AIR QUALITY AND GREENHOUSE GAS EMISSIONS IMPACT ANALYSIS

GLENDALE COMMUNITY COLLEGE DISTRICT

2019 FACILITIES MASTER PLAN UPDATE TO THE 2015 MASTER PLAN

CITY OF GLENDALE

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Project No. 17008

December 3, 2020

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CO	Carbon monoxide
CPUC	California Public Utilities Commission
DPM	Diesel particulate matter
EPA	Environmental Protection Agency
ºF	Fahrenheit
FTIP	Federal Transportation Improvement Program
GCCD	Glendale Community College District
HAP	Hazardous Air Pollutants
LST	Localized Significant Thresholds
MATES	Multiple Air Toxics Exposure Study
MPO	Metropolitan Planning Organization
MSAT	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standards
NO_x	Nitrogen oxides
NO_2	Nitrogen dioxide
O_3	Ozone
OPR	Office of Planning and Research
Pb	Lead
PM	Particle matter
PM10	Particles that are less than 10 micrometers in diameter
PM2.5	Particles that are less than 2.5 micrometers in diameter

PPM	Parts per million
PPB	Parts per billion
PPT	Parts per trillion
RTIP	Regional Transportation Improvement Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Governments
SIP	State Implementation Plan
SO_x	Sulfur oxides
TAC	Toxic air contaminants
VOC	Volatile organic compounds

1.0 INTRODUCTION

1.1 Purpose of Analysis and Study Objectives

This Air Quality and Greenhouse Gas (GHG) Emissions Impact Analysis has been completed to determine the air quality and GHG emissions impacts associated with the proposed Glendale Community College District (GCCD) 2019 Facilities Master Plan Update to the 2015 Master Plan project (proposed project). The following is provided in this report:

- A description of the proposed project;
- A description of the atmospheric setting;
- A description of the criteria pollutants and GHGs;
- A description of the air quality regulatory framework;
- A description of the GHG emissions regulatory framework;
- A description of the air quality and GHG emissions thresholds including the California Environmental Quality Act (CEQA) significance thresholds;
- An analysis of the conformity of the proposed project with the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP);
- An analysis of the short-term construction related and long-term operational air quality and GHG emissions impacts; and
- An analysis of the conformity of the proposed project with all applicable GHG emissions reduction plans and policies.

1.2 Proposed Project Description

The objective of the 2019 Facilities Master Plan Update to the 2015 Facilities Master Plan is to provide a long-range plan for the development of facilities to support GCCD's vision, mission, and goals. The Master Plan Update recommends site and facilities improvements for the three GCCD campuses: the historic Verdugo Campus, the Garfield Campus, and the Montrose Campus. The Master Plan Update quantifies planning data to forecast projected space needs that are aligned with GCCD's educational planning for existing and future programs. A summary of the proposed improvements are shown in Table A and more detailed descriptions of the improvements to each of the three campuses are provided below.

Table A – Summary of 2019 Facilities Master Plan Update

Campus	Demolition (square feet)	Renovation (square feet)	New Construction (square feet)	Changes in FTES[2]
Verdugo	170,387	228,853	52,443	0
Garfield	36,000	43,090	0	0
Montrose (PDC)	36,000	21,559	17,611	+1,000

Notes:
[1] FTES: Full Time Equivalent Students
Source: CGCD 2015 Master Plan Update Project Description May 1, 2020

Verdugo Campus

The Verdugo Campus is located at located at 1500 North Verdugo Road in the City of Glendale. The Verdugo Campus is built on the terraced hillside of the San Rafael Hills in Verdugo Canyon. The Campus is bordered by Campus Way and residential uses to the north, State Route 2 to the east, Mountain Street to the south and Verdugo Road to the west.

The proposed Verdugo Campus improvements would result in 228,853 square feet of building renovations, 52,443 square feet of new construction, and 170,387 square feet of demolition. In addition, the proposed improvements would add 650 parking spaces to the Verdugo Campus. The number of full-time equivalent students (FTES) of the Verdugo Campus in 2017-2018 was 11,853. The number of FTES is anticipated to remain at 11,800 with the proposed improvements. The 2025 Facilities Master Site Plan for the Verdugo Campus is shown in Figure 1.

Nearest Sensitive Receptors to Verdugo Campus

The nearest sensitive receptors are multi-family residences located adjacent to the north side of the Verdugo Campus, which are also adjacent to the north side of Campus Way. The nearest school to the project site is Verdugo Woodlands Elementary School that is located approximately 0.4 mile to the north of the Verdugo Campus.

Garfield Campus

The Garfield Campus is located at 1122 Garfield Avenue, Glendale, and sits in an urban neighborhood not far from Glendale's commercial center. The Garfield Campus is situated on a fairly level site within a dense, low-rise urban neighborhood consisting of mixed land uses, including single- and multi-family residences, retail and office commercial buildings, churches, and schools. The Garfield Campus is bordered by Garfield Avenue to the north, single- and multi-family residences to the east and south, and Adams Street to the west.

The proposed Garfield Campus improvements would result in 43,090 square feet of building renovation and approximately 36,000 square feet of demolition. The Garfield campus number of FTES in 2017-2018 at 2,929 and the number is expected to remain approximately the same with the improvements. The 2025 Facilities Master Site Plan for the Garfield Campus is shown in Figure 2.

Nearest Sensitive Receptors to Garfield Campus

The nearest sensitive receptors are single-family homes located as near as 60 feet west and south of the Garfield Campus. The nearest school to the project site is John Muir Elementary School that is located approximately 100 feet east of the Garfield Campus.

Montrose Campus

The Montrose Campus is located at 2340 Honolulu Avenue, Montrose, which is within the City of Glendale. The Montrose Campus is approximately 0.6 mile west of State Route 2 (SR-2 or Glendale Freeway) and approximately 0.4 mile south of Interstate 210 (I-210). The Montrose Campus sits on the main street of Montrose's walkable town center, among neighborhood shops and restaurants. The Montrose campus includes the building at 2340 Honolulu Avenue, also known as the Professional Development Center (PDC), as well as the parking lot behind the building, and the recently acquired property at 2350 Honolulu Avenue. The Campus is bounded by Honolulu Avenue to the north, commercial uses to the east, single-family residential uses and Broadview Drive to the south, and Wickham Way to the west.

The proposed Montrose Campus improvements would result in 21,559 square feet of building renovations and 17,611 square feet of new construction. In addition, the proposed projects at the Montrose Campus would add up to approximately 100 parking spaces to the Campus. The improvements would result in an additional 1,000 FTES. The traffic analysis focuses on the build-out year of 1,000 FTES. The 2025 Facilities Master Site Plan for the Montrose Campus is shown in Figure 3.

Nearest Sensitive Receptors to Montrose Campus

The nearest sensitive receptors are single-family residences located adjacent to the south side of the Montrose Campus. The nearest school to the project site is John C. Fremont Elementary School that is located approximately 0.5 mile to the south of the Montrose Campus.

1.2 Executive Summary

Standard Air Quality and GHG Regulatory Conditions

The proposed project will be required to comply with the following regulatory conditions from the SCAQMD and State of California (State).

South Coast Air Quality Management District Rules

The following lists the SCAQMD rules that are applicable, but not limited to the proposed project.

- Rule 402 Nuisance – Controls the emissions of odors and other air contaminants;
- Rule 403 Fugitive Dust – Controls the emissions of fugitive dust;
- Rules 1108 and 1108.1 Cutback and Emulsified Asphalt – Controls the VOC content in asphalt;
- Rule 1113 Architectural Coatings – Controls the VOC content in paints and solvents; and
- Rule 1143 Paint Thinners – Controls the VOC content in paint thinners.

State of California Rules

The following lists the State of California Code of Regulations (CCR) air quality emission rules that are applicable, but not limited to the proposed project.

- CCR Title 13, Article 4.8, Chapter 9, Section 2449 – In use Off-Road Diesel Vehicles;
- CCR Title 13, Section 2025 – On-Road Diesel Truck Fleets;
- CCR Title 24 Part 6 – California Building Energy Standards; and
- CCR Title 24 Part 11 – California Green Building Standards.

Summary of Analysis Results

The following is a summary of the proposed project's impacts with regard to the State CEQA Guidelines air quality checklist questions.

Conflict with or obstruct implementation of the applicable air quality plan?

Less than significant impact.

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 impact.

Expose sensitive receptors to substantial pollutant concentrations?

Less than significant impact.

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

Less than significant impact.

Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than significant impact.

Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs?

Less than significant impact.

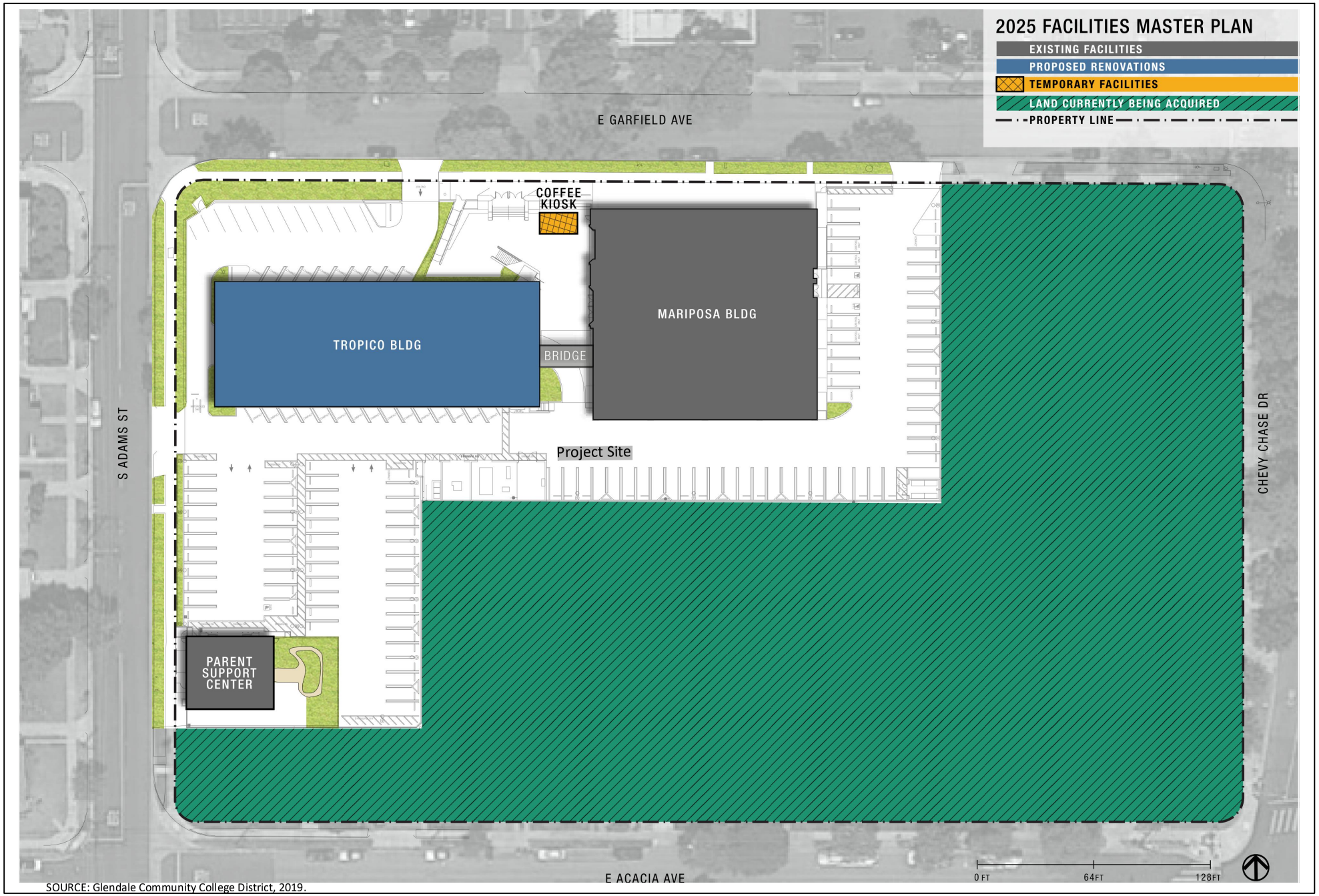
1.5 Mitigation Measures for the Proposed Project

This analysis found that implementation of the State and SCAQMD air quality and GHG emissions reductions regulations were adequate to limit criteria pollutants, toxic air contaminants, odors, and GHG emissions from the proposed project to less than significant levels. No mitigation measures are required for the proposed project with respect to air quality and GHG emissions.

SOURCE: Glendale Community College District, 2019.

VISTA ENVIRONMENTAL

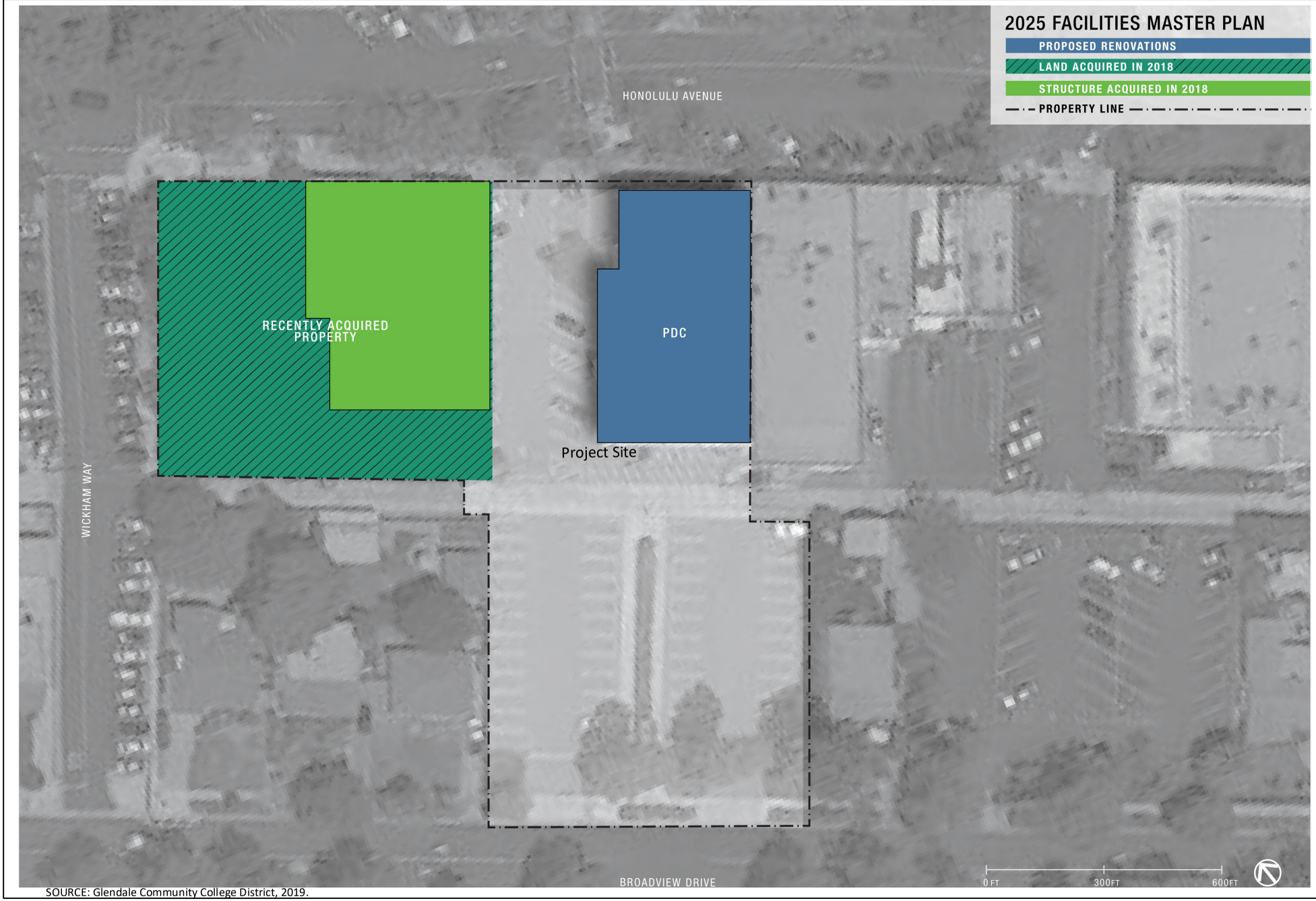
Figure 1
2025 Facilities Master Site Plan for the Verdugo Campus



SOURCE: Glendale Community College District, 2019.

VISTA ENVIRONMENTAL

Figure 2
2025 Facilities Master Site Plan for the Garfield Campus



SOURCE: Glendale Community College District, 2019.

VISTA ENVIRONMENTAL

Figure 3
2025 Facilities Master Site Plan for the Montrose Campus

2.0 AIR POLLUTANTS

Air pollutants are generally classified as either criteria pollutants or non-criteria pollutants. Federal ambient air quality standards have been established for criteria pollutants, whereas no ambient standards have been established for non-criteria pollutants. For some criteria pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). A summary of federal and state ambient air quality standards is provided in the Regulatory Framework section.

2.1 Criteria Pollutants and Ozone Precursors

The criteria pollutants consist of: ozone, NO_x, CO, SO_x, lead (Pb), and particulate matter (PM). The ozone precursors consist of NO_x and VOC. These pollutants can harm your health and the environment, and cause property damage. The Environmental Protection Agency (EPA) calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based and/or environmentally-based criteria for setting permissible levels. The following provides descriptions of each of the criteria pollutants and ozone precursors.

Nitrogen Oxides

Nitrogen Oxides (NOx) is the generic term for a group of highly reactive gases which contain nitrogen and oxygen. While most NOx are colorless and odorless, concentrations of NO_2 can often be seen as a reddish-brown layer over many urban areas. NOx form when fuel is burned at high temperatures, as in a combustion process. The primary manmade sources of NO_x are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuel. NOx reacts with other pollutants to form, ground-level ozone, nitrate particles, acid aerosols, as well as NO_2, which cause respiratory problems. NO_x and the pollutants formed from NO_x can be transported over long distances, following the patterns of prevailing winds. Therefore, controlling NOx is often most effective if done from a regional perspective, rather than focusing on the nearest sources.

Ozone

Ozone is not usually emitted directly into the air but in the vicinity of ground-level is created by a chemical reaction between NOx and volatile organic compounds (VOC) in the presence of sunlight. Motor vehicle exhaust, industrial emissions, gasoline vapors, chemical solvents as well as natural sources emit NOx and VOC that help form ozone. Ground-level ozone is the primary constituent of smog. Sunlight and hot weather cause ground-level ozone to form with the greatest concentrations usually occurring downwind from urban areas. Ozone is subsequently considered a regional pollutant. Ground-level ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. Because NOx and VOC are ozone precursors, the health effects associated with ozone are also indirect health effects associated with significant levels of NOx and VOC emissions.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes approximately 56 percent of all CO emissions nationwide. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and

chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are indoor sources of CO. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air. CO is described as having only a local influence because it dissipates quickly. Since CO concentrations are strongly associated with motor vehicle emissions, high CO concentrations generally occur in the immediate vicinity of roadways with high traffic volumes and traffic congestion, active parking lots, and in automobile tunnels. Areas adjacent to heavily traveled and congested intersections are particularly susceptible to high CO concentrations.

CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. The health threat from lower levels of CO is most serious for those who suffer from heart disease such as angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects. High levels of CO can affect even healthy people. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

Sulfur Oxides

Sulfur Oxide (SOx) gases are formed when fuel containing sulfur, such as coal and oil is burned, as well as from the refining of gasoline. SOx dissolves easily in water vapor to form acid and interacts with other gases and particles in the air to form sulfates and other products that can be harmful to people and the environment.

Lead

Lead is a metal found naturally in the environment as well as manufactured products. The major sources of lead emissions have historically been motor vehicles and industrial sources. Due to the phase out of leaded gasoline, metal processing is now the primary source of lead emissions to the air. High levels of lead in the air are typically only found near lead smelters, waste incinerators, utilities, and lead-acid battery manufacturers. Exposure of fetuses, infants and children to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased lead levels are associated with increased blood pressure.

Particulate Matter

Particle matter (PM) is the term for a mixture of solid particles and liquid droplets found in the air. PM is made up of a number of components including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. Particles that are less than 10 micrometers in diameter (PM10) that are also known as *Respirable Particulate Matter* are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Particles that are less than 2.5 micrometers in diameter (PM2.5) that are also known as *Fine Particulate Matter* have been designated as a subset of PM10 due to their increased negative health impacts and its ability to remain suspended in the air longer and travel further.

Volatile Organic Compounds

Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs (also referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

VOC is not classified as a criteria pollutant, since VOCs by themselves are not a known source of adverse health effects. The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered toxic air contaminants (TACs). There are no separate health standards for VOCs as a group.

2.2 Other Pollutants of Concern

Toxic Air Contaminants

In addition to the above-listed criteria pollutants, toxic air contaminants (TACs) are another group of pollutants of concern. TACs is a term that is defined under the California Clean Air Act and consists of the same substances that are defined as Hazardous Air Pollutants (HAPs) in the Federal Clean Air Act. There are over 700 hundred different types of TACs with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least 40 different toxic air contaminants. The most important of these TACs, in terms of health risk, are diesel particulates, benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. Public exposure to TACs can result from emissions from normal operations as well as from accidental releases. Health effects of TACs include cancer, birth defects, neurological damage, and death.

TACs are less pervasive in the urban atmosphere than criteria air pollutants, however they are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of TACs with varying degrees of toxicity. Sources of TACs include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust.

According to *The California Almanac of Emissions and Air Quality 2013 Edition*, the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important of which is DPM. DPM is a subset of PM2.5 because the size of diesel particles are typically 2.5 microns and smaller. The identification of DPM as a TAC in 1998 led the CARB to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles in September 2000. The plan's goals are a 75-percent reduction in DPM by 2010 and an 85-percent reduction by 2020 from the 2000 baseline. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and over 40 other cancer-causing substances. California's identification of DPM as a toxic air contaminant was based on its potential to cause cancer, premature deaths, and other health problems. Exposure to DPM is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's potential airborne cancer risk from combustion sources.

Asbestos

Asbestos is listed as a TAC by CARB and as a HAP by the EPA. Asbestos occurs naturally in mineral formations and crushing or breaking these rocks, through construction or other means, can release asbestiform fibers into the air. Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. The risk of disease is dependent upon the intensity and duration of exposure. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. The nearest likely locations of naturally occurring asbestos, as identified in the *General Location Guide for Ultramafic Rocks in California*, prepared by the California Division of Mines and Geology, is located in Santa Barbara County. The nearest historic asbestos mine to the project site, as identified in the *Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California,* prepared by U.S. Geological Survey, is located at Asbestos Mountain, which is approximately 100 miles southeast of the project site in the San Jacinto Mountains. Due to the distance to the nearest natural occurrences of asbestos, the project site is not likely to contain asbestos.

3.0 GREENHOUSE GASES

3.1 Greenhouse Gases

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHGs), play a critical role in the Earth's radiation amount by trapping infrared radiation from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Emissions of CO_2 and N_2O are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO_2, where CO_2 is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. The following provides a description of each of the greenhouse gases and their global warming potential.

Water Vapor

Water vapor is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to "hold" more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop will continue is unknown as there is also dynamics that put the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the Earth's surface and heat it up).

Carbon Dioxide

The natural production and absorption of CO_2 is achieved through the terrestrial biosphere and the ocean. However, humankind has altered the natural carbon cycle by burning coal, oil, natural gas, and wood. Since the industrial revolution began in the mid 1700s, each of these activities has increased in scale and distribution. CO_2 was the first GHG demonstrated to be increasing in atmospheric concentration with the first conclusive measurements being made in the last half of the 20th century. Prior to the industrial revolution, concentrations were fairly stable at 280 parts per million (ppm). The International Panel on Climate Change (IPCC) indicates that concentrations were 379 ppm in 2005, an increase of more than 30 percent. Left unchecked, the IPCC projects that concentration of carbon dioxide in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources. This

could result in an average global temperature rise of at least two degrees Celsius or 3.6 degrees Fahrenheit.

Methane

CH_4 is an extremely effective absorber of radiation, although its atmospheric concentration is less than that of CO_2. Its lifetime in the atmosphere is brief (10 to 12 years), compared to some other GHGs (such as CO_2, N_2O, and Chlorofluorocarbons (CFCs)). CH_4 has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning.

Nitrous Oxide

Concentrations of N_2O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration of this GHG was documented at 314 parts per billion (ppb). N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. N_2O is also commonly used as an aerosol spray propellant (i.e., in whipped cream bottles, in potato chip bags to keep chips fresh, and in rocket engines and race cars).

Chlorofluorocarbons

CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source, but were first synthesized in 1928. They were used for refrigerants, aerosol propellants, and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and in 1989 the European Community agreed to ban CFCs by 2000 and subsequent treaties banned CFCs worldwide by 2010. This effort was extremely successful, and the levels of the major CFCs are now remaining level or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

Hydrofluorocarbons

HFCs are synthetic man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF_3), HFC-134a (CF_3CH_2F), and HFC-152a (CH_3CHF_2). Prior to 1990, the only significant emissions were HFC-23. HFC-134a use is increasing due to its use as a refrigerant. Concentrations of HFC-23 and HFC-134a in the atmosphere are now about 10 parts per trillion (ppt) each. Concentrations of HFC-152a are about 1 ppt. HFCs are manmade for applications such as automobile air conditioners and refrigerants.

Perfluorocarbons

Perfluorocarbons (PFCs) have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6).

Concentrations of CF_4 in the atmosphere are over 70 ppt. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing.

Sulfur Hexafluoride

Sulfur Hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 has the highest global warming potential of any gas evaluated; 23,900 times that of CO_2. Concentrations in the 1990s were about 4 ppt. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Aerosols

Aerosols are particles emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Cloud formation can also be affected by aerosols. Sulfate aerosols are emitted when fuel containing sulfur is burned. Black carbon (or soot) is emitted during biomass burning due to the incomplete combustion of fossil fuels. Particulate matter regulation has been lowering aerosol concentrations in the United States; however, global concentrations are likely increasing.

3.2 Global Warming Potential

GHGs have varying global warming potential (GWP). The GWP is the potential of a gas or aerosol to trap heat in the atmosphere; it is the cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to the reference gas, CO_2. The GHGs listed by the IPCC and the CEQA Guidelines are discussed in this section in order of abundance in the atmosphere. Water vapor, the most abundant GHG, is not included in this list because its natural concentrations and fluctuations far outweigh its anthropogenic (human-made) sources. To simplify reporting and analysis, GHGs are commonly defined in terms of their GWP. The IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of CO_2e. As such, the GWP of CO_2 is equal to 1. The GWP values used in this analysis are based on the 2007 IPCC Fourth Assessment Report, which are used in CARB's 2014 Scoping Plan Update and the CalEEMod Model Version 2016.3.2 and are detailed in Table B. The IPCC has updated the Global Warming Potentials of some gases in their Fifth Assessment Report, however the new values have not yet been incorporated into the CalEEMod model that has been utilized in this analysis.

Table B – Global Warming Potentials, Atmospheric Lifetimes and Abundances of GHGs

Gas	Atmospheric Lifetime (years)[1]	Global Warming Potential (100 Year Horizon)[2]	Atmospheric Abundance
Carbon Dioxide (CO_2)	50-200	1	379 ppm
Methane (CH_4)	9-15	25	1,774 ppb
Nitrous Oxide (N_2O)	114	298	319 ppb
HFC-23	270	14,800	18 ppt
HFC-134a	14	1,430	35 ppt
HFC-152a	1.4	124	3.9 ppt
PFC: Tetrafluoromethane (CF_4)	50,000	7,390	74 ppt
PFC: Hexafluoroethane (C_2F_6)	10,000	12,200	2.9 ppt
Sulfur Hexafluoride (SF_6)	3,200	22,800	5.6 ppt

Notes:

[1] Defined as the half-life of the gas.
[2] Compared to the same quantity of CO_2 emissions and is based on the Intergovernmental Panel On Climate Change (IPCC) 2007 standard, which is utilized in CalEEMod (Version 2016.3.2),that is used in this report (CalEEMod user guide: Appendix A).
Definitions: ppm = parts per million; ppb = parts per billion; ppt = parts per trillion
Source: IPCC 2007, EPA 2015

3.3 Greenhouse Gas Emissions Inventory

According to Carbon Dioxide Information Analysis Center[1] 9,855 million metric tons (MMT) of CO_2 equivalent (CO_2e) emissions were created globally in the year 2014. According to US Environmental Protection Agency (EPA)[2] the breakdown of global GHG emissions by sector consists of: 25 percent from electricity and heat production; 21 percent from industry; 24 percent from agriculture, forestry and other land use activities; 14 percent from transportation; 6 percent from building energy use; and 10 percent from all other sources of energy use.

According to *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2018,* prepared by EPA, April 13, 2020, in 2018 total U.S. GHG emissions were 6,676.6 million metric tons (MMT) of CO_2 equivalent (CO_2e) emissions. Total U.S. emissions have increased by 3.7 percent between 1990 and 2018, which is down from a high of 15.2 percent above 1990 levels in 2007. Emissions increased by 2.9 percent or 188.4 $MMTCO_2e$ between 2017 and 2018. The recent increase in GHG emissions was largely driven by an increase in CO_2 emissions from fossil fuel combustion, that was a result of multiple factors including greater heating and cooling needs due to a colder winter and hotter summer in 2018 compared to 2017.

According to California Air Resources Board (CARB),[3] the State of California created 424.1 $MMTCO_2e$ in 2017. The breakdown of California GHG emissions by sector consists of: 41 percent from transportation; 24 percent from industrial; 15 percent from electricity generation; 8 percent from agriculture; 7 percent from residential buildings; and 5 percent from commercial buildings. In 2017, GHG emissions were 5 $MMTCO_2e$ lower than 2016 levels, which is 7 $MMTCO_2e$ below the 2020 GHG limit of 431 $MMTCO_2e$ established by AB 32.

1 Obtained from: https://cdiac.ess-dive.lbl.gov/trends/emis/tre_glob_2014.html
2 Obtained from: https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data
3 Obtained from: https://www.arb.ca.gov/cc/inventory/data/data.htm

4.0 AIR QUALITY MANAGEMENT

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

4.1 Federal – United States Environmental Protection Agency

The Clean Air Act, first passed in 1963 with major amendments in 1970, 1977 and 1990, is the overarching legislation covering regulation of air pollution in the United States. The Clean Air Act has established the mandate for requiring regulation of both mobile and stationary sources of air pollution at the state and federal level. The Environmental Protection Agency (EPA) was created in 1970 in order to consolidate research, monitoring, standard-setting and enforcement authority into a single agency.

The EPA is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. NAAQS pollutants were identified using medical evidence and are shown below in Table C.

Table C – State and Federal Criteria Pollutant Standards

Air Pollutant	Concentration / Averaging Time		Most Relevant Effects
	California Standards	Federal Primary Standards	
Ozone (O_3)	0.09 ppm / 1-hour 0.07 ppm / 8-hour	0.070 ppm, / 8-hour	(a) Pulmonary function decrements and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; and (f) Property damage.
Carbon Monoxide (CO)	20.0 ppm / 1-hour 9.0 ppm / 8-hour	35.0 ppm / 1-hour 9.0 ppm / 8-hour	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and (d) Possible increased risk to fetuses.
Nitrogen Dioxide (NO_2)	0.18 ppm / 1-hour 0.030 ppm / annual	100 ppb / 1-hour 0.053 ppm / annual	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration.
Sulfur Dioxide (SO_2)	0.25 ppm / 1-hour 0.04 ppm / 24-hour	75 ppb / 1-hour 0.14 ppm/annual	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Suspended Particulate Matter (PM_{10})	50 µg/m^3 / 24-hour 20 µg/m^3 / annual	150 µg/m^3 / 24-hour	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; and (c) Increased risk of premature death from heart or lung diseases in elderly.

Air Pollutant	Concentration / Averaging Time		Most Relevant Effects
	California Standards	Federal Primary Standards	
Suspended Particulate Matter ($PM_{2.5}$)	12 µg/m^3 / annual	35 µg/m^3 / 24-hour 12 µg/m^3 / annual	
Sulfates	25 µg/m^3 / 24-hour	No Federal Standards	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; and (f) Property damage.
Lead	1.5 µg/m^3 / 30-day	0.15 µg/m^3 /3-month rolling	(a) Learning disabilities; and (b) Impairment of blood formation and nerve conduction.
Visibility Reducing Particles	Extinction coefficient of 0.23 per kilometer - visibility of ten miles or more due to particles when relative humidity is less than 70 percent.	No Federal Standards	Visibility impairment on days when relative humidity is less than 70 percent.

Source: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf .

As part of its enforcement responsibilities, the EPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the national standards. The SIP must integrate federal, state, and local components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP. The CARB defines attainment as the category given to an area with no violations in the past three years. As indicated below in Table D, the Air Basin has been designated by EPA for the national standards as a non-attainment area for ozone and PM2.5 and partial non-attainment for lead. Currently, the Air Basin is in attainment with the national ambient air quality standards for CO, PM10, SO_2, and NO_2.

Table D – South Coast Air Basin Attainment Status

Criteria Pollutant	Standard	Averaging Time	Designation[a)]	Attainment Date[b)]
1-Hour Ozone[c)]	NAAQS	1979 1-Hour (0.12 ppm)	Nonattainment (Extreme)	2/6/2023 (revised deadline)
	CAAQS	1-Hour (0.09 ppm)	Nonattainment	N/A
8-Hour Ozone[d)]	NAAQS	1997 8-Hour (0.08 ppm)	Nonattainment (Extreme)	6/15/2024
	NAAQS	2008 8-Hour (0.075 ppm)	Nonattainment (Extreme)	8/3/2038
	NAAQS	2015 8-Hour (0.070 ppm)	Pending – Expect Nonattainment (Extreme)	Pending (beyond 2032)
	CAAQS	8-Hour (0.070 ppm)	Nonattainment	Beyond 2032
CO	NAAQS	1-Hour (35 ppm) 8-Hour (9 ppm)	Attainment (Maintenance)	6/11/2007 (attained)

Criteria Pollutant	Standard	Averaging Time	Designation[a)]	Attainment Date[b)]
	CAAQS	1-Hour (20 ppm) 8-Hour (9 ppm)	Attainment	6/11/2007 (attained)
NO_2[e)]	NAAQS	2010 1-Hour (0.10 ppm)	Unclassifiable/ Attainment	N/A (attained)
	NAAQS	1971 Annual (0.053 ppm)	Attainment (Maintenance)	9/22/1998 (attained)
	CAAQS	1-Hour (0.18 ppm) Annual (0.030 ppm)	Attainment	---
SO_2[f)]	NAAQS	2010 1-Hour (75 ppb)	Designations Pending (expect Unclassifiable/ Attainment)	N/A (attained)
	NAAQS	1971 24-Hour (0.14 ppm) 1971 Annual (0.03 ppm)	Unclassifiable/ Attainment	3/19/1979 (attained)
PM10	NAAQS	1987 24-hour (150 μg/m^3)	Attainment (Maintenance)[g)]	7/26/2013 (attained)
	CAAQS	24-hour (50 μg/m^3) Annual (20 μg/m^3)	Nonattainment	N/A
PM2.5[h)]	NAAQS	2006 24-Hour (35 μg/m^3)	Nonattainment (Serious)	12/31/2019
	NAAQS	1997 Annual (15.0 μg/m^3)	Attainment (final determination pending)	8/24/2016 (attained 2013)
	NAAQS	2012 Annual (12.0 μg/m^3)	Nonattainment (Moderate)	12/31/2021
	CAAQS	Annual (12.0 μg/m^3)	Nonattainment	N/A
Lead[i)]	NAAQS	2008 3-Months Rolling (0.15 μg/m^3)	Nonattainment (Partial) (Attainment determination requested)	12/31/2015

Source: SCAQMD, February 2016

Notes:

a) U.S. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassifiable/Attainment or Unclassifiable

b) A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for attainment demonstration

c) The 1979 1-hour O_3 standard (0.12 ppm) was revoked, effective June 15, 2005; however, the Basin has not attained this standard and therefore has some continuing obligations with respect to the revoked standard

d) The 2008 8-hour ozone NAAQS (0.075 ppm) was revised to 0.070 ppm. Effective 12/28/15 with classifications and implementation goals to be finalized by 10/1/17; the 1997 8-hour O_3 NAAQS (0.08 ppm) was revoked in the 2008 O_3 implementation rule, effective 4/6/15;there are continuing obligations under the revoked 1997 and revised 2008 O_3 until they are attained.

e) New NO_2 1-hour standard, effective August 2, 2010; attainment designations January 20, 2012; annual NO_2 standard retained

f) The 1971 annual and 24-hour SO_2 standards were revoked, effective August 23, 2010; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO_2 1-hour standard. Area designations are still pending, with Basin expected to be designated Unclassifiable /Attainment.

g) Annual PM10 standard was revoked, effective December 18, 2006; 24-hour PM10 NAAQS deadline was 12/31/2006; SCAQMD request for attainment redesignation and PM10 maintenance plan was approved by U.S. EPA on June 26, 2013, effective July 26, 2013.

h) The attainment deadline for the 2006 24-Hour PM2.5 NAAQS was 12/31/15 for the former "moderate" classification; EPA approved reclassification to "serious", effective 2/12/16 with an attainment deadline of 12/31/19; the 2012 (proposal year) annual PM2.5 NAAQS was revised on 1/15/13, effective 3/18/13, from 15 to 12 μg/m^3; new annual designations were final 1/15/15, effective 4/15/15; on July 25, 2016 EPA finalized a determination that the Basin attained the 1997 annual (15.0 μg/m^3) and 24-hour PM2.5 (65 μg/m^3) NAAQS, effective August 24, 2016

i) Partial Nonattainment designation – Los Angeles County portion of Basin only for near-source monitors. Expect to remain in attainment based on current monitoring data; attainment re-designation request pending.

In 2015, one or more stations in the Air Basin exceeded the most current federal standards on a total of 146 days (40 percent of the year), including: 8-hour ozone (113 days over 2015 ozone NAAQS), 24-hour PM2.5 (30 days, including near-road sites; 25 days for ambient sites only), PM10 (2 days), and NO_2 (1 day). Despite substantial improvement in air quality over the past few decades, some air monitoring stations in the Air Basin still exceed the NAAQS for ozone more frequently than any other area in the United States.

Seven of the top 10 stations in the nation most frequently exceeding the 2015 8-hour ozone NAAQS in 2015 were located within the Air Basin, including stations in San Bernardino, Riverside, and Los Angeles Counties (SCAQMD, 2016).

PM2.5 levels in the Air Basin have improved significantly in recent years. By 2013 and again in 2014 and 2015, there were no stations measuring PM2.5 in the Air Basin that violated the former 1997 annual PM2.5 NAAQS (15.0 $\mu g/m^3$) for the 3-year design value period. On July 25, 2016 the EPA finalized a determination that the Basin attained the 1997 annual (15.0 $\mu g/m^3$) and 24-hour PM2.5 (65 $\mu g/m^3$) NAAQS, effective August 24, 2016. Of the 17 federal PM2.5 monitors at ambient stations in the Air Basin for the 2013-2015 period, five stations had design values over the current 2012 annual PM2.5 NAAQS (12.0 $\mu g/m^3$), including: Mira Loma (Air Basin maximum at 14.1 $\mu g/m^3$), Rubidoux, Fontana, Ontario, Central Los Angeles, and Compton. For the 24-hour PM2.5 NAAQS (35.0 $\mu g/m^3$) there were 14 stations in the Air Basin in 2015 that had one or more daily exceedances of the standard, with a combined total of 25 days over that standard in the Air Basin. While it was previously anticipated that the Air Basin's 24-hour PM2.5 NAAQS would be attained by 2015, this did not occur based on the data for 2013 through 2015. The higher number of days exceeding the 24-hour PM2.5 NAAQS over what was expected is largely attributed to the severe drought conditions over this period that allowed for more stagnant conditions in the Air Basin with multi-day buildups of higher PM2.5 concentrations. This was caused by the lack of storm-related dispersion and rain-out of PM and its precursors (SCAQMD, 2016).

The Air Basin is currently in attainment for the federal standards for SO_2, CO, NO_2, and PM10. The Air Basin is designated as partial nonattainment for lead and is based on two source specific monitors in Vernon and in the City of Industry that are both near battery recycling facilities. The 2012 Lead SIP for Los Angeles County provides measures to meet attainment of lead by December 31, 2015. Current monitoring data shows that lead is now below the standards at all monitoring stations, however it will take three years of meeting the standards before Los Angeles County can request to be re-designated by the EPA. While the concentration level of the 1-hour NO_2 federal standard (100 ppb) was exceeded in the Air Basin for one day in 2015 (Long Beach- Hudson Station), the NAAQS NO_2 design value has not been exceeded. Therefore, the Air Basin remains in attainment of the NO_2 NAAQS (SCAQMD, 2016).

4.2 State – California Air Resources Board

The California Air Resources Board (CARB), which is a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. The CAAQS for criteria pollutants are shown above in Table C. In addition, the CARB establishes emission standards for motor vehicles sold in California, consumer products (e.g. hairspray, aerosol paints, and barbeque lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

The Air Basin has been designated by the CARB as a non-attainment area for ozone, PM10 and PM2.5. Currently, the Air Basin is in attainment with the ambient air quality standards for CO, NO_2, SO_2, lead, and sulfates and is unclassified for visibility reducing particles and Hydrogen Sulfide.

The following lists the State of California Code of Regulations (CCR) air quality emission rules that are applicable, but not limited to all development projects in the State.

Assembly Bill 2588

The Air Toxics "Hot Spots" Information and Assessment Act (Assembly Bill [AB] 2588, 1987, Connelly) was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. AB 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release in California. The data is ranked by high, intermediate, and low categories, which are determined by: the potency, toxicity, quantity, volume, and proximity of the facility to nearby receptors.

CARB Regulation for In-Use Off-Road Diesel Vehicles

On July 26, 2007, the California Air Resources Board (CARB) adopted California Code of Regulations Title 13, Article 4.8, Chapter 9, Section 2449 to reduce diesel particulate matter (DPM) and NOx emissions from in-use off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. Performance requirements of the rule are based on a fleet's average NOx emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirement making the first compliance deadline January 1, 2014 for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less). Currently, no commercial operation in California may add any equipment to their fleet that has a Tier 0 or Tier 1 engine. By January 1, 2018 medium and large fleets will be restricted from adding Tier 2 engines to their fleets and by January 2023, no commercial operation will be allowed to add Tier 2 engines to their fleets. It should be noted that commercial fleets may continue to use their existing Tier 0 and 1 equipment, if they can demonstrate that the average emissions from their entire fleet emissions meet the NOx emissions targets.

CARB Resolution 08-43 for On-Road Diesel Truck Fleets

On December 12, 2008 the CARB adopted Resolution 08-43, which limits NOx, PM10 and PM2.5 emissions from on-road diesel truck fleets that operate in California. On October 12, 2009 Executive Order R-09-010 was adopted that codified Resolution 08-43 into Section 2025, title 13 of the California Code of Regulations. This regulation requires that by the year 2023 all commercial diesel trucks that operate in California shall meet model year 2010 (Tier 4 Final) or latter emission standards. In the interim period, this regulation provides annual interim targets for fleet owners to meet. By January 1, 2014, 50 percent of a truck fleet is required to have installed Best Available Control Technology (BACT) for NOx emissions and 100 percent of a truck fleet installed BACT for PM10 emissions. This regulation also provides a few exemptions including a onetime per year 3-day pass for trucks registered outside of California. All on-road diesel trucks utilized during construction of the proposed project will be required to comply with Resolution 08-43.

4.3 Regional – Southern California

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin. To that end, as a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments and cooperates actively with all federal and state agencies.

South Coast Air Quality Management District

SCAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emission sources, and enforces such measures through educational programs or fines, when necessary. SCAQMD is directly responsible for reducing emissions from stationary, mobile, and indirect sources. It has responded to this requirement by preparing a sequence of AQMPs. The *Final 2016 Air Quality Management Plan* (2016 AQMP) was adopted by the SCAQMD Board on March 3, 2016 and was adopted by CARB on March 23, 2017 for inclusion into the California State Implementation Plan (SIP). The 2016 AQMP was prepared in order to meet the following standards:

- 8-hour Ozone (75 ppb) by 2032
- Annual PM2.5 (12 µg/m3) by 2021-2025
- 8-hour Ozone (80 ppb) by 2024 (updated from the 2007 and 2012 AQMPs)
- 1-hour Ozone (120 ppb) by 2023 (updated from the 2012 AQMP)
- 24-hour PM2.5 (35 $\mu g/m^3$) by 2019 (updated from the 2012 AQMP)

In addition to meeting the above standards, the 2016 AQMP also includes revisions to the attainment demonstrations for the 1997 8-hour ozone NAAQS and the 1979 1-hour ozone NAAQS. The prior 2012 AQMP was prepared in order to demonstrate attainment with the 24-hour PM2.5 standard by 2014 through adoption of all feasible measures. The prior 2007 AQMP demonstrated attainment with the 1997 8-hour ozone (80 ppb) standard by 2023, through implementation of future improvements in control techniques and technologies. These "black box" emissions reductions represent 65 percent of the remaining NOx emission reductions by 2023 in order to show attainment with the 1997 8-hour ozone NAAQS. Given the magnitude of these needed emissions reductions, additional NOx control measures have been provided in the 2012 AQMP even though the primary purpose was to show compliance with 24-hour PM2.5 emissions standards.

The 2016 AQMP provides a new approach that focuses on available, proven and cost effective alternatives to traditional strategies, while seeking to achieve multiple goals in partnership with other entities to promote reductions in greenhouse gas emissions and TAC emissions as well as efficiencies in energy use, transportation, and goods movement. The 2016 AQMP recognizes the critical importance of working with other agencies to develop funding and other incentives that encourage the accelerated transition of vehicles, buildings and industrial facilities to cleaner technologies in a manner that benefits not only air quality, but also local businesses and the regional economy.

Although SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate air quality issues associated with plans and new development projects throughout the Air Basin. Instead, this is controlled through local jurisdictions in accordance to the California Environmental Quality Act (CEQA). In order to assist local jurisdictions with air quality compliance issues the *CEQA Air Quality Handbook* (SCAQMD CEQA Handbook), prepared by SCAQMD, 1993, with the most current updates found at http://www.aqmd.gov/ceqa/hdbk.html, was developed in accordance with the projections and programs detailed in the AQMPs. The purpose of the SCAQMD CEQA Handbook is to assist Lead Agencies, as well as consultants, project proponents, and other interested parties in evaluating a proposed project's potential air quality impacts. Specifically, the SCAQMD CEQA Handbook explains the procedures that SCAQMD recommends be followed for the environmental review process required by CEQA. The SCAQMD CEQA Handbook provides direction on how to evaluate potential air quality impacts, how to determine whether these impacts are significant, and how to mitigate these impacts. The

SCAQMD intends that by providing this guidance, the air quality impacts of plans and development proposals will be analyzed accurately and consistently throughout the Air Basin, and adverse impacts will be minimized.

The following lists the SCAQMD rules that are applicable but not limited to all land development projects in the Air Basin.

Rule 402 - Nuisance

Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which causes 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. Compliance with Rule 402 will reduce local air quality and odor impacts to nearby sensitive receptors.

Rule 403- Fugitive Dust

Rule 403 governs emissions of fugitive dust during construction activities and requires that no person shall cause or allow the emissions of fugitive dust such that dust remains visible in the atmosphere beyond the property line or the dust emission exceeds 20 percent opacity, if the dust is from the operation of a motorized vehicle. Compliance with this rule is achieved through application of standard Best Available Control Measures, which include but are not limited to the measures below. Compliance with these rules would reduce local air quality impacts to nearby sensitive receptors.

- Utilize either a pad of washed gravel 50 feet long, 100 feet of paved surface, a wheel shaker, or a wheel washing device to remove material from vehicle tires and undercarriages before leaving project site.
- Do not allow any track out of material to extend more than 25 feet onto a public roadway and remove all track out at the end of each workday.
- Water all exposed areas on active sites at least three times per day and pre-water all areas prior to clearing and soil moving activities.
- Apply nontoxic chemical stabilizers according to manufacturer specifications to all construction areas that will remain inactive for 10 days or longer.
- Pre-water all material to be exported prior to loading, and either cover all loads or maintain at least 2 feet of freeboard in accordance with the requirements of California Vehicle Code Section 23114.
- Replant all disturbed area as soon as practical.
- Suspend all grading activities when wind speeds (including wind gusts) exceed 25 miles per hour.
- Restrict traffic speeds on all unpaved roads to 15 miles per hour or less.

Rules 1108 and 1108.1 – Cutback and Emulsified Asphalt

Rules 1108 and 1108.1 govern the sale, use, and manufacturing of asphalt and limits the VOC content in asphalt. This rule regulates the VOC contents of asphalt used during construction as well as any on-going

maintenance during operations. Therefore, all asphalt used during construction and operation of the proposed project must comply with SCAQMD Rules 1108 and 1108.1.

Rule 1113 – Architectural Coatings

Rule 1113 governs the sale, use, and manufacturing of architectural coatings and limits the VOC content in sealers, coatings, paints and solvents. This rule regulates the VOC contents of paints available during construction. Therefore, all paints and solvents used during construction and operation of the proposed project must comply with SCAQMD Rule 1113.

Rule 1143 – Paint Thinners

Rule 1143 governs the sale, use, and manufacturing of paint thinners and multi-purpose solvents that are used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations. This rule regulates the VOC content of solvents used during construction. Solvents used during construction and operation of the proposed project must comply with SCAQMD Rule 1143.

Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the federally designated Metropolitan Planning Organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. With respect to air quality planning, SCAG has prepared the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), adopted April, 2016 and the *2019 Federal Transportation Improvement* Program (FTIP), adopted September 2018, which addresses regional development and growth forecasts. Although the RTP/SCS and FTIP are primarily planning documents for future transportation projects a key component of these plans are to integrate land use planning with transportation planning that promotes higher density infill development in close proximity to existing transit service. These plans form the basis for the land use and transportation components of the AQMP, which are utilized in the preparation of air quality forecasts and in the consistency analysis included in the AQMP. The RTP/SCS, FTIP, and AQMP are based on projections originating within the City and County General Plans.

4.4 Local – City of Glendale

Local jurisdictions, such as the City of Glendale, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City is also responsible for the implementation of transportation control measures as outlined in the AQMPs. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation.

In accordance with the CEQA requirements, the City does not, however, have the expertise to develop plans, programs, procedures, and methodologies to ensure that air quality within the County and region will meet federal and state standards. Instead, the City relies on the expertise of the SCAQMD and utilizes the SCAQMD CEQA Handbook as the guidance document for the environmental review of plans and development proposals within its jurisdiction.

5.0 GLOBAL CLIMATE CHANGE MANAGEMENT

The regulatory setting related to global climate change is addressed through the efforts of various international, federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to reduce GHG emissions through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for global climate change regulations are discussed below.

5.1 International

In 1988, the United Nations established the Intergovernmental Panel on Climate Change (IPCC) to evaluate the impacts of global climate change and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling GHG emissions. The parties of the UNFCCC adopted the Kyoto Protocol, which set binding GHG reduction targets for 37 industrialized countries, the objective of reducing their collective GHG emissions by five percent below 1990 levels by 2012. The Kyoto Protocol has been ratified by 182 countries, but has not been ratified by the United States. It should be noted that Japan and Canada opted out of the Kyoto Protocol and the remaining developed countries that ratified the Kyoto Protocol have not met their Kyoto targets. The Kyoto Protocol expired in 2012 and the amendment for the second commitment period from 2013 to 2020 has not yet entered into legal force. The Parties to the Kyoto Protocol negotiated the Paris Agreement in December 2015, agreeing to set a goal of limiting global warming to less than 2 degrees Celsius compared with pre-industrial levels. The Paris Agreement has been adopted by 195 nations with 147 ratifying it, including the United States by President Obama, who ratified it by Executive Order on September 3, 2016. On June 1, 2017, President Trump announced that the United States is withdrawing from the Paris Agreement, however the Paris Agreement is still legally binding by the other remaining nations.

Additionally, the Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere—CFCs, halons, carbon tetrachloride, and methyl chloroform—were to be phased out, with the first three by the year 2000 and methyl chloroform by 2005.

5.2 Federal – United States Environmental Protection Agency

The United States Environmental Protection Agency (EPA) is responsible for implementing federal policy to address global climate change. The Federal government administers a wide array of public-private partnerships to reduce U.S. GHG intensity. These programs focus on energy efficiency, renewable energy, methane, and other non-CO_2 gases, agricultural practices and implementation of technologies to achieve GHG reductions. EPA implements several voluntary programs that substantially contribute to the reduction of GHG emissions.

In Massachusetts v. Environmental Protection Agency (Docket No. 05–1120), argued November 29, 2006 and decided April 2, 2007, the U.S. Supreme Court held that not only did the EPA have authority to regulate greenhouse gases, but the EPA's reasons for not regulating this area did not fit the statutory requirements. As such, the U.S. Supreme Court ruled that the EPA should be required to regulate CO2 and other greenhouse gases as pollutants under the federal Clean Air Act (CAA).

In response to the FY2008 Consolidations Appropriations Act (H.R. 2764; Public Law 110-161), EPA proposed a rule on March 10, 2009 that requires mandatory reporting of GHG emissions from large sources in the United States. On September 22, 2009, the Final Mandatory Reporting of GHG Rule was signed and published in the Federal Register on October 30, 2009. The rule became effective on December 29, 2009. This rule requires suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions to submit annual reports to EPA.

On December 7, 2009, the EPA Administrator signed two distinct findings under section 202(a) of the Clean Air Act. One is an endangerment finding that finds concentrations of the six GHGs in the atmosphere threaten the public health and welfare of current and future generations. The other is a cause or contribute finding, that finds emissions from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare. These actions did not impose any requirements on industry or other entities, however, since 2009 the EPA has been providing GHG emission standards for vehicles and other stationary sources of GHG emissions that are regulated by the EPA. On September 13, 2013 the EPA Administrator signed 40 CFR Part 60, that limits emissions from new sources to 1,100 pounds of CO_2 per MWh for fossil fuel-fired utility boilers and 1,000 pounds of CO_2 per MWh for large natural gas-fired combustion units.

On August 3, 2015, the EPA announced the Clean Power Plan, emissions guidelines for U.S. states to follow in developing plans to reduce GHG emissions from existing fossil fuel-fired power plants (Federal Register Vol. 80, No. 205, October 23 2015). On February 9, 2016 the Supreme Court stayed implementation of the Clean Power Plan due to a legal challenge from 29 states and in April 2017, the Supreme Court put the case on a 60 day hold and directed both sides to make arguments for whether it should keep the case on hold indefinitely or close it and remand the issue to the EPA. On October 11, 2017, the EPA issued a formal proposal to repeal the Clean Power Plan and on June 19, 2019, the EPA issued the Affordable Clean Energy Rule that replaces the Clean Power Plan.

On September 27, 2019, the EPA and the National Highway Safety Administration published the *Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks* (SAFE Vehicles Rule). Part One of the Rule revokes California's authority to set its own GHG emissions standards and zero-emission vehicle mandates in California, which results in one emission standard to be used nationally for all passenger cars and light trucks that is set by the EPA.

5.3 State

The California Air Resources Board (CARB) has the primary responsible for implementing state policy to address global climate change, however there are State regulations related to global climate change that affect a variety of State agencies. CARB, which is a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both the federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. In addition, the CARB establishes emission standards for motor vehicles sold in California, consumer products (e.g. hairspray, aerosol paints, and barbeque lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

In 2008, CARB approved a Climate Change Scoping Plan that proposes a "comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health" (CARB 2008). The Climate Change Scoping Plan has a range of GHG reduction actions which include direct regulations; alternative compliance mechanisms; monetary and non-monetary incentives; voluntary actions; market-based mechanisms such as a cap-and-trade system. In 2014, CARB approved the First Update to the Climate Change Scoping Plan (CARB, 2014) that identifies additional strategies moving beyond the 2020 targets to the year 2050. On December 14, 2017 CARB adopted the California's 2017 Climate Change Scoping Plan, November 2017 (CARB, 2017) that provides specific statewide policies and measures to achieve the 2030 GHG reduction target of 40 percent below 1990 levels by 2030 and the aspirational 2050 GHG reduction target of 80 percent below 1990 levels by 2050. In addition, the State has passed the following laws directing CARB to develop actions to reduce GHG emissions, which are listed below in chronological order, with the most current first.

Executive Order N-79-20

The California Governor issued Executive Order N-79-20 on September 23, 2020 that requires all new passenger cars and trucks and commercial drayage trucks sold in California to be zero-emissions by the year 2035 and all medium- heavy-duty vehicles (commercial trucks) sold in the state to be zero-emission by 2045 for all operations where feasible. Executive Order N-79-20 also requires all off-road vehicles and equipment to transition to 100 percent zero-emission equipment, where feasible by 2035.

California Code of Regulations (CCR) Title 24, Part 6

CCR Title 24, Part 6: *California's Energy Efficiency Standards for Residential and Nonresidential Buildings* (Title 24) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The California Energy Commission (CEC) is the agency responsible for the standards that are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. In 2008 the State set an energy-use reduction goal of zero-net-energy use of all new homes by 2020 and the CEC was mandated to meet this goal through revisions to the Title 24, Part 6 regulations.

The Title 24 standards are updated on a three-year schedule and since 2008 the standards have been incrementally moving to the 2020 goal of the zero-net-energy use. Currently the 2019 Title 24 standards are in effect and have been designed so that the average new home built in California will now use zero-net-energy. Single-family homes built with 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards. The 2019 standards also now require that all single-family homes to have rooftop solar photovoltaic systems and when the solar systems are factored in, homes built under the 2019 standards will use about 53 percent less energy than homes built under the prior 2016 standards. In addition to requiring rooftop solar systems, the 2019 standards also encourage the use of battery storage and heat pump water heaters, require the more widespread use of LED lighting, as well as improve the building's thermal envelope through high performance attics, walls and windows. The 2019 standards also require improvements to ventilation systems by requiring highly efficient air filters to trap hazardous air particulates as well as improvements to kitchen ventilation systems. (https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf)

California Code of Regulations (CCR) Title 24, Part 11

CCR Title 24, Part 11: *California Green Building Standards* (CalGreen) was developed in response to continued efforts to reduce GHG emissions associated with energy consumption. The CalGreen Building Standards are also updated every three years and the current version is the 2019 California Green Building Standard Code that become effective on January 1, 2020.

The CALGreen Code contains requirements for construction site selection; storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency.

The CALGreen Code provides standards for bicycle parking, carpool/vanpool/electric vehicle spaces, light and glare reduction, grading and paving, energy efficient appliances, renewable energy, graywater systems, water efficient plumbing fixtures, recycling and recycled materials, pollutant controls (including moisture control and indoor air quality), acoustical controls, storm water management, building design, insulation, flooring, and framing, among others. Implementation of the CALGreen Code measures reduces energy consumption and vehicle trips and encourages the use of alternative-fuel vehicles, which reduces pollutant emissions.

Some of the notable changes in the 2019 CALGreen Code over the prior 2016 CALGreen Code include: an alignment of building code engineering requirements with the national standards that include anchorage requirements for solar panels, provides design requirements for buildings in tsunami zones, increases Minimum Efficiency Reporting Value (MERV) for air filters from 8 to 13, increased electric vehicle charging requirements in parking areas, and sets minimum requirements for use of shade trees.

Senate Bill 100

Senate Bill 100 (SB 100) was adopted September 2018 and requires that by December 1, 2045 that 100 percent of retail sales of electricity to be generated from renewable or zero-carbon emission sources of electricity. SB 100 supersedes the renewable energy requirements set by SB 350, SB 1078, SB 107, and SB X1-2. However, the interim renewable energy thresholds from the prior Bills of 44 percent by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, will remain in effect.

Executive Order B-48-18 and Assembly Bill 2127

The California Governor issued Executive Order B-48-18 on January 26, 2018 that orders all state entities to work with the private sector to put at least five million zero-emission vehicles on California roads by 2030 and to install 200 hydrogen fueling stations and 250,000 electric vehicle chargers by 2025. Currently there are approximately 350,000 electric vehicles operating in California, which represents approximately 1.5 percent of the 24 million vehicles total currently operating in California. Implementation of Executive Order B-48-18 would result in approximately 20 percent of all vehicles in California to be zero emission electric vehicles. Assembly Bill 2127 (AB 2127) was codified into statute on September 13, 2018 and requires that the California Energy Commission working with the State Air Resources Board prepare biannual assessments of the statewide electric vehicle charging infrastructure needed to support the levels of zero emission vehicle adoption required for the State to meet its goals of putting at least 5 million zero-emission vehicles on California roads by 2030.

Executive Order B-30-15, Senate Bill 32 and Assembly Bill 197

The California Governor issued Executive Order B-30-15 on April 29, 2015 that aims to reduce California's GHG emissions 40 percent below 1990 levels by 2030. This executive order aligns California's GHG reduction targets with those of other international governments, such as the European Union that set the same target for 2030 in October, 2014. This target will make it possible to reach the ultimate goal of reducing GHG emissions 80 percent under 1990 levels by 2050 that is based on scientifically established levels needed in the U.S.A to limit global warming below 2 degrees Celsius – the warming threshold at which scientists say there will likely be major climate disruptions such as super droughts and rising sea levels. Assembly Bill 197 (AB 197) (September 8, 2016) and Senate Bill 32 (SB 32) (September 8, 2016) codified into statute the GHG emissions reduction targets of at least 40 percent below 1990 levels by 2030 as detailed in Executive Order B-30-15. AB 197 also requires additional GHG emissions reporting that is broken down to sub-county levels and requires CARB to consider the social costs of emissions impacting disadvantaged communities.

Executive Order B-29-15

The California Governor issued Executive Order B-29-15 on April 1, 2015 and directed the State Water Resources Control Board to impose restrictions to achieve a statewide 25% reduction in urban water usage and directed the Department of Water Resources to replace 50 million square feet of lawn with drought tolerant landscaping through an update to the State's Model Water Efficient Landscape Ordinance. The Ordinance also requires installation of more efficient irrigation systems, promotion of greywater usage and onsite stormwater capture, and limits the turf planted in new residential landscapes to 25 percent of the total area and restricts turf from being planted in median strips or in parkways unless the parkway is next to a parking strip and a flat surface is required to enter and exit vehicles. Executive Order B-29-15 would reduce GHG emissions associated with the energy used to transport and filter water.

Assembly Bill 341 and Senate Bills 939 and 1374

Senate Bill 939 (SB 939) requires that each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling or other means. Senate Bill 1374 (SB 1374) requires the California Integrated Waste Management Board to adopt a model ordinance by March 1, 2004 suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills. Assembly Bill 341 (AB 341) was adopted in 2011 and builds upon the waste reduction measures of SB 939 and 1374, and sets a new target of a 75 percent reduction in solid waste generated by the year 2020.

Senate Bill 375

Senate Bill 375 (SB 375) was adopted September 2008 in order to support the State's climate action goals to reduce GHG emissions through coordinated regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires CARB to set regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established targets for 2020 and 2035 for each Metropolitan Planning Organizations (MPO) within the State. It was up to each MPO to adopt a sustainable communities strategy (SCS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP) to meet CARB's 2020 and 2035 GHG emission reduction targets. These reduction targets are required to be updated every eight years and the most current targets are detailed at: https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets, which provides GHG emissions reduction targets for SCAG of 8 percent by 2020 and 19 percent by 2035.

The *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), adopted by SCAG April, 2016 provides a 2020 GHG emission reduction target of 8 percent and a 2035 GHG emission reduction target of 18 percent. SCAG will need to develop additional strategies in its next revision of the RTP/SCS in order to meet CARB's new 19 percent GHG emission reduction target for 2035. CARB is also charged with reviewing SCAG's RTP/SCS for consistency with its assigned targets.

City and County land use policies, including General Plans, are not required to be consistent with the RTP and associated SCS. However, new provisions of CEQA incentivize, through streamlining and other provisions, qualified projects that are consistent with an approved SCS and categorized as "transit priority projects."

Assembly Bill 1109

California Assembly Bill 1109 (AB 1109) was adopted October 2007, also known as the Lighting Efficiency and Toxics Reduction Act, prohibits the manufacturing of lights after January 1, 2010 that contain levels of hazardous substances prohibited by the European Union pursuant to the RoHS Directive. AB 1109 also requires reductions in energy usage for lighting and is structured to reduce lighting electrical consumption by: (1) At least 50 percent reduction from 2007 levels for indoor residential lighting; and (2) At least 25 percent reduction from 2007 levels for indoor commercial and all outdoor lighting by 2018. AB 1109 would reduce GHG emissions through reducing the amount of electricity required to be generated by fossil fuels in California.

Executive Order S-1-07

Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Executive Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

In 2009 CARB approved the proposed regulation to implement the LCFS. The standard was challenged in the courts, but has been in effect since 2011 and was re-approved by the CARB in 2015. The LCFS is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. The LCFS is designed to provide a framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. The framework establishes performance standards that fuel producers and importers must meet annually. Reformulated gasoline mixed with corn-derived ethanol and low-sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel. Compressed natural gas and liquefied natural gas also may be low-carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles, are also considered as low-carbon fuels.

Senate Bill 97

Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. SB 97 directed the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Natural Resources Agency was required to certify and adopt those guidelines by January 1, 2010.

Pursuant to the requirements of SB 97 as stated above, on December 30, 2009 the Natural Resources Agency adopted amendments to the State CEQA guidelines that addresses GHG emissions. The CEQA Guidelines Amendments changed 14 sections of the CEQA Guidelines and incorporated GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance were provided and no specific mitigation measures were identified. The GHG emission reduction amendments went into effect on March 18, 2010 and are summarized below:

- Climate Action Plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the GHG emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of GHG emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that "to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation."
- OPR's emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports must specifically consider a project's energy use and energy efficiency potential.

Assembly Bill 32

In 2006, the California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires CARB, to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020 through an enforceable statewide emission cap which will be phased in starting in 2012. Emission reductions shall include carbon sequestration projects that would remove carbon from the atmosphere and utilize best management practices that are technologically feasible and cost effective.

In 2007 CARB released the calculated Year 1990 GHG emissions of 431 million metric tons of CO2e ($MMTCO_2e$). The 2020 target of 431 $MMTCO_2e$ requires the reduction of 78 $MMTCO_2e$, or approximately 16 percent from the State's projected 2020 business as usual emissions of 509 $MMTCO_2e$ (CARB, 2014). Under AB 32, CARB was required to adopt regulations by January 1, 2011 to achieve reductions in GHGs to meet the 1990 cap by 2020. Early measures CARB took to lower GHG emissions included requiring operators of the largest industrial facilities that emit 25,000 metric tons of CO_2 in a calendar year to submit

verification of GHG emissions by December 1, 2010. The CARB Board also approved nine discrete early action measures that include regulations affecting landfills, motor vehicle fuels, refrigerants in cars, port operations and other sources, all of which became enforceable on or before January 1, 2010.

CARB's Scoping Plan that was adopted in 2009, proposes a variety of measures including: strengthening energy efficiency and building standards; targeted fees on water and energy use; a market-based cap-and-trade system; achieving a 33 percent renewable energy mix; and a fee regulation to fund the program. The 2014 update to the Scoping Plan identifies strategies moving beyond the 2020 targets to the year 2050.

The Cap and Trade Program established under the Scoping Plan sets a statewide limit on sources responsible for 85 percent of California's GHG emissions, and has established a market for long-term investment in energy efficiency and cleaner fuels since 2012.

Executive Order S-3-05

In 2005 the California Governor issued Executive Order S 3-05, GHG Emission, which established the following reduction targets:

- 2010: Reduce greenhouse gas emissions to 2000 levels;
- 2020: Reduce greenhouse gas emissions to 1990 levels;
- 2050: Reduce greenhouse gas emissions to 80 percent below 1990 levels.

The Executive Order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. To comply with the Executive Order, the secretary of CalEPA created the California Climate Action Team (CAT), made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of businesses, local governments, and communities and through State incentive and regulatory programs. The State achieved its first goal of reducing GHG emissions to 2000 levels by 2010.

Assembly Bill 1493

California Assembly Bill 1493 (also known as the Pavley Bill, in reference to its author Fran Pavley) was enacted on July 22, 2002 and required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. In 2004, CARB approved the "Pavley I" regulations limiting the amount of GHGs that may be released from new passenger automobiles that are being phased in between model years 2009 through 2016. These regulations will reduce GHG emissions by 30 percent from 2002 levels by 2016. In June 2009, the EPA granted California the authority to implement GHG emission reduction standards for light duty vehicles, in September 2009, amendments to the Pavley I regulations were adopted by CARB and implementation of the "Pavley I" regulations started in 2009.

The second set of regulations "Pavley II" was developed in 2010, and is being phased in between model years 2017 through 2025 with the goal of reducing GHG emissions by 45 percent by the year 2020 as compared to the 2002 fleet. The Pavley II standards were developed by linking the GHG emissions and formerly separate toxic tailpipe emissions standards previously known as the "LEV III" (third stage of the Low Emission Vehicle standards) into a single regulatory framework. The new rules reduce emissions from gasoline-powered cars as well as promote zero-emissions auto technologies such as electricity and hydrogen, and through increasing the infrastructure for fueling hydrogen vehicles. In 2009, the U.S. EPA

granted California the authority to implement the GHG standards for passenger cars, pickup trucks and sport utility vehicles and these GHG emissions standards are currently being implemented nationwide. However, EPA has performed a midterm evaluation of the longer-term standards for model years 2022-2025, and based on the findings of this midterm evaluation, the EPA has proposed to amend the corporate average fuel economy (CAFE) and GHG emissions standards for light vehicles for model years 2021 through 2026. The EPA's proposed amendments do not include any extension of the legal waiver granted to California by the 1970 Clean Air Act and which has allowed the State to set tighter standards for vehicle pipe emissions than the EPA standards. On September 20, 2019, California filed suit over the EPA decision to revoke California's legal waiver that has been joined by 22 other states.

5.4 Regional – Southern California

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin. To that end, as a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments and cooperates actively with all federal and state agencies.

South Coast Air Quality Management District

SCAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emission sources, and enforces such measures through educational programs or fines, when necessary. SCAQMD is directly responsible for reducing emissions from stationary, mobile, and indirect sources. The SCAQMD is also responsible for GHG emissions for projects where it is the lead agency. However, for other projects in the Air Basin where it is not the lead agency, it is limited to providing resources to other lead agencies in order to assist them in determining GHG emission thresholds and GHG reduction measures. In order to assist local agencies with direction on GHG emissions, the SCAQMD organized a working group, which is described below.

<u>SCAQMD Working Group</u>

Since neither CARB nor the OPR has developed GHG emissions threshold, the SCAQMD formed a Working Group to develop significance thresholds related to GHG emissions. At the September 28, 2010 Working Group meeting, the SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that either provides a quantitative annual thresholds of 3,500 $MTCO_2e$ for residential uses, 1,400 $MTCO_2e$ for commercial uses, and 3,000 $MTCO_2e$ for mixed uses. An alternative annual threshold of 3,000 $MTCO_2e$ for all land use types is also proposed.

Southern California Association of Governments

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quality forecasts and in the consistency analysis included in the AQMP. The RTP/SCS, FTIP, and AQMP are based on projections originating within the City and County General Plans.

5.5 Local – City of Glendale

Local jurisdictions, such as the City of Glendale, have the authority and responsibility to reduce GHG emissions through their police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of GHG emissions resulting from its land use decisions. In accordance with CEQA requirements and the CEQA review process, the City assesses the global climate change potential of new development projects, requires mitigation of potentially significant global climate change impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation.

Greener Glendale Plan

In March 2012, the City completed the Greener Glendale Plan, consisting of the Greener Glendale 2010 Report (Glendale 2010), the Greener Glendale Plan for Municipal Operations (Glendale 2011), and the Greener Glendale Plan for Community Activities (Glendale 2012). The Greener Glendale Plan promotes sustainable living and conservation programs within the community and government operations.

The Community Activities component of the Greener Glendale Plan focusses on helping the community achieve better sustainability, including identifying and reducing sources of GHGs through increasing the amount of energy generated from renewable sources, and focusing on conservation programs and identifying milestones for achieving sustainability planning that include: 1) preparing an inventory existing conditions, 2) adopting a target, 3) developing a plan to meet the target, 4) implementing the plan, and 5) monitoring progress and reporting results, and then repeating the cycle as necessary.

The key issue addressed by the Greener Glendale Plan is how the City will contribute to the mitigation of global climate change. The Greener Glendale Plan analyzes City activities related to sustainability and GHG emissions to show how implementing sustainability measures will result in reduced GHG emissions. The Greener Glendale Plan inventory of GHG emissions within the City's geographic boundaries indicates that as of 2004, 98 percent of the GHG emissions were generated within the community, while 2 percent of the GHGs were generated from municipal operations. From 2004-2009, the Greener Glendale Plan GHG inventory reflected decreases in GHG emissions from natural gas (11 percent), water transport (20 percent), waste generation (23 percent), electricity (18 percent), increases in landfill (19 percent), and transportation (5 percent).

The Greener Glendale Plan developed a GHG emissions forecast and reduction targets from its 2004-2009 data trend and based the SCAG's GHG reduction targets of 8 per cent by 2020 and 13 percent by 2035. The GGP emissions forecast includes a "business as usual" estimate of future GHG emissions, if no further action is taken. The Greener Glendale Plan "business as usual" (BAU) scenario indicates a slow decline of GHG emissions, but not enough to meet the reduction targets. Accordingly, the Greener Glendale Plan includes goals, strategies, and recommendations to achieve sustainability that are expected to have quantifiable GHG reduction results, which reflect a list of community priorities that account for both the GHG reduction potential and implementation feasibility.

The list of quantifiable GHG reduction categories in the Greener Glendale Plan includes 2020 emissions reduction targets to be achieved through California vehicle and fuel standards, building energy efficiency audits and upgrades, smart grid applications, green building standards, Zero Waste Plans, EV charging

station installation, and a plastic bag ban, to name a few. The Greener Glendale Plan identified 2035 reduction targets through continued implementation of California vehicle and fuel standards, building energy and water efficiency audits and upgrades, Zero Waste Plan 90 percent diversion by 2030, tree planning programs, and turf reduction rebates.

The Greener Glendale Plan's Community Priorities list includes: facilitating the permitting and construction of alternative building structures, materials, and locations; providing turf reduction rebates; converting to biodegradable take-out containers; developing fuel efficient vehicle infrastructure and pedestrian friendly streets with destinations; including more shade trees; cool paving and roofing and increasing surface permeability; removing toxic products; reducing energy and water consumption; increasing accessible parks and open spaces; and promoting locally grown organic foods. The final Community Priority List which takes into account the effectiveness in reducing GHGs is:

1. Conduct community outreach and education to promote and encourage sustainable practices.
2. Retrofit existing development for increased energy and water efficiency, waste reduction, reduction in use of toxics, and increased use of natural landscaping including native trees and plants.
3. Promote and support alternative forms of transportation and vehicle fuel.
4. Promote and support the use of renewable energy.
5. Install public works conservation demonstration projects within the community.
6. Continue to implement urban planning strategies to increase sustainability and livable environments.

The Greener Glendale Plan also identified nine sustainability focus areas which include seven topics described in the UN Urban Environmental Accords. These include: Cross-Cutting Approaches, Economic Development, Urban Design, Waste, Energy, Urban Nature, Water, Transportation and Environmental Health. Each of these nine sustainability focus areas has identified objectives and strategies to accomplish sustainability goals generally and which also pertain specifically to GHG emissions reductions and climate change adaptation.

With respect to the Cross-Cutting sustainability focus, the objectives that support climate change adaptation and GHG reduction goals are:

- CC1 – Implement Smart Grid Applications
- CC2 – Implement Community Business and School Sustainability Efforts
- CC3 – Implement Sustainability Outreach and Education
- CC4 – Implement Municipal Operations Sustainability Efforts
- CC5 – Collaborate with Schools on Strategies within this Plan
- CC7 – Develop a Climate Adaptation Plan

The Economic Development objectives recommend support for local business in order to, among other goals, reduce transportation emissions. Economic Development objectives also include expanding green building programs and green jobs training. The Urban Design objectives also include recommendations to expand green building standards and practices (Urban Design -- UD1, UD2, UD3, UD4), to implement zone

changes that encourage infill and mixed use development, and to complete community plans for all areas of Glendale that incorporate the Greener Glendale Plan sustainability concepts into Community Plans and other General Plan Documents (UD5). This last Urban Design objective, UD5, specifies certain Urban Design concepts be incorporated into Community Plans and General Plan documents, these include:

1. Utilize natural, local, renewable resources for energy, water, and environmental management processes when possible and cost effective.
2. Plan and build infrastructure for alternative forms of transportation such as walking, biking, and public transit, in accordance with strategies to ensure streets are designed for all users ("Complete Streets").
3. Plan and build infrastructure for alternative fueled vehicles.
4. Encourage the retrofit of existing development to increase energy and water efficiency, reduce waste, reduce use of toxics, and increase the use of natural landscaping including native trees and plants. Encourage new development to build to these standards.
5. Install public works conservation demonstration projects within the community.
6. Work toward achieving Zero Waste in the community.
7. Develop economically successful streets that act as destination centers in Glendale.
8. Facilitate permitting and construction of alternative building structures, materials, and site location.

The Greener Glendale Plan sustainability objectives for Waste include objectives that reduce waste, which in turn slow down the amount of waste being added to the City's existing landfill at Scholl Canyon which, over time, will reduce the amount of methane gas production from decaying waste. The Waste objectives include:

- WS1 – Promote Zero Waste through community education and outreach
- WS2 – Reduce use of disposable, non-renewable product
- WS3 – Improve commercial waste diversion
- WS4 – Expand waste diversion services

The Greener Glendale Plan sustainability objectives for Energy include activities that support climate change adaptation and GHG reduction:

- E1 – Increase the use of renewable energy citywide
- E2 – Reduce citywide energy consumption through promotion, education, and outreach
- E3 – Reduce citywide energy consumption by facilitating and coordinating community energy efficiency projects
- E4 – Encourage the reduction of citywide energy consumption through City municipal codes and policies

The Greener Glendale Plan sustainability objectives for Urban Nature that support climate change adaptation and GHG reduction include:

- UN1 – Update the Urban Forest Management Plan

- UN2 – Increase Glendale's tree canopy coverage by 20,000 trees by 2035
- UN3 – Implement programs to increase biodiversity in Glendale
- UN4 – Ensure there is accessible park and recreational open space to serve residents

The Greener Glendale Plan sustainability objectives for Water that support climate change adaptation include:

- WT1 – Reduce community water consumption through promotion, education, and outreach campaigns
- WT2 – Reduce community water consumption through incentive and rebate programs
- WT3 – Encourage or require water efficiency upgrades at the time of building sale
- WT4 – Facilitate and coordinate community water conservation projects
- WT5 – Implement stormwater management practices to protect water quality and replenish local groundwater sources

The GGP sustainability objectives for Transportation that support climate change adaptation and GHG reduction include:

- T1 – Facilitate the provision of alternative transportation infrastructure
- T2 – Promote and encourage the use of alternative forms of transportation
- T3 – Facilitate the provision of alternative fuel transportation infrastructure
- T4 – Promote and encourage the use of alternative fuel transportation options

The Greener Glendale Plan sustainability objective for Environmental Health that support climate change adaptation and GHG reduction include:

- EH2 – Improve air quality
- EH3 – Promote the use of locally grown, organic foods

6.0 ATMOSPHERIC SETTING

6.1 South Coast Air Basin

The project sites are located within the southwestern portion of Los Angeles County, which is part of the South Coast Air Basin (Air Basin) that includes the non-desert portions of Riverside, San Bernardino, and Los Angeles Counties and all of Orange County. The Air Basin is located on a coastal plain with connecting broad valleys and low hills to the east. Regionally, the Air Basin is bounded by the Pacific Ocean to the southwest and high mountains to the east forming the inland perimeter.

6.2 Local Climate

The climate of southwestern Los Angeles County is characterized by hot dry summers, mild moist winters with infrequent rainfall, moderate afternoon breezes, and generally fair weather. Occasional periods of strong Santa Ana winds and winter storms interrupt the otherwise mild weather pattern. Although the Air Basin is semi-arid, the air near the surface in southwestern Los Angeles County is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry air is brought into the Air Basin by offshore winds, the ocean effect is dominant. Periods of heavy fog are frequent and low stratus clouds, often referred to as “high fog” are a characteristic feature.

Winds are an important parameter in characterizing the air quality environment of a project site because they both determine the regional pattern of air pollution transport and control the rate of dispersion near a source. Daytime winds in southwestern Los Angeles County are usually light breezes from off the coast as air moves regionally onshore from the cool Pacific Ocean to the warm Mojave Desert interior of Southern California. These winds allow for good local mixing, but as discussed above, these coastal winds carry significant amounts of industrial and automobile air pollutants from the densely urbanized western portion of the Air Basin into the interior valleys which become trapped by the mountains that border the eastern and northern edges of the Air Basin.

In the summer, strong temperature inversions may occur that limit the vertical depth through which air pollution can be dispersed. Air pollutants concentrate because they cannot rise through the inversion layer and disperse. These inversions are more common and persistent during the summer months. Over time, sunlight produces photochemical reactions within this inversion layer that creates ozone, a particularly harmful air pollutant. Occasionally, strong thermal convections occur which allows the air pollutants to rise high enough to pass over the mountains and ultimately dilute the smog cloud.

In the winter, light nocturnal winds result mainly from the drainage of cool air off of the mountains toward the valley floor while the air aloft over the valley remains warm. This forms a type of inversion known as a radiation inversion. Such winds are characterized by stagnation and poor local mixing and trap pollutants such as automobile exhaust near their source. While these inversions may lead to air pollution “hot spots” in heavily developed coastal areas of the Air Basin, there is not enough traffic in inland valleys to cause any winter air pollution problems. Despite light wind conditions, especially at night and in the early morning, winter is generally a period of good air quality in the project vicinity.

The temperature and precipitation levels for the Glendale Stapenhorst Monitoring Station, which is the nearest weather station to the project sites with historical data are shown below in Table E. Table E shows that August is typically the warmest month and January is typically the coolest month. Rainfall in the project area varies considerably in both time and space. Almost all the annual rainfall comes from the

fringes of mid-latitude storms from late November to early April, with summers being almost completely dry.

Table E – Monthly Climate Data

Month	Average Maximum Temperature (°F)	Average Minimum Temperature (°F)	Average Total Precipitation (inches)
January	65.3	40.1	4.21
February	68.2	41.8	2.87
March	72.7	44.3	1.77
April	73.7	47.5	1.53
May	73.6	51.3	0.36
June	81.0	52.9	0.07
July	86.1	59.1	0.01
August	87.2	59.4	0.03
September	82.8	55.6	0.21
October	79.9	51.6	0.33
November	75.3	45.7	2.45
December	67.3	41.3	2.54
Annual	**76.4**	**49.2**	**16.37**

Source: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca3450

6.3 Monitored Local Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the Air Basin. Estimates of the existing emissions in the Air Basin provided in the 2012 AQMP, indicate that collectively, mobile sources account for 59 percent of the VOC, 88 percent of the NOx emissions and 40 percent of directly emitted PM2.5, with another 10 percent of PM2.5 from road dust. The 2016 AQMP found that since 2012 AQMP projections were made stationary source VOC emissions have decreased by approximately 12 percent, but mobile VOC emissions have increased by 5 percent. The percentage of NOx emissions remain unchanged between the 2012 and 2016 projections.

SCAQMD has divided the Air Basin into 38 air-monitoring areas with a designated ambient air monitoring station representative of each area. The project site is located in Air Monitoring Area 7, East San Fernando Valley. The nearest air monitoring station to the project site is the Los Angeles – North Main Street Monitoring Station (LA Main Street Station), which is located at 1630 North Main Street, Los Angeles. However, it should be noted that due to the air monitoring station's distance from the project site, recorded air pollution levels at the LA Main Street Station reflect with varying degrees of accuracy, local air quality conditions at the project site. The monitoring data is presented in Table F and shows the most recent three years of monitoring data from CARB. CO measurements have not been provided, since CO is currently in attainment in the Air Basin and monitoring of CO within the Air Basin ended on March 31, 2013.

Table F – Local Area Air Quality Monitoring Summary

Pollutant [1] (Standard)	Year[1] 2016	2017	2018
Ozone:			
Maximum 1-Hour Concentration (ppm)	0.103	0.116	0.098
Days > CAAQS (0.09 ppm)	**2**	**6**	**2**
Maximum 8-Hour Concentration (ppm)	0.078	0.086	0.073
Days > NAAQS (0.070 ppm)	**4**	**14**	**4**
Days > CAAQs (0.070 ppm)	**4**	**16**	**4**
Nitrogen Dioxide:			
Maximum 1-Hour Concentration (ppb)	64.7	80.6	70.1
Days > NAAQS (100 ppb)	0	0	0
Days > CAAQS (180 ppb)	0	0	0
Inhalable Particulates (PM10) :			
Maximum 24-Hour National Measurement (ug/m^3)	64.0	64.6	68.2
Days > NAAQS (150 ug/m^3)	0	0	0
Days > CAAQS (50 ug/m^3)	**21**	**40**	**31**
Annual Arithmetic Mean (AAM) (ug/m^3)	25.8	25.7	30.2
Annual > NAAQS (50 ug/m^3)	No	No	No
Annual > CAAQS (20 ug/m^3)	**Yes**	**Yes**	**Yes**
Ultra-Fine Particulates (PM2.5):			
Maximum 24-Hour National Measurement (ug/m^3)	44.3	54.9	61.4
Days > NAAQS (35 ug/m^3)	**2**	**6**	**6**
Annual Arithmetic Mean (AAM) (ug/m^3)	11.7	12.0	12.8
Annual > NAAQS and CAAQS (12 ug/m^3)	No	**Yes**	**Yes**

Notes: Exceedances are listed in **bold.** CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million; ppb = parts per billion; ND = no data available.
[1] Data obtained from the LA – North Main Steet Station.
Source: http://www.arb.ca.gov/adam/

Ozone

During the last three years, the State 1-hour concentration standard for ozone has been exceeded between 2 and 6 days each year at the LA Main Street Station. The State 8-hour ozone standard has been exceeded between 4 and 14 days each year over the last three years at the LA Main Street Station. The Federal 8-hour ozone standard has been exceeded between 4 and 16 days each year over the last three years at the LA Main Street Station. Ozone is a secondary pollutant as it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO_2, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the oxidant concentrations experienced in the area. Many areas of Southern California contribute to the ozone levels experienced at this monitoring station, with the more significant areas being those directly upwind.

Nitrogen Dioxide

The LA Main Street Station did not record an exceedance of either the Federal or State 1-hour NO_2 standards for the last three years.

Particulate Matter

The State 24-hour concentration standard for PM10 has been exceeded between 21 and 40 days each year over the past three years at the LA Main Street Station. Over the past three years the Federal 24-hour standard for PM10 has not been exceeded over the past three years at the San Bernardino Station. The annual PM10 concentration at the LA Main Street Station has exceed last three years of the State standard and has not exceeded the Federal standard for the past three years.

Over the past three years the federal 24-hour concentration standard for PM2.5 has been exceeded between 2 and 6 day each year over the past three years at the LA Main Street Station. The annual PM2.5 concentrations at the LA Main Street Station has been exceeded the State two of the last three years and not exceeded Federal standards for the past three years. There does not appear to be a noticeable trend for PM10 or PM2.5 in either maximum particulate concentrations or days of exceedances in the area. Particulate levels in the area are due to natural sources, grading operations, and motor vehicles.

According to the EPA, some people are much more sensitive than others to breathing fine particles (PM10 and PM2.5). People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM10 and PM2.5. Other groups considered sensitive are smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive, because many breathe through their mouths during exercise.

6.2 Toxic Air Contaminant Levels

In order to determine the risks associated with major airborne carcinogens, the SCAQMD conducted the Multiple Air Toxics Exposure Study (MATES) studies. According to the SCAQMD's MATES-IV study, the project sites have estimated cancer risks of between 682 and 971 per million persons chance of cancer. In comparison, the average cancer risk for Southern California is 991 per million persons, which is based on the use of age-sensitivity factors detailed in the OEHHA Guidelines (OEHHA, 2015).

In order to provide a perspective of risk, it is often estimated that the incidence in cancer over a lifetime for the U.S. population ranges between 1 in 3 to 4 and 1 in 3, or a risk of about 300,000 per million persons. The MATES-III study referenced a Harvard Report on Cancer Prevention, which estimated that of cancers associated with known risk factors, about 30 percent were related to tobacco, about 30 percent were related to diet and obesity, and about 2 percent were associated with environmental pollution related exposures that includes hazardous air pollutants.

7.0 MODELING PARAMETERS AND ASSUMPTIONS

7.1 CalEEMod Model Input Parameters

The criteria air pollution and GHG emissions impacts created by the proposed project have been analyzed through use of CalEEMod Version 2016.3.2. CalEEMod is a computer model published by the SCAQMD for estimating air pollutant emissions. The CalEEMod program uses the EMFAC2014 computer program to calculate the emission rates specific for the South Coast Air Basin portion of Los Angeles County for employee, vendor and haul truck vehicle trips and the OFFROAD2011 computer program to calculate emission rates for heavy equipment operations. EMFAC2014 and OFFROAD2011 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour.

The project characteristics in the CalEEMod model were set to a project location of the South Coast Air Basin portion of Los Angeles County, a Climate Zone of 12, utility company of Glendale Water & Power, and an opening year of 2025.

Land Use Parameters

The Master Plan Update recommends site and facilities improvements for the three GCCD campuses: the Verdugo Campus, the Garfield Campus, and the Montrose Campus. A summary of the proposed improvements for each of the three campuses has been provided above in Table A. Since the proposed improvements at the three campuses would occur independently of each other, each Campus has been modeled separately in the CalEEMod model. The proposed project's land use parameters that were entered into the CalEEMod model for each campus are shown in Table G.

Table G – CalEEMod Land Use Parameters

Proposed Land Use	Land Use Subtype in CalEEMod	Land Use Size[1]	Lot Acreage[2]	Building/Paving[3] (square feet)
	Verdugo Campus			
New and Renovated Buildings	Junior College (2 Year)	281.30 TSF	6.46	281,296
New Parking Spaces	Parking Lot	650 PS	5.85	260,000
New Sidewalks/Hardscapes	Other Non-Asphalt Surfaces	2.00 AC	2.00	87,120
	Garfield Campus			
Renovated Buildings	Junior College (2 Year)	43.09 TSF	1.00	43,090
New Parking Spaces	Parking Lot	260 PS	2.40	80,000
New Sidewalks/Hardscapes	Other Non-Asphalt Surfaces	0.40 AC	0.40	8,712
	Montrose Campus			
Renovated Buildings	Junior College (2 Year)	43.09 TSF	0.99	43,090
New Parking Spaces	Parking Lot	200 PS	1.80	80,000
New Sidewalks/Hardscapes	Other Non-Asphalt Surfaces	0.20 AC	0.20	8,712

Notes:
[1] TSF = Thousand Square Foot, PS = Parking Space; AC = Acres
[2] Lot acreage estimated based on anticipated area the proposed improvements will disturb on each campus.
[3] Building/Paving square feet represent area where architectural coatings will be applied. Paved area based on CalEEMod default values.

Electricity Emission Factors

The default CalEEMod emission factors for Glendale Water & Power for the Reporting year of 2009 (CalEEMod User Guide Appendix D, Table 1.2) are as follows:

- Carbon dioxide: 1,115 pounds per megawatt-hour
- Methane: 0.029 pounds per megawatt-hour
- Nitrous oxide: 0.00617 pounds per megawatt-hour

According to the *2019 Integrated Resource Plan*, prepared by City of Glendale Water & Power, by the year 2025, the annual GHG emissions generated from electrical generation would be approximately 350,000 $MTCO_2e$, which is based on an annual load of 1.45 million MWh of electricity. This equates to the year 2025 creating 43 percent of the GHG emissions compared to the CalEEMod default values. As such the CalEEMod default intensity factors have been reduced to 41 percent of the default values and the resultant intensity factors that have been utilized in this analysis are shown below:

- Carbon dioxide: 483 pounds per megawatt-hour
- Methane: 0.013 pounds per megawatt-hour
- Nitrous oxide: 0.003 pounds per megawatt-hour

Construction Parameters

The timing of certain projects will be dependent on the completion of other projects and will ultimately occur over the different phases. For example, the science building will occur once the PE structure construction is completed. However, these improvements will be completed in portions following building construction or renovation. Other projects like this include the security systems installation, technology replacement, energy and water conservation projects, and surface parking improvements. The construction timing utilized in CalEEMod for each campus was based on the earliest anticipated construction start time for each campus. In order to provide a conservative analysis, it was assumed that all proposed construction activities on each campus would occur at one time. The phases of construction activities that have been analyzed for each campus includes: 1) Demolition, 2) Grading, 3) Building construction, 4) Paving, and 5) Application of architectural coatings.

Operational Emissions Modeling

The operations-related criteria air pollutant emissions created by the proposed improvements to each of the three campuses have been analyzed through use of the CalEEMod model based on the land use parameters provided above. Operation of the campuses would create emissions from area sources, energy usage, solid waste, and water and wastewater, which are detailed below.

<u>Mobile Sources</u>

Mobile sources include emissions the additional vehicle miles generated from the proposed project. The vehicle trips associated with the proposed project have been analyzed through use of trip rates obtained from the *Draft Traffic Impact Analysis Glendale Community College District* (Traffic Impact Analysis), prepared by General Technologies & Solutions, August, 2020. The Traffic Impact Analysis found that the Verdugo Campus and Garfield Campus would not generate any additional trips during operation of the proposed project, and the Montrose Campus would generate an additional 1,150 daily trips from the additional 1,000 FTES. As such the weekday daily trip rate for the Montrose Campus was set to 1.15 daily

trips per student and the daily trip rates for the Verdugo Campus and Garfield Campus were set to 0 in the CalEEMod model. No other changes were made to the CalEEMod default mobile source parameters.

The CalEEMod model provides the selection of "mitigation" to account for project conditions that would result in less emissions than a project without these conditions, however it should be noted that this "mitigation" may represent current conditions, such as development that is in close proximity to an existing transit facility, where a project built at such location, would create less vehicle trips and associated emissions than a project that was not built in close proximity to an existing transit facility. The mobile source emissions analysis for the Montrose Campus included the CalEEMod "mitigation" of improved pedestrian network onsite and connecting offsite, and increase transit accessibility with 0.06 mile to the nearest transit to account for the existing Honolulu and Ocean View Bus Stop located east of the Campus.

Area Sources

Area sources include emissions from consumer products, landscape equipment and architectural coatings. The area source emissions were based on the on-going use of the proposed improvements in the CalEEMod model. No changes were made to the default area source parameters in the CalEEMod model.

Energy Usage

Energy usage includes emissions from electricity and natural gas used onsite. The energy usage was based on the ongoing use of the proposed improvements in the CalEEMod Model. No changes were made to the default energy usage parameters in the CalEEMod model.

The new 2019 Title 24, Part 6 building energy efficiency standards went into effect January 1, 2020 and require new lighting energy improvements that are 30 percent more efficient than the prior 2016 building standards. In order to account for the new standards, the CalEEMod "mitigation" of 30 percent lighting energy improvement was selected. A summary of the new 2019 Title 24 standards can be found at: https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf.

Solid Waste

Waste includes the emissions associated with the processing of waste from the proposed project as well as the emissions from the waste once it is interred into a landfill. The analysis was based on the default CalEEMod waste generation rates from the proposed improvements. No changes were made to the default solid waste parameters or mitigation measures in the CalEEMod model.

The CalEEMod "mitigation" of a 50 percent reduction in landfill waste was selected to account for implementation of AB 341 that provides strategies to reduce, recycle or compost solid waste by 75 percent by 2020. Only 50 percent was selected, since AB 341 builds upon the waste reduction measures of SB 939 and 1374 and therefore, it was assumed approximately 25 percent of the waste reduction target has already been accounted for in the CalEEMod model.

Water and Wastewater

Water includes the water used for the interior of the building as well as for landscaping and is based on the emissions associated with the energy used to transport and filter the water. The analysis was based

on the default CalEEMod water usage rates for the proposed improvements. No changes were made to the default water and wastewater parameters in the CalEEMod model.

The CalEEMod "mitigation" of the use of low flow faucets, showers, and toilets and use of smart irrigation system controllers were selected to account for the implementation of the 2016 CCR Title 24 Part 11 (CalGreen) requirements.

8.0 THRESHOLDS OF SIGNIFICANCE

8.1 Regional Air Quality

Many air quality impacts that derive from dispersed mobile sources, which are the dominant pollution generators in the Air Basin, often occurs hours later and miles away after photochemical processes have converted primary exhaust pollutants into secondary contaminants such as ozone. The incremental regional air quality impact of an individual project is generally very small and difficult to measure. Therefore, SCAQMD has developed significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a project is not quantifiable on a regional scale. The SCAQMD CEQA Handbook states that any project in the Air Basin with daily emissions that exceed any of the identified significance thresholds should be considered as having an individually and cumulatively significant air quality impact. For the purposes to this air quality impact analysis, a regional air quality impact would be considered significant if emissions exceed the SCAQMD significance thresholds identified in Table H.

Table H – SCAQMD Regional Criteria Pollutant Emission Thresholds of Significance

	Pollutant Emissions (pounds/day)						
	VOC	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**	**Lead**
Construction	75	100	550	150	150	55	3
Operation	55	55	550	150	150	55	3

Source: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2

8.2 Local Air Quality

Project-related construction air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin. In order to assess local air quality impacts the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the project-related air emissions in the project vicinity. SCAQMD has also provided *Final Localized Significance Threshold Methodology* (LST Methodology), July 2008, which details the methodology to analyze local air emission impacts. The LST Methodology found that the primary emissions of concern are NO_2, CO, PM10, and PM2.5.

The LST Methodology provides Look-Up Tables with different thresholds based on the location and size of the project site and distance to the nearest sensitive receptors. As detailed above in Section 6.3, the project site is located in Air Monitoring Area 7, East San Fernando Valley. The Look-Up Tables provided in the LST Methodology include project site acreage sizes of 1-acre, 2-acres and 5-acres. The proposed improvements are anticipated to disturb approximately 14 acres on the Verdugo Campus, 4 acres on the Garfield Campus and 2 acres on the Montrose Campus. In order to provide a conservative analysis the Verdugo Campus utilized the 5-acre project site values, since that is the largest size available in the Look-Up Tables. The Garfield Campus was based on interpolation of the 2-acre and 5-acre thresholds in order to determine the 4-acre threshold values and the Montrose Campus was based on the 2-acre threshold. Since all campuses have sensitive receptors located within 25 meters (82 feet) from the campuses, the 25 meter threshold was utilized for all campuses. Table I below shows the LSTs for NOx, CO, PM10 and PM2.5 for both construction and operational activities.

Table I – SCAQMD Local Air Quality Thresholds of Significance

Activity	Allowable Emissions (pounds/day)[1]			
	NOx	CO	PM10	PM2.5
Verdugo Campus[2]				
Construction	172	1,434	14	8
Operation	172	1,434	4	2
Garfield Campus[3]				
Construction	153	1,218	12	7
Operation	153	1,218	3	2
Montrose Campus[4]				
Construction	114	786	7	4
Operation	114	786	2	1

Notes:
[1] The nearest sensitive receptor to all three Campuses are located within 25 meters (82 feet) of each campus. According to SCAQMD methodology, all receptors closer than 25 meters are based on the 25-meter threshold.
[2] The Verdugo Campus is based on the 5-acre threshold.
[3] The Garfield Campus is based on the 4-acre threshold that was interpolated between the 2-acre and 5-acre thresholds.
[4] The Montrose Campus is based on the 2-acre threshold.
Source: Calculated from SCAQMD's Mass Rate Look-up Tables in Air Monitoring Area 7, East San Fernando Valley.

8.3 Toxic Air Contaminants

According to the SCAQMD CEQA Handbook, any project that has the potential to expose the public to toxic air contaminants in excess of the following thresholds would be considered to have a significant air quality impact:

- If the Maximum Incremental Cancer Risk is 10 in one million or greater; or
- Toxic air contaminants from the proposed project would result in a Hazard Index increase of 1 or greater.

In order to determine if the proposed project may have a significant impact related to toxic air contaminants (TACs), the *Health Risk Assessment Guidance for analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*, (Diesel Analysis) prepared by SCAQMD, August 2003, recommends that if the proposed project is anticipated to create TACs through stationary sources or regular operations of diesel trucks on the project site, then the proximity of the nearest receptors to the source of the TAC and the toxicity of the hazardous air pollutant (HAP) should be analyzed through a comprehensive facility-wide health risk assessment (HRA).

8.4 Odor Impacts

The SCAQMD CEQA Handbook states that an odor impact would occur if the proposed project creates an odor nuisance pursuant to SCAQMD Rule 402, which states:

> "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 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.

> The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals."

If the proposed project results in a violation of Rule 402 with regards to odor impacts, then the proposed project would create a significant odor impact.

8.5 Greenhouse Gas Emissions

The Greener Glendale Plan developed a GHG emissions forecast and reduction targets from its 2004-2009 data trend and based the SCAG's GHG reduction targets of 8 per cent by 2020 and 13 percent by 2035. The GGP emissions forecast includes a "business as usual" estimate of future GHG emissions, if no further action is taken. The Greener Glendale Plan "business as usual" (BAU) scenario indicates a slow decline of GHG emissions, but not enough to meet the reduction targets. Accordingly, the Greener Glendale Plan includes goals, strategies, and recommendations to achieve sustainability that are expected to have quantifiable GHG reduction results, which reflect a list of community priorities that account for both the GHG reduction potential and implementation feasibility. However, the Greener Glendale Plan does not provide any quantitative GHG emissions thresholds for new development projects nor does it provide any direction on how to analyze new development projects within the City. As such, the SCAQMD GHG emissions reduction thresholds have been utilized in this analysis.

In order to identify significance criteria under CEQA for development projects, SCAQMD initiated a Working Group, which provided detailed methodology for evaluating significance under CEQA. At the September 28, 2010 Working Group meeting, the SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that provides a quantitative annual threshold of 3,000 $MTCO_2e$ for all land use projects. Although the SCAQMD provided substantial evidence supporting the use of the above threshold, as of November 2017, the SCAQMD Board has not yet considered or approved the Working Group's thresholds.

It should be noted that SCAQMD's Working Group's thresholds were prepared prior to the issuance of Executive Order B-30-15 on April 29, 2015 that provided a reduction goal of 40 percent below 1990 levels by 2030. This target was codified into statute through passage of AB 197 and SB 32 in September 2016. However, to date no air district or local agency within California has provided guidance on how to address AB 197 and SB 32 with relation to land use projects. In addition, the California Supreme Court's ruling on *Cleveland National Forest Foundation v. San Diego Association of Governments* (Cleveland v. SANDAG), Filed July 13, 2017 stated:

> SANDAG did not abuse its discretion in declining to adopt the 2050 goal as a measure of significance in light of the fact that the Executive Order does not specify any plan or implementation measures to achieve its goal. In its response to comments, the EIR said: "It is uncertain what role regional land use and transportation strategies can or should play in achieving the EO's 2050 emissions reduction target. A recent California Energy Commission report concludes, however, that the primary strategies to achieve this target should be major 'decarbonization' of electricity supplies and fuels, and major improvements in energy efficiency [citation].

Although, the above court case was referencing California's GHG emission targets for the year 2050, at this time it is also unclear what role land use strategies can or should play in achieving the AB 197 and SB 32 reduction goal of 40 percent below 1990 levels by 2030. As such this analysis has relied on the SCAQMD

Working Group's recommended thresholds. Therefore, the proposed project would be considered to create a significant cumulative GHG impact if the proposed project would exceed the annual threshold of 3,000 $MTCO_2e$.

The GHG emissions analysis for both construction and operation of the proposed project can be found below in Sections 9.8 and 9.9.

9.0 IMPACT ANALYSIS

9.1 CEQA Thresholds of Significance

Consistent with CEQA and the State CEQA Guidelines, a significant impact related to air quality and GHG emissions would occur if the proposed project is determined to:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations;
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people;
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

9.2 Air Quality Compliance

The proposed project would not conflict with or obstruct implementation of the SCAQMD Air Quality Management Plan (AQMP). The following section discusses the proposed project's consistency with the SCAQMD AQMP.

SCAQMD Air Quality Management Plan

The California Environmental Quality Act (CEQA) requires a discussion of any inconsistencies between a proposed project and applicable General Plans and regional plans (CEQA Guidelines Section 15125). The regional plan that applies to the proposed project includes the SCAQMD AQMP. Therefore, this section discusses any potential inconsistencies of the proposed project with the AQMP.

The purpose of this discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the proposed project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-makers determine that the proposed project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD CEQA Handbook states that "New or amended GP Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

(2) Whether the project will exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

Criterion 1 - Increase in the Frequency or Severity of Violations?

Based on the air quality modeling analysis contained in this report, short-term regional construction air emissions would not result in significant impacts based on SCAQMD regional thresholds of significance discussed above in Section 8.1 or local thresholds of significance discussed above in Section 8.2. The ongoing operation of the proposed project would generate air pollutant emissions that are inconsequential on a regional basis and would not result in significant impacts based on SCAQMD thresholds of significance discussed above in Section 8.1. The analysis for long-term local air quality impacts showed that local pollutant concentrations would not be projected to exceed the air quality standards. Therefore, a less than significant long-term impact would occur and no mitigation would be required.

Therefore, based on the information provided above, the proposed project would be consistent with the first criterion.

Criterion 2 - Exceed Assumptions in the AQMP?

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to insure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. The AQMP is developed through use of the planning forecasts provided in the RTP/SCS and FTIP. The RTP/SCS is a major planning document for the regional transportation and land use network within Southern California. The RTP/SCS is a long-range plan that is required by federal and state requirements placed on SCAG and is updated every four years. The FTIP provides long-range planning for future transportation improvement projects that are constructed with state and/or federal funds within Southern California. Local governments are required to use these plans as the basis of their plans for the purpose of consistency with applicable regional plans under CEQA. For this project, the City of Glendale Land Use Plan defines the assumptions that are represented in AQMP.

The Verdugo Campus is currently designated Public/Semi-Public in the General Plan and is zoned Public/Semi-Public. The Garfield Campus is currently designated Medium Density Residential in the General Plan and is zoned Medium Density Residential. The Montrose Campus is currently designated Regional Commercial in the General Plan and is zoned Neighborhood Commercial. Educational uses are allowed in all of these land use designations and existing school uses are already occurring at all three project sites. Furthermore, the proposed project includes site and facility improvements to enhance the existing educational uses at these campuses and does not recommend and significant changes to the existing land uses. It should also be noted that all three campuses are located in close proximity to existing transit stops that promote alternative transportation methods. As such, the proposed project is not anticipated to exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP for the second criterion.

Based on the above, the proposed project will not result in an inconsistency with the SCAQMD AQMP. Therefore, a less than significant impact will occur in relation to implementation of the AQMP.

Level of Significance

Less than significant impact.

9.3 Cumulative Net Increase in Non-Attainment Pollution

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. The following section calculates the potential air emissions associated with the construction and operations of the proposed project and compares the emissions to the SCAQMD standards.

Construction Emissions

The timing of certain projects will be dependent on the completion of other projects and will ultimately occur over the different phases. In order to provide a conservative analysis, it was assumed that all proposed construction activities on each campus would occur at one time. The phases of construction activities that have been analyzed for each campus includes: 1) Demolition, 2) Grading, 3) Building construction, 4) Paving, and 5) Application of architectural coatings. The construction emissions have been analyzed for both regional and local air quality impacts.

Construction-Related Regional Impacts

The CalEEMod model has been utilized to calculate the construction-related regional emissions from the proposed project and the input parameters utilized in this analysis have been detailed in Section 7.1. The worst-case summer or winter daily construction-related criteria pollutant emissions from the proposed project for each phase of construction activities are shown below in Table J and Table K shows the maximum daily construction-related criteria pollutants by construction year. The CalEEMod printouts for the Verdugo Campus are shown in Appendix A, the Garfield Campus are shown in Appendix B, and the Montrose Campus are shown in Appendix C.

Table J – Construction-Related Regional Criteria Pollutant Emissions by Construction Phase

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Verdugo Campus Improvements						
Demolition[1]	3.59	42.85	24.93	0.07	6.35	2.31
Grading[1]	4.30	47.05	31.84	0.06	6.15	3.52
Building Construction	3.14	26.39	29.61	0.09	4.46	1.77
Paving	0.12	0.08	1.03	0.00	0.74	0.57
Architectural Coatings	60.51	1.55	3.78	0.01	0.68	0.24
Verdugo Campus Max Daily Emissions	**60.51**	**47.05**	**31.84**	**0.09**	**6.35**	**3.52**
Garfield Campus Improvements						
Demolition[1]	2.44	25.02	21.35	0.05	3.35	1.35
Grading[1]	1.79	18.39	15.39	0.03	3.93	2.29
Building Construction	1.92	16.45	19.19	0.04	1.65	0.92
Paving	1.31	8.32	12.86	0.02	0.62	0.43
Architectural Coatings	24.30	1.25	2.26	0.00	0.22	0.10
Garfield Campus Max Daily Emissions	**24.30**	**25.02**	**21.35**	**0.05**	**3.93**	**2.29**
Montrose Campus Improvements						
Demolition[1]	1.81	18.52	14.91	0.03	1.62	0.94

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading[1]	1.13	12.58	6.38	0.01	1.09	1.07
Building Construction	1.85	13.89	14.37	0.03	1.08	0.70
Paving	0.75	6.81	9.29	0.01	0.50	0.36
Architectural Coatings	19.01	1.43	2.07	0.00	0.16	0.10
Montrose Campus Max Daily Emissions	**19.01**	**18.52**	**14.91**	**0.03**	**1.62**	**1.07**
SCQAMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Threshold?	No	No	No	No	No	No

Notes:
[1] Demolition and Grading based on adherence to fugitive dust suppression requirements from SCAQMD Rule 403.
Source: CalEEMod Version 2016.3.2.

Table K – Construction-Related Regional Criteria Pollutant Emissions by Construction Year

Construction Year	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Verdugo Campus Improvements						
2021	4.31	47.05	31.84	0.08	6.35	3.52
2022	3.20	25.88	28.65	0.08	4.46	1.77
2023	60.51	10.23	15.10	0.02	0.68	0.52
Verdugo Campus Max Daily Emissions	**60.51**	**47.05**	**31.84**	**0.08**	**6.35**	**3.52**
Garfield Campus Improvements						
2023	2.45	25.02	21.35	0.06	3.93	2.29
2024	24.30	8.32	12.86	0.02	0.62	0.43
Garfield Campus Max Daily Emissions	**24.30**	**25.02**	**21.35**	**0.06**	**3.93**	**2.29**
Montrose Campus Improvements						
2022	19.01	18.52	14.91	0.03	1.63	0.94
Montrose Campus Max Daily Emissions	**19.01**	**18.52**	**14.91**	**0.03**	**1.63**	**0.94**
Combined Emissions from All Three Campuses						
2021	4.31	47.05	31.84	0.08	6.35	3.52
2022	22.20	44.40	43.56	0.11	6.09	2.71
2023	62.95	35.25	36.45	0.08	4.61	2.80
2024	24.30	8.32	12.86	0.02	0.62	0.43
Combined Max Daily Emissions	**62.95**	**47.05**	**43.56**	**0.11**	**6.35**	**3.52**
SCQAMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Threshold?	No	No	No	No	No	No

Notes:
[1] Demolition and Grading based on adherence to fugitive dust suppression requirements from SCAQMD Rule 403.
Source: CalEEMod Version 2016.3.2.

Table J shows that none of the analyzed criteria pollutants would exceed the SCAQMD's regional emissions thresholds during either the demolition, grading, building construction, paving or architectural coatings phases for each campus. Table K shows that the combined construction activities from all three campuses would not exceed the SCAQMD's regional emission thresholds. It should be noted that Table K represents a worst-case scenario, where all proposed improvements are completed concurrently. Since the timing of certain projects will be dependent on the completion of other projects as well as available

funding for the improvements, it is likely that the proposed construction activities will be more spread out than what was analyzed, which would lower the actual daily emissions than what is shown above. Therefore, a less than significant regional air quality impact would occur from construction of the proposed project.

Construction-Related Local Impacts

Construction-related air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin.

The local air quality emissions from construction were analyzed through utilizing the methodology described in *Localized Significance Threshold Methodology* (LST Methodology), prepared by SCAQMD, revised October 2009. The LST Methodology found the primary criteria pollutant emissions of concern are NOx, CO, PM10, and PM2.5. In order to determine if any of these pollutants require a detailed analysis of the local air quality impacts, each phase of construction was screened using the SCAQMD's Mass Rate LST Look-up Tables. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily onsite emissions of CO, NOx, PM10, and PM2.5 from the proposed project could result in a significant impact to the local air quality. Since construction-related local impacts are specific to each of the three campuses, each campus has been analyzed separately below.

Verdugo Campus

The onsite emissions from the different construction phases for the Verdugo Campus is shown in Table L. The calculated localized emissions thresholds for each campus have been detailed above in Section 8.2.

Table L – Construction-Related Local Criteria Pollutant Emissions for the Verdugo Campus

Phase	Pollutant Emissions (pounds/day)			
	NOx	**CO**	**PM10**	**PM2.5**
Demolition[1]	31.44	21.57	5.42	2.03
Grading[1]	46.40	30.88	5.89	3.44
Building Construction	15.61	16.36	0.81	0.76
Paving	0.04	0.56	0.57	0.52
Architectural Coatings	1.41	1.81	0.08	0.08
Maximum Daily Construction Emissions	**46.40**	**30.88**	**5.89**	**3.44**
SCAQMD Local Construction Thresholds[2]	**172**	**1,434**	**14**	**8**
Exceeds Threshold?	No	No	No	No

Notes:
[1] Demolition and Grading based on adherence to fugitive dust suppression requirements from SCAQMD Rule 403.
[2] The nearest sensitive receptors to the Verdugo Campus are multi-family homes located adjacent to the north side of the Campus. According to SCAQMD Methodology, all receptors closer than 25 meters are based on the 25-meter threshold.
Source: Calculated from SCAQMD's Mass Rate Look-up Tables for five acres in Air Monitoring Area 7, East San Fernando Valley.

The data provided in Table L shows that none of the analyzed criteria pollutants would exceed the local emissions thresholds during either the demolition, grading, building construction, paving, or architectural coatings phases for the Verdugo Campus. Therefore, a less than significant local air quality impact would occur from the proposed construction activities at the Verdugo Campus.

Garfield Campus

The onsite emissions from the different construction phases for the Garfield Campus is shown in Table M. The calculated localized emissions thresholds for each campus have been detailed above in Section 8.2.

Table M – Construction-Related Local Criteria Pollutant Emissions for the Garfield Campus

Phase	Pollutant Emissions (pounds/day)			
	NOx	CO	PM10	PM2.5
Demolition[1]	21.48	19.64	2.81	1.20
Grading[1]	17.94	14.75	3.72	2.23
Building Construction	14.38	16.24	0.70	0.66
Paving	8.27	12.22	0.40	0.37
Architectural Coatings	1.22	1.81	0.06	0.06
Maximum Daily Construction Emissions	**21.48**	**19.64**	**3.72**	**2.23**
SCAQMD Local Construction Thresholds[2]	**153**	**1,218**	**12**	**7**
Exceeds Threshold?	No	No	No	No

Notes:
[1] Demolition and Grading based on adherence to fugitive dust suppression requirements from SCAQMD Rule 403.
[2] The nearest sensitive receptors to the Garfield Campus are single-family homes located as near as 60 feet (18 meters) west and south of the Campus. According to SCAQMD Methodology, all receptors closer than 25 meters are based on the 25-meter threshold. The Garfield Campus is based on the on the 4-acre threshold that was interpolated between the 2-acre and 5-acre thresholds.
Source: Calculated from SCAQMD's Mass Rate Look-up Table for Air Monitoring Area 7, East San Fernando Valley.

The data provided in Table M shows that none of the analyzed criteria pollutants would exceed the local emissions thresholds during either the demolition, grading, building construction, paving, or architectural coatings phases for the Garfield Campus. Therefore, a less than significant local air quality impact would occur from the proposed construction activities at the Garfield Campus.

Montrose Campus

The onsite emissions from the different construction phases for the Montrose Campus is shown in Table N. The calculated localized emissions thresholds for each campus have been detailed above in Section 8.2.

Table N – Construction-Related Local Criteria Pollutant Emissions for the Montrose Campus

Phase	Pollutant Emissions (pounds/day)			
	NOx	CO	PM10	PM2.5
Demolition[1]	16.62	13.96	1.34	0.86
Grading[1]	12.00	5.94	0.96	0.70
Building Construction	12.50	12.73	0.59	0.57
Paving	6.77	8.81	0.35	0.32
Architectural Coatings	1.41	1.81	0.08	0.08
Maximum Daily Construction Emissions	**16.62**	**13.96**	**1.34**	**0.86**
SCAQMD Local Construction Thresholds[2]	**114**	**786**	**7**	**4**
Exceeds Threshold?	No	No	No	No

Notes:
[1] Demolition and Grading based on adherence to fugitive dust suppression requirements from SCAQMD Rule 403.
[2] The nearest sensitive receptors to the Montrose Campus are single-family homes located adjacent to the south side of the Campus. According to SCAQMD Methodology, all receptors closer than 25 meters are based on the 25-meter threshold.
Source: Calculated from SCAQMD's Mass Rate Look-up Tables for two acres in Air Monitoring Area 7, East San Fernando Valley.

The data provided in Table N shows that none of the analyzed criteria pollutants would exceed the local emissions thresholds during either the demolition, grading, building construction, paving, or architectural coatings phases for the Montrose Campus. Therefore, a less than significant local air quality impact would occur from the proposed construction activities at the Montrose Campus.

Operational Emissions

The on-going operation of the proposed project would result in a long-term increase in air quality emissions. This increase would be due to emissions from the project-generated vehicle trips, emissions from onsite area sources and emissions from energy usage created from the on-going use of the proposed project. The following section provides an analysis of potential long-term air quality impacts due to regional air quality and local air quality impacts with the on-going operations of the proposed project.

Operations-Related Regional Criteria Pollutant Analysis

The operations-related regional criteria air quality impacts created by the proposed project have been analyzed through use of the CalEEMod model and the input parameters utilized in this analysis have been detailed in Section 7.1. The worst-case summer or winter VOC, NOx, CO, SO_2, PM10, and PM2.5 daily emissions created from the proposed project's long-term operations have been calculated and are summarized below in Table O and the CalEEMod emissions printouts are shown in Appendix A.

Table O – Operational Regional Criteria Pollutant Emissions

	Pollutant Emissions (pounds/day)					
Activity	**VOC**	**NOx**	**CO**	**SO_2**	**PM10**	**PM2.5**
Verdugo Campus						
Area Sources[1]	6.44	0.00	0.10	0.00	0.00	0.00
Energy Usage[2]	0.23	2.05	1.72	0.01	0.16	0.16
Mobile Sources[3]	0.00	0.00	0.00	0.00	0.00	0.00
Garfield Campus						
Area Sources[1]	1.02	0.00	0.03	0.00	0.00	0.00
Energy Usage[2]	0.03	0.31	0.26	0.00	0.02	0.02
Mobile Sources[3]	0.00	0.00	0.00	0.00	0.00	0.00
Montrose Campus						
Area Sources[1]	0.90	0.00	0.11	0.00	0.00	0.00
Energy Usage[2]	0.03	0.28	0.24	0.00	0.02	0.02
Mobile Sources[3]	1.45	6.25	16.52	0.06	5.65	1.54
Total Emissions (All Campuses)	**10.10**	**8.89**	**18.98**	**0.07**	**5.85**	**1.74**
SCQAMD Operational Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	No	No	No	No	No	No

Notes:
[1] Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.
[2] Energy usage consist of emissions from natural gas usage.
[3] Mobile sources consist of emissions from vehicles and road dust. It should be noted that the Verdugo Campus and Garfield Campus are not anticipated to generate any additional vehicle trips from implementation of the proposed project.
Source: Calculated from CalEEMod Version 2016.3.2 and CAPCOA, 1997.

The data provided in Table O below shows that for the total regional emissions from the three campuses that none of the analyzed criteria pollutants would exceed the regional emissions thresholds. Therefore, a less than significant regional air quality impact would occur from operation of the proposed project.

Operations-Related Local Air Quality Impacts

Project-related air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin. The proposed project has been analyzed for the potential local CO emission impacts from the project-generated vehicular trips and from the potential local air quality impacts from on-site operations. The following analyzes the vehicular CO emissions and local impacts from on-site operations.

Local CO Hotspot Impacts from Project-Generated Vehicular Trips

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with project CO levels to the State and Federal CO standards of 20 ppm over one hour or 9 ppm over eight hours.

At the time of the 1993 Handbook, the Air Basin was designated nonattainment under the CAAQS and NAAQS for CO. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the Air Basin and in the state have steadily declined. In 2007, the Air Basin was designated in attainment for CO under both the CAAQS and NAAQS. SCAQMD conducted a CO hot spot analysis for attainment at the busiest intersections in Los Angeles[4] during the peak morning and afternoon periods and did not predict a violation of CO standards. Since the nearby intersections to the proposed project are much smaller with less traffic than what was analyzed by the SCAQMD, no local CO Hotspot are anticipated to be created from the proposed project and no CO Hotspot modeling was performed. Therefore, a less than significant long-term air quality impact is anticipated to local air quality with the on-going use of the proposed project.

Local Criteria Pollutant Impacts from Onsite Operations

Project-related air emissions from onsite sources such as architectural coatings, landscaping equipment, and onsite usage of natural gas appliances may have the potential to create emissions areas that exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin.

The local air quality emissions from onsite operations were analyzed using the SCAQMD's Mass Rate LST Look-up Tables and the methodology described in LST Methodology. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NOx, PM10, and PM2.5 from the proposed project could result in a significant impact to the local air quality. Since operations-related

[4] The four intersections analyzed by the SCAQMD were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning and LOS F in the evening peak hour.

local impacts are specific to each of the three campuses, each campus has been analyzed separately below.

Verdugo Campus

The onsite emissions from the operations of the proposed improvements for the Verdugo Campus is shown in Table P. Table P shows the onsite emissions from the CalEEMod model that includes area sources, energy usage, and vehicles operating in the immediate vicinity of the project site and the calculated emissions thresholds.

Table P – Operations-Related Local Criteria Pollutant Emissions for the Verdugo Campus

Onsite Emission Source	Pollutant Emissions (pounds/day)			
	NOx	CO	PM10	PM2.5
Area Sources	0.00	0.10	0.00	0.00
Energy Usage	2.05	1.72	0.16	0.16
Mobile Sources	0.00	0.00	0.00	0.00
Total Emissions	**2.05**	**1.82**	**0.16**	**0.16**
SCAQMD Thresholds[1]	**172**	**1,434**	**4**	**2**
Exceeds Threshold?	No	No	No	No

Notes:
[1] The nearest sensitive receptors to the Verdugo Campus are multi-family homes located adjacent to the north side of the Campus. According to SCAQMD Methodology, all receptors closer than 25 meters are based on the 25-meter threshold.
Source: Calculated from SCAQMD's Mass Rate Look-up Tables for five acres in Air Monitoring Area 7, East San Fernando Valley.

The data provided in Table P shows that the on-going operations of the proposed improvements at the Verdugo Campus would not exceed the local NOx, CO, PM10 and PM2.5 thresholds of significance discussed above in Section 8.2. Therefore, the on-going operations of the proposed improvements to the Verdugo Campus would create a less than significant operations-related impact to local air quality due to onsite emissions.

Garfield Campus

The onsite emissions from the operations of the proposed improvements for the Garfield Campus is shown in Table Q. Table Q shows the onsite emissions from the CalEEMod model that includes area sources, energy usage, and vehicles operating in the immediate vicinity of the project site and the calculated emissions thresholds.

Table Q – Operations-Related Local Criteria Pollutant Emissions for the Garfield Campus

Onsite Emission Source	Pollutant Emissions (pounds/day)			
	NOx	CO	PM10	PM2.5
Area Sources	0.00	0.03	0.00	0.00
Energy Usage	0.31	0.26	0.02	0.02
Mobile Sources	0.00	0.00	0.00	0.00
Total Emissions	**0.31**	**0.29**	**0.02**	**0.02**
SCAQMD Thresholds[1]	**153**	**1,218**	**3**	**2**
Exceeds Threshold?	No	No	No	No

Notes:

[1] The nearest sensitive receptors to the Garfield Campus are single-family homes located as near as 60 feet (18 meters) west and south of the Campus. According to SCAQMD Methodology, all receptors closer than 25 meters are based on the 25-meter threshold. The Garfield Campus is based on the on the 4-acre threshold that was interpolated between the 2-acre and 5-acre thresholds
Source: Calculated from SCAQMD's Mass Rate Look-up Tables for Air Monitoring Area 7, East San Fernando Valley.

The data provided in Table Q shows that the on-going operations of the proposed improvements at the Garfield Campus would not exceed the local NOx, CO, PM10 and PM2.5 thresholds of significance discussed above in Section 8.2. Therefore, the on-going operations of the proposed improvements to the Garfield Campus would create a less than significant operations-related impact to local air quality due to onsite emissions.

Montrose Campus

The onsite emissions from the operations of the proposed improvements for the Montrose Campus is shown in Table R. Table R shows the onsite emissions from the CalEEMod model that includes area sources, energy usage, and vehicles operating in the immediate vicinity of the project site and the calculated emissions thresholds.

Table R – Operations-Related Local Criteria Pollutant Emissions for the Montrose Campus

Onsite Emission Source	Pollutant Emissions (pounds/day)			
	NOx	CO	PM10	PM2.5
Area Sources	0.00	0.11	0.00	0.00
Energy Usage	0.28	0.24	0.02	0.02
Mobile Sources[1]	0.78	2.07	0.71	0.19
Total Emissions	**1.06**	**2.42**	**0.73**	**0.21**
SCAQMD Thresholds[2]	**114**	**786**	**2**	**1**
Exceeds Threshold?	No	No	No	No

Notes:
[1] Mobile source emissions based on 1/8 of the gross vehicular emissions, which is the estimated portion of vehicle emissions occurring within a quarter mile of the Campus.
[2] The nearest sensitive receptors to the Montrose Campus are single-family homes located adjacent to the south side of the Campus. According to SCAQMD Methodology, all receptors closer than 25 meters are based on the 25-meter threshold.
Source: Calculated from SCAQMD's Mass Rate Look-up Tables for two acres in Air Monitoring Area 7, East San Fernando Valley.

The data provided in Table R shows that the on-going operations of the proposed improvements at the Montrose Campus would not exceed the local NOx, CO, PM10 and PM2.5 thresholds of significance discussed above in Section 8.2. Therefore, the on-going operations of the proposed improvements to the Montrose Campus would create a less than significant operations-related impact to local air quality due to onsite emissions.

Therefore, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant.

Level of Significance

Less than significant impact.

9.4 Sensitive Receptors

The proposed project would not expose sensitive receptors to substantial pollutant concentrations. The local concentrations of criteria pollutant emissions produced in the nearby vicinity of the proposed

project, which may expose sensitive receptors to substantial concentrations have been calculated above in Section 9.3 for both construction and operations, which are discussed separately below. The discussion below also includes an analysis of the potential impacts from toxic air contaminant emissions. The nearest sensitive receptors to the Verdugo Campus are multi-family homes located adjacent to the north side of the Campus. The nearest sensitive receptors to the Garfield Campus are single-family homes located as near as 60 feet west and south of the Campus. The nearest sensitive receptors to the Montrose Campus are single-family homes located adjacent to the south side of the Campus.

Construction-Related Sensitive Receptor Impacts

Construction activities may expose sensitive receptors to substantial pollutant concentrations of localized criteria pollutant concentrations and from toxic air contaminant emissions created from onsite construction equipment, which are described below.

Local Criteria Pollutant Impacts from Construction

The local air quality impacts from construction of the proposed project has been analyzed above in Section 8.3 and found that the construction of the proposed project would not exceed the local NOx, CO, PM10 and PM2.5 thresholds of significance discussed above in Section 8.2. Therefore, construction of the proposed project would create a less than significant construction-related impact to local air quality and no mitigation would be required.

Toxic Air Contaminants Impacts from Construction

The greatest potential for toxic air contaminant emissions would be related to diesel particulate matter (DPM) emissions associated with heavy equipment operations during construction of the proposed project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of “individual cancer risk”. “Individual Cancer Risk” is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. It should be noted that the most current cancer risk assessment methodology recommends analyzing a 30 year exposure period for the nearby sensitive receptors (OEHHA, 2015).

Given the relatively limited number of heavy-duty construction equipment, the varying distances that construction equipment would operate to the nearby sensitive receptors, and the short-term construction schedule, the proposed project would not result in a long-term (i.e., 30 or 70 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. In addition, California Code of Regulations Title 13, Article 4.8, Chapter 9, Section 2449 regulates emissions from off-road diesel equipment in California. This regulation limits idling of equipment to no more than five minutes, requires equipment operators to label each piece of equipment and provide annual reports to CARB of their fleet’s usage and emissions. This regulation also requires systematic upgrading of the emission Tier level of each fleet, and currently no commercial operator is allowed to purchase Tier 0 or Tier 1 equipment and by January 2023 no commercial operator is allowed to purchase Tier 2 equipment. In addition to the purchase restrictions, equipment operators need to meet fleet average emissions targets that become more stringent each year between years 2014 and 2023. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed project. As such, construction of the proposed project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations.

Operations-Related Sensitive Receptor Impacts

The on-going operations of the proposed project may expose sensitive receptors to substantial pollutant concentrations of local CO emission impacts from the project-generated vehicular trips and from the potential local air quality impacts from onsite operations. The following analyzes the vehicular CO emissions. Local criteria pollutant impacts from onsite operations, and toxic air contaminant impacts.

Local CO Hotspot Impacts from Project-Generated Vehicle Trips

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential impacts to sensitive receptors. The analysis provided above in Section 9.3 shows that no local CO Hotspots are anticipated to be created at any nearby intersections from the vehicle traffic generated by the proposed project. Therefore, operation of the proposed project would result in a less than significant exposure of offsite sensitive receptors to substantial pollutant concentrations.

Local Criteria Pollutant Impacts from Onsite Operations

The local air quality impacts from the operation of the proposed project would occur from onsite sources such as architectural coatings, landscaping equipment, and onsite usage of natural gas appliances. The analysis provided above in Section 9.3 found that the operation of the proposed project would not exceed the local NOx, CO, PM10 and PM2.5 thresholds of significance discussed above in Section 8.2. Therefore, the on-going operations of the proposed project would create a less than significant operations-related impact to local air quality due to on-site emissions and no mitigation would be required.

Operations-Related Toxic Air Contaminant Impacts

Particulate matter (PM) from diesel exhaust is the predominant TAC in most areas and according to *The California Almanac of Emissions and Air Quality 2013 Edition*, prepared by CARB, about 80 percent of the outdoor TAC cancer risk is from diesel exhaust. Some chemicals in diesel exhaust, such as benzene and formaldehyde have been listed as carcinogens by State Proposition 65 and the Federal Hazardous Air Pollutants program. Due to the nominal number of diesel truck trips generated by the Proposed Project, a less than significant TAC impact would occur during the on-going operations of the Proposed Project and no mitigation would be required

Therefore, operation of the proposed project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations.

Level of Significance

Less than significant impact.

9.5 Odor Emissions Adversely Affecting a Substantial Number of People

The proposed project would not create objectionable odors affecting a substantial number of people. Individual responses to odors are highly variable and can result in a variety of effects. Generally, the impact of an odor results from a variety of factors such as frequency, duration, offensiveness, location, and sensory perception. The frequency is a measure of how often an individual is exposed to an odor in the ambient environment. The intensity refers to an individual's or group's perception of the odor strength or concentration. The duration of an odor refers to the elapsed time over which an odor is

experienced. The offensiveness of the odor is the subjective rating of the pleasantness or unpleasantness of an odor. The location accounts for the type of area in which a potentially affected person lives, works, or visits; the type of activity in which he or she is engaged; and the sensitivity of the impacted receptor.

Sensory perception has four major components: detectability, intensity, character, and hedonic tone. The detection (or threshold) of an odor is based on a panel of responses to the odor. There are two types of thresholds: the odor detection threshold and the recognition threshold. The detection threshold is the lowest concentration of an odor that will elicit a response in a percentage of the people that live and work in the immediate vicinity of the project site and is typically presented as the mean (or 50 percent of the population). The recognition threshold is the minimum concentration that is recognized as having a characteristic odor quality, this is typically represented by recognition by 50 percent of the population. The intensity refers to the perceived strength of the odor. The odor character is what the substance smells like. The hedonic tone is a judgment of the pleasantness or unpleasantness of the odor. The hedonic tone varies in subjective experience, frequency, odor character, odor intensity, and duration. Potential odor impacts have been analyzed separately for construction and operations below.

Construction-Related Odor Impacts

Potential sources that may emit odors during construction activities include the application of coatings such as asphalt pavement, paints and solvents and from emissions from diesel equipment. Standard construction requirements that limit the time of day when construction may occur as well as SCAQMD Rule 1108 that limits VOC content in asphalt and Rule 1113 that limits the VOC content in paints and solvents would minimize odor impacts from construction. As such, the objectionable odors that may be produced during the construction process would be temporary and would not likely be noticeable for extended periods of time beyond the project site's boundaries. Through compliance with the applicable regulations that reduce odors and due to the transitory nature of construction odors, a less than significant odor impact would occur and no mitigation would be required.

Operations-Related Odor Impacts

The implementation of the proposed project would include development of institutional junior college land uses. Potential sources that may emit odors during the on-going operations of the Proposed Project would primarily occur from odor emissions from the trash storage area and from vehicle emissions. Pursuant to City regulations, permanent trash enclosures that protect trash bins from rain as well as limit air circulation would be required for the trash storage areas. Perceptible odors may also be emitted from substances from other on campus activities such as laboratory uses and combustion of fuels. However, the nominal amount of these substances would not result in a significant odor impact. Due to the distance of the nearest receptors from the project site and through compliance with City trash storage regulations, no significant impact related to odors would occur during the on-going operations of the Proposed Project. Therefore, a less than significant odor impact would occur and no mitigation would be required.

Level of Significance

Less than significant impact.

9.6 Generation of Greenhouse Gas Emissions

The proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment and would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing GHG emissions. The proposed project quantifies

planning data to forecast projected space needs that are aligned with GCCD's educational planning for existing and future programs. The Master Plan Update recommends site and facilities improvements for the three GCCD campuses: the Verdugo Campus, the Garfield Campus, and the Montrose Campus. The proposed project is anticipated to generate GHG emissions from area sources, energy usage, mobile sources, waste disposal, water usage, and construction equipment. Each campuses GHG emissions have been calculated with the CalEEMod model based on the construction and operational parameters detailed above in Section 7.1. A summary of the results is shown below in Table S. The CalEEMod printouts for the Verdugo Campus are shown in Appendix A, the Garfield Campus are shown in Appendix B, and the Montrose Campus are shown in Appendix C.

Table S – Project Related Greenhouse Gas Annual Emissions

	Greenhouse Gas Emissions (Metric Tons per Year)			
Category	**CO_2**	**CH_4**	**N_2O**	**CO_2e**
	Verdugo Campus			
Area Sources[1]	0.02	0.00	0.00	0.02
Energy Usage[2]	975.29	0.02	0.01	979.14
Mobile Sources[3]	0.00	0.00	0.00	0.00
Solid Waste[4]	37.12	2.19	0.00	91.95
Water and Wastewater[5]	86.24	0.38	0.01	98.60
Construction[6]	54.06	0.01	0.00	54.23
Total Verdugo Campus GHG Emissions	**1,152.73**	**2.60**	**0.02**	**1,223.94**
	Garfield Campus			
Area Sources[1]	0.01	0.00	0.00	0.01
Energy Usage[2]	152.84	0.00	0.00	153.44
Mobile Sources[3]	0.00	0.00	0.00	0.00
Solid Waste[4]	5.68	0.34	0.00	14.09
Water and Wastewater[5]	13.21	0.06	0.00	15.10
Construction[6]	16.48	0.00	0.00	16.56
Total Garfield Campus GHG Emissions	**188.22**	**0.40**	**0.00**	**199.20**
	Montrose Campus			
Area Sources[1]	0.03	0.00	0.00	0.03
Energy Usage[2]	144.60	0.00	0.00	145.16
Mobile Sources[3]	812.87	0.04	0.00	813.85
Solid Waste[4]	18.52	1.09	0.00	45.89
Water and Wastewater[5]	13.38	0.06	0.00	15.30
Construction[6]	5.07	0.00	0.00	5.09
Total Montrose Campus GHG Emissions	**994.47**	**1.19**	**0.00**	**1,025.32**
Total GHG Emissions (All Campuses)	**2,335.42**	**4.19**	**0.02**	**2,448.46**
SCAQMD Draft Threshold of Significance				**3,000**
Exceed Threshold?				No

Notes:
[1] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscaping equipment.
[2] Energy usage consists of GHG emissions from electricity and natural gas usage.
[3] Mobile sources consist of GHG emissions from vehicles. It should be noted that the Verdugo Campus and Garfield Campus are not anticipated to generate any additional vehicle trips from implementation of the proposed project.
[4] Waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.
[5] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.
[6] Construction emissions amortized over 30 years as recommended in the SCAQMD GHG Working Group on November 19, 2009.
Source: CalEEMod Version 2016.3.2.

The data provided in Table S shows that implementation of the proposed improvements on the three campuses would create 2,448.46 $MTCO_2e$ per year. According to the SCAQMD draft threshold of significance detailed above in Section 8.6, a cumulative global climate change impact would occur if the GHG emissions created from the on-going operations would exceed 3,000 $MTCO_2e$ per year. Therefore, a less than significant generation of greenhouse gas emissions would occur from development of the proposed project. Impacts would be less than significant.

Level of Significance

Less than significant impact.

9.7 Greenhouse Gas Plan Consistency

The proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing GHG emissions. The applicable plan for the proposed project is the Greener Glendale Plan. The Greener Glendale Plan includes goals, strategies, and recommendations to achieve sustainability that are expected to have quantifiable GHG reduction results, which reflect a list of community priorities that account for both the GHG reduction potential and implementation feasibility, however the measures are primarily directed toward activities for the City to implement and not directed to new development projects. The three campuses are located in close proximity to existing bus stops, which will promote alternative transportation modes and all new and renovated structures would be required to meet the most current Title 24 Part 6 Building Energy Efficiency standards and the Title 24 Part 10 CalGreen standards, which will reduce building energy usage. Therefore, the proposed project would be in compliance with the Greener Glendale Plan and as detailed in Section 9.8 would be in compliance with the SCAQMD's GHG emissions thresholds. As such, the proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. Impacts would be less than significant.

Level of Significance

Less than significant impact.

10.0 REFERENCES

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APPENDIX A

Verdugo Campus Improvements CalEEMod Model Printouts

Glendale Communit College District Facilities Master Plan Verdugo Campus

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	281.30	1000sqft	6.46	281,296.00	0
Other Non-Asphalt Surfaces	2.00	Acre	2.00	87,120.00	0
Parking Lot	650.00	Space	5.85	260,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2025
Utility Company	Glendale Water & Power				
CO2 Intensity (lb/MWhr)	1115.33	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Renovation of 228,853 sq ft and 52,443 sq ft of new construction = total of 281,296 sq ft

Construction Phase - Construction schedule provided by applicant

Trips and VMT - 6 vendor trucks added to Demolition and Grading to account for water truck emissions

Demolition - 170387 sq ft of building space = 7,838 tons + 4 acres of paved area = 4,211 tons = Total of 12,049 tons of debris

Vehicle Trips - No new trips would be generated by Project

Construction Off-road Equipment Mitigation - Water Exposed Area 2x per day selected to account for SCAQMD Rule 403 minimum requirements

Energy Mitigation - Per 2019 Title 24 requirements a 30% improvement to lighting energy was selected

Water Mitigation - Install low flow faucets and use water efficient irrigation selected to account for Title 24 Part 11 requirements

Waste Mitigation - 50% reduction in solid waste selected to account for AB 341

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	300.00	375.00
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	20.00	45.00
tblLandUse	LandUseSquareFeet	281,300.00	281,296.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	WD_TR	27.49	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					
2021	4.2951	47.0413	31.8363	0.0836	9.4948	1.9883	11.0814	3.6669	1.8293	5.4962	0.0000	8,390.9868	8,390.9868	1.9592	0.0000	8,412.7717
2022	3.0601	25.8283	28.6473	0.0823	3.6103	0.8500	4.4603	0.9725	0.7995	1.7720	0.0000	8,261.5388	8,261.5388	0.8531	0.0000	8,282.8653
2023	60.4837	10.2278	15.0975	0.0244	0.5924	0.5115	0.6791	0.1571	0.4706	0.5150	0.0000	2,366.3564	2,366.3564	0.7181	0.0000	2,384.3084
Maximum	**60.4837**	**47.0413**	**31.8363**	**0.0836**	**9.4948**	**1.9883**	**11.0814**	**3.6669**	**1.8293**	**5.4962**	**0.0000**	**8,390.9868**	**8,390.9868**	**1.9592**	**0.0000**	**8,412.7717**

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	4.2951	47.0413	31.8363	0.0836	4.7678	1.9883	6.3544	1.6888	1.8293	3.5181	0.0000	8,390.9868	8,390.9868	1.9592	0.0000	8,412.7717
2022	3.0601	25.8283	28.6473	0.0823	3.6103	0.8500	4.4603	0.9725	0.7995	1.7720	0.0000	8,261.5388	8,261.5388	0.8531	0.0000	8,282.8653
2023	60.4837	10.2278	15.0975	0.0244	0.5924	0.5115	0.6791	0.1571	0.4706	0.5150	0.0000	2,366.3564	2,366.3564	0.7181	0.0000	2,384.3084
Maximum	**60.4837**	**47.0413**	**31.8363**	**0.0836**	**4.7678**	**1.9883**	**6.3544**	**1.6888**	**1.8293**	**3.5181**	**0.0000**	**8,390.9868**	**8,390.9868**	**1.9592**	**0.0000**	**8,412.7717**

Glendale Communit College District Facilities Master Plan Verdugo Campus - 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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**34.51**	**0.00**	**29.14**	**41.24**	**0.00**	**25.41**	**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	6.4422	8.6000e-004	0.0950	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.2043	0.2043	5.3000e-004		0.2175
Energy	0.2251	2.0461	1.7187	0.0123		0.1555	0.1555		0.1555	0.1555		2,455.2766	2,455.2766	0.0471	0.0450	2,469.8671
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**6.6673**	**2.0469**	**1.8137**	**0.0123**	**0.0000**	**0.1558**	**0.1558**	**0.0000**	**0.1558**	**0.1558**		**2,455.4809**	**2,455.4809**	**0.0476**	**0.0450**	**2,470.0846**

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	6.4422	8.6000e-004	0.0950	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.2043	0.2043	5.3000e-004		0.2175
Energy	0.2251	2.0461	1.7187	0.0123		0.1555	0.1555		0.1555	0.1555		2,455.2766	2,455.2766	0.0471	0.0450	2,469.8671
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**6.6673**	**2.0469**	**1.8137**	**0.0123**	**0.0000**	**0.1558**	**0.1558**	**0.0000**	**0.1558**	**0.1558**		**2,455.4809**	**2,455.4809**	**0.0476**	**0.0450**	**2,470.0846**

	ROG	NOx	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	5/1/2021	6/11/2021	5	30	
2	Grading	Grading	6/12/2021	7/23/2021	5	30	
3	Building Construction	Building Construction	7/24/2021	12/31/2022	5	375	
4	Paving	Paving	1/1/2023	2/10/2023	5	30	
5	Architectural Coating	Architectural Coating	2/11/2023	4/14/2023	5	45	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 7.85

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 421,944; Non-Residential Outdoor: 140,648; Striped Parking Area: 20,827 (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	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
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	6	15.00	6.00	1,191.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	264.00	103.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	53.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

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					
Fugitive Dust					8.5946	0.0000	8.5946	1.3013	0.0000	1.3013			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**8.5946**	**1.5513**	**10.1459**	**1.3013**	**1.4411**	**2.7424**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

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	0.3310	10.6493	2.4970	0.0310	0.6942	0.0327	0.7269	0.1903	0.0313	0.2216		3,360.3917	3,360.3917	0.2281		3,366.0929
Vendor	0.0182	0.5825	0.1523	1.5400e-003	0.0384	1.1900e-003	0.0396	0.0111	1.1400e-003	0.0122		164.9284	164.9284	9.7200e-003		165.1713
Worker	0.0643	0.0442	0.6042	1.7100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		170.8155	170.8155	5.0300e-003		170.9413
Total	**0.4136**	**11.2760**	**3.2534**	**0.0342**	**0.9002**	**0.0352**	**0.9355**	**0.2458**	**0.0337**	**0.2795**		**3,696.1356**	**3,696.1356**	**0.2428**		**3,702.2055**

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					3.8676	0.0000	3.8676	0.5856	0.0000	0.5856			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.8676**	**1.5513**	**5.4189**	**0.5856**	**1.4411**	**2.0267**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

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	0.3310	10.6493	2.4970	0.0310	0.6942	0.0327	0.7269	0.1903	0.0313	0.2216		3,360.3917	3,360.3917	0.2281		3,366.0929
Vendor	0.0182	0.5825	0.1523	1.5400e-003	0.0384	1.1900e-003	0.0396	0.0111	1.1400e-003	0.0122		164.9284	164.9284	9.7200e-003		165.1713
Worker	0.0643	0.0442	0.6042	1.7100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		170.8155	170.8155	5.0300e-003		170.9413
Total	**0.4136**	**11.2760**	**3.2534**	**0.0342**	**0.9002**	**0.0352**	**0.9355**	**0.2458**	**0.0337**	**0.2795**		**3,696.1356**	**3,696.1356**	**0.2428**		**3,702.2055**

3.3 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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.3 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	0.0182	0.5825	0.1523	1.5400e-003	0.0384	1.1900e-003	0.0396	0.0111	1.1400e-003	0.0122		164.9284	164.9284	9.7200e-003		165.1713
Worker	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		227.7540	227.7540	6.7100e-003		227.9217
Total	**0.1040**	**0.6415**	**0.9578**	**3.8300e-003**	**0.2620**	**3.0000e-003**	**0.2650**	**0.0704**	**2.8000e-003**	**0.0732**		**392.6824**	**392.6824**	**0.0164**		**393.0930**

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					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**3.9030**	**1.9853**	**5.8883**	**1.6184**	**1.8265**	**3.4449**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.3 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	0.0182	0.5825	0.1523	1.5400e-003	0.0384	1.1900e-003	0.0396	0.0111	1.1400e-003	0.0122		164.9284	164.9284	9.7200e-003		165.1713
Worker	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		227.7540	227.7540	6.7100e-003		227.9217
Total	**0.1040**	**0.6415**	**0.9578**	**3.8300e-003**	**0.2620**	**3.0000e-003**	**0.2650**	**0.0704**	**2.8000e-003**	**0.0732**		**392.6824**	**392.6824**	**0.0164**		**393.0930**

3.4 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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.4 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	0.3131	10.0002	2.6143	0.0265	0.6594	0.0205	0.6799	0.1899	0.0196	0.2094		2,831.2705	2,831.2705	0.1668		2,835.4405
Worker	1.1317	0.7778	10.6332	0.0302	2.9509	0.0238	2.9747	0.7826	0.0220	0.8046		3,006.3524	3,006.3524	0.0886		3,008.5670
Total	**1.4447**	**10.7781**	**13.2476**	**0.0567**	**3.6103**	**0.0443**	**3.6546**	**0.9725**	**0.0415**	**1.0140**		**5,837.6229**	**5,837.6229**	**0.2554**		**5,844.0074**

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.4 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	0.3131	10.0002	2.6143	0.0265	0.6594	0.0205	0.6799	0.1899	0.0196	0.2094		2,831.2705	2,831.2705	0.1668		2,835.4405
Worker	1.1317	0.7778	10.6332	0.0302	2.9509	0.0238	2.9747	0.7826	0.0220	0.8046		3,006.3524	3,006.3524	0.0886		3,008.5670
Total	**1.4447**	**10.7781**	**13.2476**	**0.0567**	**3.6103**	**0.0443**	**3.6546**	**0.9725**	**0.0415**	**1.0140**		**5,837.6229**	**5,837.6229**	**0.2554**		**5,844.0074**

3.4 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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.4 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	0.2938	9.5100	2.4735	0.0262	0.6594	0.0179	0.6773	0.1899	0.0171	0.2070		2,806.6047	2,806.6047	0.1611		2,810.6312
Worker	1.0600	0.7026	9.8103	0.0291	2.9509	0.0231	2.9740	0.7826	0.0213	0.8039		2,900.6005	2,900.6005	0.0801		2,902.6020
Total	**1.3539**	**10.2126**	**12.2839**	**0.0553**	**3.6103**	**0.0410**	**3.6513**	**0.9725**	**0.0384**	**1.0108**		**5,707.2052**	**5,707.2052**	**0.2411**		**5,713.2331**

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.4 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	0.2938	9.5100	2.4735	0.0262	0.6594	0.0179	0.6773	0.1899	0.0171	0.2070		2,806.6047	2,806.6047	0.1611		2,810.6312
Worker	1.0600	0.7026	9.8103	0.0291	2.9509	0.0231	2.9740	0.7826	0.0213	0.8039		2,900.6005	2,900.6005	0.0801		2,902.6020
Total	**1.3539**	**10.2126**	**12.2839**	**0.0553**	**3.6103**	**0.0410**	**3.6513**	**0.9725**	**0.0384**	**1.0108**		**5,707.2052**	**5,707.2052**	**0.2411**		**5,713.2331**

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.5109					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5436**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.5 Paving - 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	0.0000	0.0000	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	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		158.7723	158.7723	4.1000e-003		158.8748
Total	**0.0566**	**0.0361**	**0.5133**	**1.5900e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1700e-003**	**0.0456**		**158.7723**	**158.7723**	**4.1000e-003**		**158.8748**

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.5109					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5436**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.5 Paving - 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	0.0000	0.0000	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	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		158.7723	158.7723	4.1000e-003		158.8748
Total	**0.0566**	**0.0361**	**0.5133**	**1.5900e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1700e-003**	**0.0456**		**158.7723**	**158.7723**	**4.1000e-003**		**158.8748**

3.6 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	60.0922					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	**60.2838**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.6 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	0.0000	0.0000	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	0.1998	0.1276	1.8137	5.6300e-003	0.5924	4.5100e-003	0.5969	0.1571	4.1500e-003	0.1613		560.9955	560.9955	0.0145		561.3577
Total	**0.1998**	**0.1276**	**1.8137**	**5.6300e-003**	**0.5924**	**4.5100e-003**	**0.5969**	**0.1571**	**4.1500e-003**	**0.1613**		**560.9955**	**560.9955**	**0.0145**		**561.3577**

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	60.0922					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	**60.2838**	**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**

3.6 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	0.0000	0.0000	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	0.1998	0.1276	1.8137	5.6300e-003	0.5924	4.5100e-003	0.5969	0.1571	4.1500e-003	0.1613		560.9955	560.9955	0.0145		561.3577
Total	**0.1998**	**0.1276**	**1.8137**	**5.6300e-003**	**0.5924**	**4.5100e-003**	**0.5969**	**0.1571**	**4.1500e-003**	**0.1613**		**560.9955**	**560.9955**	**0.0145**		**561.3577**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Other Non-Asphalt Surfaces	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Parking Lot	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	0.2251	2.0461	1.7187	0.0123		0.1555	0.1555		0.1555	0.1555		2,455.2766	2,455.2766	0.0471	0.0450	2,469.8671
NaturalGas Unmitigated	0.2251	2.0461	1.7187	0.0123		0.1555	0.1555		0.1555	0.1555		2,455.2766	2,455.2766	0.0471	0.0450	2,469.8671

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					
Junior College (2Yr)	20869.9	0.2251	2.0461	1.7187	0.0123		0.1555	0.1555		0.1555	0.1555		2,455.2766	2,455.2766	0.0471	0.0450	2,469.8671
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.2251**	**2.0461**	**1.7187**	**0.0123**		**0.1555**	**0.1555**		**0.1555**	**0.1555**		**2,455.2766**	**2,455.2766**	**0.0471**	**0.0450**	**2,469.8671**

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					
Junior College (2Yr)	20.8699	0.2251	2.0461	1.7187	0.0123		0.1555	0.1555		0.1555	0.1555		2,455.2766	2,455.2766	0.0471	0.0450	2,469.8671
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.2251**	**2.0461**	**1.7187**	**0.0123**		**0.1555**	**0.1555**		**0.1555**	**0.1555**		**2,455.2766**	**2,455.2766**	**0.0471**	**0.0450**	**2,469.8671**

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	6.4422	8.6000e-004	0.0950	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.2043	0.2043	5.3000e-004		0.2175
Unmitigated	6.4422	8.6000e-004	0.0950	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.2043	0.2043	5.3000e-004		0.2175

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	0.7409					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.6926					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.7500e-003	8.6000e-004	0.0950	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.2043	0.2043	5.3000e-004		0.2175
Total	**6.4422**	**8.6000e-004**	**0.0950**	**1.0000e-005**		**3.4000e-004**	**3.4000e-004**		**3.4000e-004**	**3.4000e-004**		**0.2043**	**0.2043**	**5.3000e-004**		**0.2175**

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	0.7409					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.6926					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.7500e-003	8.6000e-004	0.0950	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.2043	0.2043	5.3000e-004		0.2175
Total	**6.4422**	**8.6000e-004**	**0.0950**	**1.0000e-005**		**3.4000e-004**	**3.4000e-004**		**3.4000e-004**	**3.4000e-004**		**0.2043**	**0.2043**	**5.3000e-004**		**0.2175**

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

Glendale Community College District Facilities Master Plan - Garfield Campus

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	43.09	1000sqft	1.00	43,090.00	0
Other Non-Asphalt Surfaces	0.40	Acre	0.40	17,424.00	0
Parking Lot	260.00	Space	2.40	104,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2025
Utility Company	Glendale Water & Power				
CO2 Intensity (lb/MWhr)	1115.33	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Garfield Campus = 3.80 acres total area

Construction Phase -

Trips and VMT - 6 vendor trucks added to Demolition and Grading to account for water truck emissions

Demolition - 36,000 sq ft of building space demolished = 1,656 tons + 2.00 acres of Pavement demolished = 2,105 tons = 3,761 Total tons

Vehicle Trips - No new trips would be generated by Garfield Campus

Construction Off-road Equipment Mitigation - Water Exposed Area 2x per day selected to account for SCAQMD Rule 403 minimum requirements

Energy Mitigation - Per 2019 Title 24 requirements a 30% improvement to lighting energy was selected

Water Mitigation - Install low flow faucets and use water efficient irrigation selected to account for Title 24 Part 11 requirements

Waste Mitigation - 50% reduction in solid waste selected to account for AB 341

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	2/15/2024	2/20/2024
tblConstructionPhase	PhaseEndDate	1/22/2024	1/25/2024
tblConstructionPhase	PhaseStartDate	1/23/2024	1/26/2024
tblConstructionPhase	PhaseStartDate	12/28/2023	1/2/2024
tblLandUse	LotAcreage	0.99	1.00
tblLandUse	LotAcreage	2.34	2.40
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	WD_TR	27.49	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					
2023	2.4450	25.0219	21.3549	0.0552	6.7584	1.0050	7.5351	3.4230	0.9351	4.1376	0.0000	5,515.5440	5,515.5440	1.1628	0.0000	5,544.6132
2024	24.3041	8.3216	12.8015	0.0209	0.2236	0.4003	0.6239	0.0593	0.3700	0.4293	0.0000	1,998.7813	1,998.7813	0.5720	0.0000	2,013.0821
Maximum	**24.3041**	**25.0219**	**21.3549**	**0.0552**	**6.7584**	**1.0050**	**7.5351**	**3.4230**	**0.9351**	**4.1376**	**0.0000**	**5,515.5440**	**5,515.5440**	**1.1628**	**0.0000**	**5,544.6132**

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					
2023	2.4450	25.0219	21.3549	0.0552	3.1546	1.0050	3.9313	1.5709	0.9351	2.2855	0.0000	5,515.5440	5,515.5440	1.1628	0.0000	5,544.6132
2024	24.3041	8.3216	12.8015	0.0209	0.2236	0.4003	0.6239	0.0593	0.3700	0.4293	0.0000	1,998.7813	1,998.7813	0.5720	0.0000	2,013.0821
Maximum	**24.3041**	**25.0219**	**21.3549**	**0.0552**	**3.1546**	**1.0050**	**3.9313**	**1.5709**	**0.9351**	**2.2855**	**0.0000**	**5,515.5440**	**5,515.5440**	**1.1628**	**0.0000**	**5,544.6132**

	ROG	NOx	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**	**51.62**	**0.00**	**44.17**	**53.19**	**0.00**	**40.55**	**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	1.0177	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707
Energy	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0522**	**0.3137**	**0.2942**	**1.8800e-003**	**0.0000**	**0.0239**	**0.0239**	**0.0000**	**0.0239**	**0.0239**		**376.1751**	**376.1751**	**7.3800e-003**	**6.9000e-003**	**378.4145**

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	1.0177	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707
Energy	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0522**	**0.3137**	**0.2942**	**1.8800e-003**	**0.0000**	**0.0239**	**0.0239**	**0.0000**	**0.0239**	**0.0239**		**376.1751**	**376.1751**	**7.3800e-003**	**6.9000e-003**	**378.4145**

	ROG	NOx	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	1/2/2023	1/27/2023	5	20	
2	Grading	Grading	1/28/2023	2/8/2023	5	8	
3	Building Construction	Building Construction	2/9/2023	12/27/2023	5	230	
4	Paving	Paving	1/2/2024	1/25/2024	5	18	
5	Architectural Coating	Architectural Coating	1/26/2024	2/20/2024	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 2.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 64,635; Non-Residential Outdoor: 21,545; Striped Parking Area: 7,285 (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	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	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	6	15.00	6.00	372.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	69.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 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					
Fugitive Dust					4.0241	0.0000	4.0241	0.6093	0.0000	0.6093			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**4.0241**	**0.9975**	**5.0216**	**0.6093**	**0.9280**	**1.5373**		**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

3.2 Demolition - 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	0.0992	3.0791	1.1022	0.0135	0.3253	5.6900e-003	0.3310	0.0892	5.4500e-003	0.0946		1,465.0071	1,465.0071	0.1008		1,467.5259
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	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		149.5081	149.5081	3.8500e-003		149.6043
Total	**0.1759**	**3.5375**	**1.7116**	**0.0164**	**0.5313**	**7.4800e-003**	**0.5388**	**0.1447**	**7.1100e-003**	**0.1518**		**1,768.5600**	**1,768.5600**	**0.1134**		**1,771.3949**

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					1.8108	0.0000	1.8108	0.2742	0.0000	0.2742			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**1.8108**	**0.9975**	**2.8084**	**0.2742**	**0.9280**	**1.2022**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

3.2 Demolition - 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	0.0992	3.0791	1.1022	0.0135	0.3253	5.6900e-003	0.3310	0.0892	5.4500e-003	0.0946		1,465.0071	1,465.0071	0.1008		1,467.5259
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	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		149.5081	149.5081	3.8500e-003		149.6043
Total	**0.1759**	**3.5375**	**1.7116**	**0.0164**	**0.5313**	**7.4800e-003**	**0.5388**	**0.1447**	**7.1100e-003**	**0.1518**		**1,768.5600**	**1,768.5600**	**0.1134**		**1,771.3949**

3.3 Grading - 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					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**6.5523**	**0.7749**	**7.3273**	**3.3675**	**0.7129**	**4.0804**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

3.3 Grading - 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	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		149.5081	149.5081	3.8500e-003		149.6043
Total	**0.0766**	**0.4584**	**0.6094**	**2.9400e-003**	**0.2061**	**1.7900e-003**	**0.2079**	**0.0555**	**1.6600e-003**	**0.0572**		**303.5529**	**303.5529**	**0.0127**		**303.8690**

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					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**2.9486**	**0.7749**	**3.7235**	**1.5154**	**0.7129**	**2.2283**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

3.3 Grading - 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	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		149.5081	149.5081	3.8500e-003		149.6043
Total	**0.0766**	**0.4584**	**0.6094**	**2.9400e-003**	**0.2061**	**1.7900e-003**	**0.2079**	**0.0555**	**1.6600e-003**	**0.0572**		**303.5529**	**303.5529**	**0.0127**		**303.8690**

3.4 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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.4 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	0.0601	1.8829	0.6376	6.4700e-003	0.1729	2.3000e-003	0.1752	0.0498	2.2000e-003	0.0520		693.2015	693.2015	0.0396		694.1911
Worker	0.2911	0.1838	2.1512	6.9000e-003	0.7713	5.8700e-003	0.7771	0.2045	5.4000e-003	0.2099		687.7372	687.7372	0.0177		688.1797
Total	**0.3512**	**2.0668**	**2.7888**	**0.0134**	**0.9441**	**8.1700e-003**	**0.9523**	**0.2543**	**7.6000e-003**	**0.2619**		**1,380.9387**	**1,380.9387**	**0.0573**		**1,382.3707**

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.4 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	0.0601	1.8829	0.6376	6.4700e-003	0.1729	2.3000e-003	0.1752	0.0498	2.2000e-003	0.0520		693.2015	693.2015	0.0396		694.1911
Worker	0.2911	0.1838	2.1512	6.9000e-003	0.7713	5.8700e-003	0.7771	0.2045	5.4000e-003	0.2099		687.7372	687.7372	0.0177		688.1797
Total	**0.3512**	**2.0668**	**2.7888**	**0.0134**	**0.9441**	**8.1700e-003**	**0.9523**	**0.2543**	**7.6000e-003**	**0.2619**		**1,380.9387**	**1,380.9387**	**0.0573**		**1,382.3707**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.3493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2307**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**		**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

3.5 Paving - 2024

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	0.0801	0.0486	0.5805	1.9400e-003	0.2236	1.6800e-003	0.2252	0.0593	1.5400e-003	0.0608		193.1608	193.1608	4.7000e-003		193.2783
Total	**0.0801**	**0.0486**	**0.5805**	**1.9400e-003**	**0.2236**	**1.6800e-003**	**0.2252**	**0.0593**	**1.5400e-003**	**0.0608**		**193.1608**	**193.1608**	**4.7000e-003**		**193.2783**

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	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.3493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2307**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**	**0.0000**	**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

3.5 Paving - 2024

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	0.0801	0.0486	0.5805	1.9400e-003	0.2236	1.6800e-003	0.2252	0.0593	1.5400e-003	0.0608		193.1608	193.1608	4.7000e-003		193.2783
Total	**0.0801**	**0.0486**	**0.5805**	**1.9400e-003**	**0.2236**	**1.6800e-003**	**0.2252**	**0.0593**	**1.5400e-003**	**0.0608**		**193.1608**	**193.1608**	**4.7000e-003**		**193.2783**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	24.0672					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**24.2480**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.6 Architectural Coating - 2024

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	0.0561	0.0340	0.4063	1.3600e-003	0.1565	1.1700e-003	0.1577	0.0415	1.0800e-003	0.0426		135.2125	135.2125	3.2900e-003		135.2948
Total	**0.0561**	**0.0340**	**0.4063**	**1.3600e-003**	**0.1565**	**1.1700e-003**	**0.1577**	**0.0415**	**1.0800e-003**	**0.0426**		**135.2125**	**135.2125**	**3.2900e-003**		**135.2948**

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	24.0672					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**24.2480**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.6 Architectural Coating - 2024

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	0.0561	0.0340	0.4063	1.3600e-003	0.1565	1.1700e-003	0.1577	0.0415	1.0800e-003	0.0426		135.2125	135.2125	3.2900e-003		135.2948
Total	**0.0561**	**0.0340**	**0.4063**	**1.3600e-003**	**0.1565**	**1.1700e-003**	**0.1577**	**0.0415**	**1.0800e-003**	**0.0426**		**135.2125**	**135.2125**	**3.2900e-003**		**135.2948**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Other Non-Asphalt Surfaces	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Parking Lot	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437
NaturalGas Unmitigated	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437

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					
Junior College (2Yr)	3196.92	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0345**	**0.3134**	**0.2633**	**1.8800e-003**		**0.0238**	**0.0238**		**0.0238**	**0.0238**		**376.1087**	**376.1087**	**7.2100e-003**	**6.9000e-003**	**378.3437**

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					
Junior College (2Yr)	3.19692	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0345**	**0.3134**	**0.2633**	**1.8800e-003**		**0.0238**	**0.0238**		**0.0238**	**0.0238**		**376.1087**	**376.1087**	**7.2100e-003**	**6.9000e-003**	**378.3437**

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	1.0177	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707
Unmitigated	1.0177	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707

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	0.1187					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8962					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8500e-003	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707
Total	**1.0177**	**2.8000e-004**	**0.0309**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0664**	**0.0664**	**1.7000e-004**		**0.0707**

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	0.1187					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8962					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8500e-003	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707
Total	**1.0177**	**2.8000e-004**	**0.0309**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0664**	**0.0664**	**1.7000e-004**		**0.0707**

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

Glendale Communit College District Facilities Master Plan Verdugo Campus

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	281.30	1000sqft	6.46	281,296.00	0
Other Non-Asphalt Surfaces	2.00	Acre	2.00	87,120.00	0
Parking Lot	650.00	Space	5.85	260,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2025
Utility Company	Glendale Water & Power				
CO2 Intensity (lb/MWhr)	483	**CH4 Intensity (lb/MWhr)**	0.013	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Per 2019 Integrated Resource Plan, prepared by City of Glendale Water & Power the intensity factors were reduced to 41% of default

Land Use - Renovation of 228,853 sq ft and 52,443 sq ft of new construction = total of 281,296 sq ft

Construction Phase - Construction schedule provided by applicant

Trips and VMT - 6 vendor trucks added to Demolition and Grading to account for water truck emissions

Demolition - 170387 sq ft of building space = 7,838 tons + 4 acres of paved area = 4,211 tons = Total of 12,049 tons of debris

Vehicle Trips - No new trips would be generated by Project

Construction Off-road Equipment Mitigation - Water Exposed Area 2x per day selected to account for SCAQMD Rule 403 minimum requirements

Energy Mitigation - Per 2019 Title 24 requirements a 30% improvement to lighting energy was selected

Water Mitigation - Install low flow faucets and use water efficient irrigation selected to account for Title 24 Part 11 requirements

Waste Mitigation - 50% reduction in solid waste selected to account for AB 341

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	300.00	375.00
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	20.00	30.00
tblLandUse	LandUseSquareFeet	281,300.00	281,296.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.013
tblProjectCharacteristics	CO2IntensityFactor	1115.33	483
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	WD_TR	27.49	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					
2021	0.3112	2.9897	2.5353	6.7900e-003	0.4798	0.1113	0.5911	0.1331	0.1038	0.2369	0.0000	617.0638	617.0638	0.0899	0.0000	619.3106
2022	0.3993	3.3893	3.6620	0.0105	0.4604	0.1105	0.5710	0.1242	0.1040	0.2282	0.0000	955.8687	955.8687	0.1007	0.0000	958.3869
2023	1.3849	0.1861	0.3049	5.5000e-004	0.0155	9.3700e-003	0.0249	4.1300e-003	8.7500e-003	0.0129	0.0000	48.8153	48.8153	0.0104	0.0000	49.0752
Maximum	**1.3849**	**3.3893**	**3.6620**	**0.0105**	**0.4798**	**0.1113**	**0.5911**	**0.1331**	**0.1040**	**0.2369**	**0.0000**	**955.8687**	**955.8687**	**0.1007**	**0.0000**	**958.3869**

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	0.3112	2.9897	2.5353	6.7900e-003	0.3373	0.1113	0.4486	0.0927	0.1038	0.1965	0.0000	617.0635	617.0635	0.0899	0.0000	619.3103
2022	0.3993	3.3893	3.6620	0.0105	0.4604	0.1105	0.5710	0.1242	0.1040	0.2282	0.0000	955.8683	955.8683	0.1007	0.0000	958.3865
2023	1.3849	0.1861	0.3049	5.5000e-004	0.0155	9.3700e-003	0.0249	4.1300e-003	8.7500e-003	0.0129	0.0000	48.8153	48.8153	0.0104	0.0000	49.0752
Maximum	**1.3849**	**3.3893**	**3.6620**	**0.0105**	**0.4604**	**0.1113**	**0.5710**	**0.1242**	**0.1040**	**0.2282**	**0.0000**	**955.8683**	**955.8683**	**0.1007**	**0.0000**	**958.3865**

Glendale Communit College District Facilities Master Plan Verdugo Campus - 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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**14.91**	**0.00**	**12.00**	**15.46**	**0.00**	**8.46**	**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	**5-1-2021**	**7-31-2021**	1.5546	1.5546
2	**8-1-2021**	**10-31-2021**	1.0391	1.0391
3	**11-1-2021**	**1-31-2022**	1.0138	1.0138
4	**2-1-2022**	**4-30-2022**	0.9222	0.9222
5	**5-1-2022**	**7-31-2022**	0.9492	0.9492
6	**8-1-2022**	**10-31-2022**	0.9512	0.9512
7	**11-1-2022**	**1-31-2023**	0.7645	0.7645
8	**2-1-2023**	**4-30-2023**	1.4360	1.4360
		Highest	1.5546	1.5546

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	1.1752	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0232	0.0232	6.0000e-005	0.0000	0.0247
Energy	0.0411	0.3734	0.3137	2.2400e-003		0.0284	0.0284		0.0284	0.0284	0.0000	1,043.9455	1,043.9455	0.0250	0.0114	1,047.9700
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	74.2318	0.0000	74.2318	4.3870	0.0000	183.9061
Water						0.0000	0.0000		0.0000	0.0000	4.3773	91.8884	96.2657	0.4521	0.0112	110.9009
Total	**1.2163**	**0.3735**	**0.3255**	**2.2400e-003**	**0.0000**	**0.0284**	**0.0284**	**0.0000**	**0.0284**	**0.0284**	**78.6091**	**1,135.8571**	**1,214.4662**	**4.8640**	**0.0226**	**1,342.8016**

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	1.1752	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0232	0.0232	6.0000e-005	0.0000	0.0247
Energy	0.0411	0.3734	0.3137	2.2400e-003		0.0284	0.0284		0.0284	0.0284	0.0000	975.2891	975.2891	0.0231	0.0110	979.1402
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	37.1159	0.0000	37.1159	2.1935	0.0000	91.9530
Water						0.0000	0.0000		0.0000	0.0000	3.6945	82.5440	86.2384	0.3817	9.4700e-003	98.6031
Total	**1.2163**	**0.3735**	**0.3255**	**2.2400e-003**	**0.0000**	**0.0284**	**0.0284**	**0.0000**	**0.0284**	**0.0284**	**40.8103**	**1,057.8562**	**1,098.6665**	**2.5983**	**0.0205**	**1,169.7211**

	ROG	NOx	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**	**48.08**	**6.87**	**9.54**	**46.58**	**9.47**	**12.89**

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	5/1/2021	6/11/2021	5	30	
2	Grading	Grading	6/12/2021	7/23/2021	5	30	
3	Building Construction	Building Construction	7/24/2021	12/31/2022	5	375	
4	Paving	Paving	1/1/2023	2/10/2023	5	30	
5	Architectural Coating	Architectural Coating	2/11/2023	4/14/2023	5	45	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 7.85

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 421,944; Non-Residential Outdoor: 140,648; Striped Parking Area: 20,827 (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	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
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	6	15.00	6.00	1,191.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	264.00	103.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	53.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

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					
Fugitive Dust					0.1289	0.0000	0.1289	0.0195	0.0000	0.0195	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0012	51.0012	0.0144	0.0000	51.3601
Total	**0.0475**	**0.4716**	**0.3235**	**5.8000e-004**	**0.1289**	**0.0233**	**0.1522**	**0.0195**	**0.0216**	**0.0411**	**0.0000**	**51.0012**	**51.0012**	**0.0144**	**0.0000**	**51.3601**

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	5.0200e-003	0.1649	0.0384	4.6000e-004	0.0102	4.9000e-004	0.0107	2.8100e-003	4.7000e-004	3.2800e-003	0.0000	45.3947	45.3947	3.1500e-003	0.0000	45.4735
Vendor	2.8000e-004	8.8800e-003	2.4100e-003	2.0000e-005	5.7000e-004	2.0000e-005	5.9000e-004	1.6000e-004	2.0000e-005	1.8000e-004	0.0000	2.2185	2.2185	1.4000e-004	0.0000	2.2219
Worker	9.7000e-004	7.5000e-004	8.5100e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4900e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.2251	2.2251	7.0000e-005	0.0000	2.2267
Total	**6.2700e-003**	**0.1745**	**0.0494**	**5.0000e-004**	**0.0133**	**5.3000e-004**	**0.0138**	**3.6200e-003**	**5.1000e-004**	**4.1300e-003**	**0.0000**	**49.8383**	**49.8383**	**3.3600e-003**	**0.0000**	**49.9221**

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					0.0580	0.0000	0.0580	8.7800e-003	0.0000	8.7800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0011	51.0011	0.0144	0.0000	51.3600
Total	**0.0475**	**0.4716**	**0.3235**	**5.8000e-004**	**0.0580**	**0.0233**	**0.0813**	**8.7800e-003**	**0.0216**	**0.0304**	**0.0000**	**51.0011**	**51.0011**	**0.0144**	**0.0000**	**51.3600**

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	5.0200e-003	0.1649	0.0384	4.6000e-004	0.0102	4.9000e-004	0.0107	2.8100e-003	4.7000e-004	3.2800e-003	0.0000	45.3947	45.3947	3.1500e-003	0.0000	45.4735
Vendor	2.8000e-004	8.8800e-003	2.4100e-003	2.0000e-005	5.7000e-004	2.0000e-005	5.9000e-004	1.6000e-004	2.0000e-005	1.8000e-004	0.0000	2.2185	2.2185	1.4000e-004	0.0000	2.2219
Worker	9.7000e-004	7.5000e-004	8.5100e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4900e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.2251	2.2251	7.0000e-005	0.0000	2.2267
Total	**6.2700e-003**	**0.1745**	**0.0494**	**5.0000e-004**	**0.0133**	**5.3000e-004**	**0.0138**	**3.6200e-003**	**5.1000e-004**	**4.1300e-003**	**0.0000**	**49.8383**	**49.8383**	**3.3600e-003**	**0.0000**	**49.9221**

3.3 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					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0629	0.6960	0.4632	9.3000e-004		0.0298	0.0298		0.0274	0.0274	0.0000	81.7425	81.7425	0.0264	0.0000	82.4034
Total	**0.0629**	**0.6960**	**0.4632**	**9.3000e-004**	**0.1301**	**0.0298**	**0.1599**	**0.0540**	**0.0274**	**0.0814**	**0.0000**	**81.7425**	**81.7425**	**0.0264**	**0.0000**	**82.4034**

3.3 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	2.8000e-004	8.8800e-003	2.4100e-003	2.0000e-005	5.7000e-004	2.0000e-005	5.9000e-004	1.6000e-004	2.0000e-005	1.8000e-004	0.0000	2.2185	2.2185	1.4000e-004	0.0000	2.2219
Worker	1.2900e-003	1.0000e-003	0.0113	3.0000e-005	3.2900e-003	3.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.9668	2.9668	9.0000e-005	0.0000	2.9689
Total	**1.5700e-003**	**9.8800e-003**	**0.0138**	**5.0000e-005**	**3.8600e-003**	**5.0000e-005**	**3.9000e-003**	**1.0300e-003**	**4.0000e-005**	**1.0800e-003**	**0.0000**	**5.1852**	**5.1852**	**2.3000e-004**	**0.0000**	**5.1908**

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					0.0586	0.0000	0.0586	0.0243	0.0000	0.0243	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0629	0.6960	0.4632	9.3000e-004		0.0298	0.0298		0.0274	0.0274	0.0000	81.7424	81.7424	0.0264	0.0000	82.4033
Total	**0.0629**	**0.6960**	**0.4632**	**9.3000e-004**	**0.0586**	**0.0298**	**0.0883**	**0.0243**	**0.0274**	**0.0517**	**0.0000**	**81.7424**	**81.7424**	**0.0264**	**0.0000**	**82.4033**

3.3 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	2.8000e-004	8.8800e-003	2.4100e-003	2.0000e-005	5.7000e-004	2.0000e-005	5.9000e-004	1.6000e-004	2.0000e-005	1.8000e-004	0.0000	2.2185	2.2185	1.4000e-004	0.0000	2.2219
Worker	1.2900e-003	1.0000e-003	0.0113	3.0000e-005	3.2900e-003	3.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.9668	2.9668	9.0000e-005	0.0000	2.9689
Total	**1.5700e-003**	**9.8800e-003**	**0.0138**	**5.0000e-005**	**3.8600e-003**	**5.0000e-005**	**3.9000e-003**	**1.0300e-003**	**4.0000e-005**	**1.0800e-003**	**0.0000**	**5.1852**	**5.1852**	**2.3000e-004**	**0.0000**	**5.1908**

3.4 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	0.1093	1.0024	0.9531	1.5500e-003		0.0551	0.0551		0.0518	0.0518	0.0000	133.1914	133.1914	0.0321	0.0000	133.9948
Total	**0.1093**	**1.0024**	**0.9531**	**1.5500e-003**		**0.0551**	**0.0551**		**0.0518**	**0.0518**	**0.0000**	**133.1914**	**133.1914**	**0.0321**	**0.0000**	**133.9948**

3.4 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	0.0184	0.5845	0.1585	1.5100e-003	0.0373	1.1900e-003	0.0385	0.0108	1.1400e-003	0.0119	0.0000	145.9876	145.9876	8.9500e-003	0.0000	146.2115
Worker	0.0653	0.0509	0.5740	1.6600e-003	0.1663	1.3700e-003	0.1677	0.0442	1.2600e-003	0.0454	0.0000	150.1176	150.1176	4.4200e-003	0.0000	150.2280
Total	**0.0837**	**0.6353**	**0.7325**	**3.1700e-003**	**0.2037**	**2.5600e-003**	**0.2062**	**0.0550**	**2.4000e-003**	**0.0574**	**0.0000**	**296.1052**	**296.1052**	**0.0134**	**0.0000**	**296.4395**

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	0.1093	1.0023	0.9531	1.5500e-003		0.0551	0.0551		0.0518	0.0518	0.0000	133.1913	133.1913	0.0321	0.0000	133.9946
Total	**0.1093**	**1.0023**	**0.9531**	**1.5500e-003**		**0.0551**	**0.0551**		**0.0518**	**0.0518**	**0.0000**	**133.1913**	**133.1913**	**0.0321**	**0.0000**	**133.9946**

3.4 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	0.0184	0.5845	0.1585	1.5100e-003	0.0373	1.1900e-003	0.0385	0.0108	1.1400e-003	0.0119	0.0000	145.9876	145.9876	8.9500e-003	0.0000	146.2115
Worker	0.0653	0.0509	0.5740	1.6600e-003	0.1663	1.3700e-003	0.1677	0.0442	1.2600e-003	0.0454	0.0000	150.1176	150.1176	4.4200e-003	0.0000	150.2280
Total	**0.0837**	**0.6353**	**0.7325**	**3.1700e-003**	**0.2037**	**2.5600e-003**	**0.2062**	**0.0550**	**2.4000e-003**	**0.0574**	**0.0000**	**296.1052**	**296.1052**	**0.0134**	**0.0000**	**296.4395**

3.4 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	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2428	301.2428	0.0722	0.0000	303.0471
Total	**0.2218**	**2.0300**	**2.1272**	**3.5000e-003**		**0.1052**	**0.1052**		**0.0990**	**0.0990**	**0.0000**	**301.2428**	**301.2428**	**0.0722**	**0.0000**	**303.0471**

3.4 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	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	0.0390	1.2555	0.3390	3.3700e-003	0.0844	2.3600e-003	0.0867	0.0243	2.2500e-003	0.0266	0.0000	327.1599	327.1599	0.0195	0.0000	327.6484
Worker	0.1385	0.1038	1.1958	3.6200e-003	0.3761	3.0000e-003	0.3791	0.0999	2.7700e-003	0.1027	0.0000	327.4659	327.4659	9.0200e-003	0.0000	327.6914
Total	**0.1775**	**1.3593**	**1.5348**	**6.9900e-003**	**0.4604**	**5.3600e-003**	**0.4658**	**0.1242**	**5.0200e-003**	**0.1293**	**0.0000**	**654.6258**	**654.6258**	**0.0286**	**0.0000**	**655.3398**

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	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2425	301.2425	0.0722	0.0000	303.0467
Total	**0.2218**	**2.0300**	**2.1272**	**3.5000e-003**		**0.1052**	**0.1052**		**0.0990**	**0.0990**	**0.0000**	**301.2425**	**301.2425**	**0.0722**	**0.0000**	**303.0467**

3.4 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	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	0.0390	1.2555	0.3390	3.3700e-003	0.0844	2.3600e-003	0.0867	0.0243	2.2500e-003	0.0266	0.0000	327.1599	327.1599	0.0195	0.0000	327.6484
Worker	0.1385	0.1038	1.1958	3.6200e-003	0.3761	3.0000e-003	0.3791	0.0999	2.7700e-003	0.1027	0.0000	327.4659	327.4659	9.0200e-003	0.0000	327.6914
Total	**0.1775**	**1.3593**	**1.5348**	**6.9900e-003**	**0.4604**	**5.3600e-003**	**0.4658**	**0.1242**	**5.0200e-003**	**0.1293**	**0.0000**	**654.6258**	**654.6258**	**0.0286**	**0.0000**	**655.3398**

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0155	0.1529	0.2188	3.4000e-004		7.6500e-003	7.6500e-003		7.0400e-003	7.0400e-003	0.0000	30.0403	30.0403	9.7200e-003	0.0000	30.2832
Paving	7.6600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0232**	**0.1529**	**0.2188**	**3.4000e-004**		**7.6500e-003**	**7.6500e-003**		**7.0400e-003**	**7.0400e-003**	**0.0000**	**30.0403**	**30.0403**	**9.7200e-003**	**0.0000**	**30.2832**

3.5 Paving - 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	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	8.5000e-004	6.2000e-004	7.2100e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4800e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.0683	2.0683	5.0000e-005	0.0000	2.0696
Total	**8.5000e-004**	**6.2000e-004**	**7.2100e-003**	**2.0000e-005**	**2.4700e-003**	**2.0000e-005**	**2.4800e-003**	**6.5000e-004**	**2.0000e-005**	**6.7000e-004**	**0.0000**	**2.0683**	**2.0683**	**5.0000e-005**	**0.0000**	**2.0696**

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	0.0155	0.1529	0.2188	3.4000e-004		7.6500e-003	7.6500e-003		7.0400e-003	7.0400e-003	0.0000	30.0403	30.0403	9.7200e-003	0.0000	30.2832
Paving	7.6600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0232**	**0.1529**	**0.2188**	**3.4000e-004**		**7.6500e-003**	**7.6500e-003**		**7.0400e-003**	**7.0400e-003**	**0.0000**	**30.0403**	**30.0403**	**9.7200e-003**	**0.0000**	**30.2832**

3.5 Paving - 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	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	8.5000e-004	6.2000e-004	7.2100e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4800e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.0683	2.0683	5.0000e-005	0.0000	2.0696
Total	**8.5000e-004**	**6.2000e-004**	**7.2100e-003**	**2.0000e-005**	**2.4700e-003**	**2.0000e-005**	**2.4800e-003**	**6.5000e-004**	**2.0000e-005**	**6.7000e-004**	**0.0000**	**2.0683**	**2.0683**	**5.0000e-005**	**0.0000**	**2.0696**

3.6 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	1.3521					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3100e-003	0.0293	0.0408	7.0000e-005		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003	0.0000	5.7448	5.7448	3.4000e-004	0.0000	5.7534
Total	**1.3564**	**0.0293**	**0.0408**	**7.0000e-005**		**1.5900e-003**	**1.5900e-003**		**1.5900e-003**	**1.5900e-003**	**0.0000**	**5.7448**	**5.7448**	**3.4000e-004**	**0.0000**	**5.7534**

3.6 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	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	4.5200e-003	3.2600e-003	0.0382	1.2000e-004	0.0131	1.0000e-004	0.0132	3.4700e-003	9.0000e-005	3.5600e-003	0.0000	10.9619	10.9619	2.8000e-004	0.0000	10.9690
Total	**4.5200e-003**	**3.2600e-003**	**0.0382**	**1.2000e-004**	**0.0131**	**1.0000e-004**	**0.0132**	**3.4700e-003**	**9.0000e-005**	**3.5600e-003**	**0.0000**	**10.9619**	**10.9619**	**2.8000e-004**	**0.0000**	**10.9690**

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	1.3521					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3100e-003	0.0293	0.0408	7.0000e-005		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003	0.0000	5.7448	5.7448	3.4000e-004	0.0000	5.7534
Total	**1.3564**	**0.0293**	**0.0408**	**7.0000e-005**		**1.5900e-003**	**1.5900e-003**		**1.5900e-003**	**1.5900e-003**	**0.0000**	**5.7448**	**5.7448**	**3.4000e-004**	**0.0000**	**5.7534**

3.6 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	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	4.5200e-003	3.2600e-003	0.0382	1.2000e-004	0.0131	1.0000e-004	0.0132	3.4700e-003	9.0000e-005	3.5600e-003	0.0000	10.9619	10.9619	2.8000e-004	0.0000	10.9690
Total	**4.5200e-003**	**3.2600e-003**	**0.0382**	**1.2000e-004**	**0.0131**	**1.0000e-004**	**0.0132**	**3.4700e-003**	**9.0000e-005**	**3.5600e-003**	**0.0000**	**10.9619**	**10.9619**	**2.8000e-004**	**0.0000**	**10.9690**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Other Non-Asphalt Surfaces	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Parking Lot	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	568.7905	568.7905	0.0153	3.5300e-003	570.2260
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	637.4470	637.4470	0.0172	3.9600e-003	639.0558
NaturalGas Mitigated	0.0411	0.3734	0.3137	2.2400e-003		0.0284	0.0284		0.0284	0.0284	0.0000	406.4986	406.4986	7.7900e-003	7.4500e-003	408.9142
NaturalGas Unmitigated	0.0411	0.3734	0.3137	2.2400e-003		0.0284	0.0284		0.0284	0.0284	0.0000	406.4986	406.4986	7.7900e-003	7.4500e-003	408.9142

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					
Junior College (2Yr)	7.6175e+006	0.0411	0.3734	0.3137	2.2400e-003		0.0284	0.0284		0.0284	0.0284	0.0000	406.4986	406.4986	7.7900e-003	7.4500e-003	408.9142
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0411**	**0.3734**	**0.3137**	**2.2400e-003**		**0.0284**	**0.0284**		**0.0284**	**0.0284**	**0.0000**	**406.4986**	**406.4986**	**7.7900e-003**	**7.4500e-003**	**408.9142**

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					
Junior College (2Yr)	7.6175e+006	0.0411	0.3734	0.3137	2.2400e-003		0.0284	0.0284		0.0284	0.0284	0.0000	406.4986	406.4986	7.7900e-003	7.4500e-003	408.9142
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0411**	**0.3734**	**0.3137**	**2.2400e-003**		**0.0284**	**0.0284**		**0.0284**	**0.0284**	**0.0000**	**406.4986**	**406.4986**	**7.7900e-003**	**7.4500e-003**	**408.9142**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	2.81859e+006	617.5102	0.0166	3.8400e-003	619.0687
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	91000	19.9368	5.4000e-004	1.2000e-004	19.9871
Total		**637.4470**	**0.0172**	**3.9600e-003**	**639.0558**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	2.53251e+006	554.8348	0.0149	3.4500e-003	556.2351
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	63700	13.9557	3.8000e-004	9.0000e-005	13.9909
Total		**568.7905**	**0.0153**	**3.5400e-003**	**570.2260**

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	1.1752	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0232	0.0232	6.0000e-005	0.0000	0.0247
Unmitigated	1.1752	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0232	0.0232	6.0000e-005	0.0000	0.0247

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	0.1352					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0389					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0900e-003	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0232	0.0232	6.0000e-005	0.0000	0.0247
Total	**1.1752**	**1.1000e-004**	**0.0119**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0232**	**0.0232**	**6.0000e-005**	**0.0000**	**0.0247**

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	0.1352					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0389					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0900e-003	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0232	0.0232	6.0000e-005	0.0000	0.0247
Total	**1.1752**	**1.1000e-004**	**0.0119**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0232**	**0.0232**	**6.0000e-005**	**0.0000**	**0.0247**

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	86.2384	0.3817	9.4700e-003	98.6031
Unmitigated	96.2657	0.4521	0.0112	110.9009

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	13.7975 / 21.5807	96.2657	0.4521	0.0112	110.9009
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**96.2657**	**0.4521**	**0.0112**	**110.9009**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	11.6451 / 20.2643	86.2384	0.3817	9.4700e-003	98.6031
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**86.2384**	**0.3817**	**9.4700e-003**	**98.6031**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	37.1159	2.1935	0.0000	91.9530
Unmitigated	74.2318	4.3870	0.0000	183.9061

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	365.69	74.2318	4.3870	0.0000	183.9061
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**74.2318**	**4.3870**	**0.0000**	**183.9061**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	182.845	37.1159	2.1935	0.0000	91.9530
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**37.1159**	**2.1935**	**0.0000**	**91.9530**

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

APPENDIX B

Garfield Campus Improvements CalEEMod Model Printouts

Glendale Community College District Facilities Master Plan - Garfield Campus

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	43.09	1000sqft	1.00	43,090.00	0
Other Non-Asphalt Surfaces	0.40	Acre	0.40	17,424.00	0
Parking Lot	260.00	Space	2.40	104,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2025
Utility Company	Glendale Water & Power				
CO2 Intensity (lb/MWhr)	1115.33	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Garfield Campus = 3.80 acres total area

Construction Phase -

Trips and VMT - 6 vendor trucks added to Demolition and Grading to account for water truck emissions

Demolition - 36,000 sq ft of building space demolished = 1,656 tons + 2.00 acres of Pavement demolished = 2,105 tons = 3,761 Total tons

Vehicle Trips - No new trips would be generated by Garfield Campus

Construction Off-road Equipment Mitigation - Water Exposed Area 2x per day selected to account for SCAQMD Rule 403 minimum requirements

Energy Mitigation - Per 2019 Title 24 requirements a 30% improvement to lighting energy was selected

Water Mitigation - Install low flow faucets and use water efficient irrigation selected to account for Title 24 Part 11 requirements

Waste Mitigation - 50% reduction in solid waste selected to account for AB 341

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	2/15/2024	2/20/2024
tblConstructionPhase	PhaseEndDate	1/22/2024	1/25/2024
tblConstructionPhase	PhaseStartDate	1/23/2024	1/26/2024
tblConstructionPhase	PhaseStartDate	12/28/2023	1/2/2024
tblLandUse	LotAcreage	0.99	1.00
tblLandUse	LotAcreage	2.34	2.40
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	WD_TR	27.49	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					
2023	2.4351	24.9985	21.3438	0.0556	6.7584	1.0048	7.5351	3.4230	0.9349	4.1376	0.0000	5,555.0113	5,555.0113	1.1597	0.0000	5,584.0048
2024	24.2979	8.3170	12.8590	0.0210	0.2236	0.4003	0.6239	0.0593	0.3700	0.4293	0.0000	2,010.7562	2,010.7562	0.5724	0.0000	2,025.0649
Maximum	**24.2979**	**24.9985**	**21.3438**	**0.0556**	**6.7584**	**1.0048**	**7.5351**	**3.4230**	**0.9349**	**4.1376**	**0.0000**	**5,555.0113**	**5,555.0113**	**1.1597**	**0.0000**	**5,584.0048**

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					
2023	2.4351	24.9985	21.3438	0.0556	3.1546	1.0048	3.9313	1.5709	0.9349	2.2855	0.0000	5,555.0113	5,555.0113	1.1597	0.0000	5,584.0048
2024	24.2979	8.3170	12.8590	0.0210	0.2236	0.4003	0.6239	0.0593	0.3700	0.4293	0.0000	2,010.7562	2,010.7562	0.5724	0.0000	2,025.0649
Maximum	**24.2979**	**24.9985**	**21.3438**	**0.0556**	**3.1546**	**1.0048**	**3.9313**	**1.5709**	**0.9349**	**2.2855**	**0.0000**	**5,555.0113**	**5,555.0113**	**1.1597**	**0.0000**	**5,584.0048**

	ROG	**NOx**	**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**	**51.62**	**0.00**	**44.17**	**53.19**	**0.00**	**40.56**	**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	1.0177	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707
Energy	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0522**	**0.3137**	**0.2942**	**1.8800e-003**	**0.0000**	**0.0239**	**0.0239**	**0.0000**	**0.0239**	**0.0239**		**376.1751**	**376.1751**	**7.3800e-003**	**6.9000e-003**	**378.4145**

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	1.0177	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707
Energy	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0522**	**0.3137**	**0.2942**	**1.8800e-003**	**0.0000**	**0.0239**	**0.0239**	**0.0000**	**0.0239**	**0.0239**		**376.1751**	**376.1751**	**7.3800e-003**	**6.9000e-003**	**378.4145**

	ROG	NOx	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	1/2/2023	1/27/2023	5	20	
2	Grading	Grading	1/28/2023	2/8/2023	5	8	
3	Building Construction	Building Construction	2/9/2023	12/27/2023	5	230	
4	Paving	Paving	1/2/2024	1/25/2024	5	18	
5	Architectural Coating	Architectural Coating	1/26/2024	2/20/2024	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 2.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 64,635; Non-Residential Outdoor: 21,545; Striped Parking Area: 7,285 (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	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	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	6	15.00	6.00	372.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	69.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 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					
Fugitive Dust					4.0241	0.0000	4.0241	0.6093	0.0000	0.6093			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**4.0241**	**0.9975**	**5.0216**	**0.6093**	**0.9280**	**1.5373**		**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

3.2 Demolition - 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	0.0968	3.0577	1.0570	0.0137	0.3253	5.5400e-003	0.3308	0.0892	5.3000e-003	0.0945		1,490.9106	1,490.9106	0.0980		1,493.3593
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	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		158.7723	158.7723	4.1000e-003		158.8748
Total	**0.1661**	**3.5141**	**1.7005**	**0.0168**	**0.5313**	**7.3100e-003**	**0.5386**	**0.1447**	**6.9300e-003**	**0.1516**		**1,808.0273**	**1,808.0273**	**0.1104**		**1,810.7865**

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					1.8108	0.0000	1.8108	0.2742	0.0000	0.2742			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**1.8108**	**0.9975**	**2.8084**	**0.2742**	**0.9280**	**1.2022**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

3.2 Demolition - 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	0.0968	3.0577	1.0570	0.0137	0.3253	5.5400e-003	0.3308	0.0892	5.3000e-003	0.0945		1,490.9106	1,490.9106	0.0980		1,493.3593
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	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		158.7723	158.7723	4.1000e-003		158.8748
Total	**0.1661**	**3.5141**	**1.7005**	**0.0168**	**0.5313**	**7.3100e-003**	**0.5386**	**0.1447**	**6.9300e-003**	**0.1516**		**1,808.0273**	**1,808.0273**	**0.1104**		**1,810.7865**

3.3 Grading - 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					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**6.5523**	**0.7749**	**7.3273**	**3.3675**	**0.7129**	**4.0804**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

3.3 Grading - 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	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		158.7723	158.7723	4.1000e-003		158.8748
Total	**0.0693**	**0.4565**	**0.6435**	**3.0700e-003**	**0.2061**	**1.7700e-003**	**0.2078**	**0.0555**	**1.6300e-003**	**0.0572**		**317.1168**	**317.1168**	**0.0124**		**317.4271**

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					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**2.9486**	**0.7749**	**3.7235**	**1.5154**	**0.7129**	**2.2283**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

3.3 Grading - 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	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		158.7723	158.7723	4.1000e-003		158.8748
Total	**0.0693**	**0.4565**	**0.6435**	**3.0700e-003**	**0.2061**	**1.7700e-003**	**0.2078**	**0.0555**	**1.6300e-003**	**0.0572**		**317.1168**	**317.1168**	**0.0124**		**317.4271**

3.4 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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.4 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	0.0571	1.8915	0.5856	6.6500e-003	0.1729	2.1900e-003	0.1751	0.0498	2.0900e-003	0.0519		712.5501	712.5501	0.0374		713.4854
Worker	0.2602	0.1662	2.3613	7.3300e-003	0.7713	5.8700e-003	0.7771	0.2045	5.4000e-003	0.2099		730.3526	730.3526	0.0189		730.8242
Total	**0.3173**	**2.0577**	**2.9469**	**0.0140**	**0.9441**	**8.0600e-003**	**0.9522**	**0.2543**	**7.4900e-003**	**0.2618**		**1,442.9026**	**1,442.9026**	**0.0563**		**1,444.3096**

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.4 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	0.0571	1.8915	0.5856	6.6500e-003	0.1729	2.1900e-003	0.1751	0.0498	2.0900e-003	0.0519		712.5501	712.5501	0.0374		713.4854
Worker	0.2602	0.1662	2.3613	7.3300e-003	0.7713	5.8700e-003	0.7771	0.2045	5.4000e-003	0.2099		730.3526	730.3526	0.0189		730.8242
Total	**0.3173**	**2.0577**	**2.9469**	**0.0140**	**0.9441**	**8.0600e-003**	**0.9522**	**0.2543**	**7.4900e-003**	**0.2618**		**1,442.9026**	**1,442.9026**	**0.0563**		**1,444.3096**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.3493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2307**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**		**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

3.5 Paving - 2024

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	0.0713	0.0439	0.6380	2.0600e-003	0.2236	1.6800e-003	0.2252	0.0593	1.5400e-003	0.0608		205.1357	205.1357	5.0200e-003		205.2611
Total	**0.0713**	**0.0439**	**0.6380**	**2.0600e-003**	**0.2236**	**1.6800e-003**	**0.2252**	**0.0593**	**1.5400e-003**	**0.0608**		**205.1357**	**205.1357**	**5.0200e-003**		**205.2611**

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	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.3493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2307**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**	**0.0000**	**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

3.5 Paving - 2024

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	0.0713	0.0439	0.6380	2.0600e-003	0.2236	1.6800e-003	0.2252	0.0593	1.5400e-003	0.0608		205.1357	205.1357	5.0200e-003		205.2611
Total	**0.0713**	**0.0439**	**0.6380**	**2.0600e-003**	**0.2236**	**1.6800e-003**	**0.2252**	**0.0593**	**1.5400e-003**	**0.0608**		**205.1357**	**205.1357**	**5.0200e-003**		**205.2611**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	24.0672					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**24.2480**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.6 Architectural Coating - 2024

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	0.0499	0.0307	0.4466	1.4400e-003	0.1565	1.1700e-003	0.1577	0.0415	1.0800e-003	0.0426		143.5950	143.5950	3.5100e-003		143.6828
Total	**0.0499**	**0.0307**	**0.4466**	**1.4400e-003**	**0.1565**	**1.1700e-003**	**0.1577**	**0.0415**	**1.0800e-003**	**0.0426**		**143.5950**	**143.5950**	**3.5100e-003**		**143.6828**

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	24.0672					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**24.2480**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.6 Architectural Coating - 2024

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	0.0499	0.0307	0.4466	1.4400e-003	0.1565	1.1700e-003	0.1577	0.0415	1.0800e-003	0.0426		143.5950	143.5950	3.5100e-003		143.6828
Total	**0.0499**	**0.0307**	**0.4466**	**1.4400e-003**	**0.1565**	**1.1700e-003**	**0.1577**	**0.0415**	**1.0800e-003**	**0.0426**		**143.5950**	**143.5950**	**3.5100e-003**		**143.6828**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Other Non-Asphalt Surfaces	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Parking Lot	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437
NaturalGas Unmitigated	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437

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					
Junior College (2Yr)	3196.92	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0345**	**0.3134**	**0.2633**	**1.8800e-003**		**0.0238**	**0.0238**		**0.0238**	**0.0238**		**376.1087**	**376.1087**	**7.2100e-003**	**6.9000e-003**	**378.3437**

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					
Junior College (2Yr)	3.19692	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0345**	**0.3134**	**0.2633**	**1.8800e-003**		**0.0238**	**0.0238**		**0.0238**	**0.0238**		**376.1087**	**376.1087**	**7.2100e-003**	**6.9000e-003**	**378.3437**

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	1.0177	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707
Unmitigated	1.0177	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707

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	0.1187					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8962					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8500e-003	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707
Total	**1.0177**	**2.8000e-004**	**0.0309**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0664**	**0.0664**	**1.7000e-004**		**0.0707**

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	0.1187					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8962					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8500e-003	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707
Total	**1.0177**	**2.8000e-004**	**0.0309**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0664**	**0.0664**	**1.7000e-004**		**0.0707**

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

Glendale Community College District Facilities Master Plan - Garfield Campus

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	43.09	1000sqft	1.00	43,090.00	0
Other Non-Asphalt Surfaces	0.40	Acre	0.40	17,424.00	0
Parking Lot	260.00	Space	2.40	104,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2025
Utility Company	Glendale Water & Power				
CO2 Intensity (lb/MWhr)	1115.33	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Garfield Campus = 3.80 acres total area

Construction Phase -

Trips and VMT - 6 vendor trucks added to Demolition and Grading to account for water truck emissions

Demolition - 36,000 sq ft of building space demolished = 1,656 tons + 2.00 acres of Pavement demolished = 2,105 tons = 3,761 Total tons

Vehicle Trips - No new trips would be generated by Garfield Campus

Construction Off-road Equipment Mitigation - Water Exposed Area 2x per day selected to account for SCAQMD Rule 403 minimum requirements

Energy Mitigation - Per 2019 Title 24 requirements a 30% improvement to lighting energy was selected

Water Mitigation - Install low flow faucets and use water efficient irrigation selected to account for Title 24 Part 11 requirements

Waste Mitigation - 50% reduction in solid waste selected to account for AB 341

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	2/15/2024	2/20/2024
tblConstructionPhase	PhaseEndDate	1/22/2024	1/25/2024
tblConstructionPhase	PhaseStartDate	1/23/2024	1/26/2024
tblConstructionPhase	PhaseStartDate	12/28/2023	1/2/2024
tblLandUse	LotAcreage	0.99	1.00
tblLandUse	LotAcreage	2.34	2.40
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	WD_TR	27.49	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					
2023	2.4450	25.0219	21.3549	0.0552	6.7584	1.0050	7.5351	3.4230	0.9351	4.1376	0.0000	5,515.5440	5,515.5440	1.1628	0.0000	5,544.6132
2024	24.3041	8.3216	12.8015	0.0209	0.2236	0.4003	0.6239	0.0593	0.3700	0.4293	0.0000	1,998.7813	1,998.7813	0.5720	0.0000	2,013.0821
Maximum	**24.3041**	**25.0219**	**21.3549**	**0.0552**	**6.7584**	**1.0050**	**7.5351**	**3.4230**	**0.9351**	**4.1376**	**0.0000**	**5,515.5440**	**5,515.5440**	**1.1628**	**0.0000**	**5,544.6132**

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					
2023	2.4450	25.0219	21.3549	0.0552	3.1546	1.0050	3.9313	1.5709	0.9351	2.2855	0.0000	5,515.5440	5,515.5440	1.1628	0.0000	5,544.6132
2024	24.3041	8.3216	12.8015	0.0209	0.2236	0.4003	0.6239	0.0593	0.3700	0.4293	0.0000	1,998.7813	1,998.7813	0.5720	0.0000	2,013.0821
Maximum	**24.3041**	**25.0219**	**21.3549**	**0.0552**	**3.1546**	**1.0050**	**3.9313**	**1.5709**	**0.9351**	**2.2855**	**0.0000**	**5,515.5440**	**5,515.5440**	**1.1628**	**0.0000**	**5,544.6132**

	ROG	NOx	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**	**51.62**	**0.00**	**44.17**	**53.19**	**0.00**	**40.55**	**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	1.0177	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707
Energy	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0522**	**0.3137**	**0.2942**	**1.8800e-003**	**0.0000**	**0.0239**	**0.0239**	**0.0000**	**0.0239**	**0.0239**		**376.1751**	**376.1751**	**7.3800e-003**	**6.9000e-003**	**378.4145**

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	1.0177	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707
Energy	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0522**	**0.3137**	**0.2942**	**1.8800e-003**	**0.0000**	**0.0239**	**0.0239**	**0.0000**	**0.0239**	**0.0239**		**376.1751**	**376.1751**	**7.3800e-003**	**6.9000e-003**	**378.4145**

	ROG	NOx	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	1/2/2023	1/27/2023	5	20	
2	Grading	Grading	1/28/2023	2/8/2023	5	8	
3	Building Construction	Building Construction	2/9/2023	12/27/2023	5	230	
4	Paving	Paving	1/2/2024	1/25/2024	5	18	
5	Architectural Coating	Architectural Coating	1/26/2024	2/20/2024	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 2.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 64,635; Non-Residential Outdoor: 21,545; Striped Parking Area: 7,285 (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	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	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	6	15.00	6.00	372.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	69.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 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					
Fugitive Dust					4.0241	0.0000	4.0241	0.6093	0.0000	0.6093			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**4.0241**	**0.9975**	**5.0216**	**0.6093**	**0.9280**	**1.5373**		**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

3.2 Demolition - 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	0.0992	3.0791	1.1022	0.0135	0.3253	5.6900e-003	0.3310	0.0892	5.4500e-003	0.0946		1,465.0071	1,465.0071	0.1008		1,467.5259
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	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		149.5081	149.5081	3.8500e-003		149.6043
Total	**0.1759**	**3.5375**	**1.7116**	**0.0164**	**0.5313**	**7.4800e-003**	**0.5388**	**0.1447**	**7.1100e-003**	**0.1518**		**1,768.5600**	**1,768.5600**	**0.1134**		**1,771.3949**

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					1.8108	0.0000	1.8108	0.2742	0.0000	0.2742			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**1.8108**	**0.9975**	**2.8084**	**0.2742**	**0.9280**	**1.2022**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

3.2 Demolition - 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	0.0992	3.0791	1.1022	0.0135	0.3253	5.6900e-003	0.3310	0.0892	5.4500e-003	0.0946		1,465.0071	1,465.0071	0.1008		1,467.5259
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	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		149.5081	149.5081	3.8500e-003		149.6043
Total	**0.1759**	**3.5375**	**1.7116**	**0.0164**	**0.5313**	**7.4800e-003**	**0.5388**	**0.1447**	**7.1100e-003**	**0.1518**		**1,768.5600**	**1,768.5600**	**0.1134**		**1,771.3949**

3.3 Grading - 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					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**6.5523**	**0.7749**	**7.3273**	**3.3675**	**0.7129**	**4.0804**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

3.3 Grading - 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	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		149.5081	149.5081	3.8500e-003		149.6043
Total	**0.0766**	**0.4584**	**0.6094**	**2.9400e-003**	**0.2061**	**1.7900e-003**	**0.2079**	**0.0555**	**1.6600e-003**	**0.0572**		**303.5529**	**303.5529**	**0.0127**		**303.8690**

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					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**2.9486**	**0.7749**	**3.7235**	**1.5154**	**0.7129**	**2.2283**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

3.3 Grading - 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	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		149.5081	149.5081	3.8500e-003		149.6043
Total	**0.0766**	**0.4584**	**0.6094**	**2.9400e-003**	**0.2061**	**1.7900e-003**	**0.2079**	**0.0555**	**1.6600e-003**	**0.0572**		**303.5529**	**303.5529**	**0.0127**		**303.8690**

3.4 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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.4 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	0.0601	1.8829	0.6376	6.4700e-003	0.1729	2.3000e-003	0.1752	0.0498	2.2000e-003	0.0520		693.2015	693.2015	0.0396		694.1911
Worker	0.2911	0.1838	2.1512	6.9000e-003	0.7713	5.8700e-003	0.7771	0.2045	5.4000e-003	0.2099		687.7372	687.7372	0.0177		688.1797
Total	**0.3512**	**2.0668**	**2.7888**	**0.0134**	**0.9441**	**8.1700e-003**	**0.9523**	**0.2543**	**7.6000e-003**	**0.2619**		**1,380.9387**	**1,380.9387**	**0.0573**		**1,382.3707**

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.4 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	0.0601	1.8829	0.6376	6.4700e-003	0.1729	2.3000e-003	0.1752	0.0498	2.2000e-003	0.0520		693.2015	693.2015	0.0396		694.1911
Worker	0.2911	0.1838	2.1512	6.9000e-003	0.7713	5.8700e-003	0.7771	0.2045	5.4000e-003	0.2099		687.7372	687.7372	0.0177		688.1797
Total	**0.3512**	**2.0668**	**2.7888**	**0.0134**	**0.9441**	**8.1700e-003**	**0.9523**	**0.2543**	**7.6000e-003**	**0.2619**		**1,380.9387**	**1,380.9387**	**0.0573**		**1,382.3707**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.3493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2307**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**		**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

3.5 Paving - 2024

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	0.0801	0.0486	0.5805	1.9400e-003	0.2236	1.6800e-003	0.2252	0.0593	1.5400e-003	0.0608		193.1608	193.1608	4.7000e-003		193.2783
Total	**0.0801**	**0.0486**	**0.5805**	**1.9400e-003**	**0.2236**	**1.6800e-003**	**0.2252**	**0.0593**	**1.5400e-003**	**0.0608**		**193.1608**	**193.1608**	**4.7000e-003**		**193.2783**

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	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.3493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2307**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**	**0.0000**	**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

3.5 Paving - 2024

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	0.0801	0.0486	0.5805	1.9400e-003	0.2236	1.6800e-003	0.2252	0.0593	1.5400e-003	0.0608		193.1608	193.1608	4.7000e-003		193.2783
Total	**0.0801**	**0.0486**	**0.5805**	**1.9400e-003**	**0.2236**	**1.6800e-003**	**0.2252**	**0.0593**	**1.5400e-003**	**0.0608**		**193.1608**	**193.1608**	**4.7000e-003**		**193.2783**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	24.0672					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**24.2480**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.6 Architectural Coating - 2024

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	0.0561	0.0340	0.4063	1.3600e-003	0.1565	1.1700e-003	0.1577	0.0415	1.0800e-003	0.0426		135.2125	135.2125	3.2900e-003		135.2948
Total	**0.0561**	**0.0340**	**0.4063**	**1.3600e-003**	**0.1565**	**1.1700e-003**	**0.1577**	**0.0415**	**1.0800e-003**	**0.0426**		**135.2125**	**135.2125**	**3.2900e-003**		**135.2948**

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	24.0672					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**24.2480**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.6 Architectural Coating - 2024

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	0.0561	0.0340	0.4063	1.3600e-003	0.1565	1.1700e-003	0.1577	0.0415	1.0800e-003	0.0426		135.2125	135.2125	3.2900e-003		135.2948
Total	**0.0561**	**0.0340**	**0.4063**	**1.3600e-003**	**0.1565**	**1.1700e-003**	**0.1577**	**0.0415**	**1.0800e-003**	**0.0426**		**135.2125**	**135.2125**	**3.2900e-003**		**135.2948**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Other Non-Asphalt Surfaces	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Parking Lot	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437
NaturalGas Unmitigated	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437

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					
Junior College (2Yr)	3196.92	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0345**	**0.3134**	**0.2633**	**1.8800e-003**		**0.0238**	**0.0238**		**0.0238**	**0.0238**		**376.1087**	**376.1087**	**7.2100e-003**	**6.9000e-003**	**378.3437**

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					
Junior College (2Yr)	3.19692	0.0345	0.3134	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1087	376.1087	7.2100e-003	6.9000e-003	378.3437
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0345**	**0.3134**	**0.2633**	**1.8800e-003**		**0.0238**	**0.0238**		**0.0238**	**0.0238**		**376.1087**	**376.1087**	**7.2100e-003**	**6.9000e-003**	**378.3437**

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	1.0177	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707
Unmitigated	1.0177	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707

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	0.1187					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8962					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8500e-003	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707
Total	**1.0177**	**2.8000e-004**	**0.0309**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0664**	**0.0664**	**1.7000e-004**		**0.0707**

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	0.1187					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8962					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8500e-003	2.8000e-004	0.0309	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0664	0.0664	1.7000e-004		0.0707
Total	**1.0177**	**2.8000e-004**	**0.0309**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0664**	**0.0664**	**1.7000e-004**		**0.0707**

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

Glendale Community College District Facilities Master Plan - Garfield Campus

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	43.09	1000sqft	1.00	43,090.00	0
Other Non-Asphalt Surfaces	0.40	Acre	0.40	17,424.00	0
Parking Lot	260.00	Space	2.40	104,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2025
Utility Company	Glendale Water & Power				
CO2 Intensity (lb/MWhr)	483	**CH4 Intensity (lb/MWhr)**	0.013	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Per 2019 Integrated Resource Plan, prepared by City of Glendale Water & Power the intensity factors were reduced to 41% of default

Land Use - Garfield Campus = 3.80 acres total area

Construction Phase -

Trips and VMT - 6 vendor trucks added to Demolition and Grading to account for water truck emissions

Demolition - 36,000 sq ft of building space demolished = 1,656 tons + 2.00 acres of Pavement demolished = 2,105 tons = 3,761 Total tons

Vehicle Trips - No new trips would be generated by Garfield Campus

Construction Off-road Equipment Mitigation - Water Exposed Area 2x per day selected to account for SCAQMD Rule 403 minimum requirements

Energy Mitigation - Per 2019 Title 24 requirements a 30% improvement to lighting energy was selected

Water Mitigation - Install low flow faucets and use water efficient irrigation selected to account for Title 24 Part 11 requirements

Waste Mitigation - 50% reduction in solid waste selected to account for AB 341

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	0.99	1.00
tblLandUse	LotAcreage	2.34	2.40
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.013
tblProjectCharacteristics	CO2IntensityFactor	1115.33	483
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	WD_TR	27.49	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					
2023	0.2492	2.2204	2.4677	5.3500e-003	0.1790	0.0946	0.2735	0.0499	0.0888	0.1387	0.0000	474.7685	474.7685	0.0833	0.0000	476.8496
2024	0.2304	0.0862	0.1354	2.3000e-004	3.3500e-003	4.1600e-003	7.5100e-003	8.9000e-004	3.8900e-003	4.7800e-003	0.0000	19.7659	19.7659	4.8300e-003	0.0000	19.8866
Maximum	**0.2492**	**2.2204**	**2.4677**	**5.3500e-003**	**0.1790**	**0.0946**	**0.2735**	**0.0499**	**0.0888**	**0.1387**	**0.0000**	**474.7685**	**474.7685**	**0.0833**	**0.0000**	**476.8496**

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					
2023	0.2492	2.2204	2.4677	5.3500e-003	0.1424	0.0946	0.2370	0.0392	0.0888	0.1280	0.0000	474.7681	474.7681	0.0833	0.0000	476.8492
2024	0.2304	0.0862	0.1354	2.3000e-004	3.3500e-003	4.1600e-003	7.5100e-003	8.9000e-004	3.8900e-003	4.7800e-003	0.0000	19.7659	19.7659	4.8300e-003	0.0000	19.8865
Maximum	**0.2492**	**2.2204**	**2.4677**	**5.3500e-003**	**0.1424**	**0.0946**	**0.2370**	**0.0392**	**0.0888**	**0.1280**	**0.0000**	**474.7681**	**474.7681**	**0.0833**	**0.0000**	**476.8492**

	ROG	**NOx**	**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**	**20.04**	**0.00**	**13.00**	**21.17**	**0.00**	**7.50**	**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	1-2-2023	4-1-2023	0.6828	0.6828
2	4-2-2023	7-1-2023	0.5958	0.5958
3	7-2-2023	10-1-2023	0.6024	0.6024
4	10-2-2023	1-1-2024	0.5710	0.5710
5	1-2-2024	4-1-2024	0.3199	0.3199
		Highest	0.6828	0.6828

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	0.1856	4.0000e-005	3.8600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5300e-003	7.5300e-003	2.0000e-005	0.0000	8.0200e-003
Energy	6.2900e-003	0.0572	0.0481	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	164.8363	164.8363	3.9500e-003	1.7800e-003	165.4652
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	11.3716	0.0000	11.3716	0.6720	0.0000	28.1725
Water						0.0000	0.0000		0.0000	0.0000	0.6705	14.0756	14.7461	0.0693	1.7100e-003	16.9880
Total	**0.1919**	**0.0572**	**0.0519**	**3.4000e-004**	**0.0000**	**4.3600e-003**	**4.3600e-003**	**0.0000**	**4.3600e-003**	**4.3600e-003**	**12.0421**	**178.9194**	**190.9615**	**0.7453**	**3.4900e-003**	**210.6337**

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	0.1856	4.0000e-005	3.8600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5300e-003	7.5300e-003	2.0000e-005	0.0000	8.0200e-003
Energy	6.2900e-003	0.0572	0.0481	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	152.8430	152.8430	3.6300e-003	1.7000e-003	153.4416
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	5.6858	0.0000	5.6858	0.3360	0.0000	14.0863
Water						0.0000	0.0000		0.0000	0.0000	0.5659	12.6442	13.2101	0.0585	1.4500e-003	15.1042
Total	**0.1919**	**0.0572**	**0.0519**	**3.4000e-004**	**0.0000**	**4.3600e-003**	**4.3600e-003**	**0.0000**	**4.3600e-003**	**4.3600e-003**	**6.2517**	**165.4948**	**171.7465**	**0.3981**	**3.1500e-003**	**182.6401**

	ROG	NOx	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**	**48.08**	**7.50**	**10.06**	**46.58**	**9.74**	**13.29**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2023	1/27/2023	5	20	
2	Grading	Grading	1/28/2023	2/8/2023	5	8	
3	Building Construction	Building Construction	2/9/2023	12/27/2023	5	230	
4	Paving	Paving	1/2/2024	1/25/2024	5	18	
5	Architectural Coating	Architectural Coating	1/26/2024	2/20/2024	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 2.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 64,635; Non-Residential Outdoor: 21,545; Striped Parking Area: 7,285 (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	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	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	6	15.00	6.00	372.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	69.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 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					
Fugitive Dust					0.0402	0.0000	0.0402	6.0900e-003	0.0000	6.0900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0227	0.2148	0.1964	3.9000e-004		9.9800e-003	9.9800e-003		9.2800e-003	9.2800e-003	0.0000	33.9921	33.9921	9.5200e-003	0.0000	34.2301
Total	**0.0227**	**0.2148**	**0.1964**	**3.9000e-004**	**0.0402**	**9.9800e-003**	**0.0502**	**6.0900e-003**	**9.2800e-003**	**0.0154**	**0.0000**	**33.9921**	**33.9921**	**9.5200e-003**	**0.0000**	**34.2301**

3.2 Demolition - 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	tons/yr										MT/yr					
Hauling	9.8000e-004	0.0314	0.0108	1.4000e-004	3.2000e-003	6.0000e-005	3.2500e-003	8.8000e-004	5.0000e-005	9.3000e-004	0.0000	13.4266	13.4266	9.0000e-004	0.0000	13.4491
Vendor	1.3000e-004	4.2500e-003	1.3600e-003	1.0000e-005	3.8000e-004	0.0000	3.8000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	1.4201	1.4201	8.0000e-005	0.0000	1.4220
Worker	5.7000e-004	4.1000e-004	4.8100e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3789	1.3789	4.0000e-005	0.0000	1.3798
Total	**1.6800e-003**	**0.0360**	**0.0169**	**1.7000e-004**	**5.2200e-003**	**7.0000e-005**	**5.2900e-003**	**1.4300e-003**	**6.0000e-005**	**1.4900e-003**	**0.0000**	**16.2256**	**16.2256**	**1.0200e-003**	**0.0000**	**16.2509**

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					0.0181	0.0000	0.0181	2.7400e-003	0.0000	2.7400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0227	0.2148	0.1964	3.9000e-004		9.9800e-003	9.9800e-003		9.2800e-003	9.2800e-003	0.0000	33.9920	33.9920	9.5200e-003	0.0000	34.2300
Total	**0.0227**	**0.2148**	**0.1964**	**3.9000e-004**	**0.0181**	**9.9800e-003**	**0.0281**	**2.7400e-003**	**9.2800e-003**	**0.0120**	**0.0000**	**33.9920**	**33.9920**	**9.5200e-003**	**0.0000**	**34.2300**

3.2 Demolition - 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	tons/yr										MT/yr					
Hauling	9.8000e-004	0.0314	0.0108	1.4000e-004	3.2000e-003	6.0000e-005	3.2500e-003	8.8000e-004	5.0000e-005	9.3000e-004	0.0000	13.4266	13.4266	9.0000e-004	0.0000	13.4491
Vendor	1.3000e-004	4.2500e-003	1.3600e-003	1.0000e-005	3.8000e-004	0.0000	3.8000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	1.4201	1.4201	8.0000e-005	0.0000	1.4220
Worker	5.7000e-004	4.1000e-004	4.8100e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3789	1.3789	4.0000e-005	0.0000	1.3798
Total	**1.6800e-003**	**0.0360**	**0.0169**	**1.7000e-004**	**5.2200e-003**	**7.0000e-005**	**5.2900e-003**	**1.4300e-003**	**6.0000e-005**	**1.4900e-003**	**0.0000**	**16.2256**	**16.2256**	**1.0200e-003**	**0.0000**	**16.2509**

3.3 Grading - 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					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8400e-003	0.0717	0.0590	1.2000e-004		3.1000e-003	3.1000e-003		2.8500e-003	2.8500e-003	0.0000	10.4243	10.4243	3.3700e-003	0.0000	10.5085
Total	**6.8400e-003**	**0.0717**	**0.0590**	**1.2000e-004**	**0.0262**	**3.1000e-003**	**0.0293**	**0.0135**	**2.8500e-003**	**0.0163**	**0.0000**	**10.4243**	**10.4243**	**3.3700e-003**	**0.0000**	**10.5085**

3.3 Grading - 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	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	5.0000e-005	1.7000e-003	5.5000e-004	1.0000e-005	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.5680	0.5680	3.0000e-005	0.0000	0.5688
Worker	2.3000e-004	1.6000e-004	1.9200e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5515	0.5515	1.0000e-005	0.0000	0.5519
Total	**2.8000e-004**	**1.8600e-003**	**2.4700e-003**	**2.0000e-005**	**8.1000e-004**	**1.0000e-005**	**8.1000e-004**	**2.1000e-004**	**0.0000**	**2.3000e-004**	**0.0000**	**1.1196**	**1.1196**	**4.0000e-005**	**0.0000**	**1.1207**

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					0.0118	0.0000	0.0118	6.0600e-003	0.0000	6.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8400e-003	0.0717	0.0590	1.2000e-004		3.1000e-003	3.1000e-003		2.8500e-003	2.8500e-003	0.0000	10.4242	10.4242	3.3700e-003	0.0000	10.5085
Total	**6.8400e-003**	**0.0717**	**0.0590**	**1.2000e-004**	**0.0118**	**3.1000e-003**	**0.0149**	**6.0600e-003**	**2.8500e-003**	**8.9100e-003**	**0.0000**	**10.4242**	**10.4242**	**3.3700e-003**	**0.0000**	**10.5085**

3.3 Grading - 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	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	5.0000e-005	1.7000e-003	5.5000e-004	1.0000e-005	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.5680	0.5680	3.0000e-005	0.0000	0.5688
Worker	2.3000e-004	1.6000e-004	1.9200e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5515	0.5515	1.0000e-005	0.0000	0.5519
Total	**2.8000e-004**	**1.8600e-003**	**2.4700e-003**	**2.0000e-005**	**8.1000e-004**	**1.0000e-005**	**8.1000e-004**	**2.1000e-004**	**0.0000**	**2.3000e-004**	**0.0000**	**1.1196**	**1.1196**	**4.0000e-005**	**0.0000**	**1.1207**

3.4 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	0.1809	1.6543	1.8681	3.1000e-003		0.0805	0.0805		0.0757	0.0757	0.0000	266.5755	266.5755	0.0634	0.0000	268.1608
Total	**0.1809**	**1.6543**	**1.8681**	**3.1000e-003**		**0.0805**	**0.0805**		**0.0757**	**0.0757**	**0.0000**	**266.5755**	**266.5755**	**0.0634**	**0.0000**	**268.1608**

3.4 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	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	6.7200e-003	0.2200	0.0705	7.6000e-004	0.0196	2.6000e-004	0.0198	5.6500e-003	2.5000e-004	5.8900e-003	0.0000	73.4899	73.4899	4.0000e-003	0.0000	73.5900
Worker	0.0301	0.0217	0.2542	8.1000e-004	0.0870	6.7000e-004	0.0876	0.0231	6.2000e-004	0.0237	0.0000	72.9417	72.9417	1.8800e-003	0.0000	72.9886
Total	**0.0368**	**0.2417**	**0.3248**	**1.5700e-003**	**0.1065**	**9.3000e-004**	**0.1075**	**0.0287**	**8.7000e-004**	**0.0296**	**0.0000**	**146.4316**	**146.4316**	**5.8800e-003**	**0.0000**	**146.5786**

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	0.1809	1.6543	1.8681	3.1000e-003		0.0805	0.0805		0.0757	0.0757	0.0000	266.5751	266.5751	0.0634	0.0000	268.1605
Total	**0.1809**	**1.6543**	**1.8681**	**3.1000e-003**		**0.0805**	**0.0805**		**0.0757**	**0.0757**	**0.0000**	**266.5751**	**266.5751**	**0.0634**	**0.0000**	**268.1605**

3.4 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	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	6.7200e-003	0.2200	0.0705	7.6000e-004	0.0196	2.6000e-004	0.0198	5.6500e-003	2.5000e-004	5.8900e-003	0.0000	73.4899	73.4899	4.0000e-003	0.0000	73.5900
Worker	0.0301	0.0217	0.2542	8.1000e-004	0.0870	6.7000e-004	0.0876	0.0231	6.2000e-004	0.0237	0.0000	72.9417	72.9417	1.8800e-003	0.0000	72.9886
Total	**0.0368**	**0.2417**	**0.3248**	**1.5700e-003**	**0.1065**	**9.3000e-004**	**0.1075**	**0.0287**	**8.7000e-004**	**0.0296**	**0.0000**	**146.4316**	**146.4316**	**5.8800e-003**	**0.0000**	**146.5786**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.9300e-003	0.0745	0.1100	1.7000e-004		3.5900e-003	3.5900e-003		3.3200e-003	3.3200e-003	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581
Paving	3.1400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0111**	**0.0745**	**0.1100**	**1.7000e-004**		**3.5900e-003**	**3.5900e-003**		**3.3200e-003**	**3.3200e-003**	**0.0000**	**14.7423**	**14.7423**	**4.6300e-003**	**0.0000**	**14.8581**

3.5 Paving - 2024

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	6.5000e-004	4.5000e-004	5.3700e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.6033	1.6033	4.0000e-005	0.0000	1.6043
Total	**6.5000e-004**	**4.5000e-004**	**5.3700e-003**	**2.0000e-005**	**1.9700e-003**	**2.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.6033**	**1.6033**	**4.0000e-005**	**0.0000**	**1.6043**

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	7.9300e-003	0.0745	0.1100	1.7000e-004		3.5900e-003	3.5900e-003		3.3200e-003	3.3200e-003	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581
Paving	3.1400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0111**	**0.0745**	**0.1100**	**1.7000e-004**		**3.5900e-003**	**3.5900e-003**		**3.3200e-003**	**3.3200e-003**	**0.0000**	**14.7423**	**14.7423**	**4.6300e-003**	**0.0000**	**14.8581**

3.5 Paving - 2024

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	6.5000e-004	4.5000e-004	5.3700e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.6033	1.6033	4.0000e-005	0.0000	1.6043
Total	**6.5000e-004**	**4.5000e-004**	**5.3700e-003**	**2.0000e-005**	**1.9700e-003**	**2.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.6033**	**1.6033**	**4.0000e-005**	**0.0000**	**1.6043**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2166					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012
Total	**0.2182**	**0.0110**	**0.0163**	**3.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.3000e-004**	**0.0000**	**2.3012**

3.6 Architectural Coating - 2024

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	4.5000e-004	3.1000e-004	3.7600e-003	1.0000e-005	1.3800e-003	1.0000e-005	1.3900e-003	3.7000e-004	1.0000e-005	3.8000e-004	0.0000	1.1223	1.1223	3.0000e-005	0.0000	1.1230
Total	**4.5000e-004**	**3.1000e-004**	**3.7600e-003**	**1.0000e-005**	**1.3800e-003**	**1.0000e-005**	**1.3900e-003**	**3.7000e-004**	**1.0000e-005**	**3.8000e-004**	**0.0000**	**1.1223**	**1.1223**	**3.0000e-005**	**0.0000**	**1.1230**

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	0.2166					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012
Total	**0.2182**	**0.0110**	**0.0163**	**3.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.3000e-004**	**0.0000**	**2.3012**

3.6 Architectural Coating - 2024

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	4.5000e-004	3.1000e-004	3.7600e-003	1.0000e-005	1.3800e-003	1.0000e-005	1.3900e-003	3.7000e-004	1.0000e-005	3.8000e-004	0.0000	1.1223	1.1223	3.0000e-005	0.0000	1.1230
Total	**4.5000e-004**	**3.1000e-004**	**3.7600e-003**	**1.0000e-005**	**1.3800e-003**	**1.0000e-005**	**1.3900e-003**	**3.7000e-004**	**1.0000e-005**	**3.8000e-004**	**0.0000**	**1.1223**	**1.1223**	**3.0000e-005**	**0.0000**	**1.1230**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Other Non-Asphalt Surfaces	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Parking Lot	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	90.5740	90.5740	2.4400e-003	5.6000e-004	90.8026
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	102.5673	102.5673	2.7600e-003	6.4000e-004	102.8261
NaturalGas Mitigated	6.2900e-003	0.0572	0.0481	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	62.2690	62.2690	1.1900e-003	1.1400e-003	62.6390
NaturalGas Unmitigated	6.2900e-003	0.0572	0.0481	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	62.2690	62.2690	1.1900e-003	1.1400e-003	62.6390

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					
Junior College (2Yr)	1.16688e+006	6.2900e-003	0.0572	0.0481	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	62.2690	62.2690	1.1900e-003	1.1400e-003	62.6390
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.2900e-003**	**0.0572**	**0.0481**	**3.4000e-004**		**4.3500e-003**	**4.3500e-003**		**4.3500e-003**	**4.3500e-003**	**0.0000**	**62.2690**	**62.2690**	**1.1900e-003**	**1.1400e-003**	**62.6390**

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					
Junior College (2Yr)	1.16688e+006	6.2900e-003	0.0572	0.0481	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	62.2690	62.2690	1.1900e-003	1.1400e-003	62.6390
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.2900e-003**	**0.0572**	**0.0481**	**3.4000e-004**		**4.3500e-003**	**4.3500e-003**		**4.3500e-003**	**4.3500e-003**	**0.0000**	**62.2690**	**62.2690**	**1.1900e-003**	**1.1400e-003**	**62.6390**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	431762	94.5926	2.5500e-003	5.9000e-004	94.8313
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	36400	7.9747	2.1000e-004	5.0000e-005	7.9948
Total		**102.5673**	**2.7600e-003**	**6.4000e-004**	**102.8261**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	387939	84.9917	2.2900e-003	5.3000e-004	85.2062
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	25480	5.5823	1.5000e-004	3.0000e-005	5.5964
Total		**90.5740**	**2.4400e-003**	**5.6000e-004**	**90.8026**

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	0.1856	4.0000e-005	3.8600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5300e-003	7.5300e-003	2.0000e-005	0.0000	8.0200e-003
Unmitigated	0.1856	4.0000e-005	3.8600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5300e-003	7.5300e-003	2.0000e-005	0.0000	8.0200e-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	tons/yr										MT/yr					
Architectural Coating	0.0217					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1636					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6000e-004	4.0000e-005	3.8600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5300e-003	7.5300e-003	2.0000e-005	0.0000	8.0200e-003
Total	**0.1856**	**4.0000e-005**	**3.8600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.5300e-003**	**7.5300e-003**	**2.0000e-005**	**0.0000**	**8.0200e-003**

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	0.0217					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1636					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6000e-004	4.0000e-005	3.8600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5300e-003	7.5300e-003	2.0000e-005	0.0000	8.0200e-003
Total	**0.1856**	**4.0000e-005**	**3.8600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.5300e-003**	**7.5300e-003**	**2.0000e-005**	**0.0000**	**8.0200e-003**

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	13.2101	0.0585	1.4500e-003	15.1042
Unmitigated	14.7461	0.0693	1.7100e-003	16.9880

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	2.11352 / 3.30577	14.7461	0.0693	1.7100e-003	16.9880
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**14.7461**	**0.0693**	**1.7100e-003**	**16.9880**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.78381 / 3.10411	13.2101	0.0585	1.4500e-003	15.1042
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**13.2101**	**0.0585**	**1.4500e-003**	**15.1042**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.6858	0.3360	0.0000	14.0863
Unmitigated	11.3716	0.6720	0.0000	28.1725

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	56.02	11.3716	0.6720	0.0000	28.1725
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**11.3716**	**0.6720**	**0.0000**	**28.1725**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	28.01	5.6858	0.3360	0.0000	14.0863
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**5.6858**	**0.3360**	**0.0000**	**14.0863**

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

APPENDIX C

Montrose Campus Improvements CalEEMod Model Printouts

Glendale Community College District Facilities Master Plan - Montrose Campus

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	1,000.00	Student	0.40	39,170.00	0
Other Non-Asphalt Surfaces	0.10	Acre	0.10	4,356.00	0
Unenclosed Parking Structure	100.00	Space	0.50	40,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2025
Utility Company	Glendale Water & Power				
CO2 Intensity (lb/MWhr)	1115.33	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 1,000 New Students, 21,559 sq ft renovation and 17,611 sq ft new construction = Total 39,179 sq ft building space. Approx 1 acre disturbed

Construction Phase - Grading extended to 10 days to account for parking structure

Trips and VMT - 6 vendor trucks added to Demolition and Grading to account for water truck emissions

Demolition - Demolition of Approx 0.5 acre of pavement = 526 tons of material

Grading -

Vehicle Trips - Weekday daily trip rate set to 1.15 daily trips per new student to match trip rate in TIA

Construction Off-road Equipment Mitigation - Water Exposed Area 2x per day selected to account for SCAQMD Rule 403 minimum requirements

Mobile Land Use Mitigation - Improve Pedestrian Network onsite and connecting offsite. 0.06 mile to Honolulu & Ocean View Bus Stop

Energy Mitigation - Per 2019 Title 24 requirements a 30% improvement to lighting energy was selected

Water Mitigation - Install low flow faucets and use water efficient irrigation selected to account for Title 24 Part 11 requirements

Waste Mitigation - 0% reduction in solid waste selected to account for AB 341

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	2.00	10.00
tblLandUse	LandUseSquareFeet	43,652.24	39,170.00
tblLandUse	LotAcreage	1.00	0.40
tblLandUse	LotAcreage	0.90	0.50
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	WD_TR	1.23	1.15

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	19.0046	18.5061	14.9114	0.0311	1.4002	0.8438	2.2441	0.5399	0.7885	1.0334	0.0000	3,064.6872	3,064.6872	0.6348	0.0000	3,080.5581
Maximum	**19.0046**	**18.5061**	**14.9114**	**0.0311**	**1.4002**	**0.8438**	**2.2441**	**0.5399**	**0.7885**	**1.0334**	**0.0000**	**3,064.6872**	**3,064.6872**	**0.6348**	**0.0000**	**3,080.5581**

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	19.0046	18.5061	14.9114	0.0311	0.7812	0.8438	1.6250	0.2621	0.7885	0.9397	0.0000	3,064.6872	3,064.6872	0.6348	0.0000	3,080.5581
Maximum	**19.0046**	**18.5061**	**14.9114**	**0.0311**	**0.7812**	**0.8438**	**1.6250**	**0.2621**	**0.7885**	**0.9397**	**0.0000**	**3,064.6872**	**3,064.6872**	**0.6348**	**0.0000**	**3,080.5581**

	ROG	**NOx**	**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**	**44.21**	**0.00**	**27.59**	**51.46**	**0.00**	**9.07**	**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	0.9045	1.0200e-003	0.1120	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2408	0.2408	6.3000e-004		0.2564
Energy	0.0313	0.2849	0.2393	1.7100e-003		0.0217	0.0217		0.0217	0.0217		341.8932	341.8932	6.5500e-003	6.2700e-003	343.9249
Mobile	1.6183	6.9653	20.7921	0.0837	7.3843	0.0618	7.4461	1.9757	0.0574	2.0332		8,538.9633	8,538.9633	0.3890		8,548.6870
Total	**2.5541**	**7.2513**	**21.1435**	**0.0854**	**7.3843**	**0.0839**	**7.4682**	**1.9757**	**0.0795**	**2.0552**		**8,881.0972**	**8,881.0972**	**0.3961**	**6.2700e-003**	**8,892.8683**

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	0.9045	1.0200e-003	0.1120	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2408	0.2408	6.3000e-004		0.2564
Energy	0.0313	0.2849	0.2393	1.7100e-003		0.0217	0.0217		0.0217	0.0217		341.8932	341.8932	6.5500e-003	6.2700e-003	343.9249
Mobile	1.4511	6.1559	16.5192	0.0647	5.6027	0.0484	5.6511	1.4991	0.0449	1.5440		6,608.2511	6,608.2511	0.3089		6,615.9730
Total	**2.3869**	**6.4419**	**16.8706**	**0.0665**	**5.6027**	**0.0704**	**5.6731**	**1.4991**	**0.0670**	**1.5660**		**6,950.3850**	**6,950.3850**	**0.3161**	**6.2700e-003**	**6,960.1543**

	ROG	NOx	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	**6.55**	**11.16**	**20.21**	**22.20**	**24.13**	**16.00**	**24.04**	**24.13**	**15.71**	**23.80**	**0.00**	**21.74**	**21.74**	**20.21**	**0.00**	**21.73**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/14/2022	5	10	
2	Grading	Grading	1/15/2022	1/30/2022	5	10	
3	Building Construction	Building Construction	1/31/2022	6/17/2022	5	100	
4	Paving	Paving	6/18/2022	6/24/2022	5	5	
5	Architectural Coating	Architectural Coating	6/25/2022	7/22/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.75

Acres of Paving: 0.6

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 58,755; Non-Residential Outdoor: 19,585; Striped Parking Area: 2,661 (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
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	6.00	52.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	35.00	14.00	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	7.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.1256	0.0000	1.1256	0.1704	0.0000	0.1704			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**	**1.1256**	**0.8379**	**1.9635**	**0.1704**	**0.7829**	**0.9533**		**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	0.0413	1.2958	0.3237	4.0000e-003	0.0909	3.7200e-003	0.0947	0.0249	3.5600e-003	0.0285		434.9462	434.9462	0.0294		435.6817
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	0.0522	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	**0.1106**	**1.8844**	**0.9509**	**6.9600e-003**	**0.2747**	**5.9000e-003**	**0.2806**	**0.0745**	**5.6100e-003**	**0.0801**		**741.2703**	**741.2703**	**0.0427**		**742.3390**

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					0.5065	0.0000	0.5065	0.0767	0.0000	0.0767			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**	**0.5065**	**0.8379**	**1.3444**	**0.0767**	**0.7829**	**0.8596**	**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	0.0413	1.2958	0.3237	4.0000e-003	0.0909	3.7200e-003	0.0947	0.0249	3.5600e-003	0.0285		434.9462	434.9462	0.0294		435.6817
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	0.0522	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	**0.1106**	**1.8844**	**0.9509**	**6.9600e-003**	**0.2747**	**5.9000e-003**	**0.2806**	**0.0745**	**5.6100e-003**	**0.0801**		**741.2703**	**741.2703**	**0.0427**		**742.3390**

3.3 Grading - 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					0.9829	0.0000	0.9829	0.5051	0.0000	0.5051			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759		1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**0.9829**	**0.5173**	**1.5001**	**0.5051**	**0.4759**	**0.9810**		**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

3.3 Grading - 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	0.0321	0.0213	0.2973	8.8000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		87.8970	87.8970	2.4300e-003		87.9576
Total	**0.0492**	**0.5753**	**0.4414**	**2.4100e-003**	**0.1278**	**1.7400e-003**	**0.1296**	**0.0348**	**1.6400e-003**	**0.0364**		**251.3885**	**251.3885**	**0.0118**		**251.6837**

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					0.4423	0.0000	0.4423	0.2273	0.0000	0.2273			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759	0.0000	1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**0.4423**	**0.5173**	**0.9596**	**0.2273**	**0.4759**	**0.7032**	**0.0000**	**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

3.3 Grading - 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	0.0321	0.0213	0.2973	8.8000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		87.8970	87.8970	2.4300e-003		87.9576
Total	**0.0492**	**0.5753**	**0.4414**	**2.4100e-003**	**0.1278**	**1.7400e-003**	**0.1296**	**0.0348**	**1.6400e-003**	**0.0364**		**251.3885**	**251.3885**	**0.0118**		**251.6837**

3.4 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	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**		**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

3.4 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	0.1405	0.0932	1.3006	3.8600e-003	0.3912	3.0600e-003	0.3943	0.1038	2.8200e-003	0.1066		384.5493	384.5493	0.0106		384.8147
Total	**0.1805**	**1.3858**	**1.6368**	**7.4300e-003**	**0.4809**	**5.4900e-003**	**0.4863**	**0.1296**	**5.1400e-003**	**0.1347**		**766.0296**	**766.0296**	**0.0325**		**766.8422**

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	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**	**0.0000**	**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

3.4 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	0.1405	0.0932	1.3006	3.8600e-003	0.3912	3.0600e-003	0.3943	0.1038	2.8200e-003	0.1066		384.5493	384.5493	0.0106		384.8147
Total	**0.1805**	**1.3858**	**1.6368**	**7.4300e-003**	**0.4809**	**5.4900e-003**	**0.4863**	**0.1296**	**5.1400e-003**	**0.1347**		**766.0296**	**766.0296**	**0.0325**		**766.8422**

3.5 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**

3.5 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**

3.5 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**

3.6 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	18.7720					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	**18.9765**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 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	0.0281	0.0186	0.2601	7.7000e-004	0.0782	6.1000e-004	0.0789	0.0208	5.6000e-004	0.0213		76.9099	76.9099	2.1200e-003		76.9629
Total	**0.0281**	**0.0186**	**0.2601**	**7.7000e-004**	**0.0782**	**6.1000e-004**	**0.0789**	**0.0208**	**5.6000e-004**	**0.0213**		**76.9099**	**76.9099**	**2.1200e-003**		**76.9629**

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	18.7720					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	**18.9765**	**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**

3.6 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	0.0281	0.0186	0.2601	7.7000e-004	0.0782	6.1000e-004	0.0789	0.0208	5.6000e-004	0.0213		76.9099	76.9099	2.1200e-003		76.9629
Total	**0.0281**	**0.0186**	**0.2601**	**7.7000e-004**	**0.0782**	**6.1000e-004**	**0.0789**	**0.0208**	**5.6000e-004**	**0.0213**		**76.9099**	**76.9099**	**2.1200e-003**		**76.9629**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	1.4511	6.1559	16.5192	0.0647	5.6027	0.0484	5.6511	1.4991	0.0449	1.5440		6,608.2511	6,608.2511	0.3089		6,615.9730
Unmitigated	1.6183	6.9653	20.7921	0.0837	7.3843	0.0618	7.4461	1.9757	0.0574	2.0332		8,538.9633	8,538.9633	0.3890		8,548.6870

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	1,150.00	420.00	40.00	2,679,489	2,032,998
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unenclosed Parking Structure	0.00	0.00	0.00		
Total	1,150.00	420.00	40.00	2,679,489	2,032,998

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
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unenclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Other Non-Asphalt Surfaces	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Unenclosed Parking Structure	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	0.0313	0.2849	0.2393	1.7100e-003		0.0217	0.0217		0.0217	0.0217		341.8932	341.8932	6.5500e-003	6.2700e-003	343.9249
NaturalGas Unmitigated	0.0313	0.2849	0.2393	1.7100e-003		0.0217	0.0217		0.0217	0.0217		341.8932	341.8932	6.5500e-003	6.2700e-003	343.9249

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					
Junior College (2Yr)	2906.09	0.0313	0.2849	0.2393	1.7100e-003		0.0217	0.0217		0.0217	0.0217		341.8932	341.8932	6.5500e-003	6.2700e-003	343.9249
Other Non-Asphalt Surfaces	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
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0313**	**0.2849**	**0.2393**	**1.7100e-003**		**0.0217**	**0.0217**		**0.0217**	**0.0217**		**341.8932**	**341.8932**	**6.5500e-003**	**6.2700e-003**	**343.9249**

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					
Junior College (2Yr)	2.90609	0.0313	0.2849	0.2393	1.7100e-003		0.0217	0.0217		0.0217	0.0217		341.8932	341.8932	6.5500e-003	6.2700e-003	343.9249
Other Non-Asphalt Surfaces	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
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0313**	**0.2849**	**0.2393**	**1.7100e-003**		**0.0217**	**0.0217**		**0.0217**	**0.0217**		**341.8932**	**341.8932**	**6.5500e-003**	**6.2700e-003**	**343.9249**

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	0.9045	1.0200e-003	0.1120	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2408	0.2408	6.3000e-004		0.2564
Unmitigated	0.9045	1.0200e-003	0.1120	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2408	0.2408	6.3000e-004		0.2564

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	0.1029					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7913					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0103	1.0200e-003	0.1120	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2408	0.2408	6.3000e-004		0.2564
Total	**0.9045**	**1.0200e-003**	**0.1120**	**1.0000e-005**		**4.0000e-004**	**4.0000e-004**		**4.0000e-004**	**4.0000e-004**		**0.2408**	**0.2408**	**6.3000e-004**		**0.2564**

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	0.1029					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7913					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0103	1.0200e-003	0.1120	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2408	0.2408	6.3000e-004		0.2564
Total	**0.9045**	**1.0200e-003**	**0.1120**	**1.0000e-005**		**4.0000e-004**	**4.0000e-004**		**4.0000e-004**	**4.0000e-004**		**0.2408**	**0.2408**	**6.3000e-004**		**0.2564**

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

Glendale Community College District Facilities Master Plan - Montrose Campus

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	1,000.00	Student	0.40	39,170.00	0
Other Non-Asphalt Surfaces	0.10	Acre	0.10	4,356.00	0
Unenclosed Parking Structure	100.00	Space	0.50	40,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2025
Utility Company	Glendale Water & Power				
CO2 Intensity (lb/MWhr)	1115.33	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 1,000 New Students, 21,559 sq ft renovation and 17,611 sq ft new construction = Total 39,179 sq ft building space. Approx 1 acre disturbed

Construction Phase - Grading extended to 10 days to account for parking structure

Trips and VMT - 6 vendor trucks added to Demolition and Grading to account for water truck emissions

Demolition - Demolition of Approx 0.5 acre of pavement = 526 tons of material

Grading -

Vehicle Trips - Weekday daily trip rate set to 1.15 daily trips per new student to match trip rate in TIA

Construction Off-road Equipment Mitigation - Water Exposed Area 2x per day selected to account for SCAQMD Rule 403 minimum requirements

Mobile Land Use Mitigation - Improve Pedestrian Network onsite and connecting offsite. 0.06 mile to Honolulu & Ocean View Bus Stop

Energy Mitigation - Per 2019 Title 24 requirements a 30% improvement to lighting energy was selected

Water Mitigation - Install low flow faucets and use water efficient irrigation selected to account for Title 24 Part 11 requirements

Waste Mitigation - 0% reduction in solid waste selected to account for AB 341

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	2.00	10.00
tblLandUse	LandUseSquareFeet	43,652.24	39,170.00
tblLandUse	LotAcreage	1.00	0.40
tblLandUse	LotAcreage	0.90	0.50
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	WD_TR	1.23	1.15

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	19.0079	18.5231	14.9034	0.0309	1.4002	0.8439	2.2441	0.5399	0.7886	1.0335	0.0000	3,044.2377	3,044.2377	0.6362	0.0000	3,060.1430
Maximum	**19.0079**	**18.5231**	**14.9034**	**0.0309**	**1.4002**	**0.8439**	**2.2441**	**0.5399**	**0.7886**	**1.0335**	**0.0000**	**3,044.2377**	**3,044.2377**	**0.6362**	**0.0000**	**3,060.1430**

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	19.0079	18.5231	14.9034	0.0309	0.7812	0.8439	1.6251	0.2621	0.7886	0.9398	0.0000	3,044.2377	3,044.2377	0.6362	0.0000	3,060.1430
Maximum	**19.0079**	**18.5231**	**14.9034**	**0.0309**	**0.7812**	**0.8439**	**1.6251**	**0.2621**	**0.7886**	**0.9398**	**0.0000**	**3,044.2377**	**3,044.2377**	**0.6362**	**0.0000**	**3,060.1430**

	ROG	**NOx**	**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**	**44.21**	**0.00**	**27.59**	**51.46**	**0.00**	**9.07**	**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	0.9045	1.0200e-003	0.1120	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2408	0.2408	6.3000e-004		0.2564
Energy	0.0313	0.2849	0.2393	1.7100e-003		0.0217	0.0217		0.0217	0.0217		341.8932	341.8932	6.5500e-003	6.2700e-003	343.9249
Mobile	1.5665	7.1056	19.7514	0.0797	7.3843	0.0621	7.4464	1.9757	0.0577	2.0334		8,132.5525	8,132.5525	0.3887		8,142.2710
Total	**2.5023**	**7.3915**	**20.1028**	**0.0814**	**7.3843**	**0.0841**	**7.4684**	**1.9757**	**0.0797**	**2.0554**		**8,474.6864**	**8,474.6864**	**0.3959**	**6.2700e-003**	**8,486.4523**

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	0.9045	1.0200e-003	0.1120	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2408	0.2408	6.3000e-004		0.2564
Energy	0.0313	0.2849	0.2393	1.7100e-003		0.0217	0.0217		0.0217	0.0217		341.8932	341.8932	6.5500e-003	6.2700e-003	343.9249
Mobile	1.4029	6.2461	15.8751	0.0616	5.6027	0.0486	5.6513	1.4991	0.0452	1.5442		6,287.4516	6,287.4516	0.3105		6,295.2140
Total	**2.3387**	**6.5320**	**16.2264**	**0.0633**	**5.6027**	**0.0707**	**5.6734**	**1.4991**	**0.0672**	**1.5663**		**6,629.5855**	**6,629.5855**	**0.3177**	**6.2700e-003**	**6,639.3953**

	ROG	NOx	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	**6.54**	**11.63**	**19.28**	**22.24**	**24.13**	**15.96**	**24.04**	**24.13**	**15.66**	**23.80**	**0.00**	**21.77**	**21.77**	**19.76**	**0.00**	**21.76**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/14/2022	5	10	
2	Grading	Grading	1/15/2022	1/30/2022	5	10	
3	Building Construction	Building Construction	1/31/2022	6/17/2022	5	100	
4	Paving	Paving	6/18/2022	6/24/2022	5	5	
5	Architectural Coating	Architectural Coating	6/25/2022	7/22/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.75

Acres of Paving: 0.6

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 58,755; Non-Residential Outdoor: 19,585; Striped Parking Area: 2,661 (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
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	6.00	52.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	35.00	14.00	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	7.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.1256	0.0000	1.1256	0.1704	0.0000	0.1704			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**	**1.1256**	**0.8379**	**1.9635**	**0.1704**	**0.7829**	**0.9533**		**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	0.0423	1.3106	0.3426	3.9300e-003	0.0909	3.7800e-003	0.0947	0.0249	3.6100e-003	0.0285		427.3447	427.3447	0.0304		428.1054
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	0.0582	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	**0.1185**	**1.9013**	**0.9430**	**6.7700e-003**	**0.2747**	**6.0000e-003**	**0.2807**	**0.0745**	**5.6900e-003**	**0.0802**		**720.8209**	**720.8209**	**0.0441**		**721.9239**

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					0.5065	0.0000	0.5065	0.0767	0.0000	0.0767			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**	**0.5065**	**0.8379**	**1.3444**	**0.0767**	**0.7829**	**0.8596**	**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	0.0423	1.3106	0.3426	3.9300e-003	0.0909	3.7800e-003	0.0947	0.0249	3.6100e-003	0.0285		427.3447	427.3447	0.0304		428.1054
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	0.0582	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	**0.1185**	**1.9013**	**0.9430**	**6.7700e-003**	**0.2747**	**6.0000e-003**	**0.2807**	**0.0745**	**5.6900e-003**	**0.0802**		**720.8209**	**720.8209**	**0.0441**		**721.9239**

3.3 Grading - 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					0.9829	0.0000	0.9829	0.5051	0.0000	0.5051			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759		1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**0.9829**	**0.5173**	**1.5001**	**0.5051**	**0.4759**	**0.9810**		**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

3.3 Grading - 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	0.0358	0.0236	0.2713	8.3000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		82.7656	82.7656	2.2800e-003		82.8225
Total	**0.0538**	**0.5760**	**0.4308**	**2.3200e-003**	**0.1278**	**1.7800e-003**	**0.1296**	**0.0348**	**1.6700e-003**	**0.0365**		**241.7477**	**241.7477**	**0.0123**		**242.0545**

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					0.4423	0.0000	0.4423	0.2273	0.0000	0.2273			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759	0.0000	1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**0.4423**	**0.5173**	**0.9596**	**0.2273**	**0.4759**	**0.7032**	**0.0000**	**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

3.3 Grading - 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	0.0358	0.0236	0.2713	8.3000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		82.7656	82.7656	2.2800e-003		82.8225
Total	**0.0538**	**0.5760**	**0.4308**	**2.3200e-003**	**0.1278**	**1.7800e-003**	**0.1296**	**0.0348**	**1.6700e-003**	**0.0365**		**241.7477**	**241.7477**	**0.0123**		**242.0545**

3.4 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	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**		**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

3.4 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	0.1567	0.1031	1.1871	3.6300e-003	0.3912	3.0600e-003	0.3943	0.1038	2.8200e-003	0.1066		362.0993	362.0993	9.9700e-003		362.3486
Total	**0.1987**	**1.3922**	**1.5592**	**7.1000e-003**	**0.4809**	**5.5700e-003**	**0.4864**	**0.1296**	**5.2200e-003**	**0.1348**		**733.0577**	**733.0577**	**0.0333**		**733.8898**

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	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**	**0.0000**	**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

3.4 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	0.1567	0.1031	1.1871	3.6300e-003	0.3912	3.0600e-003	0.3943	0.1038	2.8200e-003	0.1066		362.0993	362.0993	9.9700e-003		362.3486
Total	**0.1987**	**1.3922**	**1.5592**	**7.1000e-003**	**0.4809**	**5.5700e-003**	**0.4864**	**0.1296**	**5.2200e-003**	**0.1348**		**733.0577**	**733.0577**	**0.0333**		**733.8898**

3.5 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**

3.5 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**

3.5 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**

3.6 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	18.7720					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	**18.9765**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 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	0.0314	0.0206	0.2374	7.3000e-004	0.0782	6.1000e-004	0.0789	0.0208	5.6000e-004	0.0213		72.4199	72.4199	1.9900e-003		72.4697
Total	**0.0314**	**0.0206**	**0.2374**	**7.3000e-004**	**0.0782**	**6.1000e-004**	**0.0789**	**0.0208**	**5.6000e-004**	**0.0213**		**72.4199**	**72.4199**	**1.9900e-003**		**72.4697**

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	18.7720					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	**18.9765**	**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**

3.6 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	0.0314	0.0206	0.2374	7.3000e-004	0.0782	6.1000e-004	0.0789	0.0208	5.6000e-004	0.0213		72.4199	72.4199	1.9900e-003		72.4697
Total	**0.0314**	**0.0206**	**0.2374**	**7.3000e-004**	**0.0782**	**6.1000e-004**	**0.0789**	**0.0208**	**5.6000e-004**	**0.0213**		**72.4199**	**72.4199**	**1.9900e-003**		**72.4697**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	1.4029	6.2461	15.8751	0.0616	5.6027	0.0486	5.6513	1.4991	0.0452	1.5442		6,287.4516	6,287.4516	0.3105		6,295.2140
Unmitigated	1.5665	7.1056	19.7514	0.0797	7.3843	0.0621	7.4464	1.9757	0.0577	2.0334		8,132.5525	8,132.5525	0.3887		8,142.2710

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	1,150.00	420.00	40.00	2,679,489	2,032,998
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unenclosed Parking Structure	0.00	0.00	0.00		
Total	1,150.00	420.00	40.00	2,679,489	2,032,998

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
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unenclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Other Non-Asphalt Surfaces	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Unenclosed Parking Structure	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	0.0313	0.2849	0.2393	1.7100e-003		0.0217	0.0217		0.0217	0.0217		341.8932	341.8932	6.5500e-003	6.2700e-003	343.9249
NaturalGas Unmitigated	0.0313	0.2849	0.2393	1.7100e-003		0.0217	0.0217		0.0217	0.0217		341.8932	341.8932	6.5500e-003	6.2700e-003	343.9249

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					
Junior College (2Yr)	2906.09	0.0313	0.2849	0.2393	1.7100e-003		0.0217	0.0217		0.0217	0.0217		341.8932	341.8932	6.5500e-003	6.2700e-003	343.9249
Other Non-Asphalt Surfaces	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
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0313**	**0.2849**	**0.2393**	**1.7100e-003**		**0.0217**	**0.0217**		**0.0217**	**0.0217**		**341.8932**	**341.8932**	**6.5500e-003**	**6.2700e-003**	**343.9249**

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					
Junior College (2Yr)	2.90609	0.0313	0.2849	0.2393	1.7100e-003		0.0217	0.0217		0.0217	0.0217		341.8932	341.8932	6.5500e-003	6.2700e-003	343.9249
Other Non-Asphalt Surfaces	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
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0313**	**0.2849**	**0.2393**	**1.7100e-003**		**0.0217**	**0.0217**		**0.0217**	**0.0217**		**341.8932**	**341.8932**	**6.5500e-003**	**6.2700e-003**	**343.9249**

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	0.9045	1.0200e-003	0.1120	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2408	0.2408	6.3000e-004		0.2564
Unmitigated	0.9045	1.0200e-003	0.1120	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2408	0.2408	6.3000e-004		0.2564

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	0.1029					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7913					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0103	1.0200e-003	0.1120	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2408	0.2408	6.3000e-004		0.2564
Total	**0.9045**	**1.0200e-003**	**0.1120**	**1.0000e-005**		**4.0000e-004**	**4.0000e-004**		**4.0000e-004**	**4.0000e-004**		**0.2408**	**0.2408**	**6.3000e-004**		**0.2564**

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	0.1029					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7913					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0103	1.0200e-003	0.1120	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2408	0.2408	6.3000e-004		0.2564
Total	**0.9045**	**1.0200e-003**	**0.1120**	**1.0000e-005**		**4.0000e-004**	**4.0000e-004**		**4.0000e-004**	**4.0000e-004**		**0.2408**	**0.2408**	**6.3000e-004**		**0.2564**

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

Glendale Community College District Facilities Master Plan - Montrose Campus

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	1,000.00	Student	0.40	39,170.00	0
Other Non-Asphalt Surfaces	0.10	Acre	0.10	4,356.00	0
Unenclosed Parking Structure	100.00	Space	0.50	40,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2025
Utility Company	Glendale Water & Power				
CO2 Intensity (lb/MWhr)	483	**CH4 Intensity (lb/MWhr)**	0.013	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Per 2019 Integrated Resource Plan, prepared by City of Glendale Water & Power the intensity factors were reduced to 41% of default

Land Use - 1,000 New Students, 21,559 sq ft renovation and 17,611 sq ft new construction = Total 39,179 sq ft building space. Approx 1 acre disturbed

Construction Phase - Grading extended to 10 days to account for parking structure

Trips and VMT - 6 vendor trucks added to Demolition and Grading to account for water truck emissions

Demolition - Demolition of Approx 0.5 acre of pavement = 526 tons of material

Grading -

Vehicle Trips - Weekday daily trip rate set to 1.15 daily trips per new student to match trip rate in TIA

Construction Off-road Equipment Mitigation - Water Exposed Area 2x per day selected to account for SCAQMD Rule 403 minimum requirements

Mobile Land Use Mitigation - Improve Pedestrian Network onsite and connecting offsite. 0.06 mile to Honolulu & Ocean View Bus Stop

Energy Mitigation - Per 2019 Title 24 requirements a 30% improvement to lighting energy was selected

Water Mitigation - Install low flow faucets and use water efficient irrigation selected to account for Title 24 Part 11 requirements

Waste Mitigation - 0% reduction in solid waste selected to account for AB 341

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	2.00	10.00
tblGrading	AcresOfGrading	3.75	0.75
tblLandUse	LandUseSquareFeet	43,652.24	39,170.00
tblLandUse	LotAcreage	1.00	0.40
tblLandUse	LotAcreage	0.90	0.50
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.013
tblProjectCharacteristics	CO2IntensityFactor	1115.33	483
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	WD_TR	1.23	1.15

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	0.2981	0.8832	0.8651	1.7800e-003	0.0553	0.0382	0.0935	0.0205	0.0367	0.0572	0.0000	152.2189	152.2189	0.0234	0.0000	152.8028
Maximum	**0.2981**	**0.8832**	**0.8651**	**1.7800e-003**	**0.0553**	**0.0382**	**0.0935**	**0.0205**	**0.0367**	**0.0572**	**0.0000**	**152.2189**	**152.2189**	**0.0234**	**0.0000**	**152.8028**

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	0.2981	0.8832	0.8651	1.7800e-003	0.0396	0.0382	0.0778	0.0132	0.0367	0.0499	0.0000	152.2187	152.2187	0.0234	0.0000	152.8027
Maximum	**0.2981**	**0.8832**	**0.8651**	**1.7800e-003**	**0.0396**	**0.0382**	**0.0778**	**0.0132**	**0.0367**	**0.0499**	**0.0000**	**152.2187**	**152.2187**	**0.0234**	**0.0000**	**152.8027**

	ROG	NOx	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**	**28.45**	**0.00**	**16.82**	**35.69**	**0.00**	**12.80**	**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	**1-1-2022**	**3-31-2022**	0.5174	0.5174
2	**4-1-2022**	**6-30-2022**	0.5005	0.5005
3	**7-1-2022**	**9-30-2022**	0.1605	0.1605
		Highest	0.5174	0.5174

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	0.1645	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0273	0.0273	7.0000e-005	0.0000	0.0291
Energy	5.7200e-003	0.0520	0.0437	3.1000e-004		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003	0.0000	157.9275	157.9275	3.8100e-003	1.6700e-003	158.5196
Mobile	0.2146	1.0143	2.8122	0.0113	1.0167	8.6800e-003	1.0254	0.2725	8.0600e-003	0.2806	0.0000	1,050.5167	1,050.5167	0.0493	0.0000	1,051.7487
Waste						0.0000	0.0000		0.0000	0.0000	37.0459	0.0000	37.0459	2.1894	0.0000	91.7795
Water						0.0000	0.0000		0.0000	0.0000	0.6793	14.2593	14.9386	0.0702	1.7400e-003	17.2096
Total	**0.3848**	**1.0665**	**2.8699**	**0.0117**	**1.0167**	**0.0127**	**1.0294**	**0.2725**	**0.0121**	**0.2846**	**37.7251**	**1,222.7308**	**1,260.4559**	**2.3127**	**3.4100e-003**	**1,319.2865**

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	0.1645	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0273	0.0273	7.0000e-005	0.0000	0.0291
Energy	5.7200e-003	0.0520	0.0437	3.1000e-004		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003	0.0000	144.5992	144.5992	3.4500e-003	1.5800e-003	145.1577
Mobile	0.1915	0.8911	2.2535	8.7700e-003	0.7714	6.8000e-003	0.7782	0.2067	6.3100e-003	0.2131	0.0000	812.8663	812.8663	0.0393	0.0000	813.8478
Waste						0.0000	0.0000		0.0000	0.0000	18.5229	0.0000	18.5229	1.0947	0.0000	45.8898
Water						0.0000	0.0000		0.0000	0.0000	0.5733	12.8092	13.3825	0.0592	1.4700e-003	15.3013
Total	**0.3617**	**0.9432**	**2.3112**	**9.0800e-003**	**0.7714**	**0.0108**	**0.7822**	**0.2067**	**0.0103**	**0.2171**	**19.0962**	**970.3020**	**989.3983**	**1.1967**	**3.0500e-003**	**1,020.2256**

	ROG	NOx	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	**6.01**	**11.56**	**19.47**	**22.06**	**24.13**	**14.83**	**24.01**	**24.13**	**14.51**	**23.72**	**49.38**	**20.64**	**21.50**	**48.26**	**10.56**	**22.67**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/14/2022	5	10	
2	Grading	Grading	1/15/2022	1/30/2022	5	10	
3	Building Construction	Building Construction	1/31/2022	6/17/2022	5	100	
4	Paving	Paving	6/18/2022	6/24/2022	5	5	
5	Architectural Coating	Architectural Coating	6/25/2022	7/22/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.75

Acres of Paving: 0.6

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 58,755; Non-Residential Outdoor: 19,585; Striped Parking Area: 2,661 (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
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	6.00	52.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	35.00	14.00	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	7.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

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					5.6300e-003	0.0000	5.6300e-003	8.5000e-004	0.0000	8.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.4400e-003	0.0831	0.0698	1.2000e-004		4.1900e-003	4.1900e-003		3.9100e-003	3.9100e-003	0.0000	10.5388	10.5388	2.6900e-003	0.0000	10.6060
Total	**8.4400e-003**	**0.0831**	**0.0698**	**1.2000e-004**	**5.6300e-003**	**4.1900e-003**	**9.8200e-003**	**8.5000e-004**	**3.9100e-003**	**4.7600e-003**	**0.0000**	**10.5388**	**10.5388**	**2.6900e-003**	**0.0000**	**10.6060**

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	tons/yr										MT/yr					
Hauling	2.1000e-004	6.6800e-003	1.6600e-003	2.0000e-005	4.5000e-004	2.0000e-005	4.7000e-004	1.2000e-004	2.0000e-005	1.4000e-004	0.0000	1.9584	1.9584	1.4000e-004	0.0000	1.9618
Vendor	9.0000e-005	2.8100e-003	7.6000e-004	1.0000e-005	1.9000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7330	0.7330	4.0000e-005	0.0000	0.7341
Worker	2.6000e-004	2.0000e-004	2.2600e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6202	0.6202	2.0000e-005	0.0000	0.6206
Total	**5.6000e-004**	**9.6900e-003**	**4.6800e-003**	**4.0000e-005**	**1.3500e-003**	**4.0000e-005**	**1.3800e-003**	**3.6000e-004**	**4.0000e-005**	**3.9000e-004**	**0.0000**	**3.3116**	**3.3116**	**2.0000e-004**	**0.0000**	**3.3165**

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					2.5300e-003	0.0000	2.5300e-003	3.8000e-004	0.0000	3.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.4400e-003	0.0831	0.0698	1.2000e-004		4.1900e-003	4.1900e-003		3.9100e-003	3.9100e-003	0.0000	10.5388	10.5388	2.6900e-003	0.0000	10.6060
Total	**8.4400e-003**	**0.0831**	**0.0698**	**1.2000e-004**	**2.5300e-003**	**4.1900e-003**	**6.7200e-003**	**3.8000e-004**	**3.9100e-003**	**4.2900e-003**	**0.0000**	**10.5388**	**10.5388**	**2.6900e-003**	**0.0000**	**10.6060**

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	tons/yr										MT/yr					
Hauling	2.1000e-004	6.6800e-003	1.6600e-003	2.0000e-005	4.5000e-004	2.0000e-005	4.7000e-004	1.2000e-004	2.0000e-005	1.4000e-004	0.0000	1.9584	1.9584	1.4000e-004	0.0000	1.9618
Vendor	9.0000e-005	2.8100e-003	7.6000e-004	1.0000e-005	1.9000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7330	0.7330	4.0000e-005	0.0000	0.7341
Worker	2.6000e-004	2.0000e-004	2.2600e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6202	0.6202	2.0000e-005	0.0000	0.6206
Total	**5.6000e-004**	**9.6900e-003**	**4.6800e-003**	**4.0000e-005**	**1.3500e-003**	**4.0000e-005**	**1.3800e-003**	**3.6000e-004**	**4.0000e-005**	**3.9000e-004**	**0.0000**	**3.3116**	**3.3116**	**2.0000e-004**	**0.0000**	**3.3165**

3.3 Grading - 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					0.0230	0.0000	0.0230	0.0125	0.0000	0.0125	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4200e-003	0.0600	0.0297	7.0000e-005		2.5900e-003	2.5900e-003		2.3800e-003	2.3800e-003	0.0000	6.1907	6.1907	2.0000e-003	0.0000	6.2408
Total	**5.4200e-003**	**0.0600**	**0.0297**	**7.0000e-005**	**0.0230**	**2.5900e-003**	**0.0256**	**0.0125**	**2.3800e-003**	**0.0148**	**0.0000**	**6.1907**	**6.1907**	**2.0000e-003**	**0.0000**	**6.2408**

3.3 Grading - 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	9.0000e-005	2.8100e-003	7.6000e-004	1.0000e-005	1.9000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7330	0.7330	4.0000e-005	0.0000	0.7341
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	**2.5000e-004**	**2.9300e-003**	**2.1500e-003**	**1.0000e-005**	**6.3000e-004**	**1.0000e-005**	**6.3000e-004**	**1.7000e-004**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**1.1147**	**1.1147**	**5.0000e-005**	**0.0000**	**1.1160**

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					0.0103	0.0000	0.0103	5.6100e-003	0.0000	5.6100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4200e-003	0.0600	0.0297	7.0000e-005		2.5900e-003	2.5900e-003		2.3800e-003	2.3800e-003	0.0000	6.1907	6.1907	2.0000e-003	0.0000	6.2408
Total	**5.4200e-003**	**0.0600**	**0.0297**	**7.0000e-005**	**0.0103**	**2.5900e-003**	**0.0129**	**5.6100e-003**	**2.3800e-003**	**7.9900e-003**	**0.0000**	**6.1907**	**6.1907**	**2.0000e-003**	**0.0000**	**6.2408**

3.3 Grading - 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	9.0000e-005	2.8100e-003	7.6000e-004	1.0000e-005	1.9000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7330	0.7330	4.0000e-005	0.0000	0.7341
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	**2.5000e-004**	**2.9300e-003**	**2.1500e-003**	**1.0000e-005**	**6.3000e-004**	**1.0000e-005**	**6.3000e-004**	**1.7000e-004**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**1.1147**	**1.1147**	**5.0000e-005**	**0.0000**	**1.1160**

3.4 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	0.0824	0.6252	0.6363	1.1000e-003		0.0294	0.0294		0.0284	0.0284	0.0000	90.7885	90.7885	0.0158	0.0000	91.1838
Total	**0.0824**	**0.6252**	**0.6363**	**1.1000e-003**		**0.0294**	**0.0294**		**0.0284**	**0.0284**	**0.0000**	**90.7885**	**90.7885**	**0.0158**	**0.0000**	**91.1838**

3.4 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	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	2.0400e-003	0.0656	0.0177	1.8000e-004	4.4100e-003	1.2000e-004	4.5300e-003	1.2700e-003	1.2000e-004	1.3900e-003	0.0000	17.1032	17.1032	1.0200e-003	0.0000	17.1288
Worker	7.0600e-003	5.2900e-003	0.0610	1.8000e-004	0.0192	1.5000e-004	0.0193	5.0900e-003	1.4000e-004	5.2300e-003	0.0000	16.6977	16.6977	4.6000e-004	0.0000	16.7092
Total	**9.1000e-003**	**0.0709**	**0.0787**	**3.6000e-004**	**0.0236**	**2.7000e-004**	**0.0239**	**6.3600e-003**	**2.6000e-004**	**6.6200e-003**	**0.0000**	**33.8009**	**33.8009**	**1.4800e-003**	**0.0000**	**33.8380**

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	0.0824	0.6252	0.6363	1.1000e-003		0.0294	0.0294		0.0284	0.0284	0.0000	90.7884	90.7884	0.0158	0.0000	91.1837
Total	**0.0824**	**0.6252**	**0.6363**	**1.1000e-003**		**0.0294**	**0.0294**		**0.0284**	**0.0284**	**0.0000**	**90.7884**	**90.7884**	**0.0158**	**0.0000**	**91.1837**

3.4 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	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	2.0400e-003	0.0656	0.0177	1.8000e-004	4.4100e-003	1.2000e-004	4.5300e-003	1.2700e-003	1.2000e-004	1.3900e-003	0.0000	17.1032	17.1032	1.0200e-003	0.0000	17.1288
Worker	7.0600e-003	5.2900e-003	0.0610	1.8000e-004	0.0192	1.5000e-004	0.0193	5.0900e-003	1.4000e-004	5.2300e-003	0.0000	16.6977	16.6977	4.6000e-004	0.0000	16.7092
Total	**9.1000e-003**	**0.0709**	**0.0787**	**3.6000e-004**	**0.0236**	**2.7000e-004**	**0.0239**	**6.3600e-003**	**2.6000e-004**	**6.6200e-003**	**0.0000**	**33.8009**	**33.8009**	**1.4800e-003**	**0.0000**	**33.8380**

3.5 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	1.7200e-003	0.0169	0.0220	3.0000e-005		8.7000e-004	8.7000e-004		8.0000e-004	8.0000e-004	0.0000	2.9424	2.9424	9.3000e-004	0.0000	2.9657
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.7200e-003**	**0.0169**	**0.0220**	**3.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.0000e-004**	**8.0000e-004**	**0.0000**	**2.9424**	**2.9424**	**9.3000e-004**	**0.0000**	**2.9657**

3.5 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	1.3000e-004	1.0000e-004	1.1300e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3101	0.3101	1.0000e-005	0.0000	0.3103
Total	**1.3000e-004**	**1.0000e-004**	**1.1300e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3101**	**0.3101**	**1.0000e-005**	**0.0000**	**0.3103**

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	1.7200e-003	0.0169	0.0220	3.0000e-005		8.7000e-004	8.7000e-004		8.0000e-004	8.0000e-004	0.0000	2.9424	2.9424	9.3000e-004	0.0000	2.9657
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.7200e-003**	**0.0169**	**0.0220**	**3.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.0000e-004**	**8.0000e-004**	**0.0000**	**2.9424**	**2.9424**	**9.3000e-004**	**0.0000**	**2.9657**

3.5 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	1.3000e-004	1.0000e-004	1.1300e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3101	0.3101	1.0000e-005	0.0000	0.3103
Total	**1.3000e-004**	**1.0000e-004**	**1.1300e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3101**	**0.3101**	**1.0000e-005**	**0.0000**	**0.3103**

3.6 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	0.1877					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.1898**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.6 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	2.8000e-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	**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**

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	0.1877					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.1898**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.6 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	2.8000e-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	**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**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	0.1915	0.8911	2.2535	8.7700e-003	0.7714	6.8000e-003	0.7782	0.2067	6.3100e-003	0.2131	0.0000	812.8663	812.8663	0.0393	0.0000	813.8478
Unmitigated	0.2146	1.0143	2.8122	0.0113	1.0167	8.6800e-003	1.0254	0.2725	8.0600e-003	0.2806	0.0000	1,050.5167	1,050.5167	0.0493	0.0000	1,051.7487

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	1,150.00	420.00	40.00	2,679,489	2,032,998
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unenclosed Parking Structure	0.00	0.00	0.00		
Total	1,150.00	420.00	40.00	2,679,489	2,032,998

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
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unenclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Other Non-Asphalt Surfaces	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Unenclosed Parking Structure	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	87.9950	87.9950	2.3700e-003	5.5000e-004	88.2171
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	101.3232	101.3232	2.7300e-003	6.3000e-004	101.5790
NaturalGas Mitigated	5.7200e-003	0.0520	0.0437	3.1000e-004		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003	0.0000	56.6043	56.6043	1.0800e-003	1.0400e-003	56.9406
NaturalGas Unmitigated	5.7200e-003	0.0520	0.0437	3.1000e-004		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003	0.0000	56.6043	56.6043	1.0800e-003	1.0400e-003	56.9406

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					
Junior College (2Yr)	1.06072e+006	5.7200e-003	0.0520	0.0437	3.1000e-004		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003	0.0000	56.6043	56.6043	1.0800e-003	1.0400e-003	56.9406
Other Non-Asphalt Surfaces	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
Unenclosed Parking Structure	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
Total		**5.7200e-003**	**0.0520**	**0.0437**	**3.1000e-004**		**3.9500e-003**	**3.9500e-003**		**3.9500e-003**	**3.9500e-003**	**0.0000**	**56.6043**	**56.6043**	**1.0800e-003**	**1.0400e-003**	**56.9406**

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					
Junior College (2Yr)	1.06072e+006	5.7200e-003	0.0520	0.0437	3.1000e-004		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003	0.0000	56.6043	56.6043	1.0800e-003	1.0400e-003	56.9406
Other Non-Asphalt Surfaces	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
Unenclosed Parking Structure	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
Total		**5.7200e-003**	**0.0520**	**0.0437**	**3.1000e-004**		**3.9500e-003**	**3.9500e-003**		**3.9500e-003**	**3.9500e-003**	**0.0000**	**56.6043**	**56.6043**	**1.0800e-003**	**1.0400e-003**	**56.9406**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	392483	85.9873	2.3100e-003	5.3000e-004	86.2043
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	70000	15.3360	4.1000e-004	1.0000e-004	15.3747
Total		**101.3232**	**2.7200e-003**	**6.3000e-004**	**101.5790**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	352648	77.2598	2.0800e-003	4.8000e-004	77.4548
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	49000	10.7352	2.9000e-004	7.0000e-005	10.7623
Total		**87.9950**	**2.3700e-003**	**5.5000e-004**	**88.2171**

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	0.1645	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0273	0.0273	7.0000e-005	0.0000	0.0291
Unmitigated	0.1645	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0273	0.0273	7.0000e-005	0.0000	0.0291

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	0.0188					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1444					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2900e-003	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0273	0.0273	7.0000e-005	0.0000	0.0291
Total	**0.1645**	**1.3000e-004**	**0.0140**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0273**	**0.0273**	**7.0000e-005**	**0.0000**	**0.0291**

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	0.0188					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1444					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2900e-003	1.3000e-004	0.0140	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0273	0.0273	7.0000e-005	0.0000	0.0291
Total	**0.1645**	**1.3000e-004**	**0.0140**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0273**	**0.0273**	**7.0000e-005**	**0.0000**	**0.0291**

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	13.3825	0.0592	1.4700e-003	15.3013
Unmitigated	14.9386	0.0702	1.7400e-003	17.2096

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	2.1411 / 3.3489	14.9386	0.0702	1.7400e-003	17.2096
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**14.9386**	**0.0702**	**1.7400e-003**	**17.2096**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.80709 / 3.14462	13.3825	0.0592	1.4700e-003	15.3013
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**13.3825**	**0.0592**	**1.4700e-003**	**15.3013**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18.5229	1.0947	0.0000	45.8898
Unmitigated	37.0459	2.1894	0.0000	91.7795

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	182.5	37.0459	2.1894	0.0000	91.7795
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Total		**37.0459**	**2.1894**	**0.0000**	**91.7795**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	91.25	18.5229	1.0947	0.0000	45.8898
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Total		**18.5229**	**1.0947**	**0.0000**	**45.8898**

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