haul Trips	0				
Hauling	0	14	10	20	15
Vendor	6	14	10	6.9	15
Worker	10	14	10	14.7	0
					Total
Foundations/Concrete Pour	2022				
Total Haul Trips	1762				
Hauling	68	26	10	20	15
Vendor	0	26	10	6.9	15
Worker	20	26	10	14.7	0
					Total
Building Construction	2022				
Total Haul Trips	0				
Hauling	0	184	10	20	15
Vendor	14	184	10	6.9	15
Worker	60	184	10	14.7	0
					Total
Building Construction	2023				
Total Haul Trips	0				
Hauling	0	50	10	20	15
Vendor	14	50	10	6.9	15
Worker	60	50	10	14.7	0
					Total
Architectural Coating	2023				
Total Haul Trips	0				
Hauling	0	40	10	20	15
Vendor	4	40	10	6.9	15
Worker	18	40	10	14.7	0
					Total
Landscaping	2023				
Total Haul Trips	0				
Hauling	0	79	10	20	15
Vendor	6	79	10	6.9	15
Worker	10	79	10	14.7	0
					Total

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Total On-Road Emissions

Construction Phase	Regional Emissions (pounds/day)										(MT/yr)
	ROG	NOX	CO	SO2	PM10 Dust	PM10 Exh	Total PM10	PM2.5 Dust	PM2.5 Exh	Total PM2.5	Total CO2e
Demolition											
Total Haul Trips											
Hauling	0.12	3.12	1.39	0.01	0.23	0.02	0.24	0.06	0.02	0.08	13.42
Vendor	0.03	0.51	0.31	0.00	0.04	0.00	0.04	0.01	0.00	0.01	2.11
Worker	0.01	0.05	0.64	0.00	0.22	0.00	0.22	0.06	0.00	0.06	2.42
	0.16	3.67	2.34	0.01	0.49	0.02	0.51	0.13	0.02	0.15	17.95
Site Preparation											
Total Haul Trips											
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.03	0.51	0.31	0.00	0.04	0.00	0.04	0.01	0.00	0.01	0.63
Worker	0.01	0.02	0.32	0.00	0.11	0.00	0.11	0.03	0.00	0.03	0.36
	0.03	0.53	0.63	0.00	0.15	0.00	0.15	0.04	0.00	0.04	0.98
Grading/Excavation											
Total Haul Trips											
Hauling	1.72	43.43	19.38	0.13	3.16	0.23	3.40	0.87	0.22	1.09	124.56
Vendor	0.03	0.51	0.31	0.00	0.04	0.00	0.04	0.01	0.00	0.01	1.41
Worker	0.01	0.05	0.64	0.00	0.22	0.00	0.22	0.06	0.00	0.06	1.61
	1.76	43.99	20.33	0.14	3.43	0.24	3.66	0.94	0.23	1.16	127.58
Drainage/Utilities/Trenching											
Total Haul Trips											
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.03	0.51	0.31	0.00	0.04	0.00	0.04	0.01	0.00	0.01	1.10
Worker	0.01	0.02	0.32	0.00	0.11	0.00	0.11	0.03	0.00	0.03	0.63
	0.03	0.53	0.63	0.00	0.15	0.00	0.15	0.04	0.00	0.04	1.72
Foundations/Concrete Pour											
Total Haul Trips											
Hauling	0.65	16.32	7.28	0.05	1.19	0.09	1.28	0.33	0.08	0.41	67.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.01	0.05	0.64	0.00	0.22	0.00	0.22	0.06	0.00	0.06	2.33
	0.66	16.36	7.92	0.05	1.41	0.09	1.50	0.39	0.08	0.47	69.92
Building Construction											
Total Haul Trips											
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.06	1.18	0.73	0.00	0.09	0.01	0.10	0.03	0.01	0.03	33.61
Worker	0.04	0.14	1.91	0.01	0.67	0.00	0.67	0.18	0.00	0.18	49.38
	0.10	1.32	2.64	0.01	0.76	0.01	0.77	0.20	0.01	0.21	82.98
Building Construction											
Total Haul Trips											
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.05	0.97	0.74	0.00	0.09	0.00	0.09	0.03	0.00	0.03	8.71
Worker	0.03	0.12	1.75	0.01	0.67	0.00	0.67	0.18	0.00	0.18	13.06
	0.08	1.09	2.48	0.01	0.76	0.01	0.77	0.20	0.01	0.21	21.77
Architectural Coating											
Total Haul Trips											
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.01	0.28	0.21	0.00	0.03	0.00	0.03	0.01	0.00	0.01	1.99
Worker	0.01	0.04	0.52	0.00	0.20	0.00	0.20	0.05	0.00	0.05	3.14
	0.02	0.31	0.73	0.00	0.23	0.00	0.23	0.06	0.00	0.06	5.13
Landscaping											
Total Haul Trips											
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.02	0.41	0.32	0.00	0.04	0.00	0.04	0.01	0.00	0.01	5.90
Worker	0.01	0.02	0.29	0.00	0.11	0.00	0.11	0.03	0.00	0.03	3.44
	0.03	0.43	0.61	0.00	0.15	0.00	0.15	0.04	0.00	0.04	9.34

600 Foothill
Air Quality and Greenhouse Gas Assessment

Regional Operational Emissions

Maximum Unmitigated Regional Operational Emissions (pounds per day) [a]

Source	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area (Consumer Products, Landscaping)	1.9	0.7	4.2	0.0	0.1	0.1
Energy (Natural Gas)	0.0	0.3	0.1	0.0	0.0	0.0
Motor Vehicles	0.8	1.3	7.1	0.0	2.1	0.6
Total Project On-Site and Off-Site Emissions	**3**	**2**	**11**	**0.0**	**2**	**1**
SCAQMD Numeric Indicators	**55.0**	**55.0**	**550.0**	**150.0**	**150.0**	**55.0**
Over/(Under)	(52)	(53)	(538.5)	(150.0)	(148)	(54)
Exceeds Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Net Regional Operations

Maximum Unmitigated Regional Operational Emissions (pounds per day) [a]

Source	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area (Consumer Products, Landscaping)	1.7	<1	4.2	<1	<1	<1
Energy (Natural Gas)	<1	<1	<1	<1	<1	<1
Motor Vehicles	<1	0.9	5.2	<1	1.6	<1
Total Project On-Site and Off-Site Emissions	**2**	**2**	**9**	**0**	**2**	**1**
Existing On-Site and Off-Site Emissions	<1	<1	2	<1	<1	<1
Net On-Site and Off-Site Emissions	**2**	**1**	**8**	**<1**	**1**	**<1**
SCAQMD Numeric Indicators	**55**	**55**	**550**	**150**	**150.0**	**55.0**
Over/(Under)	(53)	(54)	(542)	(150)	(149)	(55)
Exceeds Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

600 Foothill
Air Quality and Greenhouse Gas Assessment

Localized Operational Emissions

Maximum Unmitigated Localized Operational Emissions (pounds per day) [a]

Source	NO_X	CO	PM_{10}	$PM_{2.5}$
Area (Consumer Products, Landscaping)	0.71	4.17	0.08	0.08
Energy (Natural Gas)	0.25	0.14	0.02	0.02
Total Project On-Site Emissions	**1**	**4**	**0.1**	**0.1**
SCAQMD Numeric Indicators	**42.5**	**882.2**	**3.6**	**1.3**
Over/(Under)	(42)	(878)	(3.5)	(1.2)
Exceeds Thresholds?	**No**	**No**	**No**	**No**

Localized significance thresholds from SCAQMD Look-Up tables, used a 1.29-acre site in SRA 8 with the nearest sensitive receptor within 50 meters from the Site.

600 Foothill
Air Quality and Greenhouse Gas Assessment

Existing Operational Emissions

Estimated Existing Operational Emissions (pounds per day) [a]

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	2	<1	<1	<1
Maximum Net Regional (On-Site and Off-Site) Emissions	**<1**	**<1**	**2**	**<1**	**<1**	**<1**

600 Foothill

Tons to Metric Tons: 0.907185

Greenhouse Gas Emissions Summary

Project Operations Summary (Full Buildout Year 2024)	
Category	**$MTCO_2e/yr$**
Mobile	359
From CalEEMod:	
Area	10
Energy	243
Waste	6
Water	35
From spreadsheet:	
EV Charging	<1
Construction	19
Project Subtotal	**673**
Existing	168
Project Net Total GHG Emissions	**505**

$MTCO_2e$=Metric Tons Carbon Dioxide equivalents

Existing Emissions Summary	
Category	**$MTCO_2e/yr$**
Mobile	87
Area	<1
Energy	48
Solid Waste	30
Water Conveyance and Wastewater Treatment	4
Total Existing Emissions	**168**

600 Foothill
Air Quality and GHG Assessment
Operational Mobile Emissions

			Criteria Pollutant Emission Factors (lb/mile)										GHG Emissions (metric tons/mile)				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 Tota	CO2	CH4	N2O	CO2e	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	603	3.46E-04	6.67E-04	3.20E-03	8.28E-06	6.61E-04	1.20E-04	7.81E-04	1.62E-04	5.33E-05	2.16E-04	3.87E-04	2.64E-08	2.11E-08	3.94E-04	0.21	0.40	1.93	0.00	0.40	0.07	0.47	0.10	0.03	0.13	85.10	0.01	0.00	86.62
Project	2024	2,716	2.85E-04	4.73E-04	2.63E-03	7.60E-06	6.61E-04	1.16E-04	7.77E-04	1.62E-04	4.91E-05	2.11E-04	3.56E-04	2.33E-08	1.89E-08	3.62E-04	0.77	1.28	7.15	0.02	1.80	0.31	2.11	0.44	0.13	0.57	352.73	0.02	0.02	358.88

Source: Project and Existing CalEEMod

600 Foothill
Air Quality and GHG Assessment
Operational Mobile Emissions - VMT Calculation from Trip Rates

Project

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	74.12	16.82	5.33	180,748	180,748
Hotel	65.28	58.92	49.08	148,079	148,079
Retirement Community	173.9	151.81	147.58	570,611	570,61

Source: Project CalEEMod

	Miles			Trip %			Trip Purpose %		
	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
General Office Building	16.6	8.4	6.9	33%	48%	19%	77%	19%	4%
Hotel	16.6	8.4	6.9	19%	62%	19%	58%	38%	4%
Retirement Community	14.7	5.9	8.7	40%	19%	41%	86%	11%	3%

Source: Project CalEEMod

	Average Daily Trip Rate	Peak Daily Trip Rate	Average Primary Trip Length	Average Overall Trip Length	Average Daily VMT	Peak Daily VMT
General Office Building	56.1	74.1	10.8	8.9	496.6	656.0
Hotel	62.1	65.3	9.7	6.6	406.8	427.9
Retirement Community	167.0	173.9	10.6	9.4	1,567.6	1,632.5
Total						2,716.4

Existing

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Place of Worship	73.18	63.07	290.94	219,353	219,353

Source: Existing CalEEMod

	Miles			Trip %			Trip Purpose %		
	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
Place of Worship	16.6	8.4	6.9	0%	95%	5%	64%	25%	11%

Source: Existing CalEEMod

	Average Daily Trip Rate	Peak Daily Trip Rate	Average Primary Trip Length	Average Overall Trip Length	Average Daily VMT	Peak Daily VMT
Place of Worship	102.8	290.9	8.3	5.9	602.6	1,704.7
Total					602.6	

Note: Average Daily VMT was used instead of Peak Daily VMT because the existing Church land use has a large Sunday trip rate. Using the average daily VMT is more conservative when calculating the net emissions.

Emissions Factors

	lbs/mile						MT/mile			
	ROG	NOx	CO	SOx	PM10	PM2_5	CO2	CH4	N2O	CO2e
2021	0.000345945	0.000667307	0.003197313	8.28422E-06	0.000119866	5.32604E-05	0.000386891	2.64029E-08	2.10776E-08	0.000393833
2024	0.000285158	0.000472841	0.002632011	7.60257E-06	0.0001158	4.91077E-05	0.000355748	2.32508E-08	1.88765E-08	0.000361955

600 Foothill Existing - Operations only

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	10.53	1000sqft	1.29	10,530.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Existing church structure - 10,530 SF

Construction Phase - No construction for existing run

Vehicle Trips - Church trip rates from Gibson's Trip Generation Comparison (Table 1) in Refined Project Memo dated December 2020

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

600 Foothill Existing - Operations only - Los Angeles-South Coast County, Annual

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	0.24	1.29
tblVehicleTrips	ST_TR	10.37	5.99
tblVehicleTrips	SU_TR	36.63	27.63
tblVehicleTrips	WD_TR	9.11	6.95

2.0 Emissions Summary

2.1 Overall Construction

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	tons/yr										MT/yr					
2021	0.2108	1.6516	1.5094	2.6500e-003	0.0234	0.0822	0.1056	0.0101	0.0789	0.0890	0.0000	220.9312	220.9312	0.0407	0.0000	221.9483
2022	0.0513	0.0207	0.0278	5.0000e-005	3.4000e-004	1.1100e-003	1.4500e-003	9.0000e-005	1.0500e-003	1.1400e-003	0.0000	3.9263	3.9263	8.4000e-004	0.0000	3.9473
Maximum	**0.2108**	**1.6516**	**1.5094**	**2.6500e-003**	**0.0234**	**0.0822**	**0.1056**	**0.0101**	**0.0789**	**0.0890**	**0.0000**	**220.9312**	**220.9312**	**0.0407**	**0.0000**	**221.9483**

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	tons/yr										MT/yr					
2021	0.2108	1.6516	1.5094	2.6500e-003	0.0234	0.0822	0.1056	0.0101	0.0789	0.0890	0.0000	220.9310	220.9310	0.0407	0.0000	221.9481
2022	0.0513	0.0207	0.0278	5.0000e-005	3.4000e-004	1.1100e-003	1.4500e-003	9.0000e-005	1.0500e-003	1.1400e-003	0.0000	3.9263	3.9263	8.4000e-004	0.0000	3.9473
Maximum	**0.2108**	**1.6516**	**1.5094**	**2.6500e-003**	**0.0234**	**0.0822**	**0.1056**	**0.0101**	**0.0789**	**0.0890**	**0.0000**	**220.9310**	**220.9310**	**0.0407**	**0.0000**	**221.9481**

	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**

600 Foothill Existing - Operations only - Los Angeles-South Coast County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-11-2021	5-10-2021	0.5619	0.5619
2	5-11-2021	8-10-2021	0.5151	0.5151
3	8-11-2021	11-10-2021	0.5152	0.5152
4	11-11-2021	2-10-2022	0.3385	0.3385
		Highest	0.5619	0.5619

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	tons/yr										MT/yr					
Area	0.0429	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004
Energy	1.0300e-003	9.3400e-003	7.8500e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	47.4122	47.4122	1.7300e-003	5.0000e-004	47.6059
Mobile	0.0284	0.1368	0.3299	1.0700e-003	0.0833	9.3000e-004	0.0842	0.0223	8.7000e-004	0.0232	0.0000	98.5133	98.5133	5.5700e-003	0.0000	98.6525
Waste						0.0000	0.0000		0.0000	0.0000	12.1835	0.0000	12.1835	0.7200	0.0000	30.1842
Water						0.0000	0.0000		0.0000	0.0000	0.1045	3.1911	3.2956	0.0109	2.8000e-004	3.6510
Total	**0.0723**	**0.1462**	**0.3379**	**1.1300e-003**	**0.0833**	**1.6400e-003**	**0.0849**	**0.0223**	**1.5800e-003**	**0.0239**	**12.2881**	**149.1169**	**161.4049**	**0.7382**	**7.8000e-004**	**180.0937**

2.2 Overall Operational

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	tons/yr										MT/yr					
Area	0.0429	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004
Energy	1.0300e-003	9.3400e-003	7.8500e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	47.4122	47.4122	1.7300e-003	5.0000e-004	47.6059
Mobile	0.0284	0.1368	0.3299	1.0700e-003	0.0833	9.3000e-004	0.0842	0.0223	8.7000e-004	0.0232	0.0000	98.5133	98.5133	5.5700e-003	0.0000	98.6525
Waste						0.0000	0.0000		0.0000	0.0000	12.1835	0.0000	12.1835	0.7200	0.0000	30.1842
Water						0.0000	0.0000		0.0000	0.0000	0.1045	3.1911	3.2956	0.0109	2.8000e-004	3.6510
Total	**0.0723**	**0.1462**	**0.3379**	**1.1300e-003**	**0.0833**	**1.6400e-003**	**0.0849**	**0.0223**	**1.5800e-003**	**0.0239**	**12.2881**	**149.1169**	**161.4049**	**0.7382**	**7.8000e-004**	**180.0937**

	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**

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/11/2021	3/10/2021	5	20	
2	Site Preparation	Site Preparation	3/11/2021	3/12/2021	5	2	
3	Grading	Grading	3/13/2021	3/18/2021	5	4	
4	Building Construction	Building Construction	3/19/2021	12/23/2021	5	200	
5	Paving	Paving	12/24/2021	1/6/2022	5	10	
6	Architectural Coating	Architectural Coating	1/7/2022	1/20/2022	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 15,795; Non-Residential Outdoor: 5,265; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

600 Foothill Existing - Operations only - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	4.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

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	tons/yr										MT/yr					
Off-Road	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	**0.0199**	**0.1970**	**0.1449**	**2.4000e-004**		**0.0104**	**0.0104**		**9.7100e-003**	**9.7100e-003**	**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

3.2 Demolition - 2021

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	tons/yr										MT/yr					
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	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	0.0000
Worker	5.6000e-004	4.4000e-004	4.9200e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2856	1.2856	4.0000e-005	0.0000	1.2865
Total	**5.6000e-004**	**4.4000e-004**	**4.9200e-003**	**1.0000e-005**	**1.4200e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.2856**	**1.2856**	**4.0000e-005**	**0.0000**	**1.2865**

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	tons/yr										MT/yr					
Off-Road	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	**0.0199**	**0.1970**	**0.1449**	**2.4000e-004**		**0.0104**	**0.0104**		**9.7100e-003**	**9.7100e-003**	**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

3.2 Demolition - 2021

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	tons/yr										MT/yr					
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	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	0.0000
Worker	5.6000e-004	4.4000e-004	4.9200e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2856	1.2856	4.0000e-005	0.0000	1.2865
Total	**5.6000e-004**	**4.4000e-004**	**4.9200e-003**	**1.0000e-005**	**1.4200e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.2856**	**1.2856**	**4.0000e-005**	**0.0000**	**1.2865**

3.3 Site Preparation - 2021

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	tons/yr										MT/yr					
Fugitive Dust					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5600e-003	0.0174	7.5600e-003	2.0000e-005		7.7000e-004	7.7000e-004		7.0000e-004	7.0000e-004	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241
Total	**1.5600e-003**	**0.0174**	**7.5600e-003**	**2.0000e-005**	**5.8000e-003**	**7.7000e-004**	**6.5700e-003**	**2.9500e-003**	**7.0000e-004**	**3.6500e-003**	**0.0000**	**1.5118**	**1.5118**	**4.9000e-004**	**0.0000**	**1.5241**

3.3 Site Preparation - 2021

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	tons/yr										MT/yr					
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	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	0.0000
Worker	3.0000e-005	3.0000e-005	3.0000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0791	0.0791	0.0000	0.0000	0.0792
Total	**3.0000e-005**	**3.0000e-005**	**3.0000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0791**	**0.0791**	**0.0000**	**0.0000**	**0.0792**

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	tons/yr										MT/yr					
Fugitive Dust					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5600e-003	0.0174	7.5600e-003	2.0000e-005		7.7000e-004	7.7000e-004		7.0000e-004	7.0000e-004	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241
Total	**1.5600e-003**	**0.0174**	**7.5600e-003**	**2.0000e-005**	**5.8000e-003**	**7.7000e-004**	**6.5700e-003**	**2.9500e-003**	**7.0000e-004**	**3.6500e-003**	**0.0000**	**1.5118**	**1.5118**	**4.9000e-004**	**0.0000**	**1.5241**

3.3 Site Preparation - 2021

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	tons/yr										MT/yr					
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	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	0.0000
Worker	3.0000e-005	3.0000e-005	3.0000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0791	0.0791	0.0000	0.0000	0.0792
Total	**3.0000e-005**	**3.0000e-005**	**3.0000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0791**	**0.0791**	**0.0000**	**0.0000**	**0.0792**

3.4 Grading - 2021

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	tons/yr										MT/yr					
Fugitive Dust					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5800e-003	0.0287	0.0127	3.0000e-005		1.2800e-003	1.2800e-003		1.1700e-003	1.1700e-003	0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968
Total	**2.5800e-003**	**0.0287**	**0.0127**	**3.0000e-005**	**9.8300e-003**	**1.2800e-003**	**0.0111**	**5.0500e-003**	**1.1700e-003**	**6.2200e-003**	**0.0000**	**2.4767**	**2.4767**	**8.0000e-004**	**0.0000**	**2.4968**

3.4 Grading - 2021

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	tons/yr										MT/yr					
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	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	0.0000
Worker	7.0000e-005	5.0000e-005	6.1000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1582	0.1582	0.0000	0.0000	0.1583
Total	**7.0000e-005**	**5.0000e-005**	**6.1000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1582**	**0.1582**	**0.0000**	**0.0000**	**0.1583**

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	tons/yr										MT/yr					
Fugitive Dust					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5800e-003	0.0287	0.0127	3.0000e-005		1.2800e-003	1.2800e-003		1.1700e-003	1.1700e-003	0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968
Total	**2.5800e-003**	**0.0287**	**0.0127**	**3.0000e-005**	**9.8300e-003**	**1.2800e-003**	**0.0111**	**5.0500e-003**	**1.1700e-003**	**6.2200e-003**	**0.0000**	**2.4767**	**2.4767**	**8.0000e-004**	**0.0000**	**2.4968**

3.4 Grading - 2021

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	tons/yr										MT/yr					
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	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	0.0000
Worker	7.0000e-005	5.0000e-005	6.1000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1582	0.1582	0.0000	0.0000	0.1583
Total	**7.0000e-005**	**5.0000e-005**	**6.1000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1582**	**0.1582**	**0.0000**	**0.0000**	**0.1583**

3.5 Building Construction - 2021

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	tons/yr										MT/yr					
Off-Road	0.1813	1.3636	1.2899	2.2000e-003		0.0684	0.0684		0.0661	0.0661	0.0000	181.5476	181.5476	0.0324	0.0000	182.3579
Total	**0.1813**	**1.3636**	**1.2899**	**2.2000e-003**		**0.0684**	**0.0684**		**0.0661**	**0.0661**	**0.0000**	**181.5476**	**181.5476**	**0.0324**	**0.0000**	**182.3579**

3.5 Building Construction - 2021

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	tons/yr										MT/yr					
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	0.0000
Vendor	6.2000e-004	0.0197	5.3500e-003	5.0000e-005	1.2600e-003	4.0000e-005	1.3000e-003	3.6000e-004	4.0000e-005	4.0000e-004	0.0000	4.9299	4.9299	3.0000e-004	0.0000	4.9375
Worker	1.7200e-003	1.3400e-003	0.0151	4.0000e-005	4.3800e-003	4.0000e-005	4.4200e-003	1.1600e-003	3.0000e-005	1.2000e-003	0.0000	3.9557	3.9557	1.2000e-004	0.0000	3.9586
Total	**2.3400e-003**	**0.0211**	**0.0205**	**9.0000e-005**	**5.6400e-003**	**8.0000e-005**	**5.7200e-003**	**1.5200e-003**	**7.0000e-005**	**1.6000e-003**	**0.0000**	**8.8856**	**8.8856**	**4.2000e-004**	**0.0000**	**8.8961**

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	tons/yr										MT/yr					
Off-Road	0.1813	1.3636	1.2899	2.2000e-003		0.0684	0.0684		0.0661	0.0661	0.0000	181.5474	181.5474	0.0324	0.0000	182.3577
Total	**0.1813**	**1.3636**	**1.2899**	**2.2000e-003**		**0.0684**	**0.0684**		**0.0661**	**0.0661**	**0.0000**	**181.5474**	**181.5474**	**0.0324**	**0.0000**	**182.3577**

3.5 Building Construction - 2021

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	tons/yr										MT/yr					
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	0.0000
Vendor	6.2000e-004	0.0197	5.3500e-003	5.0000e-005	1.2600e-003	4.0000e-005	1.3000e-003	3.6000e-004	4.0000e-005	4.0000e-004	0.0000	4.9299	4.9299	3.0000e-004	0.0000	4.9375
Worker	1.7200e-003	1.3400e-003	0.0151	4.0000e-005	4.3800e-003	4.0000e-005	4.4200e-003	1.1600e-003	3.0000e-005	1.2000e-003	0.0000	3.9557	3.9557	1.2000e-004	0.0000	3.9586
Total	**2.3400e-003**	**0.0211**	**0.0205**	**9.0000e-005**	**5.6400e-003**	**8.0000e-005**	**5.7200e-003**	**1.5200e-003**	**7.0000e-005**	**1.6000e-003**	**0.0000**	**8.8856**	**8.8856**	**4.2000e-004**	**0.0000**	**8.8961**

3.6 Paving - 2021

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	tons/yr										MT/yr					
Off-Road	2.3200e-003	0.0232	0.0266	4.0000e-005		1.2500e-003	1.2500e-003		1.1500e-003	1.1500e-003	0.0000	3.5295	3.5295	1.1200e-003	0.0000	3.5575
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.3200e-003**	**0.0232**	**0.0266**	**4.0000e-005**		**1.2500e-003**	**1.2500e-003**		**1.1500e-003**	**1.1500e-003**	**0.0000**	**3.5295**	**3.5295**	**1.1200e-003**	**0.0000**	**3.5575**

3.6 Paving - 2021

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	tons/yr										MT/yr					
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	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	0.0000
Worker	1.7000e-004	1.3000e-004	1.4700e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3857	0.3857	1.0000e-005	0.0000	0.3860
Total	**1.7000e-004**	**1.3000e-004**	**1.4700e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.3000e-004**	**1.1000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3857**	**0.3857**	**1.0000e-005**	**0.0000**	**0.3860**

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	tons/yr										MT/yr					
Off-Road	2.3200e-003	0.0232	0.0266	4.0000e-005		1.2500e-003	1.2500e-003		1.1500e-003	1.1500e-003	0.0000	3.5295	3.5295	1.1200e-003	0.0000	3.5575
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.3200e-003**	**0.0232**	**0.0266**	**4.0000e-005**		**1.2500e-003**	**1.2500e-003**		**1.1500e-003**	**1.1500e-003**	**0.0000**	**3.5295**	**3.5295**	**1.1200e-003**	**0.0000**	**3.5575**

3.6 Paving - 2021

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	tons/yr										MT/yr					
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	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	0.0000
Worker	1.7000e-004	1.3000e-004	1.4700e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3857	0.3857	1.0000e-005	0.0000	0.3860
Total	**1.7000e-004**	**1.3000e-004**	**1.4700e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.3000e-004**	**1.1000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3857**	**0.3857**	**1.0000e-005**	**0.0000**	**0.3860**

3.6 Paving - 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	tons/yr										MT/yr					
Off-Road	1.3800e-003	0.0136	0.0176	3.0000e-005		6.9000e-004	6.9000e-004		6.4000e-004	6.4000e-004	0.0000	2.3539	2.3539	7.5000e-004	0.0000	2.3726
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.3800e-003**	**0.0136**	**0.0176**	**3.0000e-005**		**6.9000e-004**	**6.9000e-004**		**6.4000e-004**	**6.4000e-004**	**0.0000**	**2.3539**	**2.3539**	**7.5000e-004**	**0.0000**	**2.3726**

3.6 Paving - 2022

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	tons/yr										MT/yr					
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	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	0.0000
Worker	1.0000e-004	8.0000e-005	9.1000e-004	0.0000	2.8000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2481	0.2481	1.0000e-005	0.0000	0.2483
Total	**1.0000e-004**	**8.0000e-005**	**9.1000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**2.9000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2481**	**0.2481**	**1.0000e-005**	**0.0000**	**0.2483**

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	tons/yr										MT/yr					
Off-Road	1.3800e-003	0.0136	0.0176	3.0000e-005		6.9000e-004	6.9000e-004		6.4000e-004	6.4000e-004	0.0000	2.3539	2.3539	7.5000e-004	0.0000	2.3726
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.3800e-003**	**0.0136**	**0.0176**	**3.0000e-005**		**6.9000e-004**	**6.9000e-004**		**6.4000e-004**	**6.4000e-004**	**0.0000**	**2.3539**	**2.3539**	**7.5000e-004**	**0.0000**	**2.3726**

3.6 Paving - 2022

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	tons/yr										MT/yr					
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	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	0.0000
Worker	1.0000e-004	8.0000e-005	9.1000e-004	0.0000	2.8000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2481	0.2481	1.0000e-005	0.0000	0.2483
Total	**1.0000e-004**	**8.0000e-005**	**9.1000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**2.9000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2481**	**0.2481**	**1.0000e-005**	**0.0000**	**0.2483**

3.7 Architectural Coating - 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	tons/yr										MT/yr					
Archit. Coating	0.0488					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**0.0498**	**7.0400e-003**	**9.0700e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

3.7 Architectural Coating - 2022

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	tons/yr										MT/yr					
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	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	0.0000
Worker	2.0000e-005	2.0000e-005	1.7000e-004	0.0000	5.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0477	0.0477	0.0000	0.0000	0.0477
Total	**2.0000e-005**	**2.0000e-005**	**1.7000e-004**	**0.0000**	**5.0000e-005**	**0.0000**	**6.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0477**	**0.0477**	**0.0000**	**0.0000**	**0.0477**

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	tons/yr										MT/yr					
Archit. Coating	0.0488					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**0.0498**	**7.0400e-003**	**9.0700e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

3.7 Architectural Coating - 2022

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	tons/yr										MT/yr					
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	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	0.0000
Worker	2.0000e-005	2.0000e-005	1.7000e-004	0.0000	5.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0477	0.0477	0.0000	0.0000	0.0477
Total	**2.0000e-005**	**2.0000e-005**	**1.7000e-004**	**0.0000**	**5.0000e-005**	**0.0000**	**6.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0477**	**0.0477**	**0.0000**	**0.0000**	**0.0477**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	tons/yr										MT/yr					
Mitigated	0.0284	0.1368	0.3299	1.0700e-003	0.0833	9.3000e-004	0.0842	0.0223	8.7000e-004	0.0232	0.0000	98.5133	98.5133	5.5700e-003	0.0000	98.6525
Unmitigated	0.0284	0.1368	0.3299	1.0700e-003	0.0833	9.3000e-004	0.0842	0.0223	8.7000e-004	0.0232	0.0000	98.5133	98.5133	5.5700e-003	0.0000	98.6525

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Place of Worship	73.18	63.07	290.94	219,353	219,353
Total	73.18	63.07	290.94	219,353	219,353

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
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	64	25	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Place of Worship	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	37.2414	37.2414	1.5400e-003	3.2000e-004	37.3747
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	37.2414	37.2414	1.5400e-003	3.2000e-004	37.3747
NaturalGas Mitigated	1.0300e-003	9.3400e-003	7.8500e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	10.1708	10.1708	1.9000e-004	1.9000e-004	10.2312
NaturalGas Unmitigated	1.0300e-003	9.3400e-003	7.8500e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	10.1708	10.1708	1.9000e-004	1.9000e-004	10.2312

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	tons/yr										MT/yr					
Place of Worship	190593	1.0300e-003	9.3400e-003	7.8500e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	10.1708	10.1708	1.9000e-004	1.9000e-004	10.2312
Total		**1.0300e-003**	**9.3400e-003**	**7.8500e-003**	**6.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**10.1708**	**10.1708**	**1.9000e-004**	**1.9000e-004**	**10.2312**

5.2 Energy by Land Use - NaturalGas

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	tons/yr										MT/yr					
Place of Worship	190593	1.0300e-003	9.3400e-003	7.8500e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	10.1708	10.1708	1.9000e-004	1.9000e-004	10.2312
Total		**1.0300e-003**	**9.3400e-003**	**7.8500e-003**	**6.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**10.1708**	**10.1708**	**1.9000e-004**	**1.9000e-004**	**10.2312**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Place of Worship	116883	37.2414	1.5400e-003	3.2000e-004	37.3747
Total		**37.2414**	**1.5400e-003**	**3.2000e-004**	**37.3747**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Place of Worship	116883	37.2414	1.5400e-003	3.2000e-004	37.3747
Total		**37.2414**	**1.5400e-003**	**3.2000e-004**	**37.3747**

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	tons/yr										MT/yr					
Mitigated	0.0429	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004
Unmitigated	0.0429	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004

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	tons/yr										MT/yr					
Architectural Coating	4.8800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0381					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004
Total	**0.0429**	**0.0000**	**1.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.6000e-004**	**2.6000e-004**	**0.0000**	**0.0000**	**2.8000e-004**

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	tons/yr										MT/yr					
Architectural Coating	4.8800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0381					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004
Total	**0.0429**	**0.0000**	**1.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.6000e-004**	**2.6000e-004**	**0.0000**	**0.0000**	**2.8000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.2956	0.0109	2.8000e-004	3.6510
Unmitigated	3.2956	0.0109	2.8000e-004	3.6510

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Place of Worship	0.329472 / 0.515328	3.2956	0.0109	2.8000e-004	3.6510
Total		**3.2956**	**0.0109**	**2.8000e-004**	**3.6510**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Place of Worship	0.329472 / 0.515328	3.2956	0.0109	2.8000e-004	3.6510
Total		**3.2956**	**0.0109**	**2.8000e-004**	**3.6510**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.1835	0.7200	0.0000	30.1842
Unmitigated	12.1835	0.7200	0.0000	30.1842

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Place of Worship	60.02	12.1835	0.7200	0.0000	30.1842
Total		**12.1835**	**0.7200**	**0.0000**	**30.1842**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Place of Worship	60.02	12.1835	0.7200	0.0000	30.1842
Total		**12.1835**	**0.7200**	**0.0000**	**30.1842**

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

600 Foothill Existing - Operations only

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	10.53	1000sqft	1.29	10,530.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Existing church structure - 10,530 SF

Construction Phase - No construction for existing run

Vehicle Trips - Church trip rates from Gibson's Trip Generation Comparison (Table 1) in Refined Project Memo dated December 2020

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	0.24	1.29
tblVehicleTrips	ST_TR	10.37	5.99
tblVehicleTrips	SU_TR	36.63	27.63
tblVehicleTrips	WD_TR	9.11	6.95

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					
2021	2.0487	19.7349	15.0161	0.0256	5.8890	1.0421	6.6551	2.9774	0.9726	3.6822	0.0000	2,470.7571	2,470.7571	0.5983	0.0000	2,485.7149
2022	9.9699	6.8084	9.2891	0.0150	0.1453	0.3486	0.4939	0.0385	0.3216	0.3601	0.0000	1,440.2115	1,440.2115	0.4152	0.0000	1,450.5920
Maximum	**9.9699**	**19.7349**	**15.0161**	**0.0256**	**5.8890**	**1.0421**	**6.6551**	**2.9774**	**0.9726**	**3.6822**	**0.0000**	**2,470.7571**	**2,470.7571**	**0.5983**	**0.0000**	**2,485.7149**

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					
2021	2.0487	19.7349	15.0161	0.0256	5.8890	1.0421	6.6551	2.9774	0.9726	3.6822	0.0000	2,470.7571	2,470.7571	0.5983	0.0000	2,485.7149
2022	9.9699	6.8084	9.2891	0.0150	0.1453	0.3486	0.4939	0.0385	0.3216	0.3601	0.0000	1,440.2115	1,440.2115	0.4152	0.0000	1,450.5920
Maximum	**9.9699**	**19.7349**	**15.0161**	**0.0256**	**5.8890**	**1.0421**	**6.6551**	**2.9774**	**0.9726**	**3.6822**	**0.0000**	**2,470.7571**	**2,470.7571**	**0.5983**	**0.0000**	**2,485.7149**

	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**

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	0.2353	1.0000e-005	1.0800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4600e-003
Energy	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003		61.4321	61.4321	1.1800e-003	1.1300e-003	61.7971
Mobile	0.1176	0.5167	1.3193	4.3300e-003	0.3319	3.6200e-003	0.3355	0.0888	3.3800e-003	0.0922		440.0583	440.0583	0.0240		440.6590
Total	**0.3586**	**0.5679**	**1.3634**	**4.6400e-003**	**0.3319**	**7.5100e-003**	**0.3394**	**0.0888**	**7.2700e-003**	**0.0961**		**501.4927**	**501.4927**	**0.0252**	**1.1300e-003**	**502.4585**

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	0.2353	1.0000e-005	1.0800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4600e-003
Energy	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003		61.4321	61.4321	1.1800e-003	1.1300e-003	61.7971
Mobile	0.1176	0.5167	1.3193	4.3300e-003	0.3319	3.6200e-003	0.3355	0.0888	3.3800e-003	0.0922		440.0583	440.0583	0.0240		440.6590
Total	**0.3586**	**0.5679**	**1.3634**	**4.6400e-003**	**0.3319**	**7.5100e-003**	**0.3394**	**0.0888**	**7.2700e-003**	**0.0961**		**501.4927**	**501.4927**	**0.0252**	**1.1300e-003**	**502.4585**

	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**

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	2/11/2021	3/10/2021	5	20	
2	Site Preparation	Site Preparation	3/11/2021	3/12/2021	5	2	
3	Grading	Grading	3/13/2021	3/18/2021	5	4	
4	Building Construction	Building Construction	3/19/2021	12/23/2021	5	200	
5	Paving	Paving	12/24/2021	1/6/2022	5	10	
6	Architectural Coating	Architectural Coating	1/7/2022	1/20/2022	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 15,795; Non-Residential Outdoor: 5,265; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

600 Foothill Existing - Operations only - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	4.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

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	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715		2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**		**1.0409**	**1.0409**		**0.9715**	**0.9715**		**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

3.2 Demolition - 2021

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
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
Worker	0.0557	0.0383	0.5236	1.4900e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.0401	148.0401	4.3600e-003		148.1491
Total	**0.0557**	**0.0383**	**0.5236**	**1.4900e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**148.0401**	**148.0401**	**4.3600e-003**		**148.1491**

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	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715	0.0000	2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**		**1.0409**	**1.0409**		**0.9715**	**0.9715**	**0.0000**	**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

3.2 Demolition - 2021

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
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
Worker	0.0557	0.0383	0.5236	1.4900e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.0401	148.0401	4.3600e-003		148.1491
Total	**0.0557**	**0.0383**	**0.5236**	**1.4900e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**148.0401**	**148.0401**	**4.3600e-003**		**148.1491**

3.3 Site Preparation - 2021

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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.5558	17.4203	7.5605	0.0172		0.7654	0.7654		0.7041	0.7041		1,666.5174	1,666.5174	0.5390		1,679.9920
Total	**1.5558**	**17.4203**	**7.5605**	**0.0172**	**5.7996**	**0.7654**	**6.5650**	**2.9537**	**0.7041**	**3.6578**		**1,666.5174**	**1,666.5174**	**0.5390**		**1,679.9920**

3.3 Site Preparation - 2021

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
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
Worker	0.0343	0.0236	0.3222	9.1000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		91.1016	91.1016	2.6800e-003		91.1687
Total	**0.0343**	**0.0236**	**0.3222**	**9.1000e-004**	**0.0894**	**7.2000e-004**	**0.0901**	**0.0237**	**6.7000e-004**	**0.0244**		**91.1016**	**91.1016**	**2.6800e-003**		**91.1687**

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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.5558	17.4203	7.5605	0.0172		0.7654	0.7654		0.7041	0.7041	0.0000	1,666.5174	1,666.5174	0.5390		1,679.9920
Total	**1.5558**	**17.4203**	**7.5605**	**0.0172**	**5.7996**	**0.7654**	**6.5650**	**2.9537**	**0.7041**	**3.6578**	**0.0000**	**1,666.5174**	**1,666.5174**	**0.5390**		**1,679.9920**

3.3 Site Preparation - 2021

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
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
Worker	0.0343	0.0236	0.3222	9.1000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		91.1016	91.1016	2.6800e-003		91.1687
Total	**0.0343**	**0.0236**	**0.3222**	**9.1000e-004**	**0.0894**	**7.2000e-004**	**0.0901**	**0.0237**	**6.7000e-004**	**0.0244**		**91.1016**	**91.1016**	**2.6800e-003**		**91.1687**

3.4 Grading - 2021

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					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.2884	14.3307	6.3314	0.0141		0.6379	0.6379		0.5869	0.5869		1,365.0648	1,365.0648	0.4415		1,376.1020
Total	**1.2884**	**14.3307**	**6.3314**	**0.0141**	**4.9143**	**0.6379**	**5.5522**	**2.5256**	**0.5869**	**3.1125**		**1,365.0648**	**1,365.0648**	**0.4415**		**1,376.1020**

3.4 Grading - 2021

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
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
Worker	0.0343	0.0236	0.3222	9.1000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		91.1016	91.1016	2.6800e-003		91.1687
Total	**0.0343**	**0.0236**	**0.3222**	**9.1000e-004**	**0.0894**	**7.2000e-004**	**0.0901**	**0.0237**	**6.7000e-004**	**0.0244**		**91.1016**	**91.1016**	**2.6800e-003**		**91.1687**

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					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.2884	14.3307	6.3314	0.0141		0.6379	0.6379		0.5869	0.5869	0.0000	1,365.0648	1,365.0648	0.4415		1,376.1020
Total	**1.2884**	**14.3307**	**6.3314**	**0.0141**	**4.9143**	**0.6379**	**5.5522**	**2.5256**	**0.5869**	**3.1125**	**0.0000**	**1,365.0648**	**1,365.0648**	**0.4415**		**1,376.1020**

3.4 Grading - 2021

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
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
Worker	0.0343	0.0236	0.3222	9.1000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		91.1016	91.1016	2.6800e-003		91.1687
Total	**0.0343**	**0.0236**	**0.3222**	**9.1000e-004**	**0.0894**	**7.2000e-004**	**0.0901**	**0.0237**	**6.7000e-004**	**0.0244**		**91.1016**	**91.1016**	**2.6800e-003**		**91.1687**

3.5 Building Construction - 2021

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**		**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.5 Building Construction - 2021

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
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0172	0.0118	0.1611	4.6000e-004	0.0447	3.6000e-004	0.0451	0.0119	3.3000e-004	0.0122		45.5508	45.5508	1.3400e-003		45.5844
Total	**0.0232**	**0.2060**	**0.2119**	**9.7000e-004**	**0.0575**	**7.6000e-004**	**0.0583**	**0.0156**	**7.1000e-004**	**0.0163**		**100.5269**	**100.5269**	**4.5800e-003**		**100.6415**

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**	**0.0000**	**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.5 Building Construction - 2021

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
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0172	0.0118	0.1611	4.6000e-004	0.0447	3.6000e-004	0.0451	0.0119	3.3000e-004	0.0122		45.5508	45.5508	1.3400e-003		45.5844
Total	**0.0232**	**0.2060**	**0.2119**	**9.7000e-004**	**0.0575**	**7.6000e-004**	**0.0583**	**0.0156**	**7.1000e-004**	**0.0163**		**100.5269**	**100.5269**	**4.5800e-003**		**100.6415**

3.6 Paving - 2021

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	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7739**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**		**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.6 Paving - 2021

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
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
Worker	0.0557	0.0383	0.5236	1.4900e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.0401	148.0401	4.3600e-003		148.1491
Total	**0.0557**	**0.0383**	**0.5236**	**1.4900e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**148.0401**	**148.0401**	**4.3600e-003**		**148.1491**

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	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7739**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**	**0.0000**	**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.6 Paving - 2021

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
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
Worker	0.0557	0.0383	0.5236	1.4900e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.0401	148.0401	4.3600e-003		148.1491
Total	**0.0557**	**0.0383**	**0.5236**	**1.4900e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**148.0401**	**148.0401**	**4.3600e-003**		**148.1491**

3.6 Paving - 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	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205		1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6877**	**6.7738**	**8.8060**	**0.0135**		**0.3474**	**0.3474**		**0.3205**	**0.3205**		**1,297.3789**	**1,297.3789**	**0.4113**		**1,307.6608**

3.6 Paving - 2022

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
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
Worker	0.0522	0.0346	0.4831	1.4300e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		142.8326	142.8326	3.9400e-003		142.9312
Total	**0.0522**	**0.0346**	**0.4831**	**1.4300e-003**	**0.1453**	**1.1400e-003**	**0.1465**	**0.0385**	**1.0500e-003**	**0.0396**		**142.8326**	**142.8326**	**3.9400e-003**		**142.9312**

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	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205	0.0000	1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6877**	**6.7738**	**8.8060**	**0.0135**		**0.3474**	**0.3474**		**0.3205**	**0.3205**	**0.0000**	**1,297.3789**	**1,297.3789**	**0.4113**		**1,307.6608**

3.6 Paving - 2022

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
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
Worker	0.0522	0.0346	0.4831	1.4300e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		142.8326	142.8326	3.9400e-003		142.9312
Total	**0.0522**	**0.0346**	**0.4831**	**1.4300e-003**	**0.1453**	**1.1400e-003**	**0.1465**	**0.0385**	**1.0500e-003**	**0.0396**		**142.8326**	**142.8326**	**3.9400e-003**		**142.9312**

3.7 Architectural Coating - 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					
Archit. Coating	9.7613					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**9.9659**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

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
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
Worker	4.0200e-003	2.6600e-003	0.0372	1.1000e-004	0.0112	9.0000e-005	0.0113	2.9600e-003	8.0000e-005	3.0400e-003		10.9871	10.9871	3.0000e-004		10.9947
Total	**4.0200e-003**	**2.6600e-003**	**0.0372**	**1.1000e-004**	**0.0112**	**9.0000e-005**	**0.0113**	**2.9600e-003**	**8.0000e-005**	**3.0400e-003**		**10.9871**	**10.9871**	**3.0000e-004**		**10.9947**

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	9.7613					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**9.9659**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

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
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
Worker	4.0200e-003	2.6600e-003	0.0372	1.1000e-004	0.0112	9.0000e-005	0.0113	2.9600e-003	8.0000e-005	3.0400e-003		10.9871	10.9871	3.0000e-004		10.9947
Total	**4.0200e-003**	**2.6600e-003**	**0.0372**	**1.1000e-004**	**0.0112**	**9.0000e-005**	**0.0113**	**2.9600e-003**	**8.0000e-005**	**3.0400e-003**		**10.9871**	**10.9871**	**3.0000e-004**		**10.9947**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	0.1176	0.5167	1.3193	4.3300e-003	0.3319	3.6200e-003	0.3355	0.0888	3.3800e-003	0.0922		440.0583	440.0583	0.0240		440.6590
Unmitigated	0.1176	0.5167	1.3193	4.3300e-003	0.3319	3.6200e-003	0.3355	0.0888	3.3800e-003	0.0922		440.0583	440.0583	0.0240		440.6590

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Place of Worship	73.18	63.07	290.94	219,353	219,353
Total	73.18	63.07	290.94	219,353	219,353

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
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	64	25	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Place of Worship	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

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	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003		61.4321	61.4321	1.1800e-003	1.1300e-003	61.7971
NaturalGas Unmitigated	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003		61.4321	61.4321	1.1800e-003	1.1300e-003	61.7971

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					
Place of Worship	522.173	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003		61.4321	61.4321	1.1800e-003	1.1300e-003	61.7971
Total		**5.6300e-003**	**0.0512**	**0.0430**	**3.1000e-004**		**3.8900e-003**	**3.8900e-003**		**3.8900e-003**	**3.8900e-003**		**61.4321**	**61.4321**	**1.1800e-003**	**1.1300e-003**	**61.7971**

5.2 Energy by Land Use - NaturalGas

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					
Place of Worship	0.522173	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003		61.4321	61.4321	1.1800e-003	1.1300e-003	61.7971
Total		**5.6300e-003**	**0.0512**	**0.0430**	**3.1000e-004**		**3.8900e-003**	**3.8900e-003**		**3.8900e-003**	**3.8900e-003**		**61.4321**	**61.4321**	**1.1800e-003**	**1.1300e-003**	**61.7971**

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	0.2353	1.0000e-005	1.0800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4600e-003
Unmitigated	0.2353	1.0000e-005	1.0800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4600e-003

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	0.0267					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4600e-003
Total	**0.2353**	**1.0000e-005**	**1.0800e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.3000e-003**	**2.3000e-003**	**1.0000e-005**		**2.4600e-003**

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	0.0267					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4600e-003
Total	**0.2353**	**1.0000e-005**	**1.0800e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.3000e-003**	**2.3000e-003**	**1.0000e-005**		**2.4600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

600 Foothill Existing - Operations only

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	10.53	1000sqft	1.29	10,530.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Existing church structure - 10,530 SF

Construction Phase - No construction for existing run

Vehicle Trips - Church trip rates from Gibson's Trip Generation Comparison (Table 1) in Refined Project Memo dated December 2020

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

600 Foothill Existing - Operations only - Los Angeles-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	0.24	1.29
tblVehicleTrips	ST_TR	10.37	5.99
tblVehicleTrips	SU_TR	36.63	27.63
tblVehicleTrips	WD_TR	9.11	6.95

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					
2021	2.0550	19.7390	14.9713	0.0255	5.8890	1.0421	6.6551	2.9774	0.9726	3.6822	0.0000	2,462.1097	2,462.1097	0.5981	0.0000	2,477.0610
2022	9.9703	6.8121	9.2469	0.0149	0.1453	0.3486	0.4939	0.0385	0.3216	0.3601	0.0000	1,431.8729	1,431.8729	0.4150	0.0000	1,442.2474
Maximum	**9.9703**	**19.7390**	**14.9713**	**0.0255**	**5.8890**	**1.0421**	**6.6551**	**2.9774**	**0.9726**	**3.6822**	**0.0000**	**2,462.1097**	**2,462.1097**	**0.5981**	**0.0000**	**2,477.0610**

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					
2021	2.0550	19.7390	14.9713	0.0255	5.8890	1.0421	6.6551	2.9774	0.9726	3.6822	0.0000	2,462.1097	2,462.1097	0.5981	0.0000	2,477.0610
2022	9.9703	6.8121	9.2469	0.0149	0.1453	0.3486	0.4939	0.0385	0.3216	0.3601	0.0000	1,431.8729	1,431.8729	0.4150	0.0000	1,442.2474
Maximum	**9.9703**	**19.7390**	**14.9713**	**0.0255**	**5.8890**	**1.0421**	**6.6551**	**2.9774**	**0.9726**	**3.6822**	**0.0000**	**2,462.1097**	**2,462.1097**	**0.5981**	**0.0000**	**2,477.0610**

	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**

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	0.2353	1.0000e-005	1.0800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4600e-003
Energy	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003		61.4321	61.4321	1.1800e-003	1.1300e-003	61.7971
Mobile	0.1142	0.5254	1.2782	4.1100e-003	0.3319	3.6500e-003	0.3356	0.0888	3.4100e-003	0.0922		418.1771	418.1771	0.0242		418.7814
Total	**0.3552**	**0.5766**	**1.3223**	**4.4200e-003**	**0.3319**	**7.5400e-003**	**0.3394**	**0.0888**	**7.3000e-003**	**0.0961**		**479.6115**	**479.6115**	**0.0254**	**1.1300e-003**	**480.5810**

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	0.2353	1.0000e-005	1.0800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4600e-003
Energy	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003		61.4321	61.4321	1.1800e-003	1.1300e-003	61.7971
Mobile	0.1142	0.5254	1.2782	4.1100e-003	0.3319	3.6500e-003	0.3356	0.0888	3.4100e-003	0.0922		418.1771	418.1771	0.0242		418.7814
Total	**0.3552**	**0.5766**	**1.3223**	**4.4200e-003**	**0.3319**	**7.5400e-003**	**0.3394**	**0.0888**	**7.3000e-003**	**0.0961**		**479.6115**	**479.6115**	**0.0254**	**1.1300e-003**	**480.5810**

	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**

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	2/11/2021	3/10/2021	5	20	
2	Site Preparation	Site Preparation	3/11/2021	3/12/2021	5	2	
3	Grading	Grading	3/13/2021	3/18/2021	5	4	
4	Building Construction	Building Construction	3/19/2021	12/23/2021	5	200	
5	Paving	Paving	12/24/2021	1/6/2022	5	10	
6	Architectural Coating	Architectural Coating	1/7/2022	1/20/2022	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 15,795; Non-Residential Outdoor: 5,265; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

600 Foothill Existing - Operations only - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	4.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

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	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715		2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**		**1.0409**	**1.0409**		**0.9715**	**0.9715**		**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

3.2 Demolition - 2021

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
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
Worker	0.0620	0.0424	0.4787	1.4000e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		139.3926	139.3926	4.1000e-003		139.4952
Total	**0.0620**	**0.0424**	**0.4787**	**1.4000e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**139.3926**	**139.3926**	**4.1000e-003**		**139.4952**

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	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715	0.0000	2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**		**1.0409**	**1.0409**		**0.9715**	**0.9715**	**0.0000**	**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

3.2 Demolition - 2021

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
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
Worker	0.0620	0.0424	0.4787	1.4000e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		139.3926	139.3926	4.1000e-003		139.4952
Total	**0.0620**	**0.0424**	**0.4787**	**1.4000e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**139.3926**	**139.3926**	**4.1000e-003**		**139.4952**

3.3 Site Preparation - 2021

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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.5558	17.4203	7.5605	0.0172		0.7654	0.7654		0.7041	0.7041		1,666.5174	1,666.5174	0.5390		1,679.9920
Total	**1.5558**	**17.4203**	**7.5605**	**0.0172**	**5.7996**	**0.7654**	**6.5650**	**2.9537**	**0.7041**	**3.6578**		**1,666.5174**	**1,666.5174**	**0.5390**		**1,679.9920**

3.3 Site Preparation - 2021

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
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
Worker	0.0382	0.0261	0.2946	8.6000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		85.7801	85.7801	2.5200e-003		85.8432
Total	**0.0382**	**0.0261**	**0.2946**	**8.6000e-004**	**0.0894**	**7.2000e-004**	**0.0901**	**0.0237**	**6.7000e-004**	**0.0244**		**85.7801**	**85.7801**	**2.5200e-003**		**85.8432**

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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.5558	17.4203	7.5605	0.0172		0.7654	0.7654		0.7041	0.7041	0.0000	1,666.5174	1,666.5174	0.5390		1,679.9920
Total	**1.5558**	**17.4203**	**7.5605**	**0.0172**	**5.7996**	**0.7654**	**6.5650**	**2.9537**	**0.7041**	**3.6578**	**0.0000**	**1,666.5174**	**1,666.5174**	**0.5390**		**1,679.9920**

3.3 Site Preparation - 2021

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
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
Worker	0.0382	0.0261	0.2946	8.6000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		85.7801	85.7801	2.5200e-003		85.8432
Total	**0.0382**	**0.0261**	**0.2946**	**8.6000e-004**	**0.0894**	**7.2000e-004**	**0.0901**	**0.0237**	**6.7000e-004**	**0.0244**		**85.7801**	**85.7801**	**2.5200e-003**		**85.8432**

3.4 Grading - 2021

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					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.2884	14.3307	6.3314	0.0141		0.6379	0.6379		0.5869	0.5869		1,365.0648	1,365.0648	0.4415		1,376.1020
Total	**1.2884**	**14.3307**	**6.3314**	**0.0141**	**4.9143**	**0.6379**	**5.5522**	**2.5256**	**0.5869**	**3.1125**		**1,365.0648**	**1,365.0648**	**0.4415**		**1,376.1020**

3.4 Grading - 2021

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
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
Worker	0.0382	0.0261	0.2946	8.6000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		85.7801	85.7801	2.5200e-003		85.8432
Total	**0.0382**	**0.0261**	**0.2946**	**8.6000e-004**	**0.0894**	**7.2000e-004**	**0.0901**	**0.0237**	**6.7000e-004**	**0.0244**		**85.7801**	**85.7801**	**2.5200e-003**		**85.8432**

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					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.2884	14.3307	6.3314	0.0141		0.6379	0.6379		0.5869	0.5869	0.0000	1,365.0648	1,365.0648	0.4415		1,376.1020
Total	**1.2884**	**14.3307**	**6.3314**	**0.0141**	**4.9143**	**0.6379**	**5.5522**	**2.5256**	**0.5869**	**3.1125**	**0.0000**	**1,365.0648**	**1,365.0648**	**0.4415**		**1,376.1020**

3.4 Grading - 2021

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
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
Worker	0.0382	0.0261	0.2946	8.6000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		85.7801	85.7801	2.5200e-003		85.8432
Total	**0.0382**	**0.0261**	**0.2946**	**8.6000e-004**	**0.0894**	**7.2000e-004**	**0.0901**	**0.0237**	**6.7000e-004**	**0.0244**		**85.7801**	**85.7801**	**2.5200e-003**		**85.8432**

3.5 Building Construction - 2021

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**		**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.5 Building Construction - 2021

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
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0191	0.0131	0.1473	4.3000e-004	0.0447	3.6000e-004	0.0451	0.0119	3.3000e-004	0.0122		42.8900	42.8900	1.2600e-003		42.9216
Total	**0.0255**	**0.2068**	**0.2035**	**9.3000e-004**	**0.0575**	**7.7000e-004**	**0.0583**	**0.0156**	**7.2000e-004**	**0.0163**		**96.3592**	**96.3592**	**4.7100e-003**		**96.4770**

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**	**0.0000**	**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.5 Building Construction - 2021

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
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0191	0.0131	0.1473	4.3000e-004	0.0447	3.6000e-004	0.0451	0.0119	3.3000e-004	0.0122		42.8900	42.8900	1.2600e-003		42.9216
Total	**0.0255**	**0.2068**	**0.2035**	**9.3000e-004**	**0.0575**	**7.7000e-004**	**0.0583**	**0.0156**	**7.2000e-004**	**0.0163**		**96.3592**	**96.3592**	**4.7100e-003**		**96.4770**

3.6 Paving - 2021

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	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7739**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**		**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.6 Paving - 2021

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
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
Worker	0.0620	0.0424	0.4787	1.4000e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		139.3926	139.3926	4.1000e-003		139.4952
Total	**0.0620**	**0.0424**	**0.4787**	**1.4000e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**139.3926**	**139.3926**	**4.1000e-003**		**139.4952**

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	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7739**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**	**0.0000**	**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.6 Paving - 2021

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
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
Worker	0.0620	0.0424	0.4787	1.4000e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		139.3926	139.3926	4.1000e-003		139.4952
Total	**0.0620**	**0.0424**	**0.4787**	**1.4000e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**139.3926**	**139.3926**	**4.1000e-003**		**139.4952**

3.6 Paving - 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	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205		1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6877**	**6.7738**	**8.8060**	**0.0135**		**0.3474**	**0.3474**		**0.3205**	**0.3205**		**1,297.3789**	**1,297.3789**	**0.4113**		**1,307.6608**

3.6 Paving - 2022

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
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
Worker	0.0582	0.0383	0.4409	1.3500e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		134.4940	134.4940	3.7000e-003		134.5866
Total	**0.0582**	**0.0383**	**0.4409**	**1.3500e-003**	**0.1453**	**1.1400e-003**	**0.1465**	**0.0385**	**1.0500e-003**	**0.0396**		**134.4940**	**134.4940**	**3.7000e-003**		**134.5866**

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	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205	0.0000	1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6877**	**6.7738**	**8.8060**	**0.0135**		**0.3474**	**0.3474**		**0.3205**	**0.3205**	**0.0000**	**1,297.3789**	**1,297.3789**	**0.4113**		**1,307.6608**

3.6 Paving - 2022

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
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
Worker	0.0582	0.0383	0.4409	1.3500e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		134.4940	134.4940	3.7000e-003		134.5866
Total	**0.0582**	**0.0383**	**0.4409**	**1.3500e-003**	**0.1453**	**1.1400e-003**	**0.1465**	**0.0385**	**1.0500e-003**	**0.0396**		**134.4940**	**134.4940**	**3.7000e-003**		**134.5866**

3.7 Architectural Coating - 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					
Archit. Coating	9.7613					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**9.9659**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

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
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
Worker	4.4800e-003	2.9500e-003	0.0339	1.0000e-004	0.0112	9.0000e-005	0.0113	2.9600e-003	8.0000e-005	3.0400e-003		10.3457	10.3457	2.8000e-004		10.3528
Total	**4.4800e-003**	**2.9500e-003**	**0.0339**	**1.0000e-004**	**0.0112**	**9.0000e-005**	**0.0113**	**2.9600e-003**	**8.0000e-005**	**3.0400e-003**		**10.3457**	**10.3457**	**2.8000e-004**		**10.3528**

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	9.7613					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**9.9659**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

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
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
Worker	4.4800e-003	2.9500e-003	0.0339	1.0000e-004	0.0112	9.0000e-005	0.0113	2.9600e-003	8.0000e-005	3.0400e-003		10.3457	10.3457	2.8000e-004		10.3528
Total	**4.4800e-003**	**2.9500e-003**	**0.0339**	**1.0000e-004**	**0.0112**	**9.0000e-005**	**0.0113**	**2.9600e-003**	**8.0000e-005**	**3.0400e-003**		**10.3457**	**10.3457**	**2.8000e-004**		**10.3528**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	0.1142	0.5254	1.2782	4.1100e-003	0.3319	3.6500e-003	0.3356	0.0888	3.4100e-003	0.0922		418.1771	418.1771	0.0242		418.7814
Unmitigated	0.1142	0.5254	1.2782	4.1100e-003	0.3319	3.6500e-003	0.3356	0.0888	3.4100e-003	0.0922		418.1771	418.1771	0.0242		418.7814

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Place of Worship	73.18	63.07	290.94	219,353	219,353
Total	73.18	63.07	290.94	219,353	219,353

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
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	64	25	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Place of Worship	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

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	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003		61.4321	61.4321	1.1800e-003	1.1300e-003	61.7971
NaturalGas Unmitigated	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003		61.4321	61.4321	1.1800e-003	1.1300e-003	61.7971

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					
Place of Worship	522.173	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003		61.4321	61.4321	1.1800e-003	1.1300e-003	61.7971
Total		**5.6300e-003**	**0.0512**	**0.0430**	**3.1000e-004**		**3.8900e-003**	**3.8900e-003**		**3.8900e-003**	**3.8900e-003**		**61.4321**	**61.4321**	**1.1800e-003**	**1.1300e-003**	**61.7971**

5.2 Energy by Land Use - NaturalGas

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					
Place of Worship	0.522173	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003		61.4321	61.4321	1.1800e-003	1.1300e-003	61.7971
Total		**5.6300e-003**	**0.0512**	**0.0430**	**3.1000e-004**		**3.8900e-003**	**3.8900e-003**		**3.8900e-003**	**3.8900e-003**		**61.4321**	**61.4321**	**1.1800e-003**	**1.1300e-003**	**61.7971**

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	0.2353	1.0000e-005	1.0800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4600e-003
Unmitigated	0.2353	1.0000e-005	1.0800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4600e-003

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	0.0267					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4600e-003
Total	**0.2353**	**1.0000e-005**	**1.0800e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.3000e-003**	**2.3000e-003**	**1.0000e-005**		**2.4600e-003**

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	0.0267					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3000e-003	2.3000e-003	1.0000e-005		2.4600e-003
Total	**0.2353**	**1.0000e-005**	**1.0800e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.3000e-003**	**2.3000e-003**	**1.0000e-005**		**2.4600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

600 Foothill Project

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	7.61	1000sqft	0.08	7,614.00	0
Unrefrigerated Warehouse-No Rail	1.50	1000sqft	0.03	1,500.00	0
Enclosed Parking with Elevator	107.00	Space	0.10	42,800.00	0
City Park	0.25	Acre	0.25	10,974.00	0
City Park	0.36	Acre	0.36	15,466.00	0
Hotel	12.00	Room	0.07	7,008.00	0
Retirement Community	47.00	Dwelling Unit	0.40	62,688.00	134

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Proposed Project land uses

Construction Phase - Per Construction Assumptions

Off-road Equipment -

Off-road Equipment - Per construction assumptions

Off-road Equipment - Per construction assumptions

Off-road Equipment - Per construction assumptions

Off-road Equipment - Per construction assumptions

Off-road Equipment - Per construction assumptions

Trips and VMT - Per construction assumptions

Demolition - Per construction assumptions

Grading - excavation volume to be exported is 22,800 cy per construction assumptions. Total acres graded is based on equipment assumptions.

Vehicle Trips - Trip generation rates are from Gibson Trip Generation Analysis from December 2020

Vehicle Emission Factors - Operation mobile emissions calculated outside of model

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - no wood fireplaces or stoves

Energy Use - Title 24 2019 standard

Construction Off-road Equipment Mitigation - watering for SCAQMD Rule 403, reduce vehicle speed to 15mph on unpaved roads

Energy Mitigation - Solar assumptions

Water Mitigation - Operational Data Needs assumptions

Waste Mitigation - Section 4.408 CalGreen Building Code

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	40.00
tblConstructionPhase	NumDays	200.00	26.00

tblConstructionPhase	NumDays	200.00	234.00
tblConstructionPhase	NumDays	200.00	79.00
tblConstructionPhase	NumDays	20.00	27.00
tblConstructionPhase	NumDays	4.00	18.00
tblConstructionPhase	NumDays	2.00	8.00
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
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblEnergyUse	T24E	3.92	3.50
tblEnergyUse	T24E	4.60	4.11
tblEnergyUse	T24E	2.55	2.28
tblEnergyUse	T24E	257.27	252.12
tblEnergyUse	T24E	0.65	0.58
tblEnergyUse	T24NG	10.02	9.92
tblEnergyUse	T24NG	19.92	19.72
tblEnergyUse	T24NG	9,955.77	9,457.98
tblEnergyUse	T24NG	0.84	0.83
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	2.35	0.00
tblGrading	MaterialExported	0.00	22,800.00
tblLandUse	LandUseSquareFeet	7,610.00	7,614.00
tblLandUse	LandUseSquareFeet	10,890.00	10,974.00

tblLandUse	LandUseSquareFeet	15,681.60	15,466.00
tblLandUse	LandUseSquareFeet	17,424.00	7,008.00
tblLandUse	LandUseSquareFeet	47,000.00	62,688.00
tblLandUse	LotAcreage	0.17	0.08
tblLandUse	LotAcreage	0.96	0.10
tblLandUse	LotAcreage	0.40	0.07
tblLandUse	LotAcreage	9.40	0.40
tblOffRoadEquipment	HorsePower	84.00	130.00
tblOffRoadEquipment	LoadFactor	0.74	0.42
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
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	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00

tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	72.00	330.00
tblTripsAndVMT	HaulingTripNumber	2,850.00	3,257.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,762.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	19.00	0.00
tblTripsAndVMT	VendorTripNumber	19.00	14.00
tblTripsAndVMT	VendorTripNumber	19.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	69.00	20.00
tblTripsAndVMT	WorkerTripNumber	69.00	60.00
tblTripsAndVMT	WorkerTripNumber	69.00	10.00

tblTripsAndVMT	WorkerTripNumber	14.00	18.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	ST_TR	8.19	4.91
tblVehicleTrips	ST_TR	2.03	3.23
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	1.05	0.70
tblVehicleTrips	SU_TR	5.95	4.09
tblVehicleTrips	SU_TR	1.95	3.14
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	11.03	9.74
tblVehicleTrips	WD_TR	8.17	5.44
tblVehicleTrips	WD_TR	2.40	3.70
tblVehicleTrips	WD_TR	1.68	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

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	tons/yr										MT/yr					
2022	0.1846	2.1643	1.6404	5.3600e-003	0.2161	0.0675	0.2836	0.0773	0.0636	0.1409	0.0000	496.1249	496.1249	0.0618	0.0000	497.6685
2023	0.3167	0.3291	0.4058	9.1000e-004	0.0289	0.0147	0.0436	7.7800e-003	0.0139	0.0217	0.0000	82.0013	82.0013	0.0108	0.0000	82.2716
Maximum	**0.3167**	**2.1643**	**1.6404**	**5.3600e-003**	**0.2161**	**0.0675**	**0.2836**	**0.0773**	**0.0636**	**0.1409**	**0.0000**	**496.1249**	**496.1249**	**0.0618**	**0.0000**	**497.6685**

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	tons/yr										MT/yr					
2022	0.1846	2.1643	1.6404	5.3600e-003	0.1659	0.0675	0.2334	0.0534	0.0636	0.1170	0.0000	496.1246	496.1246	0.0618	0.0000	497.6683
2023	0.3167	0.3291	0.4058	9.1000e-004	0.0289	0.0147	0.0436	7.7800e-003	0.0139	0.0217	0.0000	82.0013	82.0013	0.0108	0.0000	82.2715
Maximum	**0.3167**	**2.1643**	**1.6404**	**5.3600e-003**	**0.1659**	**0.0675**	**0.2334**	**0.0534**	**0.0636**	**0.1170**	**0.0000**	**496.1246**	**496.1246**	**0.0618**	**0.0000**	**497.6683**

	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**	**20.49**	**0.00**	**15.34**	**28.12**	**0.00**	**14.72**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-1-2022	5-31-2022	1.3550	1.3550
2	6-1-2022	8-31-2022	0.4053	0.4053
3	9-1-2022	11-30-2022	0.4020	0.4020
4	12-1-2022	2-28-2023	0.3717	0.3717
5	3-1-2023	5-31-2023	0.4090	0.4090
		Highest	1.3550	1.3550

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	tons/yr										MT/yr					
Area	0.3312	0.0139	0.4897	8.0000e-005		3.3600e-003	3.3600e-003		3.3600e-003	3.3600e-003	0.0000	10.3884	10.3884	9.5000e-004	1.8000e-004	10.4646
Energy	5.3400e-003	0.0464	0.0248	2.9000e-004		3.6900e-003	3.6900e-003		3.6900e-003	3.6900e-003	0.0000	241.8273	241.8273	8.8100e-003	2.5800e-003	242.8175
Mobile	0.0741	0.3444	0.9975	3.9100e-003	0.3413	2.9900e-003	0.3443	0.0915	2.7800e-003	0.0943	0.0000	362.1962	362.1962	0.0173	0.0000	362.6292
Waste						0.0000	0.0000		0.0000	0.0000	7.4559	0.0000	7.4559	0.4406	0.0000	18.4716
Water						0.0000	0.0000		0.0000	0.0000	1.6072	33.4789	35.0861	0.1665	4.1800e-003	40.4944
Total	**0.4106**	**0.4047**	**1.5119**	**4.2800e-003**	**0.3413**	**0.0100**	**0.3514**	**0.0915**	**9.8300e-003**	**0.1013**	**9.0631**	**647.8908**	**656.9539**	**0.6342**	**6.9400e-003**	**674.8772**

2.2 Overall Operational

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	tons/yr										MT/yr					
Area	0.3312	0.0139	0.4897	8.0000e-005		3.3600e-003	3.3600e-003		3.3600e-003	3.3600e-003	0.0000	10.3884	10.3884	9.5000e-004	1.8000e-004	10.4646
Energy	5.3400e-003	0.0464	0.0248	2.9000e-004		3.6900e-003	3.6900e-003		3.6900e-003	3.6900e-003	0.0000	241.8161	241.8161	8.8100e-003	2.5800e-003	242.8063
Mobile	0.0741	0.3444	0.9975	3.9100e-003	0.3413	2.9900e-003	0.3443	0.0915	2.7800e-003	0.0943	0.0000	362.1962	362.1962	0.0173	0.0000	362.6292
Waste						0.0000	0.0000		0.0000	0.0000	2.6096	0.0000	2.6096	0.1542	0.0000	6.4651
Water						0.0000	0.0000		0.0000	0.0000	1.3565	29.4400	30.7965	0.1405	3.5400e-003	35.3653
Total	**0.4106**	**0.4047**	**1.5119**	**4.2800e-003**	**0.3413**	**0.0100**	**0.3514**	**0.0915**	**9.8300e-003**	**0.1013**	**3.9661**	**643.8407**	**647.8068**	**0.3218**	**6.3000e-003**	**657.7304**

	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**	**56.24**	**0.63**	**1.39**	**49.25**	**9.22**	**2.54**

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	3/1/2022	3/31/2022	6	27	
2	Site Preparation	Site Preparation	4/1/2022	4/10/2022	6	8	
3	Grading/Excavation	Grading	4/11/2022	4/30/2022	6	18	
4	Drainage/Utilities/Trenching	Trenching	4/20/2022	5/5/2022	6	14	
5	Foundations/Concrete Pour	Building Construction	5/1/2022	5/31/2022	6	26	
6	Building Construction	Building Construction	6/1/2022	2/28/2023	6	234	
7	Landscaping	Building Construction	3/1/2023	5/31/2023	6	79	
8	Architectural Coating	Architectural Coating	3/1/2023	4/15/2023	6	40	

Acres of Grading (Site Preparation Phase): 4

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.1

Residential Indoor: 126,943; Residential Outdoor: 42,314; Non-Residential Indoor: 24,183; Non-Residential Outdoor: 8,061; Striped Parking Area: 2,568 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading/Excavation	Bore/Drill Rigs	1	8.00	221	0.50
Grading/Excavation	Excavators	1	8.00	158	0.38

Grading/Excavation	Graders	1	8.00	187	0.41
Grading/Excavation	Rubber Tired Dozers	1	8.00	247	0.40
Grading/Excavation	Sweepers/Scrubbers	1	4.00	64	0.46
Grading/Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Drainage/Utilities/Trenching	Cranes	0	0.00	231	0.29
Drainage/Utilities/Trenching	Forklifts	0	0.00	89	0.20
Drainage/Utilities/Trenching	Generator Sets	0	0.00	84	0.74
Drainage/Utilities/Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Drainage/Utilities/Trenching	Trenchers	1	8.00	78	0.50
Drainage/Utilities/Trenching	Welders	0	0.00	46	0.45
Foundations/Concrete Pour	Cement and Mortar Mixers	0	0.00	9	0.56
Foundations/Concrete Pour	Cranes	2	4.00	231	0.29
Foundations/Concrete Pour	Forklifts	0	0.00	89	0.20
Foundations/Concrete Pour	Generator Sets	0	0.00	84	0.74
Foundations/Concrete Pour	Pavers	0	0.00	130	0.42
Foundations/Concrete Pour	Paving Equipment	0	0.00	132	0.36
Foundations/Concrete Pour	Pumps	2	8.00	130	0.42
Foundations/Concrete Pour	Rollers	0	0.00	80	0.38
Foundations/Concrete Pour	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Foundations/Concrete Pour	Welders	0	0.00	46	0.45
Building Construction	Air Compressors	0	0.00	78	0.48
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	0	0.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Landscaping	Cranes	0	0.00	231	0.29
Landscaping	Forklifts	1	8.00	89	0.20
Landscaping	Generator Sets	0	0.00	84	0.74
Landscaping	Sweepers/Scrubbers	1	4.00	64	0.46
Landscaping	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Landscaping	Welders	0	0.00	46	0.45

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	20.00	6.00	330.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	10.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Excavation	6	20.00	6.00	3,257.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Drainage/Utilities/Trenching	2	10.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Foundations/Concrete Pour	4	20.00	0.00	1,762.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	60.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping	2	10.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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	tons/yr										MT/yr					
Fugitive Dust					7.8200e-003	0.0000	7.8200e-003	1.1800e-003	0.0000	1.1800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.2244	0.1885	3.3000e-004		0.0113	0.0113		0.0106	0.0106	0.0000	28.4549	28.4549	7.2500e-003	0.0000	28.6362
Total	**0.0228**	**0.2244**	**0.1885**	**3.3000e-004**	**7.8200e-003**	**0.0113**	**0.0191**	**1.1800e-003**	**0.0106**	**0.0118**	**0.0000**	**28.4549**	**28.4549**	**7.2500e-003**	**0.0000**	**28.6362**

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	tons/yr										MT/yr					
Hauling	1.3200e-003	0.0424	0.0105	1.3000e-004	2.8400e-003	1.2000e-004	2.9500e-003	7.8000e-004	1.1000e-004	8.9000e-004	0.0000	12.4283	12.4283	8.6000e-004	0.0000	12.4498
Vendor	2.4000e-004	7.5900e-003	2.0500e-003	2.0000e-005	5.1000e-004	1.0000e-005	5.2000e-004	1.5000e-004	1.0000e-005	1.6000e-004	0.0000	1.9791	1.9791	1.2000e-004	0.0000	1.9820
Worker	1.0900e-003	8.2000e-004	9.4100e-003	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.5762	2.5762	7.0000e-005	0.0000	2.5780
Total	**2.6500e-003**	**0.0508**	**0.0220**	**1.8000e-004**	**6.3100e-003**	**1.5000e-004**	**6.4500e-003**	**1.7200e-003**	**1.4000e-004**	**1.8600e-003**	**0.0000**	**16.9836**	**16.9836**	**1.0500e-003**	**0.0000**	**17.0098**

3.2 Demolition - 2022

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	tons/yr										MT/yr					
Fugitive Dust					3.5200e-003	0.0000	3.5200e-003	5.3000e-004	0.0000	5.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.2244	0.1885	3.3000e-004		0.0113	0.0113		0.0106	0.0106	0.0000	28.4548	28.4548	7.2500e-003	0.0000	28.6361
Total	**0.0228**	**0.2244**	**0.1885**	**3.3000e-004**	**3.5200e-003**	**0.0113**	**0.0148**	**5.3000e-004**	**0.0106**	**0.0111**	**0.0000**	**28.4548**	**28.4548**	**7.2500e-003**	**0.0000**	**28.6361**

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	tons/yr										MT/yr					
Hauling	1.3200e-003	0.0424	0.0105	1.3000e-004	2.8400e-003	1.2000e-004	2.9500e-003	7.8000e-004	1.1000e-004	8.9000e-004	0.0000	12.4283	12.4283	8.6000e-004	0.0000	12.4498
Vendor	2.4000e-004	7.5900e-003	2.0500e-003	2.0000e-005	5.1000e-004	1.0000e-005	5.2000e-004	1.5000e-004	1.0000e-005	1.6000e-004	0.0000	1.9791	1.9791	1.2000e-004	0.0000	1.9820
Worker	1.0900e-003	8.2000e-004	9.4100e-003	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.5762	2.5762	7.0000e-005	0.0000	2.5780
Total	**2.6500e-003**	**0.0508**	**0.0220**	**1.8000e-004**	**6.3100e-003**	**1.5000e-004**	**6.4500e-003**	**1.7200e-003**	**1.4000e-004**	**1.8600e-003**	**0.0000**	**16.9836**	**16.9836**	**1.0500e-003**	**0.0000**	**17.0098**

3.3 Site Preparation - 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	tons/yr										MT/yr					
Fugitive Dust					0.0232	0.0000	0.0232	0.0118	0.0000	0.0118	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2500e-003	0.0585	0.0284	7.0000e-005		2.4900e-003	2.4900e-003		2.2900e-003	2.2900e-003	0.0000	6.0461	6.0461	1.9600e-003	0.0000	6.0950
Total	**5.2500e-003**	**0.0585**	**0.0284**	**7.0000e-005**	**0.0232**	**2.4900e-003**	**0.0257**	**0.0118**	**2.2900e-003**	**0.0141**	**0.0000**	**6.0461**	**6.0461**	**1.9600e-003**	**0.0000**	**6.0950**

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	tons/yr										MT/yr					
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	0.0000
Vendor	7.0000e-005	2.2500e-003	6.1000e-004	1.0000e-005	1.5000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.5864	0.5864	4.0000e-005	0.0000	0.5873
Worker	1.6000e-004	1.2000e-004	1.3900e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3817	0.3817	1.0000e-005	0.0000	0.3819
Total	**2.3000e-004**	**2.3700e-003**	**2.0000e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.9681**	**0.9681**	**5.0000e-005**	**0.0000**	**0.9692**

3.3 Site Preparation - 2022

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	tons/yr										MT/yr					
Fugitive Dust					0.0104	0.0000	0.0104	5.3200e-003	0.0000	5.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2500e-003	0.0585	0.0284	7.0000e-005		2.4900e-003	2.4900e-003		2.2900e-003	2.2900e-003	0.0000	6.0461	6.0461	1.9600e-003	0.0000	6.0950
Total	**5.2500e-003**	**0.0585**	**0.0284**	**7.0000e-005**	**0.0104**	**2.4900e-003**	**0.0129**	**5.3200e-003**	**2.2900e-003**	**7.6100e-003**	**0.0000**	**6.0461**	**6.0461**	**1.9600e-003**	**0.0000**	**6.0950**

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	tons/yr										MT/yr					
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	0.0000
Vendor	7.0000e-005	2.2500e-003	6.1000e-004	1.0000e-005	1.5000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.5864	0.5864	4.0000e-005	0.0000	0.5873
Worker	1.6000e-004	1.2000e-004	1.3900e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3817	0.3817	1.0000e-005	0.0000	0.3819
Total	**2.3000e-004**	**2.3700e-003**	**2.0000e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.9681**	**0.9681**	**5.0000e-005**	**0.0000**	**0.9692**

3.4 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	tons/yr										MT/yr					
Fugitive Dust					0.0603	0.0000	0.0603	0.0305	0.0000	0.0305	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0175	0.1861	0.1242	3.1000e-004		8.0400e-003	8.0400e-003		7.4000e-003	7.4000e-003	0.0000	26.9942	26.9942	8.7300e-003	0.0000	27.2124
Total	**0.0175**	**0.1861**	**0.1242**	**3.1000e-004**	**0.0603**	**8.0400e-003**	**0.0683**	**0.0305**	**7.4000e-003**	**0.0379**	**0.0000**	**26.9942**	**26.9942**	**8.7300e-003**	**0.0000**	**27.2124**

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	tons/yr										MT/yr					
Hauling	0.0131	0.4184	0.1040	1.2400e-003	0.0280	1.1700e-003	0.0292	7.6900e-003	1.1200e-003	8.8100e-003	0.0000	122.6637	122.6637	8.4800e-003	0.0000	122.8758
Vendor	1.6000e-004	5.0600e-003	1.3700e-003	1.0000e-005	3.4000e-004	1.0000e-005	3.5000e-004	1.0000e-004	1.0000e-005	1.1000e-004	0.0000	1.3194	1.3194	8.0000e-005	0.0000	1.3214
Worker	7.3000e-004	5.4000e-004	6.2700e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7175	1.7175	5.0000e-005	0.0000	1.7187
Total	**0.0139**	**0.4240**	**0.1116**	**1.2700e-003**	**0.0303**	**1.2000e-003**	**0.0315**	**8.3100e-003**	**1.1400e-003**	**9.4600e-003**	**0.0000**	**125.7006**	**125.7006**	**8.6100e-003**	**0.0000**	**125.9158**

3.4 Grading/Excavation - 2022

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	tons/yr										MT/yr					
Fugitive Dust					0.0271	0.0000	0.0271	0.0137	0.0000	0.0137	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0175	0.1861	0.1242	3.1000e-004		8.0400e-003	8.0400e-003		7.4000e-003	7.4000e-003	0.0000	26.9941	26.9941	8.7300e-003	0.0000	27.2124
Total	**0.0175**	**0.1861**	**0.1242**	**3.1000e-004**	**0.0271**	**8.0400e-003**	**0.0352**	**0.0137**	**7.4000e-003**	**0.0211**	**0.0000**	**26.9941**	**26.9941**	**8.7300e-003**	**0.0000**	**27.2124**

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	tons/yr										MT/yr					
Hauling	0.0131	0.4184	0.1040	1.2400e-003	0.0280	1.1700e-003	0.0292	7.6900e-003	1.1200e-003	8.8100e-003	0.0000	122.6637	122.6637	8.4800e-003	0.0000	122.8758
Vendor	1.6000e-004	5.0600e-003	1.3700e-003	1.0000e-005	3.4000e-004	1.0000e-005	3.5000e-004	1.0000e-004	1.0000e-005	1.1000e-004	0.0000	1.3194	1.3194	8.0000e-005	0.0000	1.3214
Worker	7.3000e-004	5.4000e-004	6.2700e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7175	1.7175	5.0000e-005	0.0000	1.7187
Total	**0.0139**	**0.4240**	**0.1116**	**1.2700e-003**	**0.0303**	**1.2000e-003**	**0.0315**	**8.3100e-003**	**1.1400e-003**	**9.4600e-003**	**0.0000**	**125.7006**	**125.7006**	**8.6100e-003**	**0.0000**	**125.9158**

3.5 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	tons/yr										MT/yr					
Off-Road	3.7000e-003	0.0354	0.0339	5.0000e-005		2.3100e-003	2.3100e-003		2.1200e-003	2.1200e-003	0.0000	3.9892	3.9892	1.2900e-003	0.0000	4.0214
Total	**3.7000e-003**	**0.0354**	**0.0339**	**5.0000e-005**		**2.3100e-003**	**2.3100e-003**		**2.1200e-003**	**2.1200e-003**	**0.0000**	**3.9892**	**3.9892**	**1.2900e-003**	**0.0000**	**4.0214**

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	tons/yr										MT/yr					
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	0.0000
Vendor	1.2000e-004	3.9400e-003	1.0600e-003	1.0000e-005	2.6000e-004	1.0000e-005	2.7000e-004	8.0000e-005	1.0000e-005	8.0000e-005	0.0000	1.0262	1.0262	6.0000e-005	0.0000	1.0277
Worker	2.8000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.7000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.6679	0.6679	2.0000e-005	0.0000	0.6684
Total	**4.0000e-004**	**4.1500e-003**	**3.5000e-003**	**2.0000e-005**	**1.0300e-003**	**2.0000e-005**	**1.0400e-003**	**2.8000e-004**	**2.0000e-005**	**2.9000e-004**	**0.0000**	**1.6941**	**1.6941**	**8.0000e-005**	**0.0000**	**1.6961**

3.5 Drainage/Utilities/Trenching - 2022

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	tons/yr										MT/yr					
Off-Road	3.7000e-003	0.0354	0.0339	5.0000e-005		2.3100e-003	2.3100e-003		2.1200e-003	2.1200e-003	0.0000	3.9892	3.9892	1.2900e-003	0.0000	4.0214
Total	**3.7000e-003**	**0.0354**	**0.0339**	**5.0000e-005**		**2.3100e-003**	**2.3100e-003**		**2.1200e-003**	**2.1200e-003**	**0.0000**	**3.9892**	**3.9892**	**1.2900e-003**	**0.0000**	**4.0214**

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	tons/yr										MT/yr					
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	0.0000
Vendor	1.2000e-004	3.9400e-003	1.0600e-003	1.0000e-005	2.6000e-004	1.0000e-005	2.7000e-004	8.0000e-005	1.0000e-005	8.0000e-005	0.0000	1.0262	1.0262	6.0000e-005	0.0000	1.0277
Worker	2.8000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.7000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.6679	0.6679	2.0000e-005	0.0000	0.6684
Total	**4.0000e-004**	**4.1500e-003**	**3.5000e-003**	**2.0000e-005**	**1.0300e-003**	**2.0000e-005**	**1.0400e-003**	**2.8000e-004**	**2.0000e-005**	**2.9000e-004**	**0.0000**	**1.6941**	**1.6941**	**8.0000e-005**	**0.0000**	**1.6961**

3.6 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	tons/yr										MT/yr					
Off-Road	0.0109	0.1010	0.0989	2.3000e-004		4.3900e-003	4.3900e-003		4.2100e-003	4.2100e-003	0.0000	19.4986	19.4986	2.6100e-003	0.0000	19.5638
Total	**0.0109**	**0.1010**	**0.0989**	**2.3000e-004**		**4.3900e-003**	**4.3900e-003**		**4.2100e-003**	**4.2100e-003**	**0.0000**	**19.4986**	**19.4986**	**2.6100e-003**	**0.0000**	**19.5638**

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	tons/yr										MT/yr					
Hauling	7.0600e-003	0.2264	0.0562	6.7000e-004	0.0151	6.3000e-004	0.0158	4.1600e-003	6.1000e-004	4.7700e-003	0.0000	66.3597	66.3597	4.5900e-003	0.0000	66.4744
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	0.0000
Worker	1.0500e-003	7.9000e-004	9.0600e-003	3.0000e-005	2.8500e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.4808	2.4808	7.0000e-005	0.0000	2.4825
Total	**8.1100e-003**	**0.2271**	**0.0653**	**7.0000e-004**	**0.0180**	**6.5000e-004**	**0.0187**	**4.9200e-003**	**6.3000e-004**	**5.5500e-003**	**0.0000**	**68.8405**	**68.8405**	**4.6600e-003**	**0.0000**	**68.9569**

3.6 Foundations/Concrete Pour - 2022

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	tons/yr										MT/yr					
Off-Road	0.0109	0.1010	0.0989	2.3000e-004		4.3900e-003	4.3900e-003		4.2100e-003	4.2100e-003	0.0000	19.4986	19.4986	2.6100e-003	0.0000	19.5638
Total	**0.0109**	**0.1010**	**0.0989**	**2.3000e-004**		**4.3900e-003**	**4.3900e-003**		**4.2100e-003**	**4.2100e-003**	**0.0000**	**19.4986**	**19.4986**	**2.6100e-003**	**0.0000**	**19.5638**

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	tons/yr										MT/yr					
Hauling	7.0600e-003	0.2264	0.0562	6.7000e-004	0.0151	6.3000e-004	0.0158	4.1600e-003	6.1000e-004	4.7700e-003	0.0000	66.3597	66.3597	4.5900e-003	0.0000	66.4744
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	0.0000
Worker	1.0500e-003	7.9000e-004	9.0600e-003	3.0000e-005	2.8500e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.4808	2.4808	7.0000e-005	0.0000	2.4825
Total	**8.1100e-003**	**0.2271**	**0.0653**	**7.0000e-004**	**0.0180**	**6.5000e-004**	**0.0187**	**4.9200e-003**	**6.3000e-004**	**5.5500e-003**	**0.0000**	**68.8405**	**68.8405**	**4.6600e-003**	**0.0000**	**68.9569**

3.7 Building Construction - 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	tons/yr										MT/yr					
Off-Road	0.0731	0.7131	0.7373	1.3000e-003		0.0362	0.0362		0.0344	0.0344	0.0000	112.8159	112.8159	0.0221	0.0000	113.3694
Total	**0.0731**	**0.7131**	**0.7373**	**1.3000e-003**		**0.0362**	**0.0362**		**0.0344**	**0.0344**	**0.0000**	**112.8159**	**112.8159**	**0.0221**	**0.0000**	**113.3694**

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	tons/yr										MT/yr					
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	0.0000
Vendor	3.7500e-003	0.1208	0.0326	3.2000e-004	8.1100e-003	2.3000e-004	8.3400e-003	2.3400e-003	2.2000e-004	2.5600e-003	0.0000	31.4699	31.4699	1.8800e-003	0.0000	31.5169
Worker	0.0223	0.0167	0.1923	5.8000e-004	0.0605	4.8000e-004	0.0610	0.0161	4.4000e-004	0.0165	0.0000	52.6693	52.6693	1.4500e-003	0.0000	52.7056
Total	**0.0260**	**0.1375**	**0.2249**	**9.0000e-004**	**0.0686**	**7.1000e-004**	**0.0693**	**0.0184**	**6.6000e-004**	**0.0191**	**0.0000**	**84.1392**	**84.1392**	**3.3300e-003**	**0.0000**	**84.2225**

3.7 Building Construction - 2022

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	tons/yr										MT/yr					
Off-Road	0.0731	0.7131	0.7373	1.3000e-003		0.0362	0.0362		0.0344	0.0344	0.0000	112.8157	112.8157	0.0221	0.0000	113.3692
Total	**0.0731**	**0.7131**	**0.7373**	**1.3000e-003**		**0.0362**	**0.0362**		**0.0344**	**0.0344**	**0.0000**	**112.8157**	**112.8157**	**0.0221**	**0.0000**	**113.3692**

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	tons/yr										MT/yr					
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	0.0000
Vendor	3.7500e-003	0.1208	0.0326	3.2000e-004	8.1100e-003	2.3000e-004	8.3400e-003	2.3400e-003	2.2000e-004	2.5600e-003	0.0000	31.4699	31.4699	1.8800e-003	0.0000	31.5169
Worker	0.0223	0.0167	0.1923	5.8000e-004	0.0605	4.8000e-004	0.0610	0.0161	4.4000e-004	0.0165	0.0000	52.6693	52.6693	1.4500e-003	0.0000	52.7056
Total	**0.0260**	**0.1375**	**0.2249**	**9.0000e-004**	**0.0686**	**7.1000e-004**	**0.0693**	**0.0184**	**6.6000e-004**	**0.0191**	**0.0000**	**84.1392**	**84.1392**	**3.3300e-003**	**0.0000**	**84.2225**

3.7 Building Construction - 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	tons/yr										MT/yr					
Off-Road	0.0184	0.1780	0.1991	3.5000e-004		8.5800e-003	8.5800e-003		8.1500e-003	8.1500e-003	0.0000	30.6640	30.6640	5.9700e-003	0.0000	30.8132
Total	**0.0184**	**0.1780**	**0.1991**	**3.5000e-004**		**8.5800e-003**	**8.5800e-003**		**8.1500e-003**	**8.1500e-003**	**0.0000**	**30.6640**	**30.6640**	**5.9700e-003**	**0.0000**	**30.8132**

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	tons/yr										MT/yr					
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	0.0000
Vendor	7.6000e-004	0.0248	7.9500e-003	9.0000e-005	2.2000e-003	3.0000e-005	2.2300e-003	6.4000e-004	3.0000e-005	6.6000e-004	0.0000	8.2839	8.2839	4.5000e-004	0.0000	8.2952
Worker	5.6900e-003	4.1100e-003	0.0481	1.5000e-004	0.0164	1.3000e-004	0.0166	4.3700e-003	1.2000e-004	4.4800e-003	0.0000	13.7886	13.7886	3.5000e-004	0.0000	13.7975
Total	**6.4500e-003**	**0.0289**	**0.0560**	**2.4000e-004**	**0.0186**	**1.6000e-004**	**0.0188**	**5.0100e-003**	**1.5000e-004**	**5.1400e-003**	**0.0000**	**22.0725**	**22.0725**	**8.0000e-004**	**0.0000**	**22.0926**

3.7 Building Construction - 2023

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	tons/yr										MT/yr					
Off-Road	0.0184	0.1780	0.1991	3.5000e-004		8.5800e-003	8.5800e-003		8.1500e-003	8.1500e-003	0.0000	30.6640	30.6640	5.9700e-003	0.0000	30.8132
Total	**0.0184**	**0.1780**	**0.1991**	**3.5000e-004**		**8.5800e-003**	**8.5800e-003**		**8.1500e-003**	**8.1500e-003**	**0.0000**	**30.6640**	**30.6640**	**5.9700e-003**	**0.0000**	**30.8132**

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	tons/yr										MT/yr					
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	0.0000
Vendor	7.6000e-004	0.0248	7.9500e-003	9.0000e-005	2.2000e-003	3.0000e-005	2.2300e-003	6.4000e-004	3.0000e-005	6.6000e-004	0.0000	8.2839	8.2839	4.5000e-004	0.0000	8.2952
Worker	5.6900e-003	4.1100e-003	0.0481	1.5000e-004	0.0164	1.3000e-004	0.0166	4.3700e-003	1.2000e-004	4.4800e-003	0.0000	13.7886	13.7886	3.5000e-004	0.0000	13.7975
Total	**6.4500e-003**	**0.0289**	**0.0560**	**2.4000e-004**	**0.0186**	**1.6000e-004**	**0.0188**	**5.0100e-003**	**1.5000e-004**	**5.1400e-003**	**0.0000**	**22.0725**	**22.0725**	**8.0000e-004**	**0.0000**	**22.0926**

3.8 Landscaping - 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	tons/yr										MT/yr					
Off-Road	7.6500e-003	0.0716	0.0831	1.1000e-004		4.4900e-003	4.4900e-003		4.1300e-003	4.1300e-003	0.0000	9.7152	9.7152	3.1400e-003	0.0000	9.7938
Total	**7.6500e-003**	**0.0716**	**0.0831**	**1.1000e-004**		**4.4900e-003**	**4.4900e-003**		**4.1300e-003**	**4.1300e-003**	**0.0000**	**9.7152**	**9.7152**	**3.1400e-003**	**0.0000**	**9.7938**

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	tons/yr										MT/yr					
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	0.0000
Vendor	5.1000e-004	0.0168	5.3800e-003	6.0000e-005	1.4900e-003	2.0000e-005	1.5100e-003	4.3000e-004	2.0000e-005	4.5000e-004	0.0000	5.6094	5.6094	3.1000e-004	0.0000	5.6170
Worker	1.5000e-003	1.0800e-003	0.0127	4.0000e-005	4.3300e-003	3.0000e-005	4.3600e-003	1.1500e-003	3.0000e-005	1.1800e-003	0.0000	3.6310	3.6310	9.0000e-005	0.0000	3.6333
Total	**2.0100e-003**	**0.0179**	**0.0180**	**1.0000e-004**	**5.8200e-003**	**5.0000e-005**	**5.8700e-003**	**1.5800e-003**	**5.0000e-005**	**1.6300e-003**	**0.0000**	**9.2404**	**9.2404**	**4.0000e-004**	**0.0000**	**9.2503**

3.8 Landscaping - 2023

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	tons/yr										MT/yr					
Off-Road	7.6500e-003	0.0716	0.0831	1.1000e-004		4.4900e-003	4.4900e-003		4.1300e-003	4.1300e-003	0.0000	9.7152	9.7152	3.1400e-003	0.0000	9.7938
Total	**7.6500e-003**	**0.0716**	**0.0831**	**1.1000e-004**		**4.4900e-003**	**4.4900e-003**		**4.1300e-003**	**4.1300e-003**	**0.0000**	**9.7152**	**9.7152**	**3.1400e-003**	**0.0000**	**9.7938**

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	tons/yr										MT/yr					
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	0.0000
Vendor	5.1000e-004	0.0168	5.3800e-003	6.0000e-005	1.4900e-003	2.0000e-005	1.5100e-003	4.3000e-004	2.0000e-005	4.5000e-004	0.0000	5.6094	5.6094	3.1000e-004	0.0000	5.6170
Worker	1.5000e-003	1.0800e-003	0.0127	4.0000e-005	4.3300e-003	3.0000e-005	4.3600e-003	1.1500e-003	3.0000e-005	1.1800e-003	0.0000	3.6310	3.6310	9.0000e-005	0.0000	3.6333
Total	**2.0100e-003**	**0.0179**	**0.0180**	**1.0000e-004**	**5.8200e-003**	**5.0000e-005**	**5.8700e-003**	**1.5800e-003**	**5.0000e-005**	**1.6300e-003**	**0.0000**	**9.2404**	**9.2404**	**4.0000e-004**	**0.0000**	**9.2503**

3.9 Architectural Coating - 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	tons/yr										MT/yr					
Archit. Coating	0.2768					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8300e-003	0.0261	0.0362	6.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	5.1065	5.1065	3.1000e-004	0.0000	5.1142
Total	**0.2806**	**0.0261**	**0.0362**	**6.0000e-005**		**1.4200e-003**	**1.4200e-003**		**1.4200e-003**	**1.4200e-003**	**0.0000**	**5.1065**	**5.1065**	**3.1000e-004**	**0.0000**	**5.1142**

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	tons/yr										MT/yr					
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	0.0000
Vendor	1.7000e-004	5.6700e-003	1.8200e-003	2.0000e-005	5.0000e-004	1.0000e-005	5.1000e-004	1.5000e-004	1.0000e-005	1.5000e-004	0.0000	1.8935	1.8935	1.0000e-004	0.0000	1.8960
Worker	1.3700e-003	9.9000e-004	0.0115	4.0000e-005	3.9400e-003	3.0000e-005	3.9800e-003	1.0500e-003	3.0000e-005	1.0800e-003	0.0000	3.3093	3.3093	9.0000e-005	0.0000	3.3114
Total	**1.5400e-003**	**6.6600e-003**	**0.0134**	**6.0000e-005**	**4.4400e-003**	**4.0000e-005**	**4.4900e-003**	**1.2000e-003**	**4.0000e-005**	**1.2300e-003**	**0.0000**	**5.2027**	**5.2027**	**1.9000e-004**	**0.0000**	**5.2074**

3.9 Architectural Coating - 2023

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	tons/yr										MT/yr					
Archit. Coating	0.2768					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8300e-003	0.0261	0.0362	6.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	5.1065	5.1065	3.1000e-004	0.0000	5.1141
Total	**0.2806**	**0.0261**	**0.0362**	**6.0000e-005**		**1.4200e-003**	**1.4200e-003**		**1.4200e-003**	**1.4200e-003**	**0.0000**	**5.1065**	**5.1065**	**3.1000e-004**	**0.0000**	**5.1141**

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	tons/yr										MT/yr					
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	0.0000
Vendor	1.7000e-004	5.6700e-003	1.8200e-003	2.0000e-005	5.0000e-004	1.0000e-005	5.1000e-004	1.5000e-004	1.0000e-005	1.5000e-004	0.0000	1.8935	1.8935	1.0000e-004	0.0000	1.8960
Worker	1.3700e-003	9.9000e-004	0.0115	4.0000e-005	3.9400e-003	3.0000e-005	3.9800e-003	1.0500e-003	3.0000e-005	1.0800e-003	0.0000	3.3093	3.3093	9.0000e-005	0.0000	3.3114
Total	**1.5400e-003**	**6.6600e-003**	**0.0134**	**6.0000e-005**	**4.4400e-003**	**4.0000e-005**	**4.4900e-003**	**1.2000e-003**	**4.0000e-005**	**1.2300e-003**	**0.0000**	**5.2027**	**5.2027**	**1.9000e-004**	**0.0000**	**5.2074**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	tons/yr										MT/yr					
Mitigated	0.0741	0.3444	0.9975	3.9100e-003	0.3413	2.9900e-003	0.3443	0.0915	2.7800e-003	0.0943	0.0000	362.1962	362.1962	0.0173	0.0000	362.6292
Unmitigated	0.0741	0.3444	0.9975	3.9100e-003	0.3413	2.9900e-003	0.3443	0.0915	2.7800e-003	0.0943	0.0000	362.1962	362.1962	0.0173	0.0000	362.6292

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		
City Park	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	74.12	16.82	5.33	180,748	180,748
Hotel	65.28	58.92	49.08	148,079	148,079
Retirement Community	173.90	151.81	147.58	570,611	570,611
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	313.30	227.55	201.99	899,438	899,438

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
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Retirement Community	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Enclosed Parking with Elevator	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
General Office Building	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Hotel	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Retirement Community	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Unrefrigerated Warehouse-No Rail	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

600 Foothill Project - Los Angeles-South Coast County, Annual

	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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	188.9318	188.9318	7.8000e-003	1.6100e-003	189.6078
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	188.9430	188.9430	7.8000e-003	1.6100e-003	189.6189
NaturalGas Mitigated	5.3400e-003	0.0464	0.0248	2.9000e-004		3.6900e-003	3.6900e-003		3.6900e-003	3.6900e-003	0.0000	52.8843	52.8843	1.0100e-003	9.7000e-004	53.1985
NaturalGas Unmitigated	5.3400e-003	0.0464	0.0248	2.9000e-004		3.6900e-003	3.6900e-003		3.6900e-003	3.6900e-003	0.0000	52.8843	52.8843	1.0100e-003	9.7000e-004	53.1985

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	tons/yr										MT/yr					
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	0.0000
Enclosed Parking with Elevator	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	0.0000
General Office Building	78500.3	4.2000e-004	3.8500e-003	3.2300e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.1891	4.1891	8.0000e-005	8.0000e-005	4.2140
Hotel	166650	9.0000e-004	8.1700e-003	6.8600e-003	5.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	8.8931	8.8931	1.7000e-004	1.6000e-004	8.9459
Retirement Community	744573	4.0100e-003	0.0343	0.0146	2.2000e-004		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	39.7333	39.7333	7.6000e-004	7.3000e-004	39.9694
Unrefrigerated Warehouse-No Rail	1290	1.0000e-005	6.0000e-005	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0688	0.0688	0.0000	0.0000	0.0693
Total		**5.3400e-003**	**0.0464**	**0.0247**	**2.9000e-004**		**3.6800e-003**	**3.6800e-003**		**3.6800e-003**	**3.6800e-003**	**0.0000**	**52.8843**	**52.8843**	**1.0100e-003**	**9.7000e-004**	**53.1985**

5.2 Energy by Land Use - NaturalGas

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	tons/yr										MT/yr					
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	0.0000
Enclosed Parking with Elevator	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	0.0000
General Office Building	78500.3	4.2000e-004	3.8500e-003	3.2300e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.1891	4.1891	8.0000e-005	8.0000e-005	4.2140
Hotel	166650	9.0000e-004	8.1700e-003	6.8600e-003	5.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	8.8931	8.8931	1.7000e-004	1.6000e-004	8.9459
Retirement Community	744573	4.0100e-003	0.0343	0.0146	2.2000e-004		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	39.7333	39.7333	7.6000e-004	7.3000e-004	39.9694
Unrefrigerated Warehouse-No Rail	1290	1.0000e-005	6.0000e-005	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0688	0.0688	0.0000	0.0000	0.0693
Total		**5.3400e-003**	**0.0464**	**0.0247**	**2.9000e-004**		**3.6800e-003**	**3.6800e-003**		**3.6800e-003**	**3.6800e-003**	**0.0000**	**52.8843**	**52.8843**	**1.0100e-003**	**9.7000e-004**	**53.1985**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	232832	74.1853	3.0600e-003	6.3000e-004	74.4507
General Office Building	95175	30.3248	1.2500e-003	2.6000e-004	30.4333
Hotel	51228.5	16.3225	6.7000e-004	1.4000e-004	16.3809
Retirement Community	208021	66.2800	2.7400e-003	5.7000e-004	66.5171
Unrefrigerated Warehouse-No Rail	5745	1.8305	8.0000e-005	2.0000e-005	1.8370
Total		**188.9430**	**7.8000e-003**	**1.6200e-003**	**189.6189**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	-5	-0.0032	0.0000	0.0000	-0.0032
Enclosed Parking with Elevator	232827	74.1837	3.0600e-003	6.3000e-004	74.4491
General Office Building	95170	30.3232	1.2500e-003	2.6000e-004	30.4317
Hotel	51223.5	16.3209	6.7000e-004	1.4000e-004	16.3793
Retirement Community	208016	66.2784	2.7400e-003	5.7000e-004	66.5155
Unrefrigerated Warehouse-No Rail	5740	1.8289	8.0000e-005	2.0000e-005	1.8354
Total		**188.9318**	**7.8000e-003**	**1.6200e-003**	**189.6078**

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	tons/yr										MT/yr					
Mitigated	0.3312	0.0139	0.4897	8.0000e-005		3.3600e-003	3.3600e-003		3.3600e-003	3.3600e-003	0.0000	10.3884	10.3884	9.5000e-004	1.8000e-004	10.4646
Unmitigated	0.3312	0.0139	0.4897	8.0000e-005		3.3600e-003	3.3600e-003		3.3600e-003	3.3600e-003	0.0000	10.3884	10.3884	9.5000e-004	1.8000e-004	10.4646

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	tons/yr										MT/yr					
Architectural Coating	0.0277					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2878					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	9.7000e-004	8.2800e-003	3.5300e-003	5.0000e-005		6.7000e-004	6.7000e-004		6.7000e-004	6.7000e-004	0.0000	9.5935	9.5935	1.8000e-004	1.8000e-004	9.6505
Landscaping	0.0147	5.6000e-003	0.4861	3.0000e-005		2.6900e-003	2.6900e-003		2.6900e-003	2.6900e-003	0.0000	0.7949	0.7949	7.7000e-004	0.0000	0.8141
Total	**0.3312**	**0.0139**	**0.4897**	**8.0000e-005**		**3.3600e-003**	**3.3600e-003**		**3.3600e-003**	**3.3600e-003**	**0.0000**	**10.3884**	**10.3884**	**9.5000e-004**	**1.8000e-004**	**10.4646**

6.2 Area by SubCategory

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	tons/yr										MT/yr					
Architectural Coating	0.0277					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2878					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	9.7000e-004	8.2800e-003	3.5300e-003	5.0000e-005		6.7000e-004	6.7000e-004		6.7000e-004	6.7000e-004	0.0000	9.5935	9.5935	1.8000e-004	1.8000e-004	9.6505
Landscaping	0.0147	5.6000e-003	0.4861	3.0000e-005		2.6900e-003	2.6900e-003		2.6900e-003	2.6900e-003	0.0000	0.7949	0.7949	7.7000e-004	0.0000	0.8141
Total	**0.3312**	**0.0139**	**0.4897**	**8.0000e-005**		**3.3600e-003**	**3.3600e-003**		**3.3600e-003**	**3.3600e-003**	**0.0000**	**10.3884**	**10.3884**	**9.5000e-004**	**1.8000e-004**	**10.4646**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Use Water Efficient Irrigation System

600 Foothill Project - Los Angeles-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	30.7965	0.1405	3.5400e-003	35.3653
Unmitigated	35.0861	0.1665	4.1800e-003	40.4944

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0.726804	2.5728	1.1000e-004	2.0000e-005	2.5820
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	1.35255 / 0.828985	8.9751	0.0444	1.1100e-003	10.4176
Hotel	0.304401 / 0.0338224	1.4792	9.9800e-003	2.5000e-004	1.8019
Retirement Community	3.06224 / 1.93054	20.5099	0.1006	2.5200e-003	23.7765
Unrefrigerated Warehouse-No Rail	0.346875 / 0	1.5492	0.0114	2.8000e-004	1.9164
Total		**35.0861**	**0.1665**	**4.1800e-003**	**40.4944**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0.682469	2.4159	1.0000e-004	2.0000e-005	2.4245
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	1.14156 / 0.778417	7.8537	0.0375	9.4000e-004	9.0722
Hotel	0.256915 / 0.0317592	1.2598	8.4200e-003	2.1000e-004	1.5322
Retirement Community	2.58453 / 1.81278	17.9596	0.0849	2.1300e-003	20.7189
Unrefrigerated Warehouse-No Rail	0.292762 / 0	1.3075	9.5900e-003	2.4000e-004	1.6175
Total		**30.7965**	**0.1405**	**3.5400e-003**	**35.3653**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.6096	0.1542	0.0000	6.4651
Unmitigated	7.4559	0.4406	0.0000	18.4716

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.05	0.0102	6.0000e-004	0.0000	0.0252
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	7.08	1.4372	0.0849	0.0000	3.5605
Hotel	6.57	1.3337	0.0788	0.0000	3.3041
Retirement Community	21.62	4.3887	0.2594	0.0000	10.8727
Unrefrigerated Warehouse-No Rail	1.41	0.2862	0.0169	0.0000	0.7091
Total		**7.4559**	**0.4406**	**0.0000**	**18.4716**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.0175	3.5500e-003	2.1000e-004	0.0000	8.8000e-003
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	2.478	0.5030	0.0297	0.0000	1.2462
Hotel	2.2995	0.4668	0.0276	0.0000	1.1564
Retirement Community	7.567	1.5360	0.0908	0.0000	3.8055
Unrefrigerated Warehouse-No Rail	0.4935	0.1002	5.9200e-003	0.0000	0.2482
Total		**2.6096**	**0.1542**	**0.0000**	**6.4651**

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

600 Foothill Project

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	7.61	1000sqft	0.08	7,614.00	0
Unrefrigerated Warehouse-No Rail	1.50	1000sqft	0.03	1,500.00	0
Enclosed Parking with Elevator	107.00	Space	0.10	42,800.00	0
City Park	0.25	Acre	0.25	10,974.00	0
City Park	0.36	Acre	0.36	15,466.00	0
Hotel	12.00	Room	0.07	7,008.00	0
Retirement Community	47.00	Dwelling Unit	0.40	62,688.00	134

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Proposed Project land uses

Construction Phase - Per Construction Assumptions

Off-road Equipment -

Off-road Equipment - Per construction assumptions

Off-road Equipment - Per construction assumptions

Off-road Equipment - Per construction assumptions

Off-road Equipment - Per construction assumptions

Off-road Equipment - Per construction assumptions

Trips and VMT - Per construction assumptions

Demolition - Per construction assumptions

Grading - excavation volume to be exported is 22,800 cy per construction assumptions. Total acres graded is based on equipment assumptions.

Vehicle Trips - Trip generation rates are from Gibson Trip Generation Analysis from December 2020

Vehicle Emission Factors - Operation mobile emissions calculated outside of model

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - no wood fireplaces or stoves

Energy Use - Title 24 2019 standard

Construction Off-road Equipment Mitigation - watering for SCAQMD Rule 403, reduce vehicle speed to 15mph on unpaved roads

Energy Mitigation - Solar assumptions

Water Mitigation - Operational Data Needs assumptions

Waste Mitigation - Section 4.408 CalGreen Building Code

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	40.00
tblConstructionPhase	NumDays	200.00	26.00

tblConstructionPhase	NumDays	200.00	234.00
tblConstructionPhase	NumDays	200.00	79.00
tblConstructionPhase	NumDays	20.00	27.00
tblConstructionPhase	NumDays	4.00	18.00
tblConstructionPhase	NumDays	2.00	8.00
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
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblEnergyUse	T24E	3.92	3.50
tblEnergyUse	T24E	4.60	4.11
tblEnergyUse	T24E	2.55	2.28
tblEnergyUse	T24E	257.27	252.12
tblEnergyUse	T24E	0.65	0.58
tblEnergyUse	T24NG	10.02	9.92
tblEnergyUse	T24NG	19.92	19.72
tblEnergyUse	T24NG	9,955.77	9,457.98
tblEnergyUse	T24NG	0.84	0.83
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	2.35	0.00
tblGrading	MaterialExported	0.00	22,800.00
tblLandUse	LandUseSquareFeet	7,610.00	7,614.00
tblLandUse	LandUseSquareFeet	10,890.00	10,974.00

tblLandUse	LandUseSquareFeet	15,681.60	15,466.00
tblLandUse	LandUseSquareFeet	17,424.00	7,008.00
tblLandUse	LandUseSquareFeet	47,000.00	62,688.00
tblLandUse	LotAcreage	0.17	0.08
tblLandUse	LotAcreage	0.96	0.10
tblLandUse	LotAcreage	0.40	0.07
tblLandUse	LotAcreage	9.40	0.40
tblOffRoadEquipment	HorsePower	84.00	130.00
tblOffRoadEquipment	LoadFactor	0.74	0.42
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
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	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00

tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	72.00	330.00
tblTripsAndVMT	HaulingTripNumber	2,850.00	3,257.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,762.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	19.00	0.00
tblTripsAndVMT	VendorTripNumber	19.00	14.00
tblTripsAndVMT	VendorTripNumber	19.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	69.00	20.00
tblTripsAndVMT	WorkerTripNumber	69.00	60.00
tblTripsAndVMT	WorkerTripNumber	69.00	10.00

tblTripsAndVMT	WorkerTripNumber	14.00	18.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	ST_TR	8.19	4.91
tblVehicleTrips	ST_TR	2.03	3.23
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	1.05	0.70
tblVehicleTrips	SU_TR	5.95	4.09
tblVehicleTrips	SU_TR	1.95	3.14
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	11.03	9.74
tblVehicleTrips	WD_TR	8.17	5.44
tblVehicleTrips	WD_TR	2.40	3.70
tblVehicleTrips	WD_TR	1.68	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

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	4.0590	72.0038	31.3013	0.1863	10.2718	1.3573	11.6291	4.3676	1.2536	5.6212	0.0000	19,725.8286	19,725.8286	2.3241	0.0000	19,783.9321
2023	14.3521	8.2440	10.3196	0.0239	0.7603	0.3493	1.1096	0.2037	0.3317	0.5353	0.0000	2,356.6111	2,356.6111	0.2990	0.0000	2,364.0859
Maximum	**14.3521**	**72.0038**	**31.3013**	**0.1863**	**10.2718**	**1.3573**	**11.6291**	**4.3676**	**1.2536**	**5.6212**	**0.0000**	**19,725.8286**	**19,725.8286**	**2.3241**	**0.0000**	**19,783.9321**

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	4.0590	72.0038	31.3013	0.1863	6.5892	1.3573	7.9466	2.5035	1.2536	3.7571	0.0000	19,725.8286	19,725.8286	2.3241	0.0000	19,783.9321
2023	14.3521	8.2440	10.3196	0.0239	0.7603	0.3493	1.1096	0.2037	0.3317	0.5353	0.0000	2,356.6111	2,356.6111	0.2990	0.0000	2,364.0859
Maximum	**14.3521**	**72.0038**	**31.3013**	**0.1863**	**6.5892**	**1.3573**	**7.9466**	**2.5035**	**1.2536**	**3.7571**	**0.0000**	**19,725.8286**	**19,725.8286**	**2.3241**	**0.0000**	**19,783.9321**

	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**	**33.38**	**0.00**	**28.91**	**40.78**	**0.00**	**30.28**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	1.9239	0.7075	4.1711	4.4400e-003		0.0751	0.0751		0.0751	0.0751	0.0000	853.0101	853.0101	0.0230	0.0155	858.2068
Energy	0.0293	0.2542	0.1356	1.6000e-003		0.0202	0.0202		0.0202	0.0202		319.4242	319.4242	6.1200e-003	5.8600e-003	321.3224
Mobile	0.4732	1.9998	6.2623	0.0245	2.1024	0.0180	2.1205	0.5626	0.0168	0.5794		2,497.3851	2,497.3851	0.1161		2,500.2864
Total	**2.4264**	**2.9615**	**10.5690**	**0.0305**	**2.1024**	**0.1134**	**2.2158**	**0.5626**	**0.1121**	**0.6747**	**0.0000**	**3,669.8194**	**3,669.8194**	**0.1452**	**0.0214**	**3,679.8156**

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	1.9239	0.7075	4.1711	4.4400e-003		0.0751	0.0751		0.0751	0.0751	0.0000	853.0101	853.0101	0.0230	0.0155	858.2068
Energy	0.0293	0.2542	0.1356	1.6000e-003		0.0202	0.0202		0.0202	0.0202		319.4242	319.4242	6.1200e-003	5.8600e-003	321.3224
Mobile	0.4732	1.9998	6.2623	0.0245	2.1024	0.0180	2.1205	0.5626	0.0168	0.5794		2,497.3851	2,497.3851	0.1161		2,500.2864
Total	**2.4264**	**2.9615**	**10.5690**	**0.0305**	**2.1024**	**0.1134**	**2.2158**	**0.5626**	**0.1121**	**0.6747**	**0.0000**	**3,669.8194**	**3,669.8194**	**0.1452**	**0.0214**	**3,679.8156**

	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

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	3/1/2022	3/31/2022	6	27	
2	Site Preparation	Site Preparation	4/1/2022	4/10/2022	6	8	
3	Grading/Excavation	Grading	4/11/2022	4/30/2022	6	18	
4	Drainage/Utilities/Trenching	Trenching	4/20/2022	5/5/2022	6	14	
5	Foundations/Concrete Pour	Building Construction	5/1/2022	5/31/2022	6	26	
6	Building Construction	Building Construction	6/1/2022	2/28/2023	6	234	
7	Landscaping	Building Construction	3/1/2023	5/31/2023	6	79	
8	Architectural Coating	Architectural Coating	3/1/2023	4/15/2023	6	40	

Acres of Grading (Site Preparation Phase): 4

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.1

Residential Indoor: 126,943; Residential Outdoor: 42,314; Non-Residential Indoor: 24,183; Non-Residential Outdoor: 8,061; Striped Parking Area: 2,568 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40

Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading/Excavation	Bore/Drill Rigs	1	8.00	221	0.50
Grading/Excavation	Excavators	1	8.00	158	0.38
Grading/Excavation	Graders	1	8.00	187	0.41
Grading/Excavation	Rubber Tired Dozers	1	8.00	247	0.40
Grading/Excavation	Sweepers/Scrubbers	1	4.00	64	0.46
Grading/Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Drainage/Utilities/Trenching	Cranes	0	0.00	231	0.29
Drainage/Utilities/Trenching	Forklifts	0	0.00	89	0.20
Drainage/Utilities/Trenching	Generator Sets	0	0.00	84	0.74
Drainage/Utilities/Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Drainage/Utilities/Trenching	Trenchers	1	8.00	78	0.50
Drainage/Utilities/Trenching	Welders	0	0.00	46	0.45
Foundations/Concrete Pour	Cement and Mortar Mixers	0	0.00	9	0.56
Foundations/Concrete Pour	Cranes	2	4.00	231	0.29
Foundations/Concrete Pour	Forklifts	0	0.00	89	0.20
Foundations/Concrete Pour	Generator Sets	0	0.00	84	0.74
Foundations/Concrete Pour	Pavers	0	0.00	130	0.42
Foundations/Concrete Pour	Paving Equipment	0	0.00	132	0.36
Foundations/Concrete Pour	Pumps	2	8.00	130	0.42
Foundations/Concrete Pour	Rollers	0	0.00	80	0.38
Foundations/Concrete Pour	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Foundations/Concrete Pour	Welders	0	0.00	46	0.45
Building Construction	Air Compressors	0	0.00	78	0.48

Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	0	0.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Landscaping	Cranes	0	0.00	231	0.29
Landscaping	Forklifts	1	8.00	89	0.20
Landscaping	Generator Sets	0	0.00	84	0.74
Landscaping	Sweepers/Scrubbers	1	4.00	64	0.46
Landscaping	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Landscaping	Welders	0	0.00	46	0.45

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	20.00	6.00	330.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	10.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Excavation	6	20.00	6.00	3,257.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Drainage/Utilities/Trenching	2	10.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Foundations/Concrete Pour	4	20.00	0.00	1,762.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	60.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping	2	10.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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					0.5794	0.0000	0.5794	0.0877	0.0000	0.0877			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**0.5794**	**0.8379**	**1.4173**	**0.0877**	**0.7829**	**0.8706**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

3.2 Demolition - 2022

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	0.0970	3.0456	0.7609	9.4100e-003	0.2137	8.7400e-003	0.2225	0.0586	8.3600e-003	0.0670		1,022.3094	1,022.3094	0.0692		1,024.0383
Vendor	0.0171	0.5540	0.1441	1.5300e-003	0.0384	1.0400e-003	0.0395	0.0111	1.0000e-003	0.0121		163.4915	163.4915	9.3800e-003		163.7261
Worker	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		219.7425	219.7425	6.0600e-003		219.8941
Total	**0.1944**	**3.6528**	**1.6482**	**0.0132**	**0.4757**	**0.0115**	**0.4872**	**0.1289**	**0.0110**	**0.1399**		**1,405.5434**	**1,405.5434**	**0.0846**		**1,407.6585**

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					0.2607	0.0000	0.2607	0.0395	0.0000	0.0395			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**0.2607**	**0.8379**	**1.0986**	**0.0395**	**0.7829**	**0.8224**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

3.2 Demolition - 2022

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	0.0970	3.0456	0.7609	9.4100e-003	0.2137	8.7400e-003	0.2225	0.0586	8.3600e-003	0.0670		1,022.3094	1,022.3094	0.0692		1,024.0383
Vendor	0.0171	0.5540	0.1441	1.5300e-003	0.0384	1.0400e-003	0.0395	0.0111	1.0000e-003	0.0121		163.4915	163.4915	9.3800e-003		163.7261
Worker	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		219.7425	219.7425	6.0600e-003		219.8941
Total	**0.1944**	**3.6528**	**1.6482**	**0.0132**	**0.4757**	**0.0115**	**0.4872**	**0.1289**	**0.0110**	**0.1399**		**1,405.5434**	**1,405.5434**	**0.0846**		**1,407.6585**

3.3 Site Preparation - 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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.3122	14.6277	7.0939	0.0172		0.6225	0.6225		0.5727	0.5727		1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**1.3122**	**14.6277**	**7.0939**	**0.0172**	**5.7996**	**0.6225**	**6.4221**	**2.9537**	**0.5727**	**3.5264**		**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

3.3 Site Preparation - 2022

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
Vendor	0.0171	0.5540	0.1441	1.5300e-003	0.0384	1.0400e-003	0.0395	0.0111	1.0000e-003	0.0121		163.4915	163.4915	9.3800e-003		163.7261
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		109.8712	109.8712	3.0300e-003		109.9470
Total	**0.0573**	**0.5806**	**0.5157**	**2.6300e-003**	**0.1502**	**1.9100e-003**	**0.1521**	**0.0407**	**1.8100e-003**	**0.0425**		**273.3628**	**273.3628**	**0.0124**		**273.6731**

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					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	1.3122	14.6277	7.0939	0.0172		0.6225	0.6225		0.5727	0.5727	0.0000	1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**1.3122**	**14.6277**	**7.0939**	**0.0172**	**2.6098**	**0.6225**	**3.2323**	**1.3292**	**0.5727**	**1.9019**	**0.0000**	**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

3.3 Site Preparation - 2022

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
Vendor	0.0171	0.5540	0.1441	1.5300e-003	0.0384	1.0400e-003	0.0395	0.0111	1.0000e-003	0.0121		163.4915	163.4915	9.3800e-003		163.7261
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		109.8712	109.8712	3.0300e-003		109.9470
Total	**0.0573**	**0.5806**	**0.5157**	**2.6300e-003**	**0.1502**	**1.9100e-003**	**0.1521**	**0.0407**	**1.8100e-003**	**0.0425**		**273.3628**	**273.3628**	**0.0124**		**273.6731**

3.4 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					6.6956	0.0000	6.6956	3.3892	0.0000	3.3892			0.0000			0.0000
Off-Road	1.9400	20.6717	13.7965	0.0341		0.8936	0.8936		0.8221	0.8221		3,306.2175	3,306.2175	1.0693		3,332.9500
Total	**1.9400**	**20.6717**	**13.7965**	**0.0341**	**6.6956**	**0.8936**	**7.5892**	**3.3892**	**0.8221**	**4.2113**		**3,306.2175**	**3,306.2175**	**1.0693**		**3,332.9500**

3.4 Grading/Excavation - 2022

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	1.4358	45.0889	11.2649	0.1393	3.1640	0.1294	3.2935	0.8673	0.1238	0.9912		15,134.8260	15,134.8260	1.0238		15,160.4212
Vendor	0.0171	0.5540	0.1441	1.5300e-003	0.0384	1.0400e-003	0.0395	0.0111	1.0000e-003	0.0121		163.4915	163.4915	9.3800e-003		163.7261
Worker	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		219.7425	219.7425	6.0600e-003		219.8941
Total	**1.5332**	**45.6961**	**12.1522**	**0.1431**	**3.4260**	**0.1322**	**3.5582**	**0.9377**	**0.1265**	**1.0641**		**15,518.0600**	**15,518.0600**	**1.0393**		**15,544.0414**

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					3.0130	0.0000	3.0130	1.5251	0.0000	1.5251			0.0000			0.0000
Off-Road	1.9400	20.6717	13.7965	0.0341		0.8936	0.8936		0.8221	0.8221	0.0000	3,306.2175	3,306.2175	1.0693		3,332.9500
Total	**1.9400**	**20.6717**	**13.7965**	**0.0341**	**3.0130**	**0.8936**	**3.9066**	**1.5251**	**0.8221**	**2.3473**	**0.0000**	**3,306.2175**	**3,306.2175**	**1.0693**		**3,332.9500**

3.4 Grading/Excavation - 2022

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	1.4358	45.0889	11.2649	0.1393	3.1640	0.1294	3.2935	0.8673	0.1238	0.9912		15,134.8260	15,134.8260	1.0238		15,160.4212
Vendor	0.0171	0.5540	0.1441	1.5300e-003	0.0384	1.0400e-003	0.0395	0.0111	1.0000e-003	0.0121		163.4915	163.4915	9.3800e-003		163.7261
Worker	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		219.7425	219.7425	6.0600e-003		219.8941
Total	**1.5332**	**45.6961**	**12.1522**	**0.1431**	**3.4260**	**0.1322**	**3.5582**	**0.9377**	**0.1265**	**1.0641**		**15,518.0600**	**15,518.0600**	**1.0393**		**15,544.0414**

3.5 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	0.5286	5.0553	4.8369	6.4800e-003		0.3296	0.3296		0.3032	0.3032		628.1884	628.1884	0.2032		633.2676
Total	**0.5286**	**5.0553**	**4.8369**	**6.4800e-003**		**0.3296**	**0.3296**		**0.3032**	**0.3032**		**628.1884**	**628.1884**	**0.2032**		**633.2676**

3.5 Drainage/Utilities/Trenching - 2022

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
Vendor	0.0171	0.5540	0.1441	1.5300e-003	0.0384	1.0400e-003	0.0395	0.0111	1.0000e-003	0.0121		163.4915	163.4915	9.3800e-003		163.7261
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		109.8712	109.8712	3.0300e-003		109.9470
Total	**0.0573**	**0.5806**	**0.5157**	**2.6300e-003**	**0.1502**	**1.9100e-003**	**0.1521**	**0.0407**	**1.8100e-003**	**0.0425**		**273.3628**	**273.3628**	**0.0124**		**273.6731**

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	0.5286	5.0553	4.8369	6.4800e-003		0.3296	0.3296		0.3032	0.3032	0.0000	628.1884	628.1884	0.2032		633.2676
Total	**0.5286**	**5.0553**	**4.8369**	**6.4800e-003**		**0.3296**	**0.3296**		**0.3032**	**0.3032**	**0.0000**	**628.1884**	**628.1884**	**0.2032**		**633.2676**

3.5 Drainage/Utilities/Trenching - 2022

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
Vendor	0.0171	0.5540	0.1441	1.5300e-003	0.0384	1.0400e-003	0.0395	0.0111	1.0000e-003	0.0121		163.4915	163.4915	9.3800e-003		163.7261
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		109.8712	109.8712	3.0300e-003		109.9470
Total	**0.0573**	**0.5806**	**0.5157**	**2.6300e-003**	**0.1502**	**1.9100e-003**	**0.1521**	**0.0407**	**1.8100e-003**	**0.0425**		**273.3628**	**273.3628**	**0.0124**		**273.6731**

3.6 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	0.8391	7.7666	7.6105	0.0173		0.3374	0.3374		0.3235	0.3235		1,653.3505	1,653.3505	0.2212		1,658.8801
Total	**0.8391**	**7.7666**	**7.6105**	**0.0173**		**0.3374**	**0.3374**		**0.3235**	**0.3235**		**1,653.3505**	**1,653.3505**	**0.2212**		**1,658.8801**

3.6 Foundations/Concrete Pour - 2022

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	0.5377	16.8872	4.2191	0.0522	1.1850	0.0485	1.2335	0.3248	0.0464	0.3712		5,668.4554	5,668.4554	0.3835		5,678.0416
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
Worker	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		219.7425	219.7425	6.0600e-003		219.8941
Total	**0.6180**	**16.9404**	**4.9623**	**0.0544**	**1.4086**	**0.0502**	**1.4588**	**0.3841**	**0.0480**	**0.4321**		**5,888.1979**	**5,888.1979**	**0.3895**		**5,897.9357**

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	0.8391	7.7666	7.6105	0.0173		0.3374	0.3374		0.3235	0.3235	0.0000	1,653.3505	1,653.3505	0.2212		1,658.8801
Total	**0.8391**	**7.7666**	**7.6105**	**0.0173**		**0.3374**	**0.3374**		**0.3235**	**0.3235**	**0.0000**	**1,653.3505**	**1,653.3505**	**0.2212**		**1,658.8801**

3.6 Foundations/Concrete Pour - 2022

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	0.5377	16.8872	4.2191	0.0522	1.1850	0.0485	1.2335	0.3248	0.0464	0.3712		5,668.4554	5,668.4554	0.3835		5,678.0416
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
Worker	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		219.7425	219.7425	6.0600e-003		219.8941
Total	**0.6180**	**16.9404**	**4.9623**	**0.0544**	**1.4086**	**0.0502**	**1.4588**	**0.3841**	**0.0480**	**0.4321**		**5,888.1979**	**5,888.1979**	**0.3895**		**5,897.9357**

3.7 Building Construction - 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	0.7948	7.7509	8.0138	0.0141		0.3938	0.3938		0.3740	0.3740		1,351.7195	1,351.7195	0.2653		1,358.3513
Total	**0.7948**	**7.7509**	**8.0138**	**0.0141**		**0.3938**	**0.3938**		**0.3740**	**0.3740**		**1,351.7195**	**1,351.7195**	**0.2653**		**1,358.3513**

3.7 Building Construction - 2022

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
Vendor	0.0399	1.2926	0.3362	3.5700e-003	0.0896	2.4300e-003	0.0921	0.0258	2.3200e-003	0.0281		381.4802	381.4802	0.0219		382.0275
Worker	0.2409	0.1597	2.2296	6.6200e-003	0.6707	5.2500e-003	0.6759	0.1779	4.8400e-003	0.1827		659.2274	659.2274	0.0182		659.6823
Total	**0.2809**	**1.4523**	**2.5658**	**0.0102**	**0.7603**	**7.6800e-003**	**0.7680**	**0.2037**	**7.1600e-003**	**0.2108**		**1,040.7076**	**1,040.7076**	**0.0401**		**1,041.7098**

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	0.7948	7.7509	8.0138	0.0141		0.3938	0.3938		0.3740	0.3740	0.0000	1,351.7195	1,351.7195	0.2653		1,358.3513
Total	**0.7948**	**7.7509**	**8.0138**	**0.0141**		**0.3938**	**0.3938**		**0.3740**	**0.3740**	**0.0000**	**1,351.7195**	**1,351.7195**	**0.2653**		**1,358.3513**

3.7 Building Construction - 2022

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
Vendor	0.0399	1.2926	0.3362	3.5700e-003	0.0896	2.4300e-003	0.0921	0.0258	2.3200e-003	0.0281		381.4802	381.4802	0.0219		382.0275
Worker	0.2409	0.1597	2.2296	6.6200e-003	0.6707	5.2500e-003	0.6759	0.1779	4.8400e-003	0.1827		659.2274	659.2274	0.0182		659.6823
Total	**0.2809**	**1.4523**	**2.5658**	**0.0102**	**0.7603**	**7.6800e-003**	**0.7680**	**0.2037**	**7.1600e-003**	**0.2108**		**1,040.7076**	**1,040.7076**	**0.0401**		**1,041.7098**

3.7 Building Construction - 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	0.7355	7.1187	7.9627	0.0141		0.3431	0.3431		0.3259	0.3259		1,352.0515	1,352.0515	0.2632		1,358.6312
Total	**0.7355**	**7.1187**	**7.9627**	**0.0141**		**0.3431**	**0.3431**		**0.3259**	**0.3259**		**1,352.0515**	**1,352.0515**	**0.2632**		**1,358.6312**

3.7 Building Construction - 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
Vendor	0.0296	0.9808	0.3036	3.4500e-003	0.0896	1.1300e-003	0.0908	0.0258	1.0800e-003	0.0269		369.4704	369.4704	0.0194		369.9554
Worker	0.2262	0.1445	2.0533	6.3700e-003	0.6707	5.1000e-003	0.6758	0.1779	4.7000e-003	0.1826		635.0892	635.0892	0.0164		635.4993
Total	**0.2559**	**1.1253**	**2.3569**	**9.8200e-003**	**0.7603**	**6.2300e-003**	**0.7665**	**0.2037**	**5.7800e-003**	**0.2095**		**1,004.5596**	**1,004.5596**	**0.0358**		**1,005.4547**

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	0.7355	7.1187	7.9627	0.0141		0.3431	0.3431		0.3259	0.3259	0.0000	1,352.0515	1,352.0515	0.2632		1,358.6312
Total	**0.7355**	**7.1187**	**7.9627**	**0.0141**		**0.3431**	**0.3431**		**0.3259**	**0.3259**	**0.0000**	**1,352.0515**	**1,352.0515**	**0.2632**		**1,358.6312**

3.7 Building Construction - 2023

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
Vendor	0.0296	0.9808	0.3036	3.4500e-003	0.0896	1.1300e-003	0.0908	0.0258	1.0800e-003	0.0269		369.4704	369.4704	0.0194		369.9554
Worker	0.2262	0.1445	2.0533	6.3700e-003	0.6707	5.1000e-003	0.6758	0.1779	4.7000e-003	0.1826		635.0892	635.0892	0.0164		635.4993
Total	**0.2559**	**1.1253**	**2.3569**	**9.8200e-003**	**0.7603**	**6.2300e-003**	**0.7665**	**0.2037**	**5.7800e-003**	**0.2095**		**1,004.5596**	**1,004.5596**	**0.0358**		**1,005.4547**

3.8 Landscaping - 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	0.1936	1.8126	2.1041	2.8000e-003		0.1137	0.1137		0.1046	0.1046		271.1190	271.1190	0.0877		273.3112
Total	**0.1936**	**1.8126**	**2.1041**	**2.8000e-003**		**0.1137**	**0.1137**		**0.1046**	**0.1046**		**271.1190**	**271.1190**	**0.0877**		**273.3112**

3.8 Landscaping - 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
Vendor	0.0127	0.4203	0.1301	1.4800e-003	0.0384	4.9000e-004	0.0389	0.0111	4.6000e-004	0.0115		158.3445	158.3445	8.3100e-003		158.5523
Worker	0.0377	0.0241	0.3422	1.0600e-003	0.1118	8.5000e-004	0.1126	0.0296	7.8000e-004	0.0304		105.8482	105.8482	2.7300e-003		105.9166
Total	**0.0504**	**0.4444**	**0.4723**	**2.5400e-003**	**0.1502**	**1.3400e-003**	**0.1515**	**0.0407**	**1.2400e-003**	**0.0420**		**264.1927**	**264.1927**	**0.0110**		**264.4689**

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	0.1936	1.8126	2.1041	2.8000e-003		0.1137	0.1137		0.1046	0.1046	0.0000	271.1190	271.1190	0.0877		273.3112
Total	**0.1936**	**1.8126**	**2.1041**	**2.8000e-003**		**0.1137**	**0.1137**		**0.1046**	**0.1046**	**0.0000**	**271.1190**	**271.1190**	**0.0877**		**273.3112**

3.8 Landscaping - 2023

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
Vendor	0.0127	0.4203	0.1301	1.4800e-003	0.0384	4.9000e-004	0.0389	0.0111	4.6000e-004	0.0115		158.3445	158.3445	8.3100e-003		158.5523
Worker	0.0377	0.0241	0.3422	1.0600e-003	0.1118	8.5000e-004	0.1126	0.0296	7.8000e-004	0.0304		105.8482	105.8482	2.7300e-003		105.9166
Total	**0.0504**	**0.4444**	**0.4723**	**2.5400e-003**	**0.1502**	**1.3400e-003**	**0.1515**	**0.0407**	**1.2400e-003**	**0.0420**		**264.1927**	**264.1927**	**0.0110**		**264.4689**

3.9 Architectural Coating - 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	13.8402					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**14.0318**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.9 Architectural Coating - 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
Vendor	8.4700e-003	0.2802	0.0868	9.9000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.5630	105.5630	5.5400e-003		105.7015
Worker	0.0679	0.0433	0.6160	1.9100e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		190.5268	190.5268	4.9200e-003		190.6498
Total	**0.0763**	**0.3236**	**0.7027**	**2.9000e-003**	**0.2268**	**1.8500e-003**	**0.2287**	**0.0607**	**1.7200e-003**	**0.0625**		**296.0897**	**296.0897**	**0.0105**		**296.3513**

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	13.8402					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**14.0318**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.9 Architectural Coating - 2023

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
Vendor	8.4700e-003	0.2802	0.0868	9.9000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.5630	105.5630	5.5400e-003		105.7015
Worker	0.0679	0.0433	0.6160	1.9100e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		190.5268	190.5268	4.9200e-003		190.6498
Total	**0.0763**	**0.3236**	**0.7027**	**2.9000e-003**	**0.2268**	**1.8500e-003**	**0.2287**	**0.0607**	**1.7200e-003**	**0.0625**		**296.0897**	**296.0897**	**0.0105**		**296.3513**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	0.4732	1.9998	6.2623	0.0245	2.1024	0.0180	2.1205	0.5626	0.0168	0.5794		2,497.3851	2,497.3851	0.1161		2,500.2864
Unmitigated	0.4732	1.9998	6.2623	0.0245	2.1024	0.0180	2.1205	0.5626	0.0168	0.5794		2,497.3851	2,497.3851	0.1161		2,500.2864

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		
City Park	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	74.12	16.82	5.33	180,748	180,748
Hotel	65.28	58.92	49.08	148,079	148,079
Retirement Community	173.90	151.81	147.58	570,611	570,611
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	313.30	227.55	201.99	899,438	899,438

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
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Retirement Community	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Enclosed Parking with Elevator	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
General Office Building	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Hotel	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Retirement Community	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Unrefrigerated Warehouse-No Rail	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

600 Foothill Project - Los Angeles-South Coast County, Summer

	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	0.0293	0.2542	0.1356	1.6000e-003		0.0202	0.0202		0.0202	0.0202		319.4242	319.4242	6.1200e-003	5.8600e-003	321.3224
NaturalGas Unmitigated	0.0293	0.2542	0.1356	1.6000e-003		0.0202	0.0202		0.0202	0.0202		319.4242	319.4242	6.1200e-003	5.8600e-003	321.3224

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
Enclosed Parking with Elevator	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	215.069	2.3200e-003	0.0211	0.0177	1.3000e-004		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003		25.3023	25.3023	4.8000e-004	4.6000e-004	25.4526
Hotel	456.576	4.9200e-003	0.0448	0.0376	2.7000e-004		3.4000e-003	3.4000e-003		3.4000e-003	3.4000e-003		53.7148	53.7148	1.0300e-003	9.8000e-004	54.0340
Retirement Community	2039.93	0.0220	0.1880	0.0800	1.2000e-003		0.0152	0.0152		0.0152	0.0152		239.9913	239.9913	4.6000e-003	4.4000e-003	241.4175
Unrefrigerated Warehouse-No Rail	3.53425	4.0000e-005	3.5000e-004	2.9000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.4158	0.4158	1.0000e-005	1.0000e-005	0.4183
Total		**0.0293**	**0.2542**	**0.1356**	**1.6000e-003**		**0.0202**	**0.0202**		**0.0202**	**0.0202**		**319.4242**	**319.4242**	**6.1200e-003**	**5.8500e-003**	**321.3224**

5.2 Energy by Land Use - NaturalGas

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
Enclosed Parking with Elevator	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	0.215069	2.3200e-003	0.0211	0.0177	1.3000e-004		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003		25.3023	25.3023	4.8000e-004	4.6000e-004	25.4526
Hotel	0.456576	4.9200e-003	0.0448	0.0376	2.7000e-004		3.4000e-003	3.4000e-003		3.4000e-003	3.4000e-003		53.7148	53.7148	1.0300e-003	9.8000e-004	54.0340
Retirement Community	2.03993	0.0220	0.1880	0.0800	1.2000e-003		0.0152	0.0152		0.0152	0.0152		239.9913	239.9913	4.6000e-003	4.4000e-003	241.4175
Unrefrigerated Warehouse-No Rail	0.00353425	4.0000e-005	3.5000e-004	2.9000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.4158	0.4158	1.0000e-005	1.0000e-005	0.4183
Total		**0.0293**	**0.2542**	**0.1356**	**1.6000e-003**		**0.0202**	**0.0202**		**0.0202**	**0.0202**		**319.4242**	**319.4242**	**6.1200e-003**	**5.8500e-003**	**321.3224**

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	1.9239	0.7075	4.1711	4.4400e-003		0.0751	0.0751		0.0751	0.0751	0.0000	853.0101	853.0101	0.0230	0.0155	858.2068
Unmitigated	1.9239	0.7075	4.1711	4.4400e-003		0.0751	0.0751		0.0751	0.0751	0.0000	853.0101	853.0101	0.0230	0.0155	858.2068

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	0.1517					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0776	0.6627	0.2820	4.2300e-003		0.0536	0.0536		0.0536	0.0536	0.0000	846.0000	846.0000	0.0162	0.0155	851.0274
Landscaping	0.1178	0.0448	3.8891	2.1000e-004		0.0215	0.0215		0.0215	0.0215		7.0101	7.0101	6.7700e-003		7.1795
Total	**1.9239**	**0.7075**	**4.1711**	**4.4400e-003**		**0.0751**	**0.0751**		**0.0751**	**0.0751**	**0.0000**	**853.0101**	**853.0101**	**0.0230**	**0.0155**	**858.2068**

6.2 Area by SubCategory

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	0.1517					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0776	0.6627	0.2820	4.2300e-003		0.0536	0.0536		0.0536	0.0536	0.0000	846.0000	846.0000	0.0162	0.0155	851.0274
Landscaping	0.1178	0.0448	3.8891	2.1000e-004		0.0215	0.0215		0.0215	0.0215		7.0101	7.0101	6.7700e-003		7.1795
Total	**1.9239**	**0.7075**	**4.1711**	**4.4400e-003**		**0.0751**	**0.0751**		**0.0751**	**0.0751**	**0.0000**	**853.0101**	**853.0101**	**0.0230**	**0.0155**	**858.2068**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Use Water Efficient Irrigation System

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

600 Foothill Project

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	7.61	1000sqft	0.08	7,614.00	0
Unrefrigerated Warehouse-No Rail	1.50	1000sqft	0.03	1,500.00	0
Enclosed Parking with Elevator	107.00	Space	0.10	42,800.00	0
City Park	0.25	Acre	0.25	10,974.00	0
City Park	0.36	Acre	0.36	15,466.00	0
Hotel	12.00	Room	0.07	7,008.00	0
Retirement Community	47.00	Dwelling Unit	0.40	62,688.00	134

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Proposed Project land uses

Construction Phase - Per Construction Assumptions

Off-road Equipment -

Off-road Equipment - Per construction assumptions

Off-road Equipment - Per construction assumptions

Off-road Equipment - Per construction assumptions

Off-road Equipment - Per construction assumptions

Off-road Equipment - Per construction assumptions

Trips and VMT - Per construction assumptions

Demolition - Per construction assumptions

Grading - excavation volume to be exported is 22,800 cy per construction assumptions. Total acres graded is based on equipment assumptions.

Vehicle Trips - Trip generation rates are from Gibson Trip Generation Analysis from December 2020

Vehicle Emission Factors - Operation mobile emissions calculated outside of model

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - no wood fireplaces or stoves

Energy Use - Title 24 2019 standard

Construction Off-road Equipment Mitigation - watering for SCAQMD Rule 403, reduce vehicle speed to 15mph on unpaved roads

Energy Mitigation - Solar assumptions

Water Mitigation - Operational Data Needs assumptions

Waste Mitigation - Section 4.408 CalGreen Building Code

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	40.00
tblConstructionPhase	NumDays	200.00	26.00

tblConstructionPhase	NumDays	200.00	234.00
tblConstructionPhase	NumDays	200.00	79.00
tblConstructionPhase	NumDays	20.00	27.00
tblConstructionPhase	NumDays	4.00	18.00
tblConstructionPhase	NumDays	2.00	8.00
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
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblEnergyUse	T24E	3.92	3.50
tblEnergyUse	T24E	4.60	4.11
tblEnergyUse	T24E	2.55	2.28
tblEnergyUse	T24E	257.27	252.12
tblEnergyUse	T24E	0.65	0.58
tblEnergyUse	T24NG	10.02	9.92
tblEnergyUse	T24NG	19.92	19.72
tblEnergyUse	T24NG	9,955.77	9,457.98
tblEnergyUse	T24NG	0.84	0.83
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	2.35	0.00
tblGrading	MaterialExported	0.00	22,800.00
tblLandUse	LandUseSquareFeet	7,610.00	7,614.00
tblLandUse	LandUseSquareFeet	10,890.00	10,974.00

tblLandUse	LandUseSquareFeet	15,681.60	15,466.00
tblLandUse	LandUseSquareFeet	17,424.00	7,008.00
tblLandUse	LandUseSquareFeet	47,000.00	62,688.00
tblLandUse	LotAcreage	0.17	0.08
tblLandUse	LotAcreage	0.96	0.10
tblLandUse	LotAcreage	0.40	0.07
tblLandUse	LotAcreage	9.40	0.40
tblOffRoadEquipment	HorsePower	84.00	130.00
tblOffRoadEquipment	LoadFactor	0.74	0.42
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
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	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00

tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	72.00	330.00
tblTripsAndVMT	HaulingTripNumber	2,850.00	3,257.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,762.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	19.00	0.00
tblTripsAndVMT	VendorTripNumber	19.00	14.00
tblTripsAndVMT	VendorTripNumber	19.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	69.00	20.00
tblTripsAndVMT	WorkerTripNumber	69.00	60.00
tblTripsAndVMT	WorkerTripNumber	69.00	10.00

tblTripsAndVMT	WorkerTripNumber	14.00	18.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	ST_TR	8.19	4.91
tblVehicleTrips	ST_TR	2.03	3.23
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	1.05	0.70
tblVehicleTrips	SU_TR	5.95	4.09
tblVehicleTrips	SU_TR	1.95	3.14
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	11.03	9.74
tblVehicleTrips	WD_TR	8.17	5.44
tblVehicleTrips	WD_TR	2.40	3.70
tblVehicleTrips	WD_TR	1.68	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

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	4.1093	72.5242	31.8900	0.1836	10.2718	1.3594	11.6312	4.3676	1.2556	5.6231	0.0000	19,433.0584	19,433.0584	2.3597	0.0000	19,492.0516
2023	14.3658	8.2549	10.1639	0.0235	0.7603	0.3493	1.1096	0.2037	0.3317	0.5354	0.0000	2,309.5217	2,309.5217	0.2991	0.0000	2,316.9992
Maximum	**14.3658**	**72.5242**	**31.8900**	**0.1836**	**10.2718**	**1.3594**	**11.6312**	**4.3676**	**1.2556**	**5.6231**	**0.0000**	**19,433.0584**	**19,433.0584**	**2.3597**	**0.0000**	**19,492.0516**

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	4.1093	72.5242	31.8900	0.1836	6.5892	1.3594	7.9486	2.5035	1.2556	3.7591	0.0000	19,433.0584	19,433.0584	2.3597	0.0000	19,492.0516
2023	14.3658	8.2549	10.1639	0.0235	0.7603	0.3493	1.1096	0.2037	0.3317	0.5354	0.0000	2,309.5217	2,309.5217	0.2991	0.0000	2,316.9992
Maximum	**14.3658**	**72.5242**	**31.8900**	**0.1836**	**6.5892**	**1.3594**	**7.9486**	**2.5035**	**1.2556**	**3.7591**	**0.0000**	**19,433.0584**	**19,433.0584**	**2.3597**	**0.0000**	**19,492.0516**

	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**	**33.38**	**0.00**	**28.90**	**40.78**	**0.00**	**30.27**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	1.9239	0.7075	4.1711	4.4400e-003		0.0751	0.0751		0.0751	0.0751	0.0000	853.0101	853.0101	0.0230	0.0155	858.2068
Energy	0.0293	0.2542	0.1356	1.6000e-003		0.0202	0.0202		0.0202	0.0202		319.4242	319.4242	6.1200e-003	5.8600e-003	321.3224
Mobile	0.4582	2.0450	5.9370	0.0233	2.1024	0.0181	2.1205	0.5626	0.0168	0.5794		2,378.0222	2,378.0222	0.1158		2,380.9162
Total	**2.4114**	**3.0067**	**10.2436**	**0.0294**	**2.1024**	**0.1135**	**2.2159**	**0.5626**	**0.1122**	**0.6748**	**0.0000**	**3,550.4566**	**3,550.4566**	**0.1449**	**0.0214**	**3,560.4454**

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	1.9239	0.7075	4.1711	4.4400e-003		0.0751	0.0751		0.0751	0.0751	0.0000	853.0101	853.0101	0.0230	0.0155	858.2068
Energy	0.0293	0.2542	0.1356	1.6000e-003		0.0202	0.0202		0.0202	0.0202		319.4242	319.4242	6.1200e-003	5.8600e-003	321.3224
Mobile	0.4582	2.0450	5.9370	0.0233	2.1024	0.0181	2.1205	0.5626	0.0168	0.5794		2,378.0222	2,378.0222	0.1158		2,380.9162
Total	**2.4114**	**3.0067**	**10.2436**	**0.0294**	**2.1024**	**0.1135**	**2.2159**	**0.5626**	**0.1122**	**0.6748**	**0.0000**	**3,550.4566**	**3,550.4566**	**0.1449**	**0.0214**	**3,560.4454**

	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

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	3/1/2022	3/31/2022	6	27	
2	Site Preparation	Site Preparation	4/1/2022	4/10/2022	6	8	
3	Grading/Excavation	Grading	4/11/2022	4/30/2022	6	18	
4	Drainage/Utilities/Trenching	Trenching	4/20/2022	5/5/2022	6	14	
5	Foundations/Concrete Pour	Building Construction	5/1/2022	5/31/2022	6	26	
6	Building Construction	Building Construction	6/1/2022	2/28/2023	6	234	
7	Landscaping	Building Construction	3/1/2023	5/31/2023	6	79	
8	Architectural Coating	Architectural Coating	3/1/2023	4/15/2023	6	40	

Acres of Grading (Site Preparation Phase): 4

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.1

Residential Indoor: 126,943; Residential Outdoor: 42,314; Non-Residential Indoor: 24,183; Non-Residential Outdoor: 8,061; Striped Parking Area: 2,568 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40

Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading/Excavation	Bore/Drill Rigs	1	8.00	221	0.50
Grading/Excavation	Excavators	1	8.00	158	0.38
Grading/Excavation	Graders	1	8.00	187	0.41
Grading/Excavation	Rubber Tired Dozers	1	8.00	247	0.40
Grading/Excavation	Sweepers/Scrubbers	1	4.00	64	0.46
Grading/Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Drainage/Utilities/Trenching	Cranes	0	0.00	231	0.29
Drainage/Utilities/Trenching	Forklifts	0	0.00	89	0.20
Drainage/Utilities/Trenching	Generator Sets	0	0.00	84	0.74
Drainage/Utilities/Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Drainage/Utilities/Trenching	Trenchers	1	8.00	78	0.50
Drainage/Utilities/Trenching	Welders	0	0.00	46	0.45
Foundations/Concrete Pour	Cement and Mortar Mixers	0	0.00	9	0.56
Foundations/Concrete Pour	Cranes	2	4.00	231	0.29
Foundations/Concrete Pour	Forklifts	0	0.00	89	0.20
Foundations/Concrete Pour	Generator Sets	0	0.00	84	0.74
Foundations/Concrete Pour	Pavers	0	0.00	130	0.42
Foundations/Concrete Pour	Paving Equipment	0	0.00	132	0.36
Foundations/Concrete Pour	Pumps	2	8.00	130	0.42
Foundations/Concrete Pour	Rollers	0	0.00	80	0.38
Foundations/Concrete Pour	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Foundations/Concrete Pour	Welders	0	0.00	46	0.45
Building Construction	Air Compressors	0	0.00	78	0.48

Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	0	0.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Landscaping	Cranes	0	0.00	231	0.29
Landscaping	Forklifts	1	8.00	89	0.20
Landscaping	Generator Sets	0	0.00	84	0.74
Landscaping	Sweepers/Scrubbers	1	4.00	64	0.46
Landscaping	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Landscaping	Welders	0	0.00	46	0.45

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	20.00	6.00	330.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	10.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Excavation	6	20.00	6.00	3,257.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Drainage/Utilities/Trenching	2	10.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Foundations/Concrete Pour	4	20.00	0.00	1,762.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	60.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping	2	10.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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					0.5794	0.0000	0.5794	0.0877	0.0000	0.0877			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**0.5794**	**0.8379**	**1.4173**	**0.0877**	**0.7829**	**0.8706**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

3.2 Demolition - 2022

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	0.0993	3.0804	0.8052	9.2500e-003	0.2137	8.8800e-003	0.2226	0.0586	8.5000e-003	0.0671		1,004.4427	1,004.4427	0.0715		1,006.2305
Vendor	0.0180	0.5525	0.1595	1.4900e-003	0.0384	1.0800e-003	0.0395	0.0111	1.0300e-003	0.0121		158.9822	158.9822	9.9900e-003		159.2320
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		206.9139	206.9139	5.7000e-003		207.0563
Total	**0.2069**	**3.6918**	**1.6430**	**0.0128**	**0.4757**	**0.0117**	**0.4874**	**0.1289**	**0.0111**	**0.1401**		**1,370.3387**	**1,370.3387**	**0.0872**		**1,372.5188**

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					0.2607	0.0000	0.2607	0.0395	0.0000	0.0395			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**0.2607**	**0.8379**	**1.0986**	**0.0395**	**0.7829**	**0.8224**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

3.2 Demolition - 2022

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	0.0993	3.0804	0.8052	9.2500e-003	0.2137	8.8800e-003	0.2226	0.0586	8.5000e-003	0.0671		1,004.4427	1,004.4427	0.0715		1,006.2305
Vendor	0.0180	0.5525	0.1595	1.4900e-003	0.0384	1.0800e-003	0.0395	0.0111	1.0300e-003	0.0121		158.9822	158.9822	9.9900e-003		159.2320
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		206.9139	206.9139	5.7000e-003		207.0563
Total	**0.2069**	**3.6918**	**1.6430**	**0.0128**	**0.4757**	**0.0117**	**0.4874**	**0.1289**	**0.0111**	**0.1401**		**1,370.3387**	**1,370.3387**	**0.0872**		**1,372.5188**

3.3 Site Preparation - 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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.3122	14.6277	7.0939	0.0172		0.6225	0.6225		0.5727	0.5727		1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**1.3122**	**14.6277**	**7.0939**	**0.0172**	**5.7996**	**0.6225**	**6.4221**	**2.9537**	**0.5727**	**3.5264**		**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

3.3 Site Preparation - 2022

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
Vendor	0.0180	0.5525	0.1595	1.4900e-003	0.0384	1.0800e-003	0.0395	0.0111	1.0300e-003	0.0121		158.9822	158.9822	9.9900e-003		159.2320
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	**0.0628**	**0.5819**	**0.4986**	**2.5300e-003**	**0.1502**	**1.9500e-003**	**0.1521**	**0.0407**	**1.8400e-003**	**0.0425**		**262.4391**	**262.4391**	**0.0128**		**262.7601**

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					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	1.3122	14.6277	7.0939	0.0172		0.6225	0.6225		0.5727	0.5727	0.0000	1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**1.3122**	**14.6277**	**7.0939**	**0.0172**	**2.6098**	**0.6225**	**3.2323**	**1.3292**	**0.5727**	**1.9019**	**0.0000**	**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

3.3 Site Preparation - 2022

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
Vendor	0.0180	0.5525	0.1595	1.4900e-003	0.0384	1.0800e-003	0.0395	0.0111	1.0300e-003	0.0121		158.9822	158.9822	9.9900e-003		159.2320
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	**0.0628**	**0.5819**	**0.4986**	**2.5300e-003**	**0.1502**	**1.9500e-003**	**0.1521**	**0.0407**	**1.8400e-003**	**0.0425**		**262.4391**	**262.4391**	**0.0128**		**262.7601**

3.4 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					6.6956	0.0000	6.6956	3.3892	0.0000	3.3892			0.0000			0.0000
Off-Road	1.9400	20.6717	13.7965	0.0341		0.8936	0.8936		0.8221	0.8221		3,306.2175	3,306.2175	1.0693		3,332.9500
Total	**1.9400**	**20.6717**	**13.7965**	**0.0341**	**6.6956**	**0.8936**	**7.5892**	**3.3892**	**0.8221**	**4.2113**		**3,306.2175**	**3,306.2175**	**1.0693**		**3,332.9500**

3.4 Grading/Excavation - 2022

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	1.4704	45.6039	11.9202	0.1369	3.1640	0.1315	3.2955	0.8673	0.1258	0.9931		14,870.3173	14,870.3173	1.0587		14,896.7856
Vendor	0.0180	0.5525	0.1595	1.4900e-003	0.0384	1.0800e-003	0.0395	0.0111	1.0300e-003	0.0121		158.9822	158.9822	9.9900e-003		159.2320
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		206.9139	206.9139	5.7000e-003		207.0563
Total	**1.5780**	**46.2153**	**12.7580**	**0.1405**	**3.4260**	**0.1343**	**3.5603**	**0.9377**	**0.1284**	**1.0661**		**15,236.2133**	**15,236.2133**	**1.0744**		**15,263.0739**

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					3.0130	0.0000	3.0130	1.5251	0.0000	1.5251			0.0000			0.0000
Off-Road	1.9400	20.6717	13.7965	0.0341		0.8936	0.8936		0.8221	0.8221	0.0000	3,306.2175	3,306.2175	1.0693		3,332.9500
Total	**1.9400**	**20.6717**	**13.7965**	**0.0341**	**3.0130**	**0.8936**	**3.9066**	**1.5251**	**0.8221**	**2.3473**	**0.0000**	**3,306.2175**	**3,306.2175**	**1.0693**		**3,332.9500**

3.4 Grading/Excavation - 2022

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	1.4704	45.6039	11.9202	0.1369	3.1640	0.1315	3.2955	0.8673	0.1258	0.9931		14,870.3173	14,870.3173	1.0587		14,896.7856
Vendor	0.0180	0.5525	0.1595	1.4900e-003	0.0384	1.0800e-003	0.0395	0.0111	1.0300e-003	0.0121		158.9822	158.9822	9.9900e-003		159.2320
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		206.9139	206.9139	5.7000e-003		207.0563
Total	**1.5780**	**46.2153**	**12.7580**	**0.1405**	**3.4260**	**0.1343**	**3.5603**	**0.9377**	**0.1284**	**1.0661**		**15,236.2133**	**15,236.2133**	**1.0744**		**15,263.0739**

3.5 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	0.5286	5.0553	4.8369	6.4800e-003		0.3296	0.3296		0.3032	0.3032		628.1884	628.1884	0.2032		633.2676
Total	**0.5286**	**5.0553**	**4.8369**	**6.4800e-003**		**0.3296**	**0.3296**		**0.3032**	**0.3032**		**628.1884**	**628.1884**	**0.2032**		**633.2676**

3.5 Drainage/Utilities/Trenching - 2022

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
Vendor	0.0180	0.5525	0.1595	1.4900e-003	0.0384	1.0800e-003	0.0395	0.0111	1.0300e-003	0.0121		158.9822	158.9822	9.9900e-003		159.2320
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	**0.0628**	**0.5819**	**0.4986**	**2.5300e-003**	**0.1502**	**1.9500e-003**	**0.1521**	**0.0407**	**1.8400e-003**	**0.0425**		**262.4391**	**262.4391**	**0.0128**		**262.7601**

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	0.5286	5.0553	4.8369	6.4800e-003		0.3296	0.3296		0.3032	0.3032	0.0000	628.1884	628.1884	0.2032		633.2676
Total	**0.5286**	**5.0553**	**4.8369**	**6.4800e-003**		**0.3296**	**0.3296**		**0.3032**	**0.3032**	**0.0000**	**628.1884**	**628.1884**	**0.2032**		**633.2676**

3.5 Drainage/Utilities/Trenching - 2022

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
Vendor	0.0180	0.5525	0.1595	1.4900e-003	0.0384	1.0800e-003	0.0395	0.0111	1.0300e-003	0.0121		158.9822	158.9822	9.9900e-003		159.2320
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	**0.0628**	**0.5819**	**0.4986**	**2.5300e-003**	**0.1502**	**1.9500e-003**	**0.1521**	**0.0407**	**1.8400e-003**	**0.0425**		**262.4391**	**262.4391**	**0.0128**		**262.7601**

3.6 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	0.8391	7.7666	7.6105	0.0173		0.3374	0.3374		0.3235	0.3235		1,653.3505	1,653.3505	0.2212		1,658.8801
Total	**0.8391**	**7.7666**	**7.6105**	**0.0173**		**0.3374**	**0.3374**		**0.3235**	**0.3235**		**1,653.3505**	**1,653.3505**	**0.2212**		**1,658.8801**

3.6 Foundations/Concrete Pour - 2022

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	0.5507	17.0801	4.4645	0.0513	1.1850	0.0492	1.2343	0.3248	0.0471	0.3720		5,569.3888	5,569.3888	0.3965		5,579.3020
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
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		206.9139	206.9139	5.7000e-003		207.0563
Total	**0.6403**	**17.1390**	**5.1428**	**0.0534**	**1.4086**	**0.0510**	**1.4596**	**0.3841**	**0.0487**	**0.4329**		**5,776.3027**	**5,776.3027**	**0.4022**		**5,786.3583**

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	0.8391	7.7666	7.6105	0.0173		0.3374	0.3374		0.3235	0.3235	0.0000	1,653.3505	1,653.3505	0.2212		1,658.8801
Total	**0.8391**	**7.7666**	**7.6105**	**0.0173**		**0.3374**	**0.3374**		**0.3235**	**0.3235**	**0.0000**	**1,653.3505**	**1,653.3505**	**0.2212**		**1,658.8801**

3.6 Foundations/Concrete Pour - 2022

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	0.5507	17.0801	4.4645	0.0513	1.1850	0.0492	1.2343	0.3248	0.0471	0.3720		5,569.3888	5,569.3888	0.3965		5,579.3020
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
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		206.9139	206.9139	5.7000e-003		207.0563
Total	**0.6403**	**17.1390**	**5.1428**	**0.0534**	**1.4086**	**0.0510**	**1.4596**	**0.3841**	**0.0487**	**0.4329**		**5,776.3027**	**5,776.3027**	**0.4022**		**5,786.3583**

3.7 Building Construction - 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	0.7948	7.7509	8.0138	0.0141		0.3938	0.3938		0.3740	0.3740		1,351.7195	1,351.7195	0.2653		1,358.3513
Total	**0.7948**	**7.7509**	**8.0138**	**0.0141**		**0.3938**	**0.3938**		**0.3740**	**0.3740**		**1,351.7195**	**1,351.7195**	**0.2653**		**1,358.3513**

3.7 Building Construction - 2022

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
Vendor	0.0419	1.2891	0.3721	3.4700e-003	0.0896	2.5100e-003	0.0921	0.0258	2.4000e-003	0.0282		370.9584	370.9584	0.0233		371.5412
Worker	0.2687	0.1767	2.0351	6.2300e-003	0.6707	5.2500e-003	0.6759	0.1779	4.8400e-003	0.1827		620.7417	620.7417	0.0171		621.1690
Total	**0.3106**	**1.4658**	**2.4071**	**9.7000e-003**	**0.7603**	**7.7600e-003**	**0.7681**	**0.2037**	**7.2400e-003**	**0.2109**		**991.7001**	**991.7001**	**0.0404**		**992.7102**

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	0.7948	7.7509	8.0138	0.0141		0.3938	0.3938		0.3740	0.3740	0.0000	1,351.7195	1,351.7195	0.2653		1,358.3513
Total	**0.7948**	**7.7509**	**8.0138**	**0.0141**		**0.3938**	**0.3938**		**0.3740**	**0.3740**	**0.0000**	**1,351.7195**	**1,351.7195**	**0.2653**		**1,358.3513**

3.7 Building Construction - 2022

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
Vendor	0.0419	1.2891	0.3721	3.4700e-003	0.0896	2.5100e-003	0.0921	0.0258	2.4000e-003	0.0282		370.9584	370.9584	0.0233		371.5412
Worker	0.2687	0.1767	2.0351	6.2300e-003	0.6707	5.2500e-003	0.6759	0.1779	4.8400e-003	0.1827		620.7417	620.7417	0.0171		621.1690
Total	**0.3106**	**1.4658**	**2.4071**	**9.7000e-003**	**0.7603**	**7.7600e-003**	**0.7681**	**0.2037**	**7.2400e-003**	**0.2109**		**991.7001**	**991.7001**	**0.0404**		**992.7102**

3.7 Building Construction - 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	0.7355	7.1187	7.9627	0.0141		0.3431	0.3431		0.3259	0.3259		1,352.0515	1,352.0515	0.2632		1,358.6312
Total	**0.7355**	**7.1187**	**7.9627**	**0.0141**		**0.3431**	**0.3431**		**0.3259**	**0.3259**		**1,352.0515**	**1,352.0515**	**0.2632**		**1,358.6312**

3.7 Building Construction - 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
Vendor	0.0312	0.9763	0.3306	3.3600e-003	0.0896	1.1900e-003	0.0908	0.0258	1.1400e-003	0.0270		359.4378	359.4378	0.0205		359.9509
Worker	0.2532	0.1598	1.8706	6.0000e-003	0.6707	5.1000e-003	0.6758	0.1779	4.7000e-003	0.1826		598.0323	598.0323	0.0154		598.4171
Total	**0.2843**	**1.1362**	**2.2012**	**9.3600e-003**	**0.7603**	**6.2900e-003**	**0.7666**	**0.2037**	**5.8400e-003**	**0.2095**		**957.4702**	**957.4702**	**0.0359**		**958.3680**

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	0.7355	7.1187	7.9627	0.0141		0.3431	0.3431		0.3259	0.3259	0.0000	1,352.0515	1,352.0515	0.2632		1,358.6312
Total	**0.7355**	**7.1187**	**7.9627**	**0.0141**		**0.3431**	**0.3431**		**0.3259**	**0.3259**	**0.0000**	**1,352.0515**	**1,352.0515**	**0.2632**		**1,358.6312**

3.7 Building Construction - 2023

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
Vendor	0.0312	0.9763	0.3306	3.3600e-003	0.0896	1.1900e-003	0.0908	0.0258	1.1400e-003	0.0270		359.4378	359.4378	0.0205		359.9509
Worker	0.2532	0.1598	1.8706	6.0000e-003	0.6707	5.1000e-003	0.6758	0.1779	4.7000e-003	0.1826		598.0323	598.0323	0.0154		598.4171
Total	**0.2843**	**1.1362**	**2.2012**	**9.3600e-003**	**0.7603**	**6.2900e-003**	**0.7666**	**0.2037**	**5.8400e-003**	**0.2095**		**957.4702**	**957.4702**	**0.0359**		**958.3680**

3.8 Landscaping - 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	0.1936	1.8126	2.1041	2.8000e-003		0.1137	0.1137		0.1046	0.1046		271.1190	271.1190	0.0877		273.3112
Total	**0.1936**	**1.8126**	**2.1041**	**2.8000e-003**		**0.1137**	**0.1137**		**0.1046**	**0.1046**		**271.1190**	**271.1190**	**0.0877**		**273.3112**

3.8 Landscaping - 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
Vendor	0.0134	0.4184	0.1417	1.4400e-003	0.0384	5.1000e-004	0.0389	0.0111	4.9000e-004	0.0116		154.0448	154.0448	8.8000e-003		154.2647
Worker	0.0422	0.0266	0.3118	1.0000e-003	0.1118	8.5000e-004	0.1126	0.0296	7.8000e-004	0.0304		99.6721	99.6721	2.5700e-003		99.7362
Total	**0.0555**	**0.4451**	**0.4535**	**2.4400e-003**	**0.1502**	**1.3600e-003**	**0.1516**	**0.0407**	**1.2700e-003**	**0.0420**		**253.7169**	**253.7169**	**0.0114**		**254.0009**

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	0.1936	1.8126	2.1041	2.8000e-003		0.1137	0.1137		0.1046	0.1046	0.0000	271.1190	271.1190	0.0877		273.3112
Total	**0.1936**	**1.8126**	**2.1041**	**2.8000e-003**		**0.1137**	**0.1137**		**0.1046**	**0.1046**	**0.0000**	**271.1190**	**271.1190**	**0.0877**		**273.3112**

3.8 Landscaping - 2023

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
Vendor	0.0134	0.4184	0.1417	1.4400e-003	0.0384	5.1000e-004	0.0389	0.0111	4.9000e-004	0.0116		154.0448	154.0448	8.8000e-003		154.2647
Worker	0.0422	0.0266	0.3118	1.0000e-003	0.1118	8.5000e-004	0.1126	0.0296	7.8000e-004	0.0304		99.6721	99.6721	2.5700e-003		99.7362
Total	**0.0555**	**0.4451**	**0.4535**	**2.4400e-003**	**0.1502**	**1.3600e-003**	**0.1516**	**0.0407**	**1.2700e-003**	**0.0420**		**253.7169**	**253.7169**	**0.0114**		**254.0009**

3.9 Architectural Coating - 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	13.8402					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**14.0318**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.9 Architectural Coating - 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
Vendor	8.9000e-003	0.2790	0.0945	9.6000e-004	0.0256	3.4000e-004	0.0260	7.3700e-003	3.3000e-004	7.7000e-003		102.6965	102.6965	5.8600e-003		102.8431
Worker	0.0759	0.0480	0.5612	1.8000e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		179.4097	179.4097	4.6200e-003		179.5251
Total	**0.0848**	**0.3269**	**0.6556**	**2.7600e-003**	**0.2268**	**1.8700e-003**	**0.2287**	**0.0607**	**1.7400e-003**	**0.0625**		**282.1062**	**282.1062**	**0.0105**		**282.3683**

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	13.8402					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**14.0318**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.9 Architectural Coating - 2023

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
Vendor	8.9000e-003	0.2790	0.0945	9.6000e-004	0.0256	3.4000e-004	0.0260	7.3700e-003	3.3000e-004	7.7000e-003		102.6965	102.6965	5.8600e-003		102.8431
Worker	0.0759	0.0480	0.5612	1.8000e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		179.4097	179.4097	4.6200e-003		179.5251
Total	**0.0848**	**0.3269**	**0.6556**	**2.7600e-003**	**0.2268**	**1.8700e-003**	**0.2287**	**0.0607**	**1.7400e-003**	**0.0625**		**282.1062**	**282.1062**	**0.0105**		**282.3683**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	0.4582	2.0450	5.9370	0.0233	2.1024	0.0181	2.1205	0.5626	0.0168	0.5794		2,378.0222	2,378.0222	0.1158		2,380.9162
Unmitigated	0.4582	2.0450	5.9370	0.0233	2.1024	0.0181	2.1205	0.5626	0.0168	0.5794		2,378.0222	2,378.0222	0.1158		2,380.9162

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		
City Park	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	74.12	16.82	5.33	180,748	180,748
Hotel	65.28	58.92	49.08	148,079	148,079
Retirement Community	173.90	151.81	147.58	570,611	570,611
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	313.30	227.55	201.99	899,438	899,438

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
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Retirement Community	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Enclosed Parking with Elevator	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
General Office Building	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Hotel	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Retirement Community	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Unrefrigerated Warehouse-No Rail	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

600 Foothill Project - Los Angeles-South Coast County, Winter

	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	0.0293	0.2542	0.1356	1.6000e-003		0.0202	0.0202		0.0202	0.0202		319.4242	319.4242	6.1200e-003	5.8600e-003	321.3224
NaturalGas Unmitigated	0.0293	0.2542	0.1356	1.6000e-003		0.0202	0.0202		0.0202	0.0202		319.4242	319.4242	6.1200e-003	5.8600e-003	321.3224

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
Enclosed Parking with Elevator	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	215.069	2.3200e-003	0.0211	0.0177	1.3000e-004		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003		25.3023	25.3023	4.8000e-004	4.6000e-004	25.4526
Hotel	456.576	4.9200e-003	0.0448	0.0376	2.7000e-004		3.4000e-003	3.4000e-003		3.4000e-003	3.4000e-003		53.7148	53.7148	1.0300e-003	9.8000e-004	54.0340
Retirement Community	2039.93	0.0220	0.1880	0.0800	1.2000e-003		0.0152	0.0152		0.0152	0.0152		239.9913	239.9913	4.6000e-003	4.4000e-003	241.4175
Unrefrigerated Warehouse-No Rail	3.53425	4.0000e-005	3.5000e-004	2.9000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.4158	0.4158	1.0000e-005	1.0000e-005	0.4183
Total		**0.0293**	**0.2542**	**0.1356**	**1.6000e-003**		**0.0202**	**0.0202**		**0.0202**	**0.0202**		**319.4242**	**319.4242**	**6.1200e-003**	**5.8500e-003**	**321.3224**

5.2 Energy by Land Use - NaturalGas

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
Enclosed Parking with Elevator	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	0.215069	2.3200e-003	0.0211	0.0177	1.3000e-004		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003		25.3023	25.3023	4.8000e-004	4.6000e-004	25.4526
Hotel	0.456576	4.9200e-003	0.0448	0.0376	2.7000e-004		3.4000e-003	3.4000e-003		3.4000e-003	3.4000e-003		53.7148	53.7148	1.0300e-003	9.8000e-004	54.0340
Retirement Community	2.03993	0.0220	0.1880	0.0800	1.2000e-003		0.0152	0.0152		0.0152	0.0152		239.9913	239.9913	4.6000e-003	4.4000e-003	241.4175
Unrefrigerated Warehouse-No Rail	0.00353425	4.0000e-005	3.5000e-004	2.9000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.4158	0.4158	1.0000e-005	1.0000e-005	0.4183
Total		**0.0293**	**0.2542**	**0.1356**	**1.6000e-003**		**0.0202**	**0.0202**		**0.0202**	**0.0202**		**319.4242**	**319.4242**	**6.1200e-003**	**5.8500e-003**	**321.3224**

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	1.9239	0.7075	4.1711	4.4400e-003		0.0751	0.0751		0.0751	0.0751	0.0000	853.0101	853.0101	0.0230	0.0155	858.2068
Unmitigated	1.9239	0.7075	4.1711	4.4400e-003		0.0751	0.0751		0.0751	0.0751	0.0000	853.0101	853.0101	0.0230	0.0155	858.2068

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	0.1517					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0776	0.6627	0.2820	4.2300e-003		0.0536	0.0536		0.0536	0.0536	0.0000	846.0000	846.0000	0.0162	0.0155	851.0274
Landscaping	0.1178	0.0448	3.8891	2.1000e-004		0.0215	0.0215		0.0215	0.0215		7.0101	7.0101	6.7700e-003		7.1795
Total	**1.9239**	**0.7075**	**4.1711**	**4.4400e-003**		**0.0751**	**0.0751**		**0.0751**	**0.0751**	**0.0000**	**853.0101**	**853.0101**	**0.0230**	**0.0155**	**858.2068**

6.2 Area by SubCategory

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	0.1517					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0776	0.6627	0.2820	4.2300e-003		0.0536	0.0536		0.0536	0.0536	0.0000	846.0000	846.0000	0.0162	0.0155	851.0274
Landscaping	0.1178	0.0448	3.8891	2.1000e-004		0.0215	0.0215		0.0215	0.0215		7.0101	7.0101	6.7700e-003		7.1795
Total	**1.9239**	**0.7075**	**4.1711**	**4.4400e-003**		**0.0751**	**0.0751**		**0.0751**	**0.0751**	**0.0000**	**853.0101**	**853.0101**	**0.0230**	**0.0155**	**858.2068**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Use Water Efficient Irrigation System

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