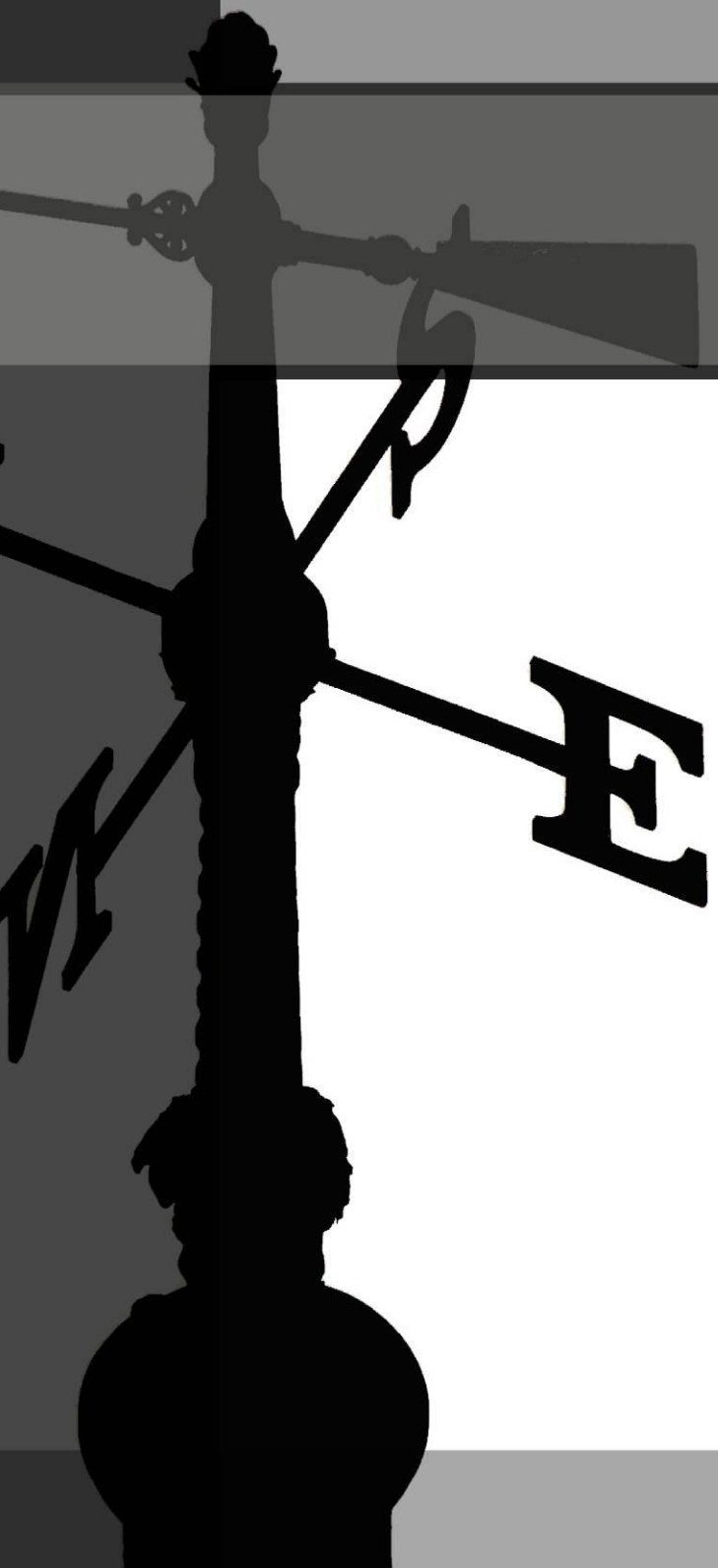

Galaxy Management Medical Village

Air Quality & Climate Change Assessment

June 2017 (13517)

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Galaxy Management Medical Village

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June 2017

Moreno Valley, California

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1 Executive Summary

Construction-related and operational emissions of criteria pollutants were modeled and analyzed for the proposed project located at the southeast corner of Nason Street and Brodiaea Avenue (APNs 486-290-036 and -037) in the city of Moreno Valley, Riverside County, California. This report also analyzes the project's consistency with the South Coast Air Quality Management District (SCAQMD) 2012 Air Quality Management Plan (AQMP) for the South Coast Air Basin. Cumulative impacts were analyzed using the methodology provided by the 1993 SCAQMD California Environmental Quality Act (CEQA) Air Quality Handbook. The results of this report find that the thresholds established by SCAQMD for volume and receptor-specific criteria pollutant emissions and toxic air contaminants will not be exceeded.

Additionally, this report models and analyzes construction- and operation-related emissions of greenhouse gases from the proposed project. This analysis utilizes guidance provided in the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate Change* white paper and the *Quantifying Greenhouse Gas Mitigation Measures* handbook. Modeling of emissions utilizes the California Emissions Estimator Model (CalEEMod) v 2016.3.1. The results of this report find that the interim-threshold established by the South Coast Air Quality Management District for greenhouse gas emissions will not be exceeded.

1.1 Project Description

The proposed project is located on approximately 18.14 acres and is currently vacant. The project includes the construction of a medical village consisting of five buildings, on-grade un-covered parking, and associated drive aisles and landscaping. The proposed development will include a 53,000-square foot medical office building, 50,000-square foot wellness center with a 3,000-square foot urgent care attached, 91,800 square feet of assisted living space with a total of 207 beds, and a 70,000-square foot Skilled Nursing Program (SNP) building with a total of 158 beds. Approximately 333,568 square feet of the site area will consist of driveway pavement area, an emergency fire access lane, and parking to accommodate 696 parking spaces. The project will also include approximately 264,675 square feet of landscape and hardscape area. Approximately 25,317 cubic yards of soil will be exported.

1.2 Air Quality

The project will not result in substantial emissions of volatile organic compounds (with mitigation incorporated), oxides of nitrogen, or particulate matter and will not exceed the regional growth assumptions used in the Air Quality Management Plan (AQMP). The project will not individually cause or cumulatively contribute to an air quality standard violation. Toxics emissions, carbon monoxide, and localized criteria pollutants will not substantially impact sensitive receptors in vicinity of the project. The project will not expose a substantial number of people to odors.

1.3 Climate Change

With implementation of project design features, regulatory requirements, and greenhouse gas reduction policies identified in the City's Energy Efficiency and Climate Action Strategy, the project will result in a 17.5 percent reduction in greenhouse gas emissions compared to business as usual conditions. This reduction exceeds the 15 percent reduction required by the City's Energy Efficiency and Climate Action Strategy and will therefore result in less than significant impacts. The project will not conflict with greenhouse gas reduction strategies.

1.4 Mitigation Measures

The following mitigation measures are required to reduce, minimize, or avoid exceedance of established thresholds.

AQ-1 Before the City issues building permits, the Building Official and Community Development Director must verify that construction plans submitted by the project proponent reflect use of architectural coatings where the content of volatile organic compounds (VOC) does not exceed 25 grams per liter (g/l) for interior and exterior applications. This measure must be verified through standard building inspections in light of the performance standard that emissions of

volatile organic compounds from application of interior or exterior coatings shall not exceed the daily emissions thresholds established by the South Coast Air Quality Management District. The applicant bears the cost of implementing this mitigation.

2 Introduction

This report models and analyzes construction- and operation-related emissions of criteria air pollutants, and greenhouse gas emissions from the proposed project. The project includes construction of a medical village consisting of five buildings with associated parking, drive aisles, and landscaping in Moreno Valley, California. The proposed development will include a medical office building, wellness center, urgent care, assisted living facilities, and a Skilled Nursing Program (SNP) building.

The air quality analysis provided herein utilizes guidance provided in the South Coast Air Quality Management District (SCAQMD) the 1993 California Environmental Quality Act (CEQA) Air Quality handbook as amended and supplemented (http://www.aqmd.gov/ceqa/hdbk.html). Modeling of emissions utilizes the following software and guidelines:

- California Emissions Estimator Model (CalEEMod) v 2016.3.1

The climate change analysis provided herein utilizes guidance provided in the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate Change* white paper and the *Quantifying Greenhouse Gas Mitigation Measures* handbook. Modeling of greenhouse gas emissions utilizes the California Emissions Estimator Model (CalEEMod) v 2016.3.1.

This report has been prepared utilizing project-specific characteristics where available. In those instances where project-specific data is not available, the analysis has been supplemented by established model default values or other standardized sources of comparable data. In any case where non-project defaults or other data have been used, a "worst-case" scenario was developed to ensure a conservative estimate of emissions.

This report has been prepared for use by the Lead Agency to assess potential project-related air quality impacts in compliance with the state CEQA Statutes and Guidelines, particularly in respect to the air quality issues identified in Appendix G of the state CEQA Guidelines. This report suggests significance thresholds pursuant to published data for review and consideration by the Lead Agency that is responsible for making determinations of significance pursuant to CEQA.

This document has been reviewed in accordance with *Table 7-2, Checklist for an Air Quality Analysis Section* of the SCAQMD Air Quality Handbook for quality control purposes.

This report was prepared by Christopher Brown (Director of Environmental Services) and Olivia Chan (Associate Analyst) of the Planning and Environmental Management Services division of MIG, Inc. under contract with Galaxy Management, Inc.

Christopher Brown
Director of Environmental Services

Olivia Chan
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3 Environmental Setting

3.1 Climate

The project is located in the city of Moreno Valley, Riverside County, California. Riverside County and the broader Inland Empire are defined by a semi-arid, Mediterranean climate with mild winters and warm summers. Annual rainfall averages 9.86 inches with the rainy season occurring during the winter.[1] The coolest month of the year is December with an average monthly low of 41.3° Fahrenheit (F). The warmest month is August with an average monthly high of 94.4° F. The project site is at an elevation of approximately 1,560 feet above mean sea level (AMSL).

3.2 Regional Air Quality

The proposed project is located within the South Coast Air Basin (Basin).[2] The Basin includes Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties. The Basin is bounded by the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east that trap ambient air and pollutants within the Los Angeles and Inland Empire valleys below. The Basin is managed by the South Coast Air Quality Management District (SCAQMD). Pursuant to the California Clean Air Act (CCAA), SCAQMD is responsible for bringing air quality within the Basin into conformity with federal and state air quality standards by reducing existing emission levels and ensuring that future emission levels meet applicable air quality standards. SCAQMD works with federal, state, and local agencies to reduce pollutant emissions from stationary, mobile, and indirect pollutant sources through the development of rules and regulations.

Both California and the federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants (known as "criteria pollutants"). These pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), inhalable particulate matter with a diameter of 10 microns or less (PM_{10}), fine particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$), and lead (Pb). The state has also established AAQS for the additional pollutants of visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. The AAQS are designed to protect the health and welfare of the populace within a reasonable margin of safety. Where the state and federal standards differ, state AAQS are more stringent than federal AAQS. Federal and state standards are shown in Table 1 (Ambient Air Quality Standards). A brief description of each criteria pollutant is provided below.

Ozone. Ozone is a pungent, colorless, and highly reactive gas that forms from the atmospheric reaction of organic gases with nitrogen oxides in the presence of sunlight. Ozone is most commonly associated with smog. Ozone precursors such as reactive organic gases (ROG) and oxides of nitrogen (NO_X) are released from mobile and stationary sources. Ozone is a respiratory irritant and can cause cardiovascular diseases, eye irritation, and impaired cardiopulmonary function. Ozone also causes damage to building materials and plant leafs.

Carbon Monoxide. Carbon monoxide is primarily emitted from vehicles due to the incomplete combustion of fuels. Carbon monoxide has wide ranging impacts on human health because it combines with hemoglobin in the body and reduces the amount of oxygen transported in the bloodstream. Carbon monoxide can result in reduced tolerance for exercise, impairment of mental function, impairment of fetal development, headaches, nausea, and death at high levels of exposure.

Nitrogen Dioxide. Nitrogen dioxide and other oxides of nitrogen (NO_X) contribute to the formation of smog and results in the brownish haze associated with it. They are primarily emitted from motor vehicle exhaust but can be omitted from other high-temperature stationary sources. Nitrogen oxides can aggravate respiratory illnesses, reduce visibility, impair plant growth, and form acid rain.

Particulate Matter. Particulate matter is a complex mixture of small-suspended particles and liquid droplets in the air. Particulate matter between ten microns and 2.5 microns is known as PM_{10}, also known as coarse or inhalable particulate matter. PM_{10} is emitted from diverse sources including road dust, diesel soot, combustion products, abrasion of tires and brakes, construction operations, and windstorms. PM_{10} can also be formed secondarily in the atmosphere when NO_2 and SO_2

react with ammonia. Particulate matter less than 2.5 microns in size are called $PM_{2.5}$ or fine particulate matter. $PM_{2.5}$ is primarily emitted from point sources such as power plants, industrial facilities, automobiles, wood-burning fireplaces, and construction sites. Particulate matter is deposited in the lungs and causes permanent lung damage, potentially resulting in lung disease and respiratory symptoms like asthma and bronchitis. Particulate matter has also been linked to cardiovascular problems such as arrhythmia and heart attacks. Particulate matter can also interfere with the body's ability to clear the respiratory tract and can act as a carrier of absorbed toxic substances. Particulate matter causes welfare issues because it scatters light and reduces visibility, causes environmental damage such as increasing the acidity of lakes and streams, and can stain and damage stone, such as that applied in statues and monuments.

Sulfur Dioxide. Sulfur dioxide and other oxides of sulfur (SO_X) are reactive gasses emitted from the burning of fossil fuels, primarily from power plants and other industrial facilities. [3] Other less impacting sources include metal extraction activities, locomotives, large ships, and off-road equipment. Human health impacts associated with SO_X emissions include bronchoconstriction and increased asthma symptoms.

Lead. Lead is primarily emitted from metal processing facilities (i.e. secondary lead smelters) and other sources such as manufacturers of batteries, paints, ink, ceramics, and ammunition. Historically, automobiles were the primary sources before lead was phased out of gasoline. The health effects of exposure to lead include gastrointestinal disturbances, anemia, kidney diseases, and potential neuromuscular and neurologic dysfunction. Lead is also classified as a probable human carcinogen.

Table 1
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (137 µg/m^3)		0.07 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM_{10})[8]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		-		
Fine Particulate Matter($PM_{2.5}$)[8]	24 Hour	-	-	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/ m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	-	Non-Dispersive Infrared Photometry (NDIR) -
	8 Hour	9.0 ppm (10mg/m^3)		9 ppm (10 mg/m^3)	-	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/ m^3)		-	-	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.03 ppm (57 µg/m^3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m^3)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m^3)		100 ppb (188 µg/m^3)	-	
Sulfur Dioxide (SO_2)	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	-	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method) -
	3 Hour	-		-	0.5 ppm (1,300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[10]	-	
	Annual Arithmetic Mean	-		0.030 ppm (for certain areas)[10]	-	
Lead[11,12]	30 Day Average	1.5 µg/m^3	Atomic Absorption	-	-	High Volume Sampler and Atomic Absorption
	Calendar Quarter	-		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average[10]	-		0.15 µg/m^3		
Visibility Reducing Particles[13]	8 Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[11]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

Source: ARB, October 2015

PPM, parts per million
µg/m3, micrograms per cubic meter

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal

to or less than the standard. Contact U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
8. On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
9. To attain the 1-hour national standard, the 3-year average of the 98th percentile of the daily maximum 1-hour daily maximum concentrations at each site must not exceed 100ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 100ppb is identical to 0.100ppm.
10. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
11. The ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
11. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
12. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

3.3 Non-Attainment Status

Air pollution levels are measured at monitoring stations located throughout the Basin. Areas that are in nonattainment with respect to criteria pollutants are required to prepare plans and implement measures that will bring the region into attainment. Table 2 (South Coast Air Basin (Non-Desert) Attainment Status) summarizes the attainment status in the non-desert portion of the Basin for the criteria pollutants.[4] The non-desert portion of the Basin is currently in nonattainment status for ozone, inhalable and fine particulate matter, nitrogen dioxide, and lead.

Pollution problems in the Basin are caused by emissions within the area and the specific meteorology that promotes pollutant concentrations. Emissions sources vary widely from smaller sources such as individual residential water heaters and short-term grading activities to extensive operational sources including long-term operation of electrical power plants and other intense industrial uses. Pollutants in the Basin are blown inward from coastal areas by sea breezes from the Pacific Ocean and are prevented from horizontally dispersing due to the surrounding mountains. This is further complicated by atmospheric temperature inversions that create inversion layers. The inversion layer in Southern California refers to the warm layer of air that lies over the cooler air from the Pacific Ocean. This is strongest in the summer and prevents ozone and other pollutants from dispersing upward. A ground-level surface inversion commonly occurs during winter nights and traps carbon monoxide emitted during the morning rush hour.

Table 2
South Coast Air Basin (Non-Desert) Attainment Status

Pollutant	Federal	State
O_3 (1-hr)	--	Nonattainment
O_3 (8-hr)	Nonattainment	Nonattainment
PM_{10}	Attainment	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Nonattainment
SO_2	Attainment	Attainment
Pb	Nonattainment	Nonattainment
VRP	--	Unclassified
SO_4	--	Attainment
H_2S	--	Unclassified
Sources: ARB 2014		

3.4 Local Air Quality

Riverside County is located within the South Coast Air Basin (SCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The project site is located in the Perris Valley monitoring area known as Source Receptor Area (SRA 24). The air quality in SRA 24 is monitored at Station 4149. Air monitoring results for SRA 24 over the last three years of available data are summarized in Table 4.2-3 (2012-2014 Local Air Quality).[5] [6] [7] Note that NO_2, SO_2, $PM_{2.5}$, TSP, and Pb are not measured at this station. Table 4.2-4 (2012-2014 Air Quality Standards Exceedance) summarizes the number of days for each monitoring year that air quality standards were exceeded. Based on the 2012-2014 air quality monitoring data, the Perris Valley area experiences ozone pollution and particulate matter pollution with at most 64 days exceeding State ozone standards in 2012 and at most 10 days exceeding State PM_{10} standards in 2011.

Table 3
2012-2014 Local Air Quality

	CO (PPM)		O_3 (PPM)		NO_2 (ppb)		SO_2 (ppb)	
Year	Max 1-hr	Max 8-hr	Max 1-hr	Max 8-hr	Max 1-hr	AAM	Max 1-hr	Max 24-hr
2014	--	--	0.117	0.094	--	--	--	--
2013	--	--	0.108	0.090	--	--	--	--
2012	--	--	0.111	0.093	--	--	--	--

	PM_{10} (µg/m³)		$PM_{2.5}$ (µg/m³)		TSP (µg/m³)		Pb (µg/m³)		SO_4 (µg/m³)
Year	Max 24-hr	AAM	Max 24-hr	AAM	Max 24-hr	AAM	Max Month	Max Qtr	Max 24-hr
2014	87	35.1	--	--	--	--	--	--	3.5
2013	70	33.6	--	--	--	--	--	--	3.4
2012	62	26.5	--	--	--	--	--	--	3.8

Source: SCAQMD 2012-2014

-- pollutant not monitored
ppm, parts per million
ppb, parts per billion
µg/m³, micrograms per cubic meter
AAM, annual arithmetic mean

Table 4
2012-2014 Air Quality Standards Exceedance

Year	O_3 (PPM)			PM_{10} (µg/m^3)		$PM_{2.5}$ (µg/m^3)
	Fed* 8-hr	State 1-hr	State 8-hr	Fed 24-hr	State 24-hr	Fed^ 24-hr
2014	38	16	63	0	8	--
2013	34	17	60	0	10	--
2012	46	28	64	0	1	--

Source: SCAQMD 2012-2014

-- pollutant not monitored
* 0.075 ppm
^35 µg/m^3

3.5 Sensitive Receptors

Some populations are more susceptible to the effects of air pollution than the population at large; these populations are defined as sensitive receptors. Sensitive receptors include children, the elderly, the sick, and the athletic. Land uses associated with sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Pollutants of particular concern when relating to sensitive receptors include carbon monoxide, toxic air contaminants, and odors. Specific sensitive receptors within one-quarter mile of the project site include the Riverside County Regional Medical Center to the west and residential uses to the west, south, and east of the project site.

3.6 Toxic Emission Sources

According to the EPA, there are no existing sources of industrial- or utility-related toxic emissions uses within one-quarter mile of the project site.[8] The nearest toxics emitter to the project site is San Diego & Electric-Moreno Valley located at 14601 Virginia & Alessandro in Moreno Valley, approximately four miles east of the project site. San Diego Gas & Electric – Moreno Valley is a pipeline transport of natural gas. The facility is in compliance with emissions requirements.[9]

3.7 Local Transportation

The proposed development will be located east of Nason Street between Brodiaea Avenue and Hospital Road in the City of Moreno Valley. Nason Street is a four-lane undivided north-south roadway. The project traffic study analyzed existing performance at 15 intersections in the project vicinity. All studied intersections currently operate at acceptable levels of service.[10]

3.8 Odors

According to the CEQA Air Quality Handbook, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). The proposed development is not a use generally associated with substantial odors. Furthermore, surrounding residential and medical center uses are not associated with substantial odors.

3.9 Existing Criteria Pollutant Emissions

The project site is currently vacant and therefore does not emit criteria pollutants.

3.10 Climate Change

3.10.1 Defining Climate Change

Climate change is the distinct change in measures of climate for a long period of time. Climate change can result from natural processes and from human activities. Natural changes in the climate can be caused by indirect processes such as changes in the Earth's orbit around the Sun or direct changes within the climate system itself (i.e. changes in ocean circulation). Human activities affect the atmosphere through emissions of gases and changes to the planet's surface. Emissions affect the atmosphere directly by changing its chemical composition, while changes to the land surface indirectly affects the atmosphere by changing the way the Earth absorbs gases from the atmosphere. The term "climate change" is preferred over the term "global warming" because "climate change" conveys the fact that other changes can occur beyond just average increase in temperatures near the Earth's surface. Elements that indicate that climate change is occurring on Earth include:

- Rising of global surface temperatures by 1.3° Fahrenheit (F) over the last 100 years
- Changes in precipitation patterns
- Melting ice in the Arctic
- Melting glaciers throughout the world
- Rising ocean temperatures
- Acidification of oceans
- Range shifts in plant and animal species

Climate change is intimately tied to the Earth's greenhouse effect. The greenhouse effect is a natural occurrence that helps regulate the temperature of the planet. The majority of radiation from the Sun hits the Earth's surface and warms it. The surface in turn radiates heat back towards the atmosphere, known as infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping back into space and re-radiate it in all directions. This process is essential to supporting life on Earth because it keeps the planet approximately 60° F warmer than without it. Emissions from human activities since the beginning of the industrial revolution (approximately 150 years) are adding to the natural greenhouse effect by increasing the gases in the atmosphere that trap heat, thereby contributing to an average increase in the Earth's temperature. Human activities that enhance the greenhouse effect are detailed below.

Greenhouse Gases

The greenhouse effect is caused by a variety of "greenhouse gases". Greenhouse gases (GHGs) occur naturally and from human activities. Greenhouse gases produced by human activities include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Since the year 1750, it is estimated that the concentrations of carbon dioxide, methane, and nitrous oxide in the atmosphere have increased over 39 percent, 158 percent, and 18 percent, respectively, primarily due to human activity.[11] The primary GHGs are discussed below.[12]

Carbon Dioxide. CO_2 is emitted and removed from the atmosphere naturally. Animal and plant respiration involves the release of carbon dioxide from animals and its absorption by plants in a continuous cycle. The ocean-atmosphere exchange results in the absorption and release of CO_2 at the sea surface. Carbon dioxide is also released from plants during wildfires. Volcanic eruptions release a small amount of CO_2 from the Earth's crust.

Human activities that affect carbon dioxide in the atmosphere include burning of fossil fuels, industrial processes, and product uses. Combustion of fossil fuels is the largest source of carbon dioxide emissions in the United States, accounting for approximately 85 percent of all equivalent emissions. Because of the fossil fuels used, the largest of these sources is electricity generation and transportation. When fossil fuels are burned, the carbon stored in them is released into the atmosphere entirely as CO_2. Emissions from onsite industrial activities also emit carbon dioxide such as cement, metal, and chemical production and use of petroleum produced in plastics, solvents, and lubricants.

Methane. Methane (CH_4) is emitted from human activities and natural sources. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, soils, and wildfires. Human activities that cause methane releases include fossil fuel production, animal digestive processes from farms, manure management, and waste management. It is estimated that 50 percent of global methane emissions are human generated. Wetlands are the primary natural producers of methane in the world because the habitat is conducive to bacteria that produce methane during decomposition of organic material. Methane is produced from landfills as solid waste decomposes. Methane is a primary component of natural gas and is emitted during its production, processing, storage, transmission, distribution, and use. Decomposition of organic material in manure stocks or in liquid manure management systems also releases methane. Releases from animal digestive processes are the primary source of human-related methane.

Nitrous Oxide. Anthropogenic (human) sources of nitrous oxide include agricultural soil management, animal manure management, sewage treatment, combustion of fossil fuels, and production of certain acids. N_2O is produced naturally in soil and water, especially in wet, tropical forests. The primary human-related source of N_2O is agricultural soil management due to use of synthetic nitrogen fertilizers and other techniques to boost nitrogen in soils. Combustion of fossil fuels (mobile and stationary) is the second leading source of nitrous oxide, although parts of the world where catalytic converters are used (such as California) have significantly lower levels than those areas that do not.

High Global Warming Potential Gases. High global warming potential (GWP) gases (or fluorinated gases) are entirely manmade and are mainly used in industrial processes. HFCs, PFCs, and SF_6 are high GWP gases. These types of gases are used in aluminum production, semiconductor manufacturing, electric power transmission, magnesium production and processing, and in the production of hydrochlorofluorocarbon-22 (HCFC-22). High GWP gases are also used as substitutes for ozone-depleting gases like chlorofluorocarbons (CFCs) and halons. Use of high GWP gases as substitutes for ozone-depleting substances is the primary use of these gases in the United States.

Water Vapor. It should be noted that water vapor is also a significant GHG in the atmosphere; however, concentration of water vapor in the air is primarily dependent on air temperature and cannot be influenced by humans.

GHGs behave differently in the atmosphere and contribute to climate change in different ways. Some gases have more potential to reflect infrared heat back towards the earth while some persist in the atmosphere longer than others. To equalize the contribution of GHGs to climate change, the Intergovernmental Panel on Climate Change (IPCC) devised a weighted metric to compare all greenhouse gases to carbon dioxide.[13] The weighting depends on the lifetime of the gas in the atmosphere and its radiative efficiency. As an example, over a time horizon of 100-years, emissions of nitrous oxide will contribute to climate change 298 times more than the same amount of emissions of carbon dioxide while emissions of HFC-23 will contribute 14,800 times more than the same amount of carbon dioxide. These differences define a gas's GWP. Table 5 (Global Warming Potential of Greenhouse Gases) identifies the lifetime and GWP of select GHGs. The lifetime of the GHG represents how many years the GHG will persist in the atmosphere. The GWP of the GHG represents the GHG's relative potential to induce climate change as compared to carbon dioxide.

Carbon Sequestration

Carbon sequestration is the process by which plants absorb CO_2 from the atmosphere and store it in biomass like leaves and grasses. Agricultural lands, forests, and grasslands can all sequester carbon dioxide, or emit it. The key is to determine if the land use is emitting carbon dioxide faster than it is absorbing it. Young, fast-growing trees are particularly good at absorbing more than they release and are known as a *sink*. Agricultural resources often end up being sources of carbon release because of soil management practices. Deforestation contributes to carbon dioxide emissions by removing trees, or carbon sinks, that will otherwise absorb CO_2. Forests are a crucial part of sequestration in some parts of the world, but not much in the United States. Another form of sequestration is geologic sequestration. This is a manmade process that results in the collection and transport of CO_2 from industrial emitters (i.e. power plants) and injecting it into underground reservoirs.

Table 5
Global Warming Potential (GWP) of Greenhouse Gases (GHG)

GHG	Lifetime (yrs)	GWP
Carbon Dioxide	50-200	1
Methane	12	25
Nitrous Oxide	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC-14	50,000	7,390
PFC-116	10,000	12,200
Sulfur Hexafluoride	3,200	22,800
Source: IPCC 2007[14]		

3.10.2 Climate Change and California

Specific, anticipated impacts to California have been identified in the 2009 California Climate Adaptation Strategy prepared by the California Natural Resources Agency (CNRA) through extensive modeling efforts.[15] General climate changes in California indicate that:

- California is likely to get hotter and drier as climate change occurs with a reduction in winter snow, particularly in the Sierra Nevadas
- Some reduction in precipitation is likely by the middle of the century
- Sea-levels will rise up to an estimated 55 inches
- Extreme events such as heat waves, wildfires, droughts, and floods will increase
- Ecological shifts of habitat and animals are already occurring and will continue to occur

It should be noted that changes are based on the results of several models prepared under different climatic scenarios; therefore, discrepancies occur between the projections. The potential impacts of global climate change in California are detailed below.

Public Health and Welfare

Concerns related to public health and climate change includes higher rates of mortality and morbidity, change in prevalence and spread of disease vectors, decreases in food quality and security, reduced water availability, and increased exposure to pesticides. These concerns are all generally related to increase in ambient outdoor air temperature, particularly in summer.

Higher rates of mortality and morbidity could arise from more frequent heat waves at greater intensities. Health impacts associated with extreme heat events include heat stroke, heat exhaustion, and exacerbation of medical conditions such as cardiovascular and respiratory diseases, diabetes, nervous system disorders, emphysema, and epilepsy. Climate change will result in degradation of air quality promoting the formation of ground-level pollutants, particularly ozone. Degradation of air quality will increase the severity of health impacts from criteria and other air pollutants discussed in Section 4.3 (Air Quality). Temperature increases and increases in carbon dioxide are also expected to increase plant production of pollens, spores, and fungus. Pollens and spores could induce or aggravate allergic rhinitis, asthma, and obstructive pulmonary diseases.

Precipitation projections suggest that California will become drier over the next century due to reduced precipitation and increased evaporation from higher temperatures. These conditions could result in increased occurrences of drought. Surface water reductions will increase the need to pump groundwater, reducing supplies and increasing the potential for land subsidence.

Precipitation changes are also suspected to impact the Sierra snowpack (see "Water Management" herein). Earlier snow melts could coincide with the rainy season and could result in failure of the flood control devices in that region. Flooding can

cause property damage and loss of life for those affected. Increased wildfires are also of concern as the state "dries" over time. Wildfires can also cause property damage, loss of life, and injuries to citizens and emergency response services.

Sea-level rises will also threaten human health and welfare. Flood risks will be increased in coastal areas due to strengthened storm surges and greater tidal damage that could result in injury and loss of property and life. Gradual rising of the sea will permanently inundate many coastal areas in the state.

Other concerns related to public health are changes in the range, incidence, and spread of infectious, water-borne, and food-borne diseases. Changes in humidity levels, distribution of surface water, and precipitation changes are all likely to shift or increase the preferred range of disease vectors (i.e. mosquitoes). This could expose more people and animals to potential for vector-borne disease.

Biodiversity and Habitat

Changes in temperature will change the livable ranges of plants and animals throughout the state and cause considerable stress on these species. Species will shift their range if appropriate habitat is available and accessible if they cannot adapt to their new climate. If they do not adapt or shift, they face local extirpation or extinction. As the climate changes, community compositions and interactions will be interrupted and changed. These have substantial implications on the ecosystems in the state. Extreme events will lead to tremendous stress and displacement on affected species. This could make it easier for invasive species to enter new areas, due to their ability to more easily adapt. Precipitation changes will alter stream flow patterns and affect fish populations during their life cycle. Sea level rises could impact fragile wetland and other coastal habitat.

Water Management

Although disagreement among scientists on long-term precipitation patterns in the state has occurred, it is generally accepted by scientists that rising temperatures will impact California's water supply due to changes in the Sierra Nevada snowpack. Currently, the state's water infrastructure is designed to both gather and convey water from melting snow and to serve as a flood control device. Snowpack melts gradually through spring warming into early summer, releasing an average of approximately 15 million acre-feet of water. The state's concern related to climate change is that due to rising temperatures, snowpack melt will begin earlier in the spring and will coincide with the rainy season. The combination of precipitation and snowmelt will overwhelm the current system, requiring tradeoffs between water storage and flood protection to be made. Reduction in reserves from the Sierra Nevada snowpack is troublesome for California and particularly for Southern California. Approximately 75-percent of California's available water supply originates in the northern third of the state while 80 percent of demand occurs in the southern two-thirds. There is also concern that rising temperatures will result in decreasing volumes from the Colorado River basin. Colorado River water is important to Southern California because it supplies water directly to Metropolitan Water District of Southern California. Water from the Colorado River is also used to recharge groundwater basins in the Coachella Valley.

Agriculture

California is the most agriculturally productive state in the US resulting in more than 37 billion dollars in revenue in 2008. California is the nation's leading producer of nearly 80 crops and livestock commodities, supplying more than half of the nation's fruit and vegetables and over 90 percent of the nation's production of almonds, apricots, raisin grapes, olives, pistachios, and walnuts. Production of crops is not limited to the Central Valley but also occurs in Southern California. Strawberries and grapes are grown in San Bernardino and Riverside Counties. Orange County and San Diego County contribute to strawberry production. Cherries are grown in Los Angeles and Riverside County. Anticipated impacts to agricultural resources are mixed when compared to the potentially increased temperatures, reduced chill hours, and changes in precipitation associated with climate change. For example, wheat, cotton, maize, sunflower, and rice are anticipated to show declining yields as temperatures rise. Conversely, grapes and almonds will benefit from warming temperatures. Anticipated increases in the number and severity in heat waves will have a negative impact on livestock where heat stress will make livestock more vulnerable to disease, infection and mortality. The projected drying trend and changes in precipitation are a threat to agricultural production in California. Reduced water reliability and changes in weather patterns will impact irrigated

farmlands and reduce food security. Furthermore, a drying trend will increase wildfire risk. Overall, agriculture in California is anticipated to suffer due to climate change impacts.

Forestry

Increases in wildfires will substantially impact California's forest resources that are prime targets for wildfires. This can increase public safety risks, property damage, emergency response costs, watershed quality, and habitat fragmentation. Climate change is also predicted to affect the behavior or plant species including seed production, seedling establishment, growth, and vigor due to rising temperatures. Precipitation changes will affect forests due to longer dry periods, moisture deficits, and drought conditions that limit seedling and sapling growth. Prolonged drought also weakens trees, making them more susceptible to disease and pest invasion. Furthermore, as trees die due to disease and pest invasion (i.e. the Bark Beetle invasion of the San Bernardino Forest), wildfires can spread more rapidly.

Transportation and Energy Infrastructure

Higher temperatures will require increased cooling, raising energy production demand. Higher temperatures also decrease the efficiency of distributing electricity and could lead to more power outages during peak demand. Climate changes will impact the effectiveness of California's transportation infrastructure as extreme weather events damage, destroy, and impair roadways and railways throughout the state causing governmental costs to increase as well as impacts to human life as accidents increase. Other infrastructure costs and potential impacts to life will increase due to the need to upgrade levees and other flood control devices throughout the state. Infrastructure improvement costs related to climate change adaptation are estimated in the tens of billions of dollars.

3.10.3 Existing Greenhouse Gas Emissions

The project site is currently vacant and does not emit greenhouse gases.

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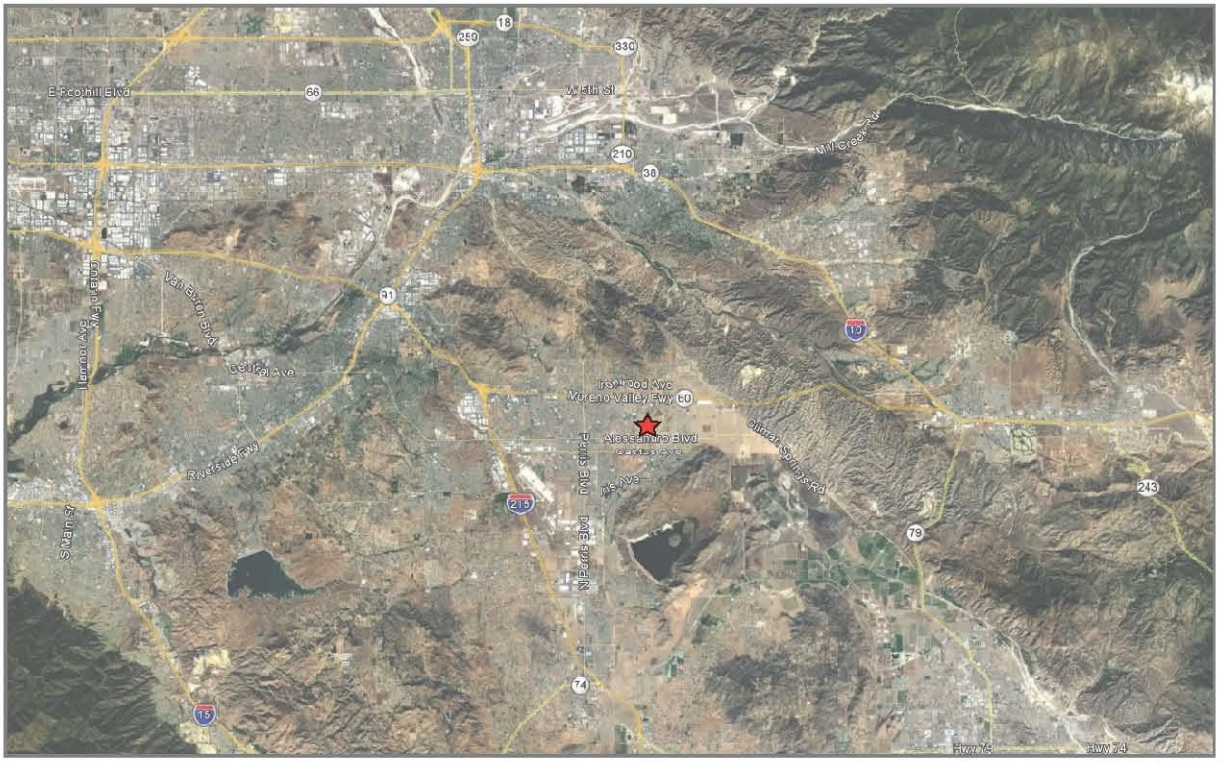

Regional

Vicinity

Not to Scale

Exhibit 1 Regional Context and Vicinity Map

Galaxy Management Medical Village
City of Moreno Valley, California

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4 Regulatory Framework

The following summarizes federal, state, and local regulations related to air quality, pollution control, and greenhouse gas emissions.

4.1 Clean Air Act

The Federal Clean Air Act (CAA) defines the Environmental Protection Agency's (EPA) responsibilities for protecting and improving the United States air quality and ozone layer.[16] Key components of the CAA include reducing ambient concentrations of air pollutants that cause health and aesthetic problems, reducing emission of toxic air pollutants, and stopping production and use of chemicals that destroy the ozone.

Federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop State Implementation Plans (SIPs); comprehensive documents that identify how an area will attain NAAQS. Deadlines for attainment were established in the 1990 amendments to the CAA based on the severity of an area's air pollution problem. Failure to meet air quality deadlines can result in sanctions against the state or the EPA taking over enforcement of the CAA in the affected area. SIPs are a compilation of new and previously submitted plans, programs, district rules, and state and federal regulations. The SCAQMD implements the required provisions of an applicable SIP through its AQMPs and updates. Currently, SCAQMD implements the 8-hr Ozone SIP in the 2007 AQMP and the PM_{10} SIP in the 2003 AQMP. The $PM_{2.5}$ SIP is currently being revised by SCAQMD in response to partial disapproval by the EPA. The 2012 Lead SIP for the Los Angeles County portion of the SCAB was adopted by the SCAQMD Board on May 4, 2012 and approved by ARB on May 24, 2012 and forwarded to the EPA for approval as a revision to the California SIP.

4.2 California Clean Air Act

The California Clean Air Act (CCAA) of 1988 was enacted to develop plans and strategies for attaining California Ambient Air Quality Standards (CAAQS). The California Air Resources Board (ARB), which is part of the California Environmental Protection Agency (Cal-EPA), develops statewide air quality regulations, including industry-specific limits on criteria, toxic, and nuisance pollutants. The CCAA is more stringent than federal law in a number of ways, including revised standards for PM_{10} and ozone and state for visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

4.3 Toxic Hotspots

State requirements specifically address air toxics issues through Assembly Bill (AB) 1807 (known as the Tanner Bill) that established the state air toxics program and the Air Toxics Hot Spots Information and Assessment Act (AB 2588). The air quality regulations developed from these bills have been modified recently to incorporate the federal regulations associated with the Federal Clean Air Act Amendments of 1990. The Air Toxics Hot Spots Information and Assessment Act (Hot Spots Act) was enacted in September 1987. Under this bill, stationary sources of emissions are required to report the types and quantities of certain substances that their facilities routinely release into the air.

The SCAQMD is required to prepare an annual report on the status and forecast of air toxic "hot spots" pursuant to Section 44363 of the California Health and Safety Code. SCAQMD monitors facilities that are not exempt from the fee and reporting requirements of AB2588.

Some facilities are covered under "umbrella" permits that address industry-wide categories. SCAQMD has issued general permits for the following seven activities:

- Retail gasoline dispensing
- Perchloroethylene dry cleaning
- Auto body shops
- Fiberglass molding
- Printing

- Metal plating
- Wood striping and finishing

Emissions inventories and risk assessment guidelines have been prepared for the seven industry-wide categories. Approximately 1,400 auto body shops, 3,200 gasoline stations, and 1,400 perchloroethylene dry cleaners within the District are covered under these umbrella permits.

Depending on the severity of the facilities' TAC releases, SCAQMD requires either public notification of toxic hot spots or preparation of a risk reduction plan, as follows:

	Cancer Risk (per million)	Acute Risk	Chronic Risk
Action Risk Level	>= 25	>= 3.0	>= 3.0
Public Notification Level	>= 10	>= 1.0	>= 1.0
Exempt	<1	<0.1	<0.1

4.4 2016 Air Quality Management Plan

The purpose of an Air Quality Management Plan (AQMP) is to bring an air basin into compliance with federal and state air quality standards and is a multi-tiered document that builds on previously adopted AQMPs.[17] The 2003 AQMP was adopted in August 2003 and demonstrated O_3 and PM_{10} for the Basin. It also provides the maintenance plans for CO and NO_2, which the Basin has been in attainment for since 1997 and 1992, respectively. The 2007 AQMP for the Basin was approved by the SCAQMD Board of Directors in June 2007. The 2007 AQMP builds on the 2003 AQMP and is designed to address the federal 8-hour ozone and $PM_{2.5}$ air quality standards. The AQMP identifies short- and long-term control measures designed to reduce stationary, area, and mobile source emissions, organized into four primary components:

1. District Stationary and Mobile Source Control Measures
2. Air Resources Board (ARB) State Strategy
3. Supplement to ARB Control Strategy
4. SCAG Regional Transportation Strategy and Control Measures

The 2012 AQMP was adopted by the SCAQMD board on December 7, 2012. The 2012 AQMP incorporated the latest scientific and technological information and planning assumptions, including the 2012 Regional Transportation Plan/Sustainable Communities Strategy and updated emission inventory methodologies for various source categories. The 2012 AQMP includes the new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches. The SCAQMD approved the 2016 AQMP on March 3, 2017. The 2016 AQMP addresses the federal 2008 8-hour ozone NAAQS, 2012 annual PM2.5 NAAQS and the 2006 24-hour PM 2.5 NAAQS. The 2016 AQMP includes a chapter reporting on the Riverside County portion of the Salton Sea Air Basin and future air quality requirements. An additional chapter provides the proposed air toxics control program that will reduce toxic risk and another examines the interplay between air quality and other planning efforts addressing climate change, energy, and transportation. The objectives of the 2016 AQMP include the following:[18]

- Eliminate reliance on future technologies (CAA Section 182(e)(5)) measures to the maximum extent feasible.
- Calculate and take credit for co-benefits from other planning efforts.
- Develop a strategy with fair-share emission reductions at the federal, state, and local levels.
- Invest in strategies and technologies meeting multiple objectives regarding air quality, climate change, air toxics exposure, energy, and transportation.
- Identify and secure significant funding for incentives to implement early deployment and commercialization of zero and near-zero technologies.
- Enhance the socioeconomic analysis and pursue the most efficient and cost-effective path to achieve multi-pollutant and multi-deadline targets.

- Prioritize enforceable regulatory measures as well as non-regulatory, innovative and "win-win" approaches for emission reductions.

4.5 SCAQMD Rule Book

In order to control air pollution in the Basin, SCAQMD adopts rules that establish permissible air pollutant emissions and governs a variety of businesses, processes, operations, and products to implement the AQMP and the various federal and state air quality requirements. SCAQMD does not adopt rules for mobile sources; those are established by ARB or the United States Environmental Protection Agency (EPA). Rules that will be applicable during construction of the proposed project include Rule 403 (Fugitive Dust) and Rule 1113 (Architectural Coatings). Rule 403 prohibits emissions of fugitive dust from any grading activity, storage pile, or other disturbed surface area if it crosses the project property line or if emissions caused by vehicle movement cause substantial impairment of visibility (defined as exceeding 20 percent opacity in the air). Rule 403 requires the implementation of Best Available Control Measures (BACM) and includes additional provisions for projects disturbing more than five acres and those disturbing more than fifty acres. Rule 1113 establishes maximum concentrations of VOCs in paints and other applications and establishes the thresholds for low-VOC coatings.

4.6 Executive Order S-3-05

Executive Order S-3-05 was issued by California Governor Arnold Schwarzenegger and established targets for the reduction of greenhouse gas emission at the milestone years of 2010, 2020, and 2050. Statewide GHG emissions must be reduced to 1990 levels by year 2020 and by 80 percent beyond that by year 2050. The Order requires the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate with other state departments to identify strategies and reduction programs to meet the identified targets. A Climate Action Team (CAT) was created and is headed by the Secretary of CalEPA who reports on the progress of the reduction strategies. The latest CAT *Biennial Report to the Governor and Legislature* was completed in April 2010.[19] CAT also works in 11 subgroups to support development and implementation of the Scoping Plan (see "California Global Warming Solutions Act" herein).

4.7 Executive Order B-30-15

Executive Order B-30-15 was issued by California Governor Edmund G. Brown Jr. on April 29, 2015 to establish a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030. This is meant as an interim target to ensure the state meets its ultimate goal of 80 percent below 1990 levels by 2050.

4.8 California Global Warming Solutions Act

The California State Legislature adopted the California Global Warming Solutions Act in 2006 (AB32). AB32 establishes the caps on statewide greenhouse gas emissions proclaimed in Executive Order S-3-05 and establishes a regulatory timeline to meet the reduction targets. The timeline is as follows:

January 1, 2009	Adopt Scoping Plan
January 1, 2010	Early action measures take effect
January 1, 2011	Adopt GHG reduction measures
January 1, 2012	Reduction measures take effect
December 31, 2020	Deadline for 2020 reduction target

As part of AB32, CARB had to determine what 1990 GHG emissions levels were and projected a business-as-usual (BAU) estimate for 2020 to determine the amount of GHG emissions that will need to be reduced. BAU is a term used to define emissions levels without considering reductions from future or existing programs or technologies. 1990 emissions are

estimated at 427 million metric tons of carbon dioxide equivalent (MMTCO2E) while 2020 emissions (after accounting for the economic downturn in 2008 and implementation of Pavley 1 vehicle emissions reductions and the State Renewable Portfolio Standard identified in Air Resources Board Scoping Plan below) are estimated at 507 MMTCO2E; therefore, California GHG emissions must be reduced 80 MMTCO2E (507 – 427 = 80) by 2020, a reduction of approximately 16 percent below BAU. Emissions are required to be reduced an additional 80 percent below 1990 levels by 2050.

The California Air Resources Board (ARB) is responsible for implementation of AB32. Nine discrete early action measures and 35 additional measures were adopted in October 2007 and are now enforceable. The discrete early actions include a low carbon fuel standard, landfill methane capture regulations, reductions in HFCs from mobile air conditioning systems, fluorinated gas emissions from semiconductor manufacturing, sulfur hexafluoride from some industrial processes, high GWP gases in consumer products, and emissions from diesel auxiliary engines on ships at California Ports, improved fuel efficiency in heavy-duty diesel vehicles, and new tire pressure regulations. The early action programs form part of California's comprehensive strategy for achieving the GHG reduction targets.

4.9 Sustainable Communities and Climate Protection Act

In January 2009, California Senate Bill (SB) 375 went into effect known as the Sustainable Communities and Climate Protection Act.[20] The objective of SB375 is to better integrate regional planning of transportation, land use, and housing to reduce sprawl and ultimately reduce greenhouse gas emissions and other air pollutants. SB375 tasks ARB to set greenhouse gas reduction targets for each of California's 18 regional Metropolitan Planning Organizations (MPOs). Each MPO is required to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP). The SCS is a growth strategy in combination with transportation policies that will show how the MPO will meet its GHG reduction target. If the SCS cannot meet the reduction goal, an Alternative Planning Strategy (APS) may be adopted that meets the goal through alternative development, infrastructure, and transportation measures or policies.

In the Southern California Association of Governments (SCAG) region (in which the project is located), sub-regions can also elect to prepare their own SCS or APS. In August 2010, ARB released the proposed GHG reduction targets for the MPOs to be adopted in September 2010. The proposed reduction targets for the SCAG region were 8-percent by year 2020 and 13-percent by year 2035. The 8-percent year 2020 target was adopted in September 2010 and tentatively adopted the year 2035 until February 2011 to provide additional time for SCAG, ARB, and other stakeholders to account for additional resources (such as state transportation funds) needed to achieve the proposed targets. In February 2011, the SCAG President affirmed the year 2035 reduction target and SCAG Staff updated ARB on additional funding opportunities. The status of funding was requested to be revisited again in year 2014.

4.10 Air Resources Board Scoping Plan

The ARB Scoping Plan is the comprehensive plan to reach the GHG reduction targets stipulated in AB32. The key elements of the plan are to expand and strengthen energy efficiency programs, achieve a statewide renewable energy mix of 33 percent, develop a cap-and-trade program with other partners in the Western Climate Initiative (includes seven states in the United States and four territories in Canada), establish transportation-related targets, and establish fees.[21] The Scoping Plan measures are identified in Table 6 (Scoping Plan Measures). Note that the current early discrete actions are incorporated into these measures. ARB estimates that implementation of these measures will reduce GHG emissions in the state by 174 MMTCO2E by 2020; therefore, implementation of the Scoping Plan will meet the 2020 reduction target. In a report prepared on September 23, 2010, ARB indicates that 40 percent of the reduction measures identified in the Scoping Plan have been secured.[22] The cap-and-trade program began on January 1, 2012 after ARB completes a series of activities that deal with the registration process, compliance cycle, and tracking system; however, covered entities will not have an emissions obligation until 2013.[23] ARB is currently working on the low carbon fuel standard where public hearings and workshops are currently being conducted. In August 2011, the Scoping Plan was reapproved by the ARB Board with the program's environmental documentation.

The ARB has prepared the First Update to the Scoping Plan (Update) with a draft made available for public review on February 10, 2014. The Update to the Scoping Plan builds upon the 2008 Scoping Plan with new strategies and recommendations. The Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The Update defines ARB's climate change priorities for the next five years and sets the groundwork to reach post-2020 goals set forth in Executive Orders S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the 2020 GHG emission reduction goals defined in the 2008 Scoping Plan. It also evaluates how to align the State's long-term GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. A draft Environmental Analysis (EA) was released for a 45-day public review period on March 14, 2014. After considering public comments and Board direction, the final First Update, summary of comments received on the draft EA, and ARB's responses to those comments were released on May 15, 2014. The First Update to the Scoping Plan was approved by the Board on May 22, 2014.

4.11 Water Conservation in Landscaping Act

Section 65591 of the Government Code requires all local jurisdictions to adopt a water efficient landscape ordinance. The ordinance is to address water conservation through appropriate use and grouping of plants based on environmental conditions, water budgeting to maximize irrigation efficiency, storm water retention, and automatic irrigation systems. Failure to adopt a water efficiency ordinance requires a local jurisdiction to enforce the provisions of the state's model water efficiency ordinance. In 2009, the Department of Water Resources (DWR) updated the Model Water Efficient Landscape Ordinance pursuant to amendments to the 1991 Act. These amendments and the new model ordinance went into effect on January 1, 2010. The amended Act is applicable to any new commercial, multi-family, industrial, or tract home project containing 2,500 square feet (SF) or more of landscaping. Individual landscape projects of 5,000 SF or more on single-family properties will also be subject to the Act. All landscape plans are required to include calculations verifying conformance with the maximum applied water allowance and must be prepared and stamped by a licensed landscape architect.

4.12 California Green Building Standards

New California Green Building Standards Code (CALGREEN) went into effect on January 1, 2011.[24] The purpose of the new addition to the California Building Code (CBC) is to improve public health, safety, and general welfare by enhancing the design and construction of buildings using concepts to reduce negative impacts or produce positive impacts on the environment. The CALGREEN regulations cover planning and design, energy efficiency, water efficiency and conservation, material conservation and resources efficiency, and environmental quality. Many of the new regulations have the effect of reducing greenhouse gas emissions from the operation of new buildings. Table 7 (CALGREEN Requirements) summarizes the previous requirements of the CBC and the new requirements of CALGREEN that went into effect in January 2011. Minor technical revisions and additional requirements went into effect in July 2012. The Code was further updated in 2013, effective January 1, 2014 through 2016. The code has been updated with the 2016 Code effective as of January 1, 2017.

Table 6
Scoping Plan Measures

Measure	Description
T-1	Pavely I and II – Light Duty Vehicle Greenhouse Gas Standards
T-2	Low Carbon Fuel Standard
T-3	Regional Transportation-Related Greenhouse Gas Targets
T-4	Vehicle Efficiency Measures
T-5	Ship Electrification at Ports
T-6	Good Movement Efficiency Measures
T-7	Heavy-Duty Vehicle Aerodynamic Efficiency
T-8	Medium and Heavy-Duty Vehicle Hybridization
T-9	High Speed Rail
E-1	Energy Efficiency (Electricity Demand Reduction)
E-2	Increase Combined Heat and Power Use
E-3	Renewable Portfolio Standard
E-4	Million Solar Roofs
CR-1	Energy Efficiency (Natural Gas Demand Reduction)
CR-2	Solar Water Heating
GB-1	Green Buildings
W-1	Water Use Efficiency
W-2	Water Recycling
W-3	Water System Energy Efficiency
W-4	Reuse Urban Runoff
W-5	Increase Renewable Energy Production
W-6	Public Good Charge (Water)
I-1	Energy Efficiency for Large Industrial Sources
I-2	Oil and Gas Extraction GHG Reductions
I-3	Oil and Gas Transmission Leak Reductions
I-4	Refinery Flare Recovery Process Improvements
I-5	Removal of Methane Exemption from Existing Refinery Regulations
RW-1	Landfill Methane Control
RW-2	Increase Landfill Methane Capture Efficiency
RW-3	Recycling and Zero Waste
F-1	Sustainable Forest Target
H-1	Motor Vehicle Air Conditioning
H-2	Non-Utilities and Non-Semiconductor SF_6 Limits
H-3	Semiconductor Manufacturing PFC Reductions
H-4	Consumer Products High GWP Limits
H-5	High GWP Mobile Source Reductions
H-6	High GWP Stationary Source Reductions
H-7	High GWP Mitigation Fees
A-1	Large Dairy Methane Capture
Source: ARB 2008	

Table 7
CALGREEN Requirements

Item		Requirements	
		Previous	CALGREEN
4.1	Stormwater Management	Stormwater management required on projects > than one acre	All projects subject to stormwater management.
	Surface Drainage	Surface water must flow away from building	Drainage patterns must be analyzed
4.2	Energy Efficiency	California Energy Code	Minimum energy efficiency to be established by California Energy Commissions
4.3	Indoor Water Use	HCD maximum flush rates; CEC water use standards for appliances and fixtures	Indoor water use must decrease by at least 20 percent (prescriptive or performance based)
	Multiple Showerheads	Not covered	Multiple showerheads can not exceed combined flow of the code
	Irrigation Controllers	Not covered	Irrigation controllers must be weather or soil moisture based controllers
4.4	Joint Protection	Plumbing and Mechanical Codes	All openings must be sealed with materials that rodents cannot penetrate
	Construction Waste	Local Ordinances	Establishes minimum 50 percent recycling and waste management plan
	Operation	Plumbing Code for gray water systems	Educational materials and manuals must be provided to building occupants and owners to ensure proper equipment operation
4.5	Fireplaces	Local Ordinances	Gas fireplaces must be direct-vent sealed-combustion type; Wood stoves and pellet stoves must meet USEPA Phase II emissions limits
	Mechanical Equipment	Not covered	All ventilation equipment must be sealed from contamination during construction
	VOCs	Local Ordinances	Establishes statewide limits on VOC emissions from adhesives, paints, sealants, and other coatings
	Capillary Break	No prescriptive method of compliance	Establishes minimum requirements for vapor barriers in slab on grade foundations
	Moisture Content	Current mill moisture levels for wall and floor beams is 15-20 percent	Moisture content must be verified prior to enclosure of wall or floor beams
	Whole House Fans	Not covered	Requires insulted louvers and closing mechanism when fan is off
	Bath Exhaust Fans	Not covered	Requires Energy Star compliance and humidistat control
	HVAC Design	Minimal requirements for heat loss, heat gain, and duct systems	Entire system must be designed in respects to the local climate
7	Installer Qualifications	HVAC installers need not be trained	HVAC installers must be trained or certified
	Inspectors	Training only required for structural materials	All inspectors must be trained

Source: HCD 2010

4.13 Moreno Valley Energy Efficiency and Climate Action Strategy

The City of Moreno Valley Energy Efficiency and Climate Action Strategy (Strategy) is a policy document that identifies energy and water consumption and greenhouse gas emission reduction strategies. The Climate Action portion of the Strategy includes analysis of existing and future greenhouse gas emissions within Moreno Valley and includes policies to guide efforts to reduce emissions to meet or exceed State requirements. The Strategy sets goals to reduce emissions produced in the city by 2020. Emissions reduction goals and policies incorporate environmental responsibility into its daily management of residential, commercial and industrial growth, education, energy and water use, air quality, transportation, waste reduction, economic development, and open space and natural habitats.

5 Project Description

The proposed project is located on approximately 18.14 acres and is currently vacant. The project includes the construction of a medical village consisting of five buildings, on-grade un-covered parking, and associated drive aisles and landscaping. The proposed development will include a 53,000-square foot medical office building, 50,000-square foot wellness center with a 3,000-square foot urgent care attached, 91,800 square feet of assisted living space with a total of 207 beds, and a 70,000-square foot Skilled Nursing Program (SNP) building with a total of 158 beds. (see Exhibit 2, Site Plan) Approximately 333,568 square feet of the site area will consist of driveway pavement area, emergency fire access lane, and parking to accommodate 696 parking spaces. The project will also include approximately 264,675 square feet of landscape and hardscape area. Approximately 25,317 cubic yards of soil will be exported.

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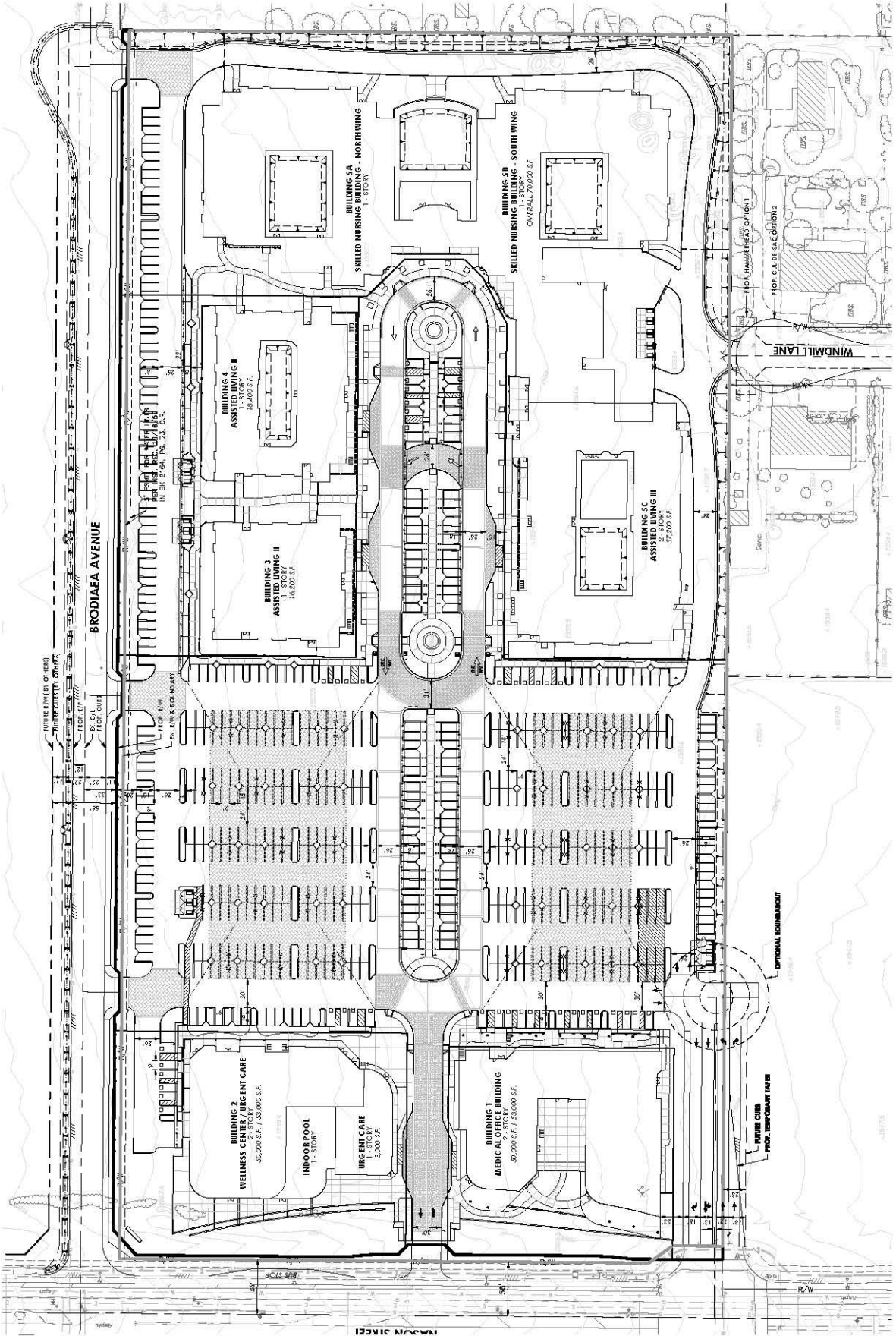

Exhibit 2 Site Plan

Galaxy Management Medical Village
City of Moreno Valley, California

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The impact analysis contained herein was prepared utilizing guidance provided in the 1993 SCAQMD California Environmental Quality Act (CEQA) Air Quality Handbook. The thresholds identified in Appendix G of the state CEQA Guidelines, as implemented by the City of Moreno Valley, have been utilized to determine the significance of potential impacts.

6.1 Thresholds of Significance

In accordance with Appendix G of the state CEQA Guidelines and the local implementation procedures of the City of Moreno Valley, the project could result in potentially significant impacts related to air quality if it:

A. Conflicts with or obstructs implementation of the applicable air quality plan.
B. Violates any air quality standard or contributes substantially to an existing or projected air quality violation.
C. Results in a cumulatively considerable net increase of any criteria pollutant that the region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
D. Exposes sensitive receptors to substantial pollutant concentrations.
E. Create objectionable odors affecting a substantial number of people.

To determine if maximum daily criteria pollutant emissions from construction and operation of the proposed project are significant, the SCAQMD significance thresholds are used. These thresholds are identified in Table 8 (SCAQMD Maximum Daily Emissions Thresholds (lbs/days)).

Table 8
SCAQMD Maximum Daily Emissions Thresholds (lbs/days)

Pollutant	Construction	Operation
NO_X	100	55
VOC/ROG	75	55
PM^{10}	150	150
$PM^{2.5}$	55	55
SO_X	150	150
CO	550	550
Lead	3	3
Source: SCAQMD 2012		

6.2 AQMP Consistency

A significant impact could occur if the proposed project conflicts with or obstructs the implementation of the South Coast Air Basin 2016 Air Quality Management Plan. Conflicts and obstructions that hinder implementation of the AQMP can delay efforts to meet attainment deadlines for criteria pollutants and maintaining existing compliance with applicable air quality standards. Pursuant to the methodology provided in Chapter 12 of the 1993 SCAQMD CEQA Air Quality Handbook, consistency with the South Coast Air Basin 2016 Air Quality Management Plan (AQMP) is affirmed when a project (1) does not increase the frequency or severity of an air quality standards violation or cause a new violation and (2) is consistent with the growth assumptions in the AQMP.[25] Consistency review is presented below:

1. The project would result in short-term construction and long-term pollutant emissions that are less than the CEQA significance emissions thresholds established by the SCAQMD, with mitigation incorporated, as demonstrated in Section 6.3 et seq of this report; therefore, the project could not result in an increase in the frequency or severity of any air quality standards violation and will not cause a new air quality standard violation.

2. The CEQA Air Quality Handbook indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and *significant projects*. *Significant projects* include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and off-shore drilling facilities; therefore, the proposed project is not defined as *significant*. This project includes a General Plan Amendment and therefore requires consistency analysis with the AQMP.

The SCAG Regional Transportation Plan /Sustainable Communities Strategy (RTP/SCS) estimated an employment base of 31,400 for Moreno Valley in 2012 and projected an employment base of 83,200 by the year 2040, an increase of 51,800 jobs. The proposed project will result in the addition of approximately 440 employees.[26] This increase in employment is within the growth assumptions estimated by SCAG and thus would be consistent with regional growth projections for employment. The proposed project includes a total of 207 assisted living beds and 158 Skilled Nursing Program beds for a total of 365 beds/residents. SCAG estimated a total population for Moreno Valley at 197,600 residents in 2012 and projected a total population of 256,600 by the year 2040, an increase of 59,000 residents. The increase in population anticipated from the proposed project is within regional population growth assumptions. Therefore, the proposed project is consistent with the AQMP.

Based on the consistency analysis presented above, the proposed project will not conflict with the AQMP.

6.3 Pollutant Emissions

6.3.1 Building Construction

Short-term criteria pollutant emissions will occur during grading, building construction, paving, and coating activities. Emissions will occur from use of equipment, worker, vendor, and hauling trips, and disturbance of on-site soils (fugitive dust). To determine if construction of the proposed project could result in a significant air quality impact, the California Emissions Estimator Model (CalEEMod) has been utilized. It is estimated that the project will take approximately 17 months to complete and a year 2020 operational year has been assumed. It is estimated that approximately 25,317 cubic yards of soil will be exported. Particulate matter emissions account for daily watering required by SCAQMD Rule 403 (three times per day for a 61 percent reduction in fugitive dust). Based on the results of the model, maximum daily emissions from the construction of the project will result in excessive emissions of volatile organic chemicals (identified as reactive organic gases) associated with interior and exterior coating activities. Using the default assumptions of 50 grams per liter (g/l) VOC content for residential interior and exterior coatings and 100 d/l for non-residential interior and exterior coatings, daily VOC emissions will reach 176.43 lbs/day.

To compensate for excessive volatile organic compound (reactive organic gasses) emissions from coating activities, the model includes use of a maximum 25 grams per liter (g/l) volatile organic compound (VOC) content for interior and exterior coatings. Use of low-VOC coatings during construction activities will reduce VOC emissions to below the 75 lbs/day threshold established by SCAQMD (see Table 10 Maximum Mitigated Daily Construction Emissions (lbs/day)). The requirement for use of low-VOC coatings has been incorporated as Mitigation Measure AQ-1. Short-term construction-related impacts will be less than significant with mitigation incorporated.

Table 9
Maximum Unmitigated Daily Construction Emissions (lbs/day)

Year	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer	176.38	92.78	49.96	0.15	8.84	4.52
Winter	176.43	93.25	48.01	0.15	8.85	4.52
Threshold	75	100	550	150	150	55
Potentially Significant?	Yes	No	No	No	No	No

Table 10
Maximum Mitigated Daily Construction Emissions (lbs/day)

Year	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer	73.24	92.78	49.96	0.15	8.84	4.52
Winter	73.30	93.25	48.01	0.15	8.85	4.52
Threshold	75	100	550	150	150	55
Potentially Significant?	No	No	No	No	No	No

6.3.2 Operational and Area Sources

Long-term criteria air pollutant emissions will result from the operation of the proposed project. Long-term emissions are categorized as area source emissions, energy demand emissions, and operational emissions. Operational emissions will result from automobile and other vehicle sources associated with daily trips to and from the project site. The California Emissions Estimator Model (CalEEMod) was utilized to estimate mobile source emissions. Trip generation is based on the project traffic study prepared by Kunzman Associates.[27] Area source emissions are the combination of many small emission sources that include use of outdoor landscape maintenance equipment, use of consumer products such as cleaning products, and periodic repainting of the project. Energy demand emissions result from use of electricity and natural gas. Area, energy, and mobile source emissions are included in Table 11 (Unmitigated Daily Emissions (lbs/day)). Based on the results of the model, net daily operational emissions associated with the proposed development will not exceed the thresholds established by SCAQMD.

Table 11
Unmitigated Daily Emissions (lbs/day)

Source	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer						
Area Sources	20.99	7.26	135.35	0.33	14.91	14.91
Energy Demand	0.21	1.83	0.82	0.01	0.15	0.15
Mobile Sources	9.41	44.17	116.52	0.39	30.45	8.30
Summer Total	*30.62*	*53.25*	*252.69*	*0.73*	*45.50*	*23.46*
Winter						
Area Sources	20.99	7.26	135.35	0.33	14.91	14.91
Energy Demand	0.21	1.83	0.82	0.01	0.15	0.15
Mobile Sources	9.06	45.11	110.71	0.37	30.45	8.30
Winter Total	*30.26*	*54.20*	*246.88*	*0.71*	*45.51*	*23.46*
Threshold	55	55	550	150	150	55
Potentially Significant?	No	No	No	No	No	No

6.4 Localized Emissions

6.4.1 Toxic Air Contaminants

Operationally, the proposed project does not emit toxic air contaminants and there are no emitters of toxic air contaminants in vicinity of the project. No long-term impacts related to toxic air contaminants (TAC) will occur.

6.4.2 Carbon Monoxide Hotspots

A carbon monoxide (CO) hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. CO hotspots have the potential to violate State and Federal CO standards at intersections, even if the broader Basin is in attainment for Federal and State levels. The California Department of Transportation Project-Level Carbon Monoxide Protocol (Protocol) screening procedures have been utilized to determine if the proposed project could potentially result in a CO hotspot. Based on the recommendations of the Protocol, a screening analysis

should be performed for the proposed project to determine if a detailed analysis will be required. The California Department of Transportation notes that because of the age of the assumptions used in the screening procedures and the obsolete nature of the modeling tools utilized to develop the screening procedures in the Protocol, they are no longer accepted. More recent screening procedures based on more current methodologies have been developed. The Sacramento Metropolitan Air Quality Management District (SMAQMD) developed a screening threshold in 2011 which states that any project involving an intersection experiencing 31,600 vehicles per hour or more will require detailed analysis. In addition, the Bay Area Air Quality Management District developed a screening threshold in 2010 which states that any project involving an intersection experiencing 44,000 vehicles per hour would require detailed analysis. The proposed project's operations would not involve an intersection experiencing this level of traffic; therefore, the proposed project passes the screening analysis and impacts are deemed less than significant. Based on the local analysis procedures, the proposed project would not result in a CO hotspot.

6.4.3 Localized Significance Thresholds

As part of SCAQMD's environmental justice program, attention has recently been focusing more on the localized effects of air quality. Although the region may be in attainment for a particular criteria pollutant, localized emissions from construction activities coupled with ambient pollutant levels can cause localized increases in criteria pollutant that exceed national and/or state air quality standards.

Construction-related criteria pollutant emissions and potentially significant localized impacts were evaluated pursuant to the SCAQMD Final Localized Significance Thresholds Methodology. This methodology provides screening tables for one through five-acre project scenarios, depending on the amount of site disturbance during a day using the Fact Sheet for equipment usage in CalEEMod.[28] Daily oxides of nitrogen (NO_X), carbon monoxide (CO), and particulate matter (PM_{10} and $PM_{2.5}$) emissions will occur during construction of the project, grading of the project site, and paving of facility parking lot and drive aisles. Table 12 (Localized Significance Threshold Analysis) summarize on-site emissions as compared to the local thresholds established for Source Receptor Area (SRA) 24 (Perris Valley). Based on the use of two tractors, one grader, and one dozer during grading activities, a two-acre threshold will be used. A 25-meter receptor distance was used to reflect the proximity of residential uses to south and east of the project site. Particulate matter emissions account for daily watering required by SCAQMD Rule 403 (three times per day for a 61 percent reduction in fugitive dust). Emissions from construction activities will not exceed any localized threshold.

Table 12
Localized Significance Threshold Analysis

Construction Activity	CO	NO_X	PM_{10}	$PM_{2.5}$
Grading	35.09	59.52	6.05	3.83
Building Construction 2018	17.58	23.39	1.50	1.41
Building Construction 2019	17.16	21.08	1.29	1.21
Paving	14.66	15.24	0.82	0.76
Architectural Coating	1.84	1.84	0.13	0.13
Maximum	35.09	59.52	6.05	3.83
Threshold	883	170	7.0	4.0
Potentially Significant?	No	No	No	No

6.5 Odors

According to the CEQA Air Quality Handbook, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). Surrounding land uses include residential and health care uses which are not considered uses that produce odors. The proposed project, in turn, does not produce odors that will affect a substantial number of people considering that the proposed project will not result in the manufacturing of any products or conduct other heavy industrial operations.

6.6 Cumulative Impacts

6.6.1 Cumulative Construction Impacts

Cumulative short-term, construction-related emissions from the project will not contribute considerably to any potential cumulative air quality impact because short-term project emissions will be less than significant and other concurrent construction projects in the region will be required to implement standard air quality regulations and mitigation pursuant to state CEQA requirements, just as this project has.

6.6.2 Cumulative Operational Impacts

The SCAQMD CEQA Air Quality Handbook identifies methodologies for analyzing long-term cumulative air quality impacts for criteria pollutants for which the Basin is nonattainment. These methodologies identify three performance standards that can be used to determine if long-term emissions will result in cumulative impacts. Essentially, these methodologies assess growth associated with a land use project and are evaluated for consistency with regional projections. These methodologies are outdated, and are no longer recommended by SCAQMD.

As discussed in Section 6.2 (AQMD Consistency) of this report, the proposed project is consistent with the growth assumptions in the AQMP. Therefore, the proposed project will not contribute to any potential cumulative air quality impacts.

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7.1 Thresholds of Significance

The proposed project could result in potentially significant impacts related to greenhouse gas emissions and global climate change if it would:

A. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

B. Conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of greenhouse gases.

A numerical threshold for determining the significance of greenhouse gas emissions in the South Coast Air Basin (Basin) has not officially been adopted by the SCAQMD. The City of Moreno Valley adopted an Energy Efficiency and Climate Action Strategy in 2012. The focus of the City's Strategy is to implement energy efficiency and greenhouse gas reduction strategies in an effort to reduce greenhouse gas emissions to meet or exceed State requirements. The purpose and intent of these policies is to achieve compliance with AB 32 and reduce greenhouse gas emissions by 15 percent by the year 2020.

7.1.1 Short-Term Emissions

The project will result in short-term greenhouse gas emissions from construction activities. Greenhouse gas emissions will be released by equipment used for grading, paving, building construction, and architectural coating activities. GHG emissions will also result from worker and vendor trips to and from the project site. Table 13 (Construction Greenhouse Gas Emissions) summarizes the estimated yearly emissions from construction activities. Carbon dioxide emissions from construction equipment and worker/vendor trips were estimated utilizing the California Emissions Estimator Model (CalEEMod) version 2016.3.1. Construction activities are short-term and cease to emit greenhouse gases upon completion, unlike operational emissions that are continuous year after year until operation of the use ceases. Because of this difference, the City recommends that construction emissions be amortized over a 30-year operational lifetime. This normalizes construction emissions so that they can be grouped with operational emissions in order to generate a precise project GHG inventory. Amortized construction emissions are included in Table 13.

Table 13
Construction Greenhouse Gas Emissions

	GHG Emissions (MT/YR)			
	CO_2	CH_4	N_2O	TOTAL*
2018	1,603.72	0.16	0.00	1,607.67
2019	443.35	0.04	0.00	444.41
*AMORTIZED TOTAL^*				*53.59*

* MTCO2E
Note: Slight variations may occur due to rounding and variations in modeling software
^ Amortized over 30-years

7.1.2 Long-Term Emissions

Project activities will result in continuous greenhouse gas emissions from mobile, area, and operational sources. Mobile sources including vehicle trips to and from the project site will result primarily in emissions of CO_2 with minor emissions of methane and nitrous oxide. The most significant GHG emission from natural gas usage will be methane. Electricity usage by the project and indirect usage of electricity for water and wastewater conveyance will result primarily in emissions of carbon dioxide. Disposal of solid waste will result in emissions of methane from the decomposition of waste at landfills coupled with CO_2 emission from the handling and transport of solid waste. These sources combine to define the long-term greenhouse gas emissions inventory for the build-out of the proposed project.

The methodology utilized for each emissions source in CalEEMod is based on the CAPCOA *Quantifying Greenhouse Gas Mitigation Measures* handbook.[29] A summary of the project's operational greenhouse gas are included in Table 14 (Operational Greenhouse Gas Emissions). The emissions inventories are presented as metric tons of carbon dioxide equivalent (MTCO2E) meaning that all emissions have been weighted based on their Global Warming Potential (GWP) (a metric ton is equal to 1.102 US short tons). Mobile sources are based on annual vehicle miles traveled (VMT) based on daily trip generation identified in project traffic study. Natural gas usage and electricity usage are based on default demand figures utilized in CalEEMod.

Table 14
Operational Greenhouse Gas Emissions

Source	GHG Emissions (MT/YR)			
	CO_2	CH_4	N_2O	TOTAL*
Area	109.48	0.14	0.00	113.41
Energy	1,314.34	0.05	0.02	1,319.95
Mobile	5,005.36	0.26	0.00	5,011.91
Solid Waste	318.58	18.82	0.00	789.27
Water/Wastewater	233.12	1.25	0.03	273.73
Subtotal	*6,980.88*	*20.53*	*0.05*	*7,508.28*

* MTCO2E/YR
Note: Slight variations may occur due to rounding

7.1.3 Greenhouse Gas Emissions Inventory

Table 15 (Greenhouse Gas Emissions Inventory) summarizes the yearly estimated greenhouse gas emissions from construction of the project and operational sources. The total yearly carbon dioxide equivalent emissions are estimated at 7,561.87 MTCO2E under business as usual (BAU) conditions without consideration of project design features or implementation of City's Energy Efficiency and Climate Action Strategy policies.

Table 15
Greenhouse Gas Emissions Inventory

Source	GHG Emissions (MT/YR)
	TOTAL*
Construction^	53.59
Operational	7,508.28
EMISSIONS	7,561.87

* MTCO2E/YR: metric tons of carbon dioxide equivalent per year
Note: Slight variations may occur due to rounding
^ Construction impacts amortized over 30-years

Design Features and Regulatory Requirements
The project includes project design features that will reduce greenhouse gas emissions. Furthermore, regulatory requirements associated with the City's Energy Efficiency and Climate Action Strategy policies and the state CalGREEN requirements will further reduce greenhouse gas emissions. Greenhouse gas emissions reductions are summarized below as modeled using CalEEMod per the California Air Pollution Control Officers Association (CAPCOA) *Quantifying Greenhouse Gas Mitigation Measures* handbook.

The City's Energy Efficiency and Climate Action Strategy identifies local policy R2-T3, which requires a Transportation Demand Management (TDM) program for new development to reduce vehicle miles traveled by encouraging ride-sharing and carpooling. The project will ensure trip reduction by encouraging ridesharing through preferential parking and the availability of secured bicycle storage. (CAPCOA Mitigation Measure TRT-3)

The City's Energy Efficiency and Climate Action Strategy identifies local policy R2-E1 and R2-E5 which require energy efficient designs for all new residential and commercial buildings to be ten percent beyond current Title 24 standards. CalEEMod defaults assume compliance with 2008 California Building Energy Efficiency Standards. According to the Impact Analysis on California's 2013 *Building Energy Efficiency Standards* report prepared by California Energy Commission, compliance with 2013 standards reduced electricity use by 23.3 percent compared to 2008 standards.[30] 2016 Title 24 standards are effective as of January 1, 2017. According to the California Energy Commission, new residential developments built to 2016 standards are 28 percent more efficient than homes built to 2013 standards and nonresidential developments are five percent more efficient.[31] The model was adjusted to account for a 23.3 percent exceedance of 2008 Title 24 efficiency standards to meet 2013 standards coupled with an addition five percent exceedance of 2013 standards to meet 2016 standards for a total exceedance of 28.3 percent. In order to provide a conservative analysis, the additional ten percent efficiency required by the City's Energy Efficiency and Climate Action Strategy has not been discounted. (CAPCOA Mitigation Measure BE-1)

The City's Energy Efficiency and Climate Action Strategy identifies local policy R2-W1, which requires the reduction of water use of 20 percent per capita. Pursuant to CalGREEN requirements, indoor water demand must be reduced by a minimum of 20 percent. This requirement was applied to the project using default reduction factors for low-flow fixtures such as bathroom faucets, kitchen faucets, toilets, and showers provided in CalEEMod (CAPCOA Mitigation Measure WUW-1).

The City's Energy Efficiency and Climate Action Strategy identifies local policy R2-S1 which requires 75 percent of solid waste be diverted from landfills by the year 2020. A 75 percent solid waste diversion factor has been assumed. Recycling helps reduce GHG emissions by reducing solid waste transportation demand and decomposition of solid waste in landfills. (CAPCOA Mitigation Measure SW-1)

Design features and regulatory requirements will reduce greenhouse gas emissions by 1,326.26 MTCO2E per year from BAU conditions, a 17.5 percent reduction. With design features and regulatory requirements, the project will meet the minimum threshold of a 15 percent reduction performance standard from BAU conditions as required by the City's Energy Efficiency and Climate Action Strategy. Table 16 (Reduced Greenhouse Gas Emissions Inventory) summarizes the project greenhouse gas inventory with design features and regulatory requirements incorporated. Impacts will be less than significant with implementation of City greenhouse gas reduction policy.

Table 16
Reduced Greenhouse Gas Emissions Inventory

Source	GHG Emissions (MT/YR)*	
	BAU	Reduced
Construction^	53.59	53.59
Area	113.41	113.41
Energy	1,319.95	1,180.32
Mobile	5,011.91	4,459.39
Solid Waste	789.27	197.32
Water/Wastewater	273.73	231.58
Total	*7,561.87*	*6,235.61*
Reduction		*1,326.26*
Percent Reduction		*17.5%*

* MTCO2E/YR
Note: Slight variations may occur due to rounding

7.2 Greenhouse Gas Emissions Reduction Planning

7.2.1 Moreno Valley Energy Efficiency and Climate Action Strategy

The City's Energy Efficiency and Climate Action Strategy (2012) guides the City toward attainable conservation goals that may also significantly reduce the impact of greenhouse gas emissions within the community. The Energy Efficiency and Climate Action Strategy includes goals and policies to support and encourage sustainable actions. As discussed above, the project will be consistent with and support implementation of five identified local policies. With implementation of those policies, the project will achieve a 17.87 percent reduction in greenhouse gas emissions over BAU conditions, meeting the required 15 percent reduction as discussed in the City's Energy Efficiency and Climate Action Strategy.

The City adopted the 2016 edition of the California Building Code, including the California Green Building Standards Code (pursuant to Moreno Valley Municipal Code Chapter 8.20). The project would be subject to the California Green Building Standards Code, which requires new buildings to reduce water consumption, employ building commissioning to increase building system efficiencies for large buildings, divert construction waste from landfills, and install low pollutant-emitting finish materials. The project does not include any feature (i.e. substantially alter energy demands) that would interfere with implementation of these state and City codes and plans. No impact will occur.

7.2.2 California Air Resources Board Scoping Plan

ARB's *Scoping Plan* identifies strategies to reduce California's greenhouse gas emissions in support of AB 32. Many of the strategies identified in the Scoping Plan are not applicable at the project level, such as long-term technological improvements to reduce emissions from vehicles. Some measures are applicable and supported by the project, such as energy efficiency. Finally, while some measures are not directly applicable, the project will not conflict with their implementation. Reduction measures are grouped into 18 action categories, as follows:

1. California Cap-and-Trade Program Linked to Western Climate Initiative Partner Jurisdictions. Implement a broad-based California cap-and-trade program to provide a firm limit on emissions. Link the California cap–and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.
2. California Light-Duty Vehicle Greenhouse Gas Standards. Implement adopted Pavley standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.
3. Energy Efficiency. Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities).
4. Renewables Portfolio Standards. Achieve 33 percent renewable energy mix statewide.
5. Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard.
6. Regional Transportation-Related Greenhouse Gas Targets. Develop regional greenhouse gas emissions reduction targets for passenger vehicles.
7. Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.
8. Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.
9. Million Solar Roofs Program. Install 3,000 megawatts of solar-electric capacity under California's existing solar programs.
10. Medium- and Heavy-Duty Vehicles. Adopt medium- (MD) and heavy-duty (HD) vehicle efficiencies. Aerodynamic efficiency measures for HD trucks pulling trailers 53-feet or longer that include improvements in trailer aerodynamics and use of rolling resistance tires were adopted in 2008 and went into effect in 2010. Future, yet to be determined improvements, includes hybridization of MD and HD trucks.

11. Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.
12. High Speed Rail. Support implementation of a high speed rail system.
13. Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.
14. High Global Warming Potential Gases. Adopt measures to reduce high warming global potential gases.
15. Recycling and Waste. Reduce methane emissions at landfills. Increase waste diversion, composting and other beneficial uses of organic materials, and mandate commercial recycling. Move toward zero-waste.
16. Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation. The 2020 target for carbon sequestration is 5 million MTCO2E/YR.
17. Water. Continue efficiency programs and use cleaner energy sources to move and treat water.
18. Agriculture. In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.

Table 17 (Scoping Plan Consistency Summary) summarizes the project's consistency with the State Scoping Plan. As summarized, the project will not conflict with any of the provisions of the Scoping Plan and in fact supports four of the action categories through energy efficiency, water conservation, recycling, and landscaping.

Table 17
Scoping Plan Consistency Summary

Action	Supporting Measures	Consistency
Cap-and-Trade Program	--	Not Applicable. These programs involve capping emissions from electricity generation, industrial facilities, and broad scoped fuels. Caps do not affect commercial projects.
Light-Duty Vehicle Standards	T-1	Not Applicable. This is a statewide measure establishing vehicle emissions standards.
Energy Efficiency	E-1	Consistent. The project will include a variety of building, water, and solid waste efficiencies consistent with 2013 CALGREEN requirements.
	E-2	
	CR-1	
	CR-2	
Renewables Portfolio Standard	E-3	Not Applicable. Establishes the minimum statewide renewable energy mix.
Low Carbon Fuel Standard	T-2	Not Applicable. Establishes reduced carbon intensity of transportation fuels.
Regional Transportation-Related Greenhouse Gas Targets	T-3	Not Applicable. The project will not result in substantial emissions of greenhouse gas emissions; therefore, transportation related emissions reductions are not required.
Vehicle Efficiency Measures	T-4	Not Applicable. Identifies measures such as minimum tire-fuel efficiency, lower friction oil, and reduction in air conditioning use.
Goods Movement	T-5	Not applicable. Identifies measures to improve goods movement efficiencies such as advanced combustion strategies, friction reduction, waste heat recovery, and

	T-6	electrification of accessories.
Million Solar Roofs Program	E-4	Not Applicable. Sets goal for use of solar systems throughout the state.
Medium- & Heavy-Duty Vehicles	T-7	Not applicable. Medium-duty and heavy-duty trucks and trailers will not operate from the proposed project.
	T-8	
Industrial Emissions	I-1	Not Applicable. These measures are applicable to large industrial facilities (> 500,000 MTCOE2/YR) and other intensive uses such as refineries.
	I-2	
	I-3	
	I-4	
	I-5	
High Speed Rail	T-9	Not Applicable. Supports increased mobility choice.
Green Building Strategy	GB-1	Consistent. The project will include a variety of building, water, and solid waste efficiencies consistent with 2013 CALGREEN requirements.
High Global Warming Potential Gases	H-1	Not Applicable. The proposed project is not a substantial source of high GWP emissions and will comply with any future changes in air conditioning, fire protection suppressant, and other requirements.
	H-2	
	H-3	
	H-4	
	H-5	
	H-6	
	H-7	
Recycling and Waste	RW-1	Consistent. The project will be required to recycle a minimum of 50 percent from construction activities and operations per state requirements.
	RW-2	
	RW-3	
Sustainable Forests	F-1	Not Applicable. The project site is not forested and the project will not result in the loss of any forest land.
Water	W-1	Consistent. The project will include use of low-flow fixtures and efficient landscaping per state requirements.
	W-2	
	W-3	
	W-4	
	W-5	
	W-6	
Agriculture	A-1	Not Applicable. The project is not an agricultural use.

AQ-1 Before the City issues building permits, the Building Official and Community Development Director must verify that construction plans submitted by the project proponent reflect use of architectural coatings where the content of volatile organic compounds (VOC) does not exceed 25 grams per liter (g/l) for interior and exterior applications. This measure must be verified through standard building inspections in light of the performance standard that emissions of volatile organic compounds from application of interior or exterior coatings shall not exceed the daily emissions thresholds established by the South Coast Air Quality Management District. The applicant bears the cost of implementing this mitigation.

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Appendix A CalEEMod Output

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Moreno Valley Medical Village

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	114.48	1000sqft	1.34	114,480.00	0
Other Asphalt Surfaces	333.57	1000sqft	7.66	333,568.00	0
Other Non-Asphalt Surfaces	264.68	1000sqft	6.08	264,675.00	0
Congregate Care (Assisted Living)	365.00	Dwelling Unit	3.06	365,000.00	365

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 114,480 SF Medical Office Building
365 DU Assisted Living and Nursing Home Units/Beds

Construction Phase -

Grading - Export 25,317 CY

Architectural Coating - Maximum 25 g/L

Vehicle Trips -

Woodstoves - No wood-burning fireplaces

Construction Off-road Equipment Mitigation - Water site 3 tmes daily

Mobile Land Use Mitigation -

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	25.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	25.00
tblArchitecturalCoating	EF_Parking	100.00	25.00
tblArchitecturalCoating	EF_Residential_Exterior	50.00	25.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	25.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblFireplaces	NumberGas	310.25	328.50
tblFireplaces	NumberWood	18.25	0.00
tblGrading	MaterialExported	0.00	25,317.00
tblLandUse	BuildingSpaceSquareFeet	333,570.00	333,568.00
tblLandUse	BuildingSpaceSquareFeet	264,680.00	264,675.00
tblLandUse	LandUseSquareFeet	333,570.00	333,568.00
tblLandUse	LandUseSquareFeet	264,680.00	264,675.00
tblLandUse	LotAcreage	2.63	1.34
tblLandUse	LotAcreage	22.81	3.06
tblLandUse	Population	1,044.00	365.00
tblProjectCharacteristics	OperationalYear	2018	2020
tblWoodstoves	NumberCatalytic	18.25	0.00
tblWoodstoves	NumberNoncatalytic	18.25	36.50

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					
2018	6.2942	92.7807	49.9578	0.1485	10.8351	2.7639	13.5990	4.1752	2.5475	6.7227	0.0000	15,574.8293	15,574.8293	2.6043	0.0000	15,639.9364
2019	73.2429	40.8585	46.2607	0.1323	7.1571	1.4568	8.6139	1.9207	1.3707	3.2914	0.0000	13,377.7617	13,377.7617	1.1233	0.0000	13,405.8444
Maximum	**73.2429**	**92.7807**	**49.9578**	**0.1485**	**10.8351**	**2.7639**	**13.5990**	**4.1752**	**2.5475**	**6.7227**	**0.0000**	**15,574.8293**	**15,574.8293**	**2.6043**	**0.0000**	**15,639.9364**

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					
2018	6.2942	92.7807	49.9578	0.1485	7.1571	2.7639	8.8449	1.9725	2.5475	4.5200	0.0000	15,574.8293	15,574.8293	2.6043	0.0000	15,639.9364
2019	73.2429	40.8585	46.2607	0.1323	7.1571	1.4568	8.6139	1.9207	1.3707	3.2914	0.0000	13,377.7617	13,377.7617	1.1233	0.0000	13,405.8444
Maximum	**73.2429**	**92.7807**	**49.9578**	**0.1485**	**7.1571**	**2.7639**	**8.8449**	**1.9725**	**2.5475**	**4.5200**	**0.0000**	**15,574.8293**	**15,574.8293**	**2.6043**	**0.0000**	**15,639.9364**

	ROG	NOx	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**	**20.44**	**0.00**	**21.40**	**36.13**	**0.00**	**22.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	20.9887	7.2588	135.3480	0.3283		14.9093	14.9093		14.9093	14.9093	2,154.0980	7,010.8482	9,164.9462	11.8620	0.1275	9,499.5005
Energy	0.2132	1.8285	0.8226	0.0116		0.1473	0.1473		0.1473	0.1473		2,326.0244	2,326.0244	0.0446	0.0426	2,339.8468
Mobile	9.4147	44.1656	116.5215	0.3862	30.0656	0.3806	30.4462	8.0441	0.3571	8.4012		39,239.2556	39,239.2556	1.9920		39,289.0558
Total	**30.6167**	**53.2529**	**252.6920**	**0.7261**	**30.0656**	**15.4372**	**45.5027**	**8.0441**	**15.4137**	**23.4577**	**2,154.0980**	**48,576.1282**	**50,730.2262**	**13.8985**	**0.1702**	**51,128.4030**

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	20.9887	7.2588	135.3480	0.3283		14.9093	14.9093		14.9093	14.9093	2,154.0980	7,010.8482	9,164.9462	11.8620	0.1275	9,499.5005
Energy	0.2132	1.8285	0.8226	0.0116		0.1473	0.1473		0.1473	0.1473		2,326.0244	2,326.0244	0.0446	0.0426	2,339.8468
Mobile	9.4147	44.1656	116.5215	0.3862	30.0656	0.3806	30.4462	8.0441	0.3571	8.4012		39,239.2556	39,239.2556	1.9920		39,289.0558
Total	**30.6167**	**53.2529**	**252.6920**	**0.7261**	**30.0656**	**15.4372**	**45.5027**	**8.0441**	**15.4137**	**23.4577**	**2,154.0980**	**48,576.1282**	**50,730.2262**	**13.8985**	**0.1702**	**51,128.4030**

	ROG	NOx	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	Grading	Grading	1/1/2018	2/9/2018	5	30	
2	Building Construction	Building Construction	2/10/2018	4/5/2019	5	300	
3	Paving	Paving	4/6/2019	5/3/2019	5	20	
4	Architectural Coating	Architectural Coating	5/4/2019	5/31/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 13.74

Residential Indoor: 739,125; Residential Outdoor: 246,375; Non-Residential Indoor: 171,720; Non-Residential Outdoor: 57,240; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Grading	8	20.00	0.00	3,165.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	551.00	156.00	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	110.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2018

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					8.7688	0.0000	8.7688	3.6110	0.0000	3.6110			0.0000			0.0000
Off-Road	5.0901	59.5218	35.0894	0.0620		2.6337	2.6337		2.4230	2.4230		6,244.4284	6,244.4284	1.9440		6,293.0278
Total	**5.0901**	**59.5218**	**35.0894**	**0.0620**	**8.7688**	**2.6337**	**11.4025**	**3.6110**	**2.4230**	**6.0340**		**6,244.4284**	**6,244.4284**	**1.9440**		**6,293.0278**

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	0.9590	33.1819	6.4277	0.0840	1.8428	0.1284	1.9712	0.5050	0.1229	0.6278		9,086.6569	9,086.6569	0.6520		9,102.9564
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	0.1069	0.0770	1.0006	2.4500e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		243.7440	243.7440	8.3300e-003		243.9523
Total	**1.0659**	**33.2589**	**7.4283**	**0.0865**	**2.0663**	**0.1302**	**2.1965**	**0.5642**	**0.1245**	**0.6887**		**9,330.4009**	**9,330.4009**	**0.6603**		**9,346.9086**

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					3.4198	0.0000	3.4198	1.4083	0.0000	1.4083			0.0000			0.0000
Off-Road	5.0901	59.5218	35.0894	0.0620		2.6337	2.6337		2.4230	2.4230	0.0000	6,244.4284	6,244.4284	1.9440		6,293.0278
Total	**5.0901**	**59.5218**	**35.0894**	**0.0620**	**3.4198**	**2.6337**	**6.0536**	**1.4083**	**2.4230**	**3.8313**	**0.0000**	**6,244.4284**	**6,244.4284**	**1.9440**		**6,293.0278**

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	0.9590	33.1819	6.4277	0.0840	1.8428	0.1284	1.9712	0.5050	0.1229	0.6278		9,086.6569	9,086.6569	0.6520		9,102.9564
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	0.1069	0.0770	1.0006	2.4500e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		243.7440	243.7440	8.3300e-003		243.9523
Total	**1.0659**	**33.2589**	**7.4283**	**0.0865**	**2.0663**	**0.1302**	**2.1965**	**0.5642**	**0.1245**	**0.6887**		**9,330.4009**	**9,330.4009**	**0.6603**		**9,346.9086**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

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	0.6711	18.9529	4.8106	0.0405	0.9982	0.1385	1.1368	0.2874	0.1325	0.4199		4,321.3435	4,321.3435	0.2985		4,328.8053
Worker	2.9437	2.1222	27.5668	0.0675	6.1589	0.0494	6.2083	1.6334	0.0455	1.6789		6,715.1477	6,715.1477	0.2295		6,720.8854
Total	**3.6147**	**21.0751**	**32.3774**	**0.1080**	**7.1571**	**0.1879**	**7.3450**	**1.9207**	**0.1781**	**2.0988**		**11,036.4912**	**11,036.4912**	**0.5280**		**11,049.6907**

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	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

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	0.6711	18.9529	4.8106	0.0405	0.9982	0.1385	1.1368	0.2874	0.1325	0.4199		4,321.3435	4,321.3435	0.2985		4,328.8053
Worker	2.9437	2.1222	27.5668	0.0675	6.1589	0.0494	6.2083	1.6334	0.0455	1.6789		6,715.1477	6,715.1477	0.2295		6,720.8854
Total	**3.6147**	**21.0751**	**32.3774**	**0.1080**	**7.1571**	**0.1879**	**7.3450**	**1.9207**	**0.1781**	**2.0988**		**11,036.4912**	**11,036.4912**	**0.5280**		**11,049.6907**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

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	0.6080	17.9075	4.4158	0.0401	0.9982	0.1187	1.1169	0.2874	0.1136	0.4009		4,282.3898	4,282.3898	0.2881		4,289.5931
Worker	2.6751	1.8722	24.6811	0.0653	6.1589	0.0482	6.2071	1.6334	0.0444	1.6778		6,503.7917	6,503.7917	0.2038		6,508.8878
Total	**3.2831**	**19.7797**	**29.0969**	**0.1054**	**7.1571**	**0.1669**	**7.3240**	**1.9207**	**0.1580**	**2.0787**		**10,786.1815**	**10,786.1815**	**0.4920**		**10,798.4809**

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

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	0.6080	17.9075	4.4158	0.0401	0.9982	0.1187	1.1169	0.2874	0.1136	0.4009		4,282.3898	4,282.3898	0.2881		4,289.5931
Worker	2.6751	1.8722	24.6811	0.0653	6.1589	0.0482	6.2071	1.6334	0.0444	1.6778		6,503.7917	6,503.7917	0.2038		6,508.8878
Total	**3.2831**	**19.7797**	**29.0969**	**0.1054**	**7.1571**	**0.1669**	**7.3240**	**1.9207**	**0.1580**	**2.0787**		**10,786.1815**	**10,786.1815**	**0.4920**		**10,798.4809**

3.4 Paving - 2019

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	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	1.0035					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4579**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

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	0.0728	0.0510	0.6719	1.7800e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		177.0542	177.0542	5.5500e-003		177.1930
Total	**0.0728**	**0.0510**	**0.6719**	**1.7800e-003**	**0.1677**	**1.3100e-003**	**0.1690**	**0.0445**	**1.2100e-003**	**0.0457**		**177.0542**	**177.0542**	**5.5500e-003**		**177.1930**

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	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	1.0035					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4579**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

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	0.0728	0.0510	0.6719	1.7800e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		177.0542	177.0542	5.5500e-003		177.1930
Total	**0.0728**	**0.0510**	**0.6719**	**1.7800e-003**	**0.1677**	**1.3100e-003**	**0.1690**	**0.0445**	**1.2100e-003**	**0.0457**		**177.0542**	**177.0542**	**5.5500e-003**		**177.1930**

3.5 Architectural Coating - 2019

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	72.4424					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**72.7089**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

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	0.5341	0.3738	4.9273	0.0130	1.2295	9.6200e-003	1.2392	0.3261	8.8700e-003	0.3350		1,298.3976	1,298.3976	0.0407		1,299.4150
Total	**0.5341**	**0.3738**	**4.9273**	**0.0130**	**1.2295**	**9.6200e-003**	**1.2392**	**0.3261**	**8.8700e-003**	**0.3350**		**1,298.3976**	**1,298.3976**	**0.0407**		**1,299.4150**

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	72.4424					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**72.7089**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

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	0.5341	0.3738	4.9273	0.0130	1.2295	9.6200e-003	1.2392	0.3261	8.8700e-003	0.3350		1,298.3976	1,298.3976	0.0407		1,299.4150
Total	**0.5341**	**0.3738**	**4.9273**	**0.0130**	**1.2295**	**9.6200e-003**	**1.2392**	**0.3261**	**8.8700e-003**	**0.3350**		**1,298.3976**	**1,298.3976**	**0.0407**		**1,299.4150**

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	9.4147	44.1656	116.5215	0.3862	30.0656	0.3806	30.4462	8.0441	0.3571	8.4012		39,239.2556	39,239.2556	1.9920		39,289.0558
Unmitigated	9.4147	44.1656	116.5215	0.3862	30.0656	0.3806	30.4462	8.0441	0.3571	8.4012		39,239.2556	39,239.2556	1.9920		39,289.0558

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	1,000.10	803.00	890.60	3,267,822	3,267,822
Medical Office Building	4,136.16	1,025.74	177.44	8,109,142	8,109,142
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	5,136.26	1,828.74	1,068.04	11,376,964	11,376,964

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
Congregate Care (Assisted Living)	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	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
Medical Office Building	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Other Asphalt Surfaces	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Other Non-Asphalt Surfaces	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Congregate Care (Assisted Living)	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2132	1.8285	0.8226	0.0116		0.1473	0.1473		0.1473	0.1473		2,326.0244	2,326.0244	0.0446	0.0426	2,339.8468
NaturalGas Unmitigated	0.2132	1.8285	0.8226	0.0116		0.1473	0.1473		0.1473	0.1473		2,326.0244	2,326.0244	0.0446	0.0426	2,339.8468

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					
Congregate Care (Assisted Living)	18676.6	0.2014	1.7212	0.7324	0.0110		0.1392	0.1392		0.1392	0.1392		2,197.2459	2,197.2459	0.0421	0.0403	2,210.3030
Medical Office Building	1094.62	0.0118	0.1073	0.0901	6.4000e-004		8.1600e-003	8.1600e-003		8.1600e-003	8.1600e-003		128.7785	128.7785	2.4700e-003	2.3600e-003	129.5437
Other 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
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
Total		**0.2132**	**1.8285**	**0.8226**	**0.0116**		**0.1473**	**0.1473**		**0.1473**	**0.1473**		**2,326.0244**	**2,326.0244**	**0.0446**	**0.0426**	**2,339.8468**

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					
Congregate Care (Assisted Living)	18.6766	0.2014	1.7212	0.7324	0.0110		0.1392	0.1392		0.1392	0.1392		2,197.2459	2,197.2459	0.0421	0.0403	2,210.3030
Medical Office Building	1.09462	0.0118	0.1073	0.0901	6.4000e-004		8.1600e-003	8.1600e-003		8.1600e-003	8.1600e-003		128.7785	128.7785	2.4700e-003	2.3600e-003	129.5437
Other 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
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
Total		**0.2132**	**1.8285**	**0.8226**	**0.0116**		**0.1473**	**0.1473**		**0.1473**	**0.1473**		**2,326.0244**	**2,326.0244**	**0.0446**	**0.0426**	**2,339.8468**

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	20.9887	7.2588	135.3480	0.3283		14.9093	14.9093		14.9093	14.9093	2,154.0980	7,010.8482	9,164.9462	11.8620	0.1275	9,499.5005
Unmitigated	20.9887	7.2588	135.3480	0.3283		14.9093	14.9093		14.9093	14.9093	2,154.0980	7,010.8482	9,164.9462	11.8620	0.1275	9,499.5005

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	0.9621					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.7056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	9.3942	6.9087	105.0617	0.3267		14.7429	14.7429		14.7429	14.7429	2,154.0980	6,956.4706	9,110.5686	11.8087	0.1275	9,443.7906
Landscaping	0.9269	0.3501	30.2863	1.6000e-003		0.1664	0.1664		0.1664	0.1664		54.3776	54.3776	0.0533		55.7098
Total	**20.9887**	**7.2588**	**135.3480**	**0.3283**		**14.9092**	**14.9092**		**14.9092**	**14.9092**	**2,154.0980**	**7,010.8482**	**9,164.9462**	**11.8620**	**0.1275**	**9,499.5005**

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	0.9621					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.7056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	9.3942	6.9087	105.0617	0.3267		14.7429	14.7429		14.7429	14.7429	2,154.0980	6,956.4706	9,110.5686	11.8087	0.1275	9,443.7906
Landscaping	0.9269	0.3501	30.2863	1.6000e-003		0.1664	0.1664		0.1664	0.1664		54.3776	54.3776	0.0533		55.7098
Total	**20.9887**	**7.2588**	**135.3480**	**0.3283**		**14.9092**	**14.9092**		**14.9092**	**14.9092**	**2,154.0980**	**7,010.8482**	**9,164.9462**	**11.8620**	**0.1275**	**9,499.5005**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Moreno Valley Medical Village

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	114.48	1000sqft	1.34	114,480.00	0
Other Asphalt Surfaces	333.57	1000sqft	7.66	333,568.00	0
Other Non-Asphalt Surfaces	264.68	1000sqft	6.08	264,675.00	0
Congregate Care (Assisted Living)	365.00	Dwelling Unit	3.06	365,000.00	365

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 114,480 SF Medical Office Building
365 DU Assisted Living and Nursing Home Units/Beds
Construction Phase -

Grading - Export 25,317 CY

Architectural Coating - Maximum 25 g/L

Vehicle Trips -

Woodstoves - No wood-burning fireplaces

Construction Off-road Equipment Mitigation - Water site 3 tmes daily

Mobile Land Use Mitigation -

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	25.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	25.00
tblArchitecturalCoating	EF_Parking	100.00	25.00
tblArchitecturalCoating	EF_Residential_Exterior	50.00	25.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	25.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblFireplaces	NumberGas	310.25	328.50
tblFireplaces	NumberWood	18.25	0.00
tblGrading	MaterialExported	0.00	25,317.00
tblLandUse	BuildingSpaceSquareFeet	333,570.00	333,568.00
tblLandUse	BuildingSpaceSquareFeet	264,680.00	264,675.00
tblLandUse	LandUseSquareFeet	333,570.00	333,568.00
tblLandUse	LandUseSquareFeet	264,680.00	264,675.00
tblLandUse	LotAcreage	2.63	1.34
tblLandUse	LotAcreage	22.81	3.06
tblLandUse	Population	1,044.00	365.00
tblProjectCharacteristics	OperationalYear	2018	2020
tblWoodstoves	NumberCatalytic	18.25	0.00
tblWoodstoves	NumberNoncatalytic	18.25	36.50

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					
2018	6.6070	93.2531	48.0138	0.1469	10.8351	2.7664	13.6015	4.1752	2.5499	6.7251	0.0000	15,408.8588	15,408.8588	2.6306	0.0000	15,474.6241
2019	73.2954	41.0654	44.4784	0.1272	7.1571	1.4587	8.6158	1.9207	1.3725	3.2932	0.0000	12,859.4395	12,859.4395	1.1308	0.0000	12,887.7088
Maximum	**73.2954**	**93.2531**	**48.0138**	**0.1469**	**10.8351**	**2.7664**	**13.6015**	**4.1752**	**2.5499**	**6.7251**	**0.0000**	**15,408.8588**	**15,408.8588**	**2.6306**	**0.0000**	**15,474.6241**

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					
2018	6.6070	93.2531	48.0138	0.1469	7.1571	2.7664	8.8471	1.9725	2.5499	4.5224	0.0000	15,408.8587	15,408.8587	2.6306	0.0000	15,474.6241
2019	73.2954	41.0654	44.4784	0.1272	7.1571	1.4587	8.6158	1.9207	1.3725	3.2932	0.0000	12,859.4395	12,859.4395	1.1308	0.0000	12,887.7088
Maximum	**73.2954**	**93.2531**	**48.0138**	**0.1469**	**7.1571**	**2.7664**	**8.8471**	**1.9725**	**2.5499**	**4.5224**	**0.0000**	**15,408.8587**	**15,408.8587**	**2.6306**	**0.0000**	**15,474.6241**

	ROG	NOx	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**	**20.44**	**0.00**	**21.40**	**36.13**	**0.00**	**21.99**	**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	20.9887	7.2588	135.3480	0.3283		14.9093	14.9093		14.9093	14.9093	2,154.0980	7,010.8482	9,164.9462	11.8620	0.1275	9,499.5005
Energy	0.2132	1.8285	0.8226	0.0116		0.1473	0.1473		0.1473	0.1473		2,326.0244	2,326.0244	0.0446	0.0426	2,339.8468
Mobile	9.0570	45.1124	110.7132	0.3660	30.0656	0.3829	30.4485	8.0441	0.3593	8.4034		37,208.2857	37,208.2857	1.9931		37,258.1121
Total	**30.2589**	**54.1997**	**246.8838**	**0.7059**	**30.0656**	**15.4395**	**45.5051**	**8.0441**	**15.4159**	**23.4600**	**2,154.0980**	**46,545.1582**	**48,699.2562**	**13.8996**	**0.1702**	**49,097.4593**

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	20.9887	7.2588	135.3480	0.3283		14.9093	14.9093		14.9093	14.9093	2,154.0980	7,010.8482	9,164.9462	11.8620	0.1275	9,499.5005
Energy	0.2132	1.8285	0.8226	0.0116		0.1473	0.1473		0.1473	0.1473		2,326.0244	2,326.0244	0.0446	0.0426	2,339.8468
Mobile	9.0570	45.1124	110.7132	0.3660	30.0656	0.3829	30.4485	8.0441	0.3593	8.4034		37,208.2857	37,208.2857	1.9931		37,258.1121
Total	**30.2589**	**54.1997**	**246.8838**	**0.7059**	**30.0656**	**15.4395**	**45.5051**	**8.0441**	**15.4159**	**23.4600**	**2,154.0980**	**46,545.1582**	**48,699.2562**	**13.8996**	**0.1702**	**49,097.4593**

	ROG	NOx	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	Grading	Grading	1/1/2018	2/9/2018	5	30	
2	Building Construction	Building Construction	2/10/2018	4/5/2019	5	300	
3	Paving	Paving	4/6/2019	5/3/2019	5	20	
4	Architectural Coating	Architectural Coating	5/4/2019	5/31/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 13.74

Residential Indoor: 739,125; Residential Outdoor: 246,375; Non-Residential Indoor: 171,720; Non-Residential Outdoor: 57,240; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Grading	8	20.00	0.00	3,165.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	551.00	156.00	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	110.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2018

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					8.7688	0.0000	8.7688	3.6110	0.0000	3.6110			0.0000			0.0000
Off-Road	5.0901	59.5218	35.0894	0.0620		2.6337	2.6337		2.4230	2.4230		6,244.4284	6,244.4284	1.9440		6,293.0278
Total	**5.0901**	**59.5218**	**35.0894**	**0.0620**	**8.7688**	**2.6337**	**11.4025**	**3.6110**	**2.4230**	**6.0340**		**6,244.4284**	**6,244.4284**	**1.9440**		**6,293.0278**

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	0.9850	33.6467	6.9141	0.0826	1.8428	0.1309	1.9737	0.5050	0.1252	0.6302		8,935.7798	8,935.7798	0.6788		8,952.7500
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	0.1172	0.0847	0.9118	2.3000e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		228.6505	228.6505	7.8300e-003		228.8463
Total	**1.1021**	**33.7313**	**7.8260**	**0.0849**	**2.0663**	**0.1327**	**2.1990**	**0.5642**	**0.1269**	**0.6911**		**9,164.4303**	**9,164.4303**	**0.6866**		**9,181.5963**

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					3.4198	0.0000	3.4198	1.4083	0.0000	1.4083			0.0000			0.0000
Off-Road	5.0901	59.5218	35.0894	0.0620		2.6337	2.6337		2.4230	2.4230	0.0000	6,244.4284	6,244.4284	1.9440		6,293.0278
Total	**5.0901**	**59.5218**	**35.0894**	**0.0620**	**3.4198**	**2.6337**	**6.0536**	**1.4083**	**2.4230**	**3.8313**	**0.0000**	**6,244.4284**	**6,244.4284**	**1.9440**		**6,293.0278**

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	0.9850	33.6467	6.9141	0.0826	1.8428	0.1309	1.9737	0.5050	0.1252	0.6302		8,935.7798	8,935.7798	0.6788		8,952.7500
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	0.1172	0.0847	0.9118	2.3000e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		228.6505	228.6505	7.8300e-003		228.8463
Total	**1.1021**	**33.7313**	**7.8260**	**0.0849**	**2.0663**	**0.1327**	**2.1990**	**0.5642**	**0.1269**	**0.6911**		**9,164.4303**	**9,164.4303**	**0.6866**		**9,181.5963**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

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	0.6995	18.9931	5.3126	0.0394	0.9982	0.1407	1.1389	0.2874	0.1346	0.4220		4,206.4045	4,206.4045	0.3192		4,214.3845
Worker	3.2281	2.3321	25.1208	0.0633	6.1589	0.0494	6.2083	1.6334	0.0455	1.6789		6,299.3214	6,299.3214	0.2157		6,304.7147
Total	**3.9276**	**21.3252**	**30.4334**	**0.1027**	**7.1571**	**0.1901**	**7.3472**	**1.9207**	**0.1801**	**2.1008**		**10,505.7259**	**10,505.7259**	**0.5349**		**10,519.0992**

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	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

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	0.6995	18.9931	5.3126	0.0394	0.9982	0.1407	1.1389	0.2874	0.1346	0.4220		4,206.4045	4,206.4045	0.3192		4,214.3845
Worker	3.2281	2.3321	25.1208	0.0633	6.1589	0.0494	6.2083	1.6334	0.0455	1.6789		6,299.3214	6,299.3214	0.2157		6,304.7147
Total	**3.9276**	**21.3252**	**30.4334**	**0.1027**	**7.1571**	**0.1901**	**7.3472**	**1.9207**	**0.1801**	**2.1008**		**10,505.7259**	**10,505.7259**	**0.5349**		**10,519.0992**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

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	0.6343	17.9296	4.8905	0.0390	0.9982	0.1206	1.1188	0.2874	0.1154	0.4027		4,167.3672	4,167.3672	0.3082		4,175.0715
Worker	2.9379	2.0571	22.4241	0.0613	6.1589	0.0482	6.2071	1.6334	0.0444	1.6778		6,100.4921	6,100.4921	0.1913		6,105.2738
Total	**3.5721**	**19.9866**	**27.3146**	**0.1003**	**7.1571**	**0.1688**	**7.3259**	**1.9207**	**0.1598**	**2.0805**		**10,267.8594**	**10,267.8594**	**0.4994**		**10,280.3453**

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

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	0.6343	17.9296	4.8905	0.0390	0.9982	0.1206	1.1188	0.2874	0.1154	0.4027		4,167.3672	4,167.3672	0.3082		4,175.0715
Worker	2.9379	2.0571	22.4241	0.0613	6.1589	0.0482	6.2071	1.6334	0.0444	1.6778		6,100.4921	6,100.4921	0.1913		6,105.2738
Total	**3.5721**	**19.9866**	**27.3146**	**0.1003**	**7.1571**	**0.1688**	**7.3259**	**1.9207**	**0.1598**	**2.0805**		**10,267.8594**	**10,267.8594**	**0.4994**		**10,280.3453**

3.4 Paving - 2019

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	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	1.0035					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4579**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

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	0.0800	0.0560	0.6105	1.6700e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		166.0751	166.0751	5.2100e-003		166.2053
Total	**0.0800**	**0.0560**	**0.6105**	**1.6700e-003**	**0.1677**	**1.3100e-003**	**0.1690**	**0.0445**	**1.2100e-003**	**0.0457**		**166.0751**	**166.0751**	**5.2100e-003**		**166.2053**

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	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	1.0035					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4579**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

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	0.0800	0.0560	0.6105	1.6700e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		166.0751	166.0751	5.2100e-003		166.2053
Total	**0.0800**	**0.0560**	**0.6105**	**1.6700e-003**	**0.1677**	**1.3100e-003**	**0.1690**	**0.0445**	**1.2100e-003**	**0.0457**		**166.0751**	**166.0751**	**5.2100e-003**		**166.2053**

3.5 Architectural Coating - 2019

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	72.4424					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**72.7089**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

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	0.5865	0.4107	4.4767	0.0122	1.2295	9.6200e-003	1.2392	0.3261	8.8700e-003	0.3350		1,217.8841	1,217.8841	0.0382		1,218.8387
Total	**0.5865**	**0.4107**	**4.4767**	**0.0122**	**1.2295**	**9.6200e-003**	**1.2392**	**0.3261**	**8.8700e-003**	**0.3350**		**1,217.8841**	**1,217.8841**	**0.0382**		**1,218.8387**

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	72.4424					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**72.7089**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

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	0.5865	0.4107	4.4767	0.0122	1.2295	9.6200e-003	1.2392	0.3261	8.8700e-003	0.3350		1,217.8841	1,217.8841	0.0382		1,218.8387
Total	**0.5865**	**0.4107**	**4.4767**	**0.0122**	**1.2295**	**9.6200e-003**	**1.2392**	**0.3261**	**8.8700e-003**	**0.3350**		**1,217.8841**	**1,217.8841**	**0.0382**		**1,218.8387**

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	9.0570	45.1124	110.7132	0.3660	30.0656	0.3829	30.4485	8.0441	0.3593	8.4034		37,208.2857	37,208.2857	1.9931		37,258.1121
Unmitigated	9.0570	45.1124	110.7132	0.3660	30.0656	0.3829	30.4485	8.0441	0.3593	8.4034		37,208.2857	37,208.2857	1.9931		37,258.1121

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	1,000.10	803.00	890.60	3,267,822	3,267,822
Medical Office Building	4,136.16	1,025.74	177.44	8,109,142	8,109,142
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	5,136.26	1,828.74	1,068.04	11,376,964	11,376,964

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
Congregate Care (Assisted	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	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
Medical Office Building	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Other Asphalt Surfaces	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Other Non-Asphalt Surfaces	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Congregate Care (Assisted Living)	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2132	1.8285	0.8226	0.0116		0.1473	0.1473		0.1473	0.1473		2,326.0244	2,326.0244	0.0446	0.0426	2,339.8468
NaturalGas Unmitigated	0.2132	1.8285	0.8226	0.0116		0.1473	0.1473		0.1473	0.1473		2,326.0244	2,326.0244	0.0446	0.0426	2,339.8468

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					
Congregate Care (Assisted Living)	18676.6	0.2014	1.7212	0.7324	0.0110		0.1392	0.1392		0.1392	0.1392		2,197.2459	2,197.2459	0.0421	0.0403	2,210.3030
Medical Office Building	1094.62	0.0118	0.1073	0.0901	6.4000e-004		8.1600e-003	8.1600e-003		8.1600e-003	8.1600e-003		128.7785	128.7785	2.4700e-003	2.3600e-003	129.5437
Other 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
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
Total		**0.2132**	**1.8285**	**0.8226**	**0.0116**		**0.1473**	**0.1473**		**0.1473**	**0.1473**		**2,326.0244**	**2,326.0244**	**0.0446**	**0.0426**	**2,339.8468**

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					
Congregate Care (Assisted Living)	18.6766	0.2014	1.7212	0.7324	0.0110		0.1392	0.1392		0.1392	0.1392		2,197.2459	2,197.2459	0.0421	0.0403	2,210.3030
Medical Office Building	1.09462	0.0118	0.1073	0.0901	6.4000e-004		8.1600e-003	8.1600e-003		8.1600e-003	8.1600e-003		128.7785	128.7785	2.4700e-003	2.3600e-003	129.5437
Other 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
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
Total		**0.2132**	**1.8285**	**0.8226**	**0.0116**		**0.1473**	**0.1473**		**0.1473**	**0.1473**		**2,326.0244**	**2,326.0244**	**0.0446**	**0.0426**	**2,339.8468**

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	20.9887	7.2588	135.3480	0.3283		14.9093	14.9093		14.9093	14.9093	2,154.0980	7,010.8482	9,164.9462	11.8620	0.1275	9,499.5005
Unmitigated	20.9887	7.2588	135.3480	0.3283		14.9093	14.9093		14.9093	14.9093	2,154.0980	7,010.8482	9,164.9462	11.8620	0.1275	9,499.5005

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	0.9621					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.7056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	9.3942	6.9087	105.0617	0.3267		14.7429	14.7429		14.7429	14.7429	2,154.0980	6,956.4706	9,110.5686	11.8087	0.1275	9,443.7906
Landscaping	0.9269	0.3501	30.2863	1.6000e-003		0.1664	0.1664		0.1664	0.1664		54.3776	54.3776	0.0533		55.7098
Total	**20.9887**	**7.2588**	**135.3480**	**0.3283**		**14.9092**	**14.9092**		**14.9092**	**14.9092**	**2,154.0980**	**7,010.8482**	**9,164.9462**	**11.8620**	**0.1275**	**9,499.5005**

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	0.9621					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.7056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	9.3942	6.9087	105.0617	0.3267		14.7429	14.7429		14.7429	14.7429	2,154.0980	6,956.4706	9,110.5686	11.8087	0.1275	9,443.7906
Landscaping	0.9269	0.3501	30.2863	1.6000e-003		0.1664	0.1664		0.1664	0.1664		54.3776	54.3776	0.0533		55.7098
Total	**20.9887**	**7.2588**	**135.3480**	**0.3283**		**14.9092**	**14.9092**		**14.9092**	**14.9092**	**2,154.0980**	**7,010.8482**	**9,164.9462**	**11.8620**	**0.1275**	**9,499.5005**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Moreno Valley Medical Village

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	114.48	1000sqft	1.34	114,480.00	0
Other Asphalt Surfaces	333.57	1000sqft	7.66	333,568.00	0
Other Non-Asphalt Surfaces	264.68	1000sqft	6.08	264,675.00	0
Congregate Care (Assisted Living)	365.00	Dwelling Unit	3.06	365,000.00	365

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 114,480 SF Medical Office Building
365 DU Assisted Living and Nursing Home Units/Beds

Construction Phase -

Grading - Export 25,317 CY

Architectural Coating -

Vehicle Trips -

Woodstoves - No wood-burning fireplaces

Construction Off-road Equipment Mitigation - Water site 3 tmes daily

Mobile Land Use Mitigation -

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblFireplaces	NumberGas	310.25	328.50
tblFireplaces	NumberWood	18.25	0.00
tblGrading	MaterialExported	0.00	25,317.00
tblLandUse	BuildingSpaceSquareFeet	333,570.00	333,568.00
tblLandUse	BuildingSpaceSquareFeet	264,680.00	264,675.00
tblLandUse	LandUseSquareFeet	333,570.00	333,568.00
tblLandUse	LandUseSquareFeet	264,680.00	264,675.00
tblLandUse	LotAcreage	2.63	1.34
tblLandUse	LotAcreage	22.81	3.06
tblLandUse	Population	1,044.00	365.00
tblProjectCharacteristics	OperationalYear	2018	2020
tblWoodstoves	NumberCatalytic	18.25	0.00
tblWoodstoves	NumberNoncatalytic	18.25	36.50

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					
2018	0.8182	6.6227	6.2313	0.0174	0.9738	0.2365	1.2103	0.2807	0.2217	0.5024	0.0000	1,603.7185	1,603.7185	0.1581	0.0000	1,607.6707
2019	1.9834	1.6060	1.7639	4.8400e-003	0.2562	0.0599	0.3161	0.0688	0.0563	0.1251	0.0000	443.3546	443.3546	0.0422	0.0000	444.4104
Maximum	**1.9834**	**6.6227**	**6.2313**	**0.0174**	**0.9738**	**0.2365**	**1.2103**	**0.2807**	**0.2217**	**0.5024**	**0.0000**	**1,603.7185**	**1,603.7185**	**0.1581**	**0.0000**	**1,607.6707**

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					
2018	0.8182	6.6227	6.2313	0.0174	0.8936	0.2365	1.1301	0.2477	0.2217	0.4694	0.0000	1,603.7180	1,603.7180	0.1581	0.0000	1,607.6703
2019	1.9834	1.6060	1.7639	4.8400e-003	0.2562	0.0599	0.3161	0.0688	0.0563	0.1251	0.0000	443.3544	443.3544	0.0422	0.0000	444.4103
Maximum	**1.9834**	**6.6227**	**6.2313**	**0.0174**	**0.8936**	**0.2365**	**1.1301**	**0.2477**	**0.2217**	**0.4694**	**0.0000**	**1,603.7180**	**1,603.7180**	**0.1581**	**0.0000**	**1,607.6703**

	ROG	NOx	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**	**6.52**	**0.00**	**5.26**	**9.45**	**0.00**	**5.26**	**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	1-1-2018	3-31-2018	2.3371	2.3371
2	4-1-2018	6-30-2018	1.6497	1.6497
3	7-1-2018	9-30-2018	1.6678	1.6678
4	10-1-2018	12-31-2018	1.6863	1.6863
5	1-1-2019	3-31-2019	1.5107	1.5107
6	4-1-2019	6-30-2019	2.0471	2.0471
		Highest	2.3371	2.3371

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	2.1801	0.1301	5.0991	4.2800e-003		0.2051	0.2051		0.2051	0.2051	24.4271	85.0514	109.4784	0.1400	1.4500e-003	113.4082
Energy	0.0389	0.3337	0.1501	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	1,314.3394	1,314.3394	0.0457	0.0150	1,319.9522
Mobile	1.2800	6.6942	16.3707	0.0543	4.3209	0.0557	4.3767	1.1578	0.0523	1.2101	0.0000	5,005.3574	5,005.3574	0.2623	0.0000	5,011.9148
Waste						0.0000	0.0000		0.0000	0.0000	318.5821	0.0000	318.5821	18.8277	0.0000	789.2738
Water						0.0000	0.0000		0.0000	0.0000	12.1020	221.0175	233.1195	1.2521	0.0312	273.7313
Total	**3.4990**	**7.1580**	**21.6199**	**0.0607**	**4.3209**	**0.2877**	**4.6086**	**1.1578**	**0.2843**	**1.4421**	**355.1112**	**6,625.7656**	**6,980.8768**	**20.5278**	**0.0477**	**7,508.2803**

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	2.1801	0.1301	5.0991	4.2800e-003		0.2051	0.2051		0.2051	0.2051	24.4271	85.0514	109.4784	0.1400	1.4500e-003	113.4082
Energy	0.0389	0.3337	0.1501	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	1,314.3394	1,314.3394	0.0457	0.0150	1,319.9522
Mobile	1.2800	6.6942	16.3707	0.0543	4.3209	0.0557	4.3767	1.1578	0.0523	1.2101	0.0000	5,005.3574	5,005.3574	0.2623	0.0000	5,011.9148
Waste						0.0000	0.0000		0.0000	0.0000	318.5821	0.0000	318.5821	18.8277	0.0000	789.2738
Water						0.0000	0.0000		0.0000	0.0000	12.1020	221.0175	233.1195	1.2521	0.0312	273.7313
Total	**3.4990**	**7.1580**	**21.6199**	**0.0607**	**4.3209**	**0.2877**	**4.6086**	**1.1578**	**0.2843**	**1.4421**	**355.1112**	**6,625.7656**	**6,980.8768**	**20.5278**	**0.0477**	**7,508.2803**

	ROG	NOx	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	Grading	Grading	1/1/2018	2/9/2018	5	30	
2	Building Construction	Building Construction	2/10/2018	4/5/2019	5	300	
3	Paving	Paving	4/6/2019	5/3/2019	5	20	
4	Architectural Coating	Architectural Coating	5/4/2019	5/31/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 13.74

Residential Indoor: 739,125; Residential Outdoor: 246,375; Non-Residential Indoor: 171,720; Non-Residential Outdoor: 57,240; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Grading	8	20.00	0.00	3,165.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	551.00	156.00	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	110.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2018

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					0.1315	0.0000	0.1315	0.0542	0.0000	0.0542	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0764	0.8928	0.5263	9.3000e-004		0.0395	0.0395		0.0364	0.0364	0.0000	84.9728	84.9728	0.0265	0.0000	85.6341
Total	**0.0764**	**0.8928**	**0.5263**	**9.3000e-004**	**0.1315**	**0.0395**	**0.1710**	**0.0542**	**0.0364**	**0.0905**	**0.0000**	**84.9728**	**84.9728**	**0.0265**	**0.0000**	**85.6341**

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	0.0146	0.5144	0.0996	1.2500e-003	0.0272	1.9400e-003	0.0291	7.4700e-003	1.8600e-003	9.3200e-003	0.0000	122.7868	122.7868	9.0300e-003	0.0000	123.0127
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	1.5900e-003	1.3100e-003	0.0140	4.0000e-005	3.2900e-003	3.0000e-005	3.3200e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	3.1605	3.1605	1.1000e-004	0.0000	3.1632
Total	**0.0161**	**0.5157**	**0.1137**	**1.2900e-003**	**0.0305**	**1.9700e-003**	**0.0325**	**8.3400e-003**	**1.8800e-003**	**0.0102**	**0.0000**	**125.9473**	**125.9473**	**9.1400e-003**	**0.0000**	**126.1759**

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					0.0513	0.0000	0.0513	0.0211	0.0000	0.0211	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0764	0.8928	0.5263	9.3000e-004		0.0395	0.0395		0.0364	0.0364	0.0000	84.9727	84.9727	0.0265	0.0000	85.6340
Total	**0.0764**	**0.8928**	**0.5263**	**9.3000e-004**	**0.0513**	**0.0395**	**0.0908**	**0.0211**	**0.0364**	**0.0575**	**0.0000**	**84.9727**	**84.9727**	**0.0265**	**0.0000**	**85.6340**

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	0.0146	0.5144	0.0996	1.2500e-003	0.0272	1.9400e-003	0.0291	7.4700e-003	1.8600e-003	9.3200e-003	0.0000	122.7868	122.7868	9.0300e-003	0.0000	123.0127
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	1.5900e-003	1.3100e-003	0.0140	4.0000e-005	3.2900e-003	3.0000e-005	3.3200e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	3.1605	3.1605	1.1000e-004	0.0000	3.1632
Total	**0.0161**	**0.5157**	**0.1137**	**1.2900e-003**	**0.0305**	**1.9700e-003**	**0.0325**	**8.3400e-003**	**1.8800e-003**	**0.0102**	**0.0000**	**125.9473**	**125.9473**	**9.1400e-003**	**0.0000**	**126.1759**

3.3 Building Construction - 2018

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	0.3095	2.7016	2.0305	3.1100e-003		0.1732	0.1732		0.1629	0.1629	0.0000	274.6212	274.6212	0.0673	0.0000	276.3032
Total	**0.3095**	**2.7016**	**2.0305**	**3.1100e-003**		**0.1732**	**0.1732**		**0.1629**	**0.1629**	**0.0000**	**274.6212**	**274.6212**	**0.0673**	**0.0000**	**276.3032**

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	0.0789	2.2355	0.5853	4.6300e-003	0.1136	0.0161	0.1297	0.0328	0.0154	0.0482	0.0000	447.7316	447.7316	0.0323	0.0000	448.5380
Worker	0.3373	0.2770	2.9755	7.4300e-003	0.6982	5.7000e-003	0.7039	0.1854	5.2600e-003	0.1907	0.0000	670.4456	670.4456	0.0230	0.0000	671.0196
Total	**0.4162**	**2.5126**	**3.5608**	**0.0121**	**0.8118**	**0.0218**	**0.8336**	**0.2182**	**0.0207**	**0.2389**	**0.0000**	**1,118.1772**	**1,118.1772**	**0.0552**	**0.0000**	**1,119.5576**

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	0.3095	2.7015	2.0305	3.1100e-003		0.1732	0.1732		0.1629	0.1629	0.0000	274.6208	274.6208	0.0673	0.0000	276.3029
Total	**0.3095**	**2.7015**	**2.0305**	**3.1100e-003**		**0.1732**	**0.1732**		**0.1629**	**0.1629**	**0.0000**	**274.6208**	**274.6208**	**0.0673**	**0.0000**	**276.3029**

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	0.0789	2.2355	0.5853	4.6300e-003	0.1136	0.0161	0.1297	0.0328	0.0154	0.0482	0.0000	447.7316	447.7316	0.0323	0.0000	448.5380
Worker	0.3373	0.2770	2.9755	7.4300e-003	0.6982	5.7000e-003	0.7039	0.1854	5.2600e-003	0.1907	0.0000	670.4456	670.4456	0.0230	0.0000	671.0196
Total	**0.4162**	**2.5126**	**3.5608**	**0.0121**	**0.8118**	**0.0218**	**0.8336**	**0.2182**	**0.0207**	**0.2389**	**0.0000**	**1,118.1772**	**1,118.1772**	**0.0552**	**0.0000**	**1,119.5576**

3.3 Building Construction - 2019

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	0.0815	0.7272	0.5922	9.3000e-004		0.0445	0.0445		0.0418	0.0418	0.0000	81.1110	81.1110	0.0198	0.0000	81.6049
Total	**0.0815**	**0.7272**	**0.5922**	**9.3000e-004**		**0.0445**	**0.0445**		**0.0418**	**0.0418**	**0.0000**	**81.1110**	**81.1110**	**0.0198**	**0.0000**	**81.6049**

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	0.0214	0.6302	0.1607	1.3700e-003	0.0339	4.1200e-003	0.0380	9.7900e-003	3.9400e-003	0.0137	0.0000	132.5178	132.5178	9.3000e-003	0.0000	132.7502
Worker	0.0915	0.0730	0.7938	2.1500e-003	0.2086	1.6600e-003	0.2102	0.0554	1.5300e-003	0.0569	0.0000	193.9443	193.9443	6.0800e-003	0.0000	194.0964
Total	**0.1129**	**0.7032**	**0.9545**	**3.5200e-003**	**0.2425**	**5.7800e-003**	**0.2483**	**0.0652**	**5.4700e-003**	**0.0707**	**0.0000**	**326.4621**	**326.4621**	**0.0154**	**0.0000**	**326.8466**

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	0.0815	0.7272	0.5922	9.3000e-004		0.0445	0.0445		0.0418	0.0418	0.0000	81.1109	81.1109	0.0198	0.0000	81.6048
Total	**0.0815**	**0.7272**	**0.5922**	**9.3000e-004**		**0.0445**	**0.0445**		**0.0418**	**0.0418**	**0.0000**	**81.1109**	**81.1109**	**0.0198**	**0.0000**	**81.6048**

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	0.0214	0.6302	0.1607	1.3700e-003	0.0339	4.1200e-003	0.0380	9.7900e-003	3.9400e-003	0.0137	0.0000	132.5178	132.5178	9.3000e-003	0.0000	132.7502
Worker	0.0915	0.0730	0.7938	2.1500e-003	0.2086	1.6600e-003	0.2102	0.0554	1.5300e-003	0.0569	0.0000	193.9443	193.9443	6.0800e-003	0.0000	194.0964
Total	**0.1129**	**0.7032**	**0.9545**	**3.5200e-003**	**0.2425**	**5.7800e-003**	**0.2483**	**0.0652**	**5.4700e-003**	**0.0707**	**0.0000**	**326.4621**	**326.4621**	**0.0154**	**0.0000**	**326.8466**

3.4 Paving - 2019

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	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	0.0100					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0246**	**0.1524**	**0.1467**	**2.3000e-004**		**8.2500e-003**	**8.2500e-003**		**7.5900e-003**	**7.5900e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.8000e-004	6.2600e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5304	1.5304	5.0000e-005	0.0000	1.5316
Total	**7.2000e-004**	**5.8000e-004**	**6.2600e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.5304**	**1.5304**	**5.0000e-005**	**0.0000**	**1.5316**

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	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	0.0100					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0246**	**0.1524**	**0.1467**	**2.3000e-004**		**8.2500e-003**	**8.2500e-003**		**7.5900e-003**	**7.5900e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.8000e-004	6.2600e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5304	1.5304	5.0000e-005	0.0000	1.5316
Total	**7.2000e-004**	**5.8000e-004**	**6.2600e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.5304**	**1.5304**	**5.0000e-005**	**0.0000**	**1.5316**

3.5 Architectural Coating - 2019

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	1.7558					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5587
Total	**1.7584**	**0.0184**	**0.0184**	**3.0000e-005**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**2.5533**	**2.5533**	**2.2000e-004**	**0.0000**	**2.5587**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-003	4.2200e-003	0.0459	1.2000e-004	0.0121	1.0000e-004	0.0122	3.2100e-003	9.0000e-005	3.2900e-003	0.0000	11.2227	11.2227	3.5000e-004	0.0000	11.2315
Total	**5.3000e-003**	**4.2200e-003**	**0.0459**	**1.2000e-004**	**0.0121**	**1.0000e-004**	**0.0122**	**3.2100e-003**	**9.0000e-005**	**3.2900e-003**	**0.0000**	**11.2227**	**11.2227**	**3.5000e-004**	**0.0000**	**11.2315**

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	1.7558					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5586
Total	**1.7584**	**0.0184**	**0.0184**	**3.0000e-005**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**2.5533**	**2.5533**	**2.2000e-004**	**0.0000**	**2.5586**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-003	4.2200e-003	0.0459	1.2000e-004	0.0121	1.0000e-004	0.0122	3.2100e-003	9.0000e-005	3.2900e-003	0.0000	11.2227	11.2227	3.5000e-004	0.0000	11.2315
Total	**5.3000e-003**	**4.2200e-003**	**0.0459**	**1.2000e-004**	**0.0121**	**1.0000e-004**	**0.0122**	**3.2100e-003**	**9.0000e-005**	**3.2900e-003**	**0.0000**	**11.2227**	**11.2227**	**3.5000e-004**	**0.0000**	**11.2315**

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	1.2800	6.6942	16.3707	0.0543	4.3209	0.0557	4.3767	1.1578	0.0523	1.2101	0.0000	5,005.3574	5,005.3574	0.2623	0.0000	5,011.9148
Unmitigated	1.2800	6.6942	16.3707	0.0543	4.3209	0.0557	4.3767	1.1578	0.0523	1.2101	0.0000	5,005.3574	5,005.3574	0.2623	0.0000	5,011.9148

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	1,000.10	803.00	890.60	3,267,822	3,267,822
Medical Office Building	4,136.16	1,025.74	177.44	8,109,142	8,109,142
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	5,136.26	1,828.74	1,068.04	11,376,964	11,376,964

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
Congregate Care (Assisted Living)	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	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
Medical Office Building	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Other Asphalt Surfaces	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Other Non-Asphalt Surfaces	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Congregate Care (Assisted Living)	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	929.2400	929.2400	0.0384	7.9400e-003	932.5643
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	929.2400	929.2400	0.0384	7.9400e-003	932.5643
NaturalGas Mitigated	0.0389	0.3337	0.1501	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.0994	385.0994	7.3800e-003	7.0600e-003	387.3879
NaturalGas Unmitigated	0.0389	0.3337	0.1501	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.0994	385.0994	7.3800e-003	7.0600e-003	387.3879

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					
Congregate Care (Assisted Living)	6.81696e+006	0.0368	0.3141	0.1337	2.0000e-003		0.0254	0.0254		0.0254	0.0254	0.0000	363.7787	363.7787	6.9700e-003	6.6700e-003	365.9405
Medical Office Building	399535	2.1500e-003	0.0196	0.0165	1.2000e-004		1.4900e-003	1.4900e-003		1.4900e-003	1.4900e-003	0.0000	21.3207	21.3207	4.1000e-004	3.9000e-004	21.4474
Other 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
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
Total		**0.0389**	**0.3337**	**0.1501**	**2.1200e-003**		**0.0269**	**0.0269**		**0.0269**	**0.0269**	**0.0000**	**385.0994**	**385.0994**	**7.3800e-003**	**7.0600e-003**	**387.3879**

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					
Congregate Care (Assisted Living)	6.81696e+006	0.0368	0.3141	0.1337	2.0000e-003		0.0254	0.0254		0.0254	0.0254	0.0000	363.7787	363.7787	6.9700e-003	6.6700e-003	365.9405
Medical Office Building	399535	2.1500e-003	0.0196	0.0165	1.2000e-004		1.4900e-003	1.4900e-003		1.4900e-003	1.4900e-003	0.0000	21.3207	21.3207	4.1000e-004	3.9000e-004	21.4474
Other 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
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
Total		**0.0389**	**0.3337**	**0.1501**	**2.1200e-003**		**0.0269**	**0.0269**		**0.0269**	**0.0269**	**0.0000**	**385.0994**	**385.0994**	**7.3800e-003**	**7.0600e-003**	**387.3879**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	1.79911e+006	573.2363	0.0237	4.9000e-003	575.2871
Medical Office Building	1.11732e+006	356.0036	0.0147	3.0400e-003	357.2772
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**929.2400**	**0.0384**	**7.9400e-003**	**932.5643**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	1.79911e+006	573.2363	0.0237	4.9000e-003	575.2871
Medical Office Building	1.11732e+006	356.0036	0.0147	3.0400e-003	357.2772
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**929.2400**	**0.0384**	**7.9400e-003**	**932.5643**

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	2.1801	0.1301	5.0991	4.2800e-003		0.2051	0.2051		0.2051	0.2051	24.4271	85.0514	109.4784	0.1400	1.4500e-003	113.4082
Unmitigated	2.1801	0.1301	5.0991	4.2800e-003		0.2051	0.2051		0.2051	0.2051	24.4271	85.0514	109.4784	0.1400	1.4500e-003	113.4082

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	0.1756					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7713					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1174	0.0864	1.3133	4.0800e-003		0.1843	0.1843		0.1843	0.1843	24.4271	78.8851	103.3121	0.1339	1.4500e-003	107.0908
Landscaping	0.1159	0.0438	3.7858	2.0000e-004		0.0208	0.0208		0.0208	0.0208	0.0000	6.1663	6.1663	6.0400e-003	0.0000	6.3174
Total	**2.1801**	**0.1301**	**5.0991**	**4.2800e-003**		**0.2051**	**0.2051**		**0.2051**	**0.2051**	**24.4271**	**85.0514**	**109.4784**	**0.1400**	**1.4500e-003**	**113.4082**

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	0.1756					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7713					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1174	0.0864	1.3133	4.0800e-003		0.1843	0.1843		0.1843	0.1843	24.4271	78.8851	103.3121	0.1339	1.4500e-003	107.0908
Landscaping	0.1159	0.0438	3.7858	2.0000e-004		0.0208	0.0208		0.0208	0.0208	0.0000	6.1663	6.1663	6.0400e-003	0.0000	6.3174
Total	**2.1801**	**0.1301**	**5.0991**	**4.2800e-003**		**0.2051**	**0.2051**		**0.2051**	**0.2051**	**24.4271**	**85.0514**	**109.4784**	**0.1400**	**1.4500e-003**	**113.4082**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	233.1195	1.2521	0.0312	273.7313
Unmitigated	233.1195	1.2521	0.0312	273.7313

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	23.7812 / 14.9925	159.2792	0.7812	0.0196	184.6475
Medical Office Building	14.365 / 2.73619	73.8403	0.4709	0.0116	89.0839
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**233.1195**	**1.2521**	**0.0312**	**273.7313**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	23.7812 / 14.9925	159.2792	0.7812	0.0196	184.6475
Medical Office Building	14.365 / 2.73619	73.8403	0.4709	0.0116	89.0839
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**233.1195**	**1.2521**	**0.0312**	**273.7313**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	318.5821	18.8277	0.0000	789.2738
Unmitigated	318.5821	18.8277	0.0000	789.2738

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	333.06	67.6082	3.9955	0.0000	167.4964
Medical Office Building	1236.38	250.9740	14.8321	0.0000	621.7774
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**318.5821**	**18.8277**	**0.0000**	**789.2738**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	333.06	67.6082	3.9955	0.0000	167.4964
Medical Office Building	1236.38	250.9740	14.8321	0.0000	621.7774
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**318.5821**	**18.8277**	**0.0000**	**789.2738**

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

Moreno Valley Medical Village

South Coast Air Basin, Annual 2020 Mitigated

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	114.48	1000sqft	1.34	114,480.00	0
Other Asphalt Surfaces	333.57	1000sqft	7.66	333,568.00	0
Other Non-Asphalt Surfaces	264.68	1000sqft	6.08	264,675.00	0
Congregate Care (Assisted Living)	365.00	Dwelling Unit	3.06	365,000.00	365

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 114,480 SF Medical Office Building
365 DU Assisted Living and Nursing Home Units/Beds

Construction Phase -

Grading - Export 25,317 CY

Architectural Coating - Maximum 25 g/L

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No wood-burning fireplaces

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	25.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	25.00
tblArchitecturalCoating	EF_Parking	100.00	25.00
tblArchitecturalCoating	EF_Residential_Exterior	50.00	25.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	25.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblFireplaces	NumberGas	310.25	328.50
tblFireplaces	NumberWood	18.25	0.00
tblFleetMix	FleetMixLandUseSubType	Medical Office Building	Congregate Care (Assisted Living)
tblFleetMix	FleetMixLandUseSubType	Other Asphalt Surfaces	Medical Office Building
tblFleetMix	FleetMixLandUseSubType	Other Non-Asphalt Surfaces	Other Asphalt Surfaces
tblFleetMix	FleetMixLandUseSubType	Congregate Care (Assisted Living)	Other Non-Asphalt Surfaces
tblGrading	MaterialExported	0.00	25,317.00
tblLandUse	BuildingSpaceSquareFeet	333,570.00	333,568.00
tblLandUse	BuildingSpaceSquareFeet	264,680.00	264,675.00
tblLandUse	LandUseSquareFeet	333,570.00	333,568.00
tblLandUse	LandUseSquareFeet	264,680.00	264,675.00
tblLandUse	LotAcreage	2.63	1.34
tblLandUse	LotAcreage	22.81	3.06
tblLandUse	Population	1,044.00	365.00

tblProjectCharacteristics	OperationalYear	2018	2020
tblWoodstoves	NumberCatalytic	18.25	0.00
tblWoodstoves	NumberNoncatalytic	18.25	36.50

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					
2018	0.8070	6.5307	6.0850	0.0167	1.0229	0.2406	1.2634	0.3194	0.2253	0.5447	0.0000	1,536.0698	1,536.0698	0.1563	0.0000	1,539.9783
2019	0.9802	1.8133	1.9881	5.4900e-003	0.2913	0.0672	0.3586	0.0783	0.0632	0.1414	0.0000	502.4231	502.4231	0.0473	0.0000	503.6063
Maximum	**0.9802**	**6.5307**	**6.0850**	**0.0167**	**1.0229**	**0.2406**	**1.2634**	**0.3194**	**0.2253**	**0.5447**	**0.0000**	**1,536.0698**	**1,536.0698**	**0.1563**	**0.0000**	**1,539.9783**

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					
2018	0.8070	6.5307	6.0850	0.0167	0.8884	0.2406	1.1290	0.2562	0.2253	0.4815	0.0000	1,536.0694	1,536.0694	0.1563	0.0000	1,539.9779
2019	0.9802	1.8133	1.9881	5.4900e-003	0.2913	0.0672	0.3586	0.0783	0.0632	0.1414	0.0000	502.4230	502.4230	0.0473	0.0000	503.6061
Maximum	**0.9802**	**6.5307**	**6.0850**	**0.0167**	**0.8884**	**0.2406**	**1.1290**	**0.2562**	**0.2253**	**0.4815**	**0.0000**	**1,536.0694**	**1,536.0694**	**0.1563**	**0.0000**	**1,539.9779**

	ROG	NOx	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**	**10.23**	**0.00**	**8.29**	**15.89**	**0.00**	**9.21**	**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	**1-1-2018**	**3-31-2018**	2.2698	2.2698
2	**4-1-2018**	**6-30-2018**	1.6497	1.6497

3	**7-1-2018**	**9-30-2018**	1.6678	1.6678
4	**10-1-2018**	**12-31-2018**	1.6863	1.6863
5	**1-1-2019**	**3-31-2019**	1.5107	1.5107
6	**4-1-2019**	**6-30-2019**	1.2483	1.2483
		Highest	2.2698	2.2698

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	2.1801	0.1301	5.0991	4.2800e-003		0.2051	0.2051		0.2051	0.2051	24.4271	85.0514	109.4784	0.1400	1.4500e-003	113.4082
Energy	0.0389	0.3337	0.1501	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	1,314.3394	1,314.3394	0.0457	0.0150	1,319.9522
Mobile	1.2800	6.6942	16.3707	0.0543	4.3209	0.0557	4.3767	1.1578	0.0523	1.2101	0.0000	5,005.3574	5,005.3574	0.2623	0.0000	5,011.9148
Waste						0.0000	0.0000		0.0000	0.0000	318.5821	0.0000	318.5821	18.8277	0.0000	789.2738
Water						0.0000	0.0000		0.0000	0.0000	12.1020	221.0175	233.1195	1.2521	0.0312	273.7313
Total	**3.4990**	**7.1580**	**21.6199**	**0.0607**	**4.3209**	**0.2877**	**4.6086**	**1.1578**	**0.2843**	**1.4421**	**355.1112**	**6,625.7656**	**6,980.8768**	**20.5278**	**0.0477**	**7,508.2803**

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	2.1801	0.1301	5.0991	4.2800e-003		0.2051	0.2051		0.2051	0.2051	24.4271	85.0514	109.4784	0.1400	1.4500e-003	113.4082
Energy	0.0313	0.2680	0.1199	1.7100e-003		0.0216	0.0216		0.0216	0.0216	0.0000	1,175.3870	1,175.3870	0.0417	0.0131	1,180.3236
Mobile	1.2196	6.2316	14.8488	0.0483	3.8124	0.0497	3.8622	1.0216	0.0467	1.0682	0.0000	4,453.4420	4,453.4420	0.2379	0.0000	4,459.3896
Waste						0.0000	0.0000		0.0000	0.0000	79.6455	0.0000	79.6455	4.7069	0.0000	197.3184
Water						0.0000	0.0000		0.0000	0.0000	9.6816	189.3655	199.0471	1.0022	0.0251	231.5815
Total	**3.4310**	**6.6297**	**20.0677**	**0.0543**	**3.8124**	**0.2764**	**4.0889**	**1.0216**	**0.2733**	**1.2949**	**113.7542**	**5,903.2458**	**6,017.0000**	**6.1287**	**0.0396**	**6,182.0213**

	ROG	NOx	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	1.95	7.38	7.18	10.55	11.77	3.92	11.28	11.77	3.84	10.21	67.97	10.90	13.81	70.14	16.92	17.66

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2018	1/12/2018	5	10	
2	Grading	Grading	1/13/2018	2/23/2018	5	30	
3	Building Construction	Building Construction	2/24/2018	4/19/2019	5	300	
4	Paving	Paving	4/20/2019	5/17/2019	5	20	
5	Architectural Coating	Architectural Coating	5/18/2019	6/14/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 13.74

Residential Indoor: 739,125; Residential Outdoor: 246,375; Non-Residential Indoor: 171,720; Non-Residential Outdoor: 57,240; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
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
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	2,503.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	551.00	156.00	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	110.00	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 Site Preparation - 2018

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.2410	0.1124	1.9000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	17.3800	17.3800	5.4100e-003	0.0000	17.5152
Total	**0.0228**	**0.2410**	**0.1124**	**1.9000e-004**	**0.0903**	**0.0129**	**0.1032**	**0.0497**	**0.0119**	**0.0615**	**0.0000**	**17.3800**	**17.3800**	**5.4100e-003**	**0.0000**	**17.5152**

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	4.8000e-004	3.9000e-004	4.2100e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9481	0.9481	3.0000e-005	0.0000	0.9490
Total	**4.8000e-004**	**3.9000e-004**	**4.2100e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.9481**	**0.9481**	**3.0000e-005**	**0.0000**	**0.9490**

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					0.0352	0.0000	0.0352	0.0194	0.0000	0.0194	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.2410	0.1124	1.9000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	17.3799	17.3799	5.4100e-003	0.0000	17.5152
Total	**0.0228**	**0.2410**	**0.1124**	**1.9000e-004**	**0.0352**	**0.0129**	**0.0481**	**0.0194**	**0.0119**	**0.0312**	**0.0000**	**17.3799**	**17.3799**	**5.4100e-003**	**0.0000**	**17.5152**

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	4.8000e-004	3.9000e-004	4.2100e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9481	0.9481	3.0000e-005	0.0000	0.9490
Total	**4.8000e-004**	**3.9000e-004**	**4.2100e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.9481**	**0.9481**	**3.0000e-005**	**0.0000**	**0.9490**

3.3 Grading - 2018

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	0.0764	0.8928	0.5263	9.3000e-004		0.0395	0.0395		0.0364	0.0364	0.0000	84.9728	84.9728	0.0265	0.0000	85.6341
Total	**0.0764**	**0.8928**	**0.5263**	**9.3000e-004**	**0.1301**	**0.0395**	**0.1696**	**0.0540**	**0.0364**	**0.0903**	**0.0000**	**84.9728**	**84.9728**	**0.0265**	**0.0000**	**85.6341**

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	0.0115	0.4068	0.0788	9.9000e-004	0.0215	1.5400e-003	0.0230	5.9000e-003	1.4700e-003	7.3700e-003	0.0000	97.1044	97.1044	7.1400e-003	0.0000	97.2830
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	1.5900e-003	1.3100e-003	0.0140	4.0000e-005	3.2900e-003	3.0000e-005	3.3200e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	3.1605	3.1605	1.1000e-004	0.0000	3.1632
Total	**0.0131**	**0.4081**	**0.0928**	**1.0300e-003**	**0.0248**	**1.5700e-003**	**0.0264**	**6.7700e-003**	**1.4900e-003**	**8.2700e-003**	**0.0000**	**100.2649**	**100.2649**	**7.2500e-003**	**0.0000**	**100.4462**

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					0.0507	0.0000	0.0507	0.0210	0.0000	0.0210	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0764	0.8928	0.5263	9.3000e-004		0.0395	0.0395		0.0364	0.0364	0.0000	84.9727	84.9727	0.0265	0.0000	85.6340
Total	**0.0764**	**0.8928**	**0.5263**	**9.3000e-004**	**0.0507**	**0.0395**	**0.0903**	**0.0210**	**0.0364**	**0.0574**	**0.0000**	**84.9727**	**84.9727**	**0.0265**	**0.0000**	**85.6340**

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	0.0115	0.4068	0.0788	9.9000e-004	0.0215	1.5400e-003	0.0230	5.9000e-003	1.4700e-003	7.3700e-003	0.0000	97.1044	97.1044	7.1400e-003	0.0000	97.2830
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	1.5900e-003	1.3100e-003	0.0140	4.0000e-005	3.2900e-003	3.0000e-005	3.3200e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	3.1605	3.1605	1.1000e-004	0.0000	3.1632
Total	**0.0131**	**0.4081**	**0.0928**	**1.0300e-003**	**0.0248**	**1.5700e-003**	**0.0264**	**6.7700e-003**	**1.4900e-003**	**8.2700e-003**	**0.0000**	**100.2649**	**100.2649**	**7.2500e-003**	**0.0000**	**100.4462**

3.4 Building Construction - 2018

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	0.2961	2.5846	1.9426	2.9700e-003		0.1657	0.1657		0.1558	0.1558	0.0000	262.7328	262.7328	0.0644	0.0000	264.3420
Total	**0.2961**	**2.5846**	**1.9426**	**2.9700e-003**		**0.1657**	**0.1657**		**0.1558**	**0.1558**	**0.0000**	**262.7328**	**262.7328**	**0.0644**	**0.0000**	**264.3420**

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	0.0755	2.1388	0.5600	4.4300e-003	0.1086	0.0154	0.1240	0.0313	0.0147	0.0461	0.0000	428.3493	428.3493	0.0309	0.0000	429.1208
Worker	0.3227	0.2650	2.8467	7.1000e-003	0.6680	5.4600e-003	0.6735	0.1774	5.0300e-003	0.1824	0.0000	641.4220	641.4220	0.0220	0.0000	641.9711
Total	**0.3982**	**2.4038**	**3.4066**	**0.0115**	**0.7766**	**0.0209**	**0.7975**	**0.2087**	**0.0198**	**0.2285**	**0.0000**	**1,069.7713**	**1,069.7713**	**0.0528**	**0.0000**	**1,071.0919**

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	0.2961	2.5846	1.9426	2.9700e-003		0.1657	0.1657		0.1558	0.1558	0.0000	262.7325	262.7325	0.0644	0.0000	264.3417
Total	**0.2961**	**2.5846**	**1.9426**	**2.9700e-003**		**0.1657**	**0.1657**		**0.1558**	**0.1558**	**0.0000**	**262.7325**	**262.7325**	**0.0644**	**0.0000**	**264.3417**

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	0.0755	2.1388	0.5600	4.4300e-003	0.1086	0.0154	0.1240	0.0313	0.0147	0.0461	0.0000	428.3493	428.3493	0.0309	0.0000	429.1208
Worker	0.3227	0.2650	2.8467	7.1000e-003	0.6680	5.4600e-003	0.6735	0.1774	5.0300e-003	0.1824	0.0000	641.4220	641.4220	0.0220	0.0000	641.9711
Total	**0.3982**	**2.4038**	**3.4066**	**0.0115**	**0.7766**	**0.0209**	**0.7975**	**0.2087**	**0.0198**	**0.2285**	**0.0000**	**1,069.7713**	**1,069.7713**	**0.0528**	**0.0000**	**1,071.0919**

3.4 Building Construction - 2019

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	0.0933	0.8326	0.6780	1.0600e-003		0.0510	0.0510		0.0479	0.0479	0.0000	92.8662	92.8662	0.0226	0.0000	93.4317
Total	**0.0933**	**0.8326**	**0.6780**	**1.0600e-003**		**0.0510**	**0.0510**		**0.0479**	**0.0479**	**0.0000**	**92.8662**	**92.8662**	**0.0226**	**0.0000**	**93.4317**

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	0.0245	0.7215	0.1840	1.5700e-003	0.0388	4.7200e-003	0.0436	0.0112	4.5200e-003	0.0157	0.0000	151.7232	151.7232	0.0107	0.0000	151.9894
Worker	0.1048	0.0836	0.9089	2.4600e-003	0.2388	1.9000e-003	0.2407	0.0634	1.7500e-003	0.0652	0.0000	222.0522	222.0522	6.9600e-003	0.0000	222.2263
Total	**0.1293**	**0.8051**	**1.0929**	**4.0300e-003**	**0.2776**	**6.6200e-003**	**0.2842**	**0.0746**	**6.2700e-003**	**0.0809**	**0.0000**	**373.7754**	**373.7754**	**0.0176**	**0.0000**	**374.2156**

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	0.0933	0.8326	0.6780	1.0600e-003		0.0510	0.0510		0.0479	0.0479	0.0000	92.8661	92.8661	0.0226	0.0000	93.4316
Total	**0.0933**	**0.8326**	**0.6780**	**1.0600e-003**		**0.0510**	**0.0510**		**0.0479**	**0.0479**	**0.0000**	**92.8661**	**92.8661**	**0.0226**	**0.0000**	**93.4316**

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	0.0245	0.7215	0.1840	1.5700e-003	0.0388	4.7200e-003	0.0436	0.0112	4.5200e-003	0.0157	0.0000	151.7232	151.7232	0.0107	0.0000	151.9894
Worker	0.1048	0.0836	0.9089	2.4600e-003	0.2388	1.9000e-003	0.2407	0.0634	1.7500e-003	0.0652	0.0000	222.0522	222.0522	6.9600e-003	0.0000	222.2263
Total	**0.1293**	**0.8051**	**1.0929**	**4.0300e-003**	**0.2776**	**6.6200e-003**	**0.2842**	**0.0746**	**6.2700e-003**	**0.0809**	**0.0000**	**373.7754**	**373.7754**	**0.0176**	**0.0000**	**374.2156**

3.5 Paving - 2019

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	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	0.0100					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0246**	**0.1524**	**0.1467**	**2.3000e-004**		**8.2500e-003**	**8.2500e-003**		**7.5900e-003**	**7.5900e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.8000e-004	6.2600e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5304	1.5304	5.0000e-005	0.0000	1.5316
Total	**7.2000e-004**	**5.8000e-004**	**6.2600e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.5304**	**1.5304**	**5.0000e-005**	**0.0000**	**1.5316**

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	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	0.0100					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0246**	**0.1524**	**0.1467**	**2.3000e-004**		**8.2500e-003**	**8.2500e-003**		**7.5900e-003**	**7.5900e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.8000e-004	6.2600e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5304	1.5304	5.0000e-005	0.0000	1.5316
Total	**7.2000e-004**	**5.8000e-004**	**6.2600e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.5304**	**1.5304**	**5.0000e-005**	**0.0000**	**1.5316**

3.6 Architectural Coating - 2019

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	0.7244					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5587
Total	**0.7271**	**0.0184**	**0.0184**	**3.0000e-005**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**2.5533**	**2.5533**	**2.2000e-004**	**0.0000**	**2.5587**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-003	4.2200e-003	0.0459	1.2000e-004	0.0121	1.0000e-004	0.0122	3.2100e-003	9.0000e-005	3.2900e-003	0.0000	11.2227	11.2227	3.5000e-004	0.0000	11.2315
Total	**5.3000e-003**	**4.2200e-003**	**0.0459**	**1.2000e-004**	**0.0121**	**1.0000e-004**	**0.0122**	**3.2100e-003**	**9.0000e-005**	**3.2900e-003**	**0.0000**	**11.2227**	**11.2227**	**3.5000e-004**	**0.0000**	**11.2315**

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	0.7244					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5586
Total	**0.7271**	**0.0184**	**0.0184**	**3.0000e-005**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**2.5533**	**2.5533**	**2.2000e-004**	**0.0000**	**2.5586**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-003	4.2200e-003	0.0459	1.2000e-004	0.0121	1.0000e-004	0.0122	3.2100e-003	9.0000e-005	3.2900e-003	0.0000	11.2227	11.2227	3.5000e-004	0.0000	11.2315
Total	**5.3000e-003**	**4.2200e-003**	**0.0459**	**1.2000e-004**	**0.0121**	**1.0000e-004**	**0.0122**	**3.2100e-003**	**9.0000e-005**	**3.2900e-003**	**0.0000**	**11.2227**	**11.2227**	**3.5000e-004**	**0.0000**	**11.2315**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive 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	1.2196	6.2316	14.8488	0.0483	3.8124	0.0497	3.8622	1.0216	0.0467	1.0682	0.0000	4,453.4420	4,453.4420	0.2379	0.0000	4,459.3896
Unmitigated	1.2800	6.6942	16.3707	0.0543	4.3209	0.0557	4.3767	1.1578	0.0523	1.2101	0.0000	5,005.3574	5,005.3574	0.2623	0.0000	5,011.9148

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	1,000.10	803.00	890.60	3,267,822	2,993,918
Medical Office Building	4,136.16	1,025.74	177.44	8,109,142	7,044,147
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	5,136.26	1,828.74	1,068.04	11,376,964	10,038,066

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
Congregate Care (Assisted Living)	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	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
Congregate Care (Assisted Living)	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Medical Office Building	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Other Asphalt Surfaces	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Other Non-Asphalt Surfaces	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive 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	866.0320	866.0320	0.0358	7.4000e-003	869.1303
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	929.2400	929.2400	0.0384	7.9400e-003	932.5643
NaturalGas Mitigated	0.0313	0.2680	0.1199	1.7100e-003		0.0216	0.0216		0.0216	0.0216	0.0000	309.3549	309.3549	5.9300e-003	5.6700e-003	311.1933
NaturalGas Unmitigated	0.0389	0.3337	0.1501	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.0994	385.0994	7.3800e-003	7.0600e-003	387.3879

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					
Congregate Care (Assisted Living)	6.81696e+006	0.0368	0.3141	0.1337	2.0000e-003		0.0254	0.0254		0.0254	0.0254	0.0000	363.7787	363.7787	6.9700e-003	6.6700e-003	365.9405
Medical Office Building	399535	2.1500e-003	0.0196	0.0165	1.2000e-004		1.4900e-003	1.4900e-003		1.4900e-003	1.4900e-003	0.0000	21.3207	21.3207	4.1000e-004	3.9000e-004	21.4474
Other 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
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
Total		**0.0389**	**0.3337**	**0.1501**	**2.1200e-003**		**0.0269**	**0.0269**		**0.0269**	**0.0269**	**0.0000**	**385.0994**	**385.0994**	**7.3800e-003**	**7.0600e-003**	**387.3879**

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					
Congregate Care (Assisted Living)	5.51063e+006	0.0297	0.2539	0.1081	1.6200e-003		0.0205	0.0205		0.0205	0.0205	0.0000	294.0680	294.0680	5.6400e-003	5.3900e-003	295.8155
Medical Office Building	286467	1.5400e-003	0.0140	0.0118	8.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	15.2870	15.2870	2.9000e-004	2.8000e-004	15.3778
Other 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
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
Total		**0.0313**	**0.2680**	**0.1199**	**1.7000e-003**		**0.0216**	**0.0216**		**0.0216**	**0.0216**	**0.0000**	**309.3549**	**309.3549**	**5.9300e-003**	**5.6700e-003**	**311.1933**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	1.79911e+006	573.2363	0.0237	4.9000e-003	575.2871
Medical Office Building	1.11732e+006	356.0036	0.0147	3.0400e-003	357.2772
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**929.2400**	**0.0384**	**7.9400e-003**	**932.5643**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	1.70506e+006	543.2673	0.0224	4.6400e-003	545.2109
Medical Office Building	1.013e+006	322.7647	0.0133	2.7600e-003	323.9194
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**866.0320**	**0.0358**	**7.4000e-003**	**869.1303**

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	2.1801	0.1301	5.0991	4.2800e-003		0.2051	0.2051		0.2051	0.2051	24.4271	85.0514	109.4784	0.1400	1.4500e-003	113.4082
Unmitigated	2.1801	0.1301	5.0991	4.2800e-003		0.2051	0.2051		0.2051	0.2051	24.4271	85.0514	109.4784	0.1400	1.4500e-003	113.4082

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	0.1756					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7713					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1174	0.0864	1.3133	4.0800e-003		0.1843	0.1843		0.1843	0.1843	24.4271	78.8851	103.3121	0.1339	1.4500e-003	107.0908
Landscaping	0.1159	0.0438	3.7858	2.0000e-004		0.0208	0.0208		0.0208	0.0208	0.0000	6.1663	6.1663	6.0400e-003	0.0000	6.3174
Total	**2.1801**	**0.1301**	**5.0991**	**4.2800e-003**		**0.2051**	**0.2051**		**0.2051**	**0.2051**	**24.4271**	**85.0514**	**109.4784**	**0.1400**	**1.4500e-003**	**113.4082**

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	0.1756					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7713					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1174	0.0864	1.3133	4.0800e-003		0.1843	0.1843		0.1843	0.1843	24.4271	78.8851	103.3121	0.1339	1.4500e-003	107.0908
Landscaping	0.1159	0.0438	3.7858	2.0000e-004		0.0208	0.0208		0.0208	0.0208	0.0000	6.1663	6.1663	6.0400e-003	0.0000	6.3174
Total	**2.1801**	**0.1301**	**5.0991**	**4.2800e-003**		**0.2051**	**0.2051**		**0.2051**	**0.2051**	**24.4271**	**85.0514**	**109.4784**	**0.1400**	**1.4500e-003**	**113.4082**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	199.0471	1.0022	0.0251	231.5815
Unmitigated	233.1195	1.2521	0.0312	273.7313

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	23.7812 / 14.9925	159.2792	0.7812	0.0196	184.6475
Medical Office Building	14.365 / 2.73619	73.8403	0.4709	0.0116	89.0839
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**233.1195**	**1.2521**	**0.0312**	**273.7313**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	19.025 / 14.9925	138.0377	0.6254	0.0158	158.3703
Medical Office Building	11.492 / 2.73619	61.0094	0.3768	9.3300e-003	73.2112
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**199.0471**	**1.0022**	**0.0251**	**231.5815**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	79.6455	4.7069	0.0000	197.3184
Unmitigated	318.5821	18.8277	0.0000	789.2738

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	333.06	67.6082	3.9955	0.0000	167.4964
Medical Office Building	1236.38	250.9740	14.8321	0.0000	621.7774
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**318.5821**	**18.8277**	**0.0000**	**789.2738**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	83.265	16.9020	0.9989	0.0000	41.8741
Medical Office Building	309.095	62.7435	3.7080	0.0000	155.4443
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**79.6455**	**4.7069**	**0.0000**	**197.3184**

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