KUNZMAN ASSOCIATES, INC.

COLTON'S HUB CITY CENTRE SPECIFIC PLAN

AIR QUALITY, GLOBAL CLIMATE CHANGE, AND HEALTH RISK ASSESSMENT IMPACT ANALYSIS

February 14, 2014

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

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I. Introduction and Setting

A. Purpose and Objectives

This study was performed to address the possibility of regional and local air quality impacts, global climate change impacts, and cancer risk from diesel air emissions. The objectives of the study include:

- documentation of the atmospheric setting
- discussion of criteria pollutants and greenhouse gases
- discussion of the air quality and global climate change regulatory framework
- discussion of the air quality, greenhouse gases, and cancer risk thresholds of significance
- analysis of the construction related air quality and greenhouse gas emissions
- analysis of the operations related air quality and greenhouse gas emissions
- analysis of the operations related cancer risk from diesel emissions
- recommendations for mitigation measures
- analysis of the conformity of the proposed project with the SCAQMD AQMP

The City of Colton is the lead agency responsible for preparation of this air quality analysis, in accordance with the California Environmental Quality Act authorizing legislation. Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with terms unique to air quality and global climate change, a definition of terms has been provided in Appendix A.

B. Project Location

The Colton Hub City Center Specific Plan (CHCCSP) project area is located within the City of Colton in San Bernardino County, California. The project site is composed of approximately 373 gross acres and is bordered by San Bernardino Avenue to the north, I-10 Freeway to the south, Hermosa Avenue to the east, and on the west by the City of Colton boundary with the City of Rialto. The CHCCSP project area is made up of multiple parcels as identified by the County of San Bernardino's Office of the Assessor generally found in the northern ½ of Sections 23 and 24, Township 1 South (T1S), Range 5 West (R5W) and Section 19, Township 1 South (T1S) Range 4 West (R4W) at latitude 34° 4.395' N, longitude 117° 21.517' W at the approximate center of the project site. A vicinity map showing the project location is provided on Figure 1.

The CHCCSP project area is bounded on the south by the I-10 Freeway and on the north by San Bernardino Avenue. North of San Bernardino Avenue is a series of single-family residential neighborhoods and an apartment complex at the northwestern corner of the intersection and to the west. A retail center with a supermarket is located at the northeast corner of Pepper Avenue and San Bernardino Avenue with residential neighborhoods to the east.

The Arrowhead Regional Medical Center (ARMC) and the Hermosa Gardens Cemetery are within the West Valley Specific Plan project area but are not a part of the CHCCSP project area. At the far eastern edge of the project area is a Union Pacific railroad right-of-way and the Kinder Morgan pipeline right-of-way.

The western edge of the CHCCSP project area borders the City of Rialto's Gateway Specific Plan project area. Proposed development under the 366-acre Gateway Specific Plan, adopted in 1990, consists of mixed-use with retail uses along Riverside Avenue, freeway commercial (hotels, food services and auto services) along Valley Boulevard and light industrial parks in the western portion of the specific plan area. Land uses under the Gateway Specific Plan that border the CHCCSP project area consist of Office Park (OP), Industrial Park (IP) and Retail Commercial (R-C) and will border CHCC proposed land uses consisting of Business Park (BP), Residential Medium (RES-M), Residential Medium-1 (RES-M1) and Open Space Natural Habitat (OS/H).

C. Project Description

The CHCCSP project area may be developed with a variety of land uses including retail, office, business park, residential, and open space for recreation uses. The uses are detailed below. Figure 2 illustrates the project land use plan.

RETAIL (R)

In order to create a new shopping hub in the City of Colton, 79.2 acres has been designated for Commercial Retail (R) uses along the I-10 Freeway and Valley Boulevard corridor. These uses will be located in planning areas 16, 20 and 22 generally located near the intersection of Valley Blvd and Pepper Avenue. The objective is to provide for development of a vibrant walkable Village Shopping Center/Hub that includes entertainment and hospitality components, combined with department stores, large format national retail stores as well as small scale shops and services in a "Main Street" setting. Access is provided from the I-10 Freeway via the Pepper Avenue interchange.

The Pepper Avenue / I-10 Freeway interchange provides optimum freeway access and serves as the "front door" to the Retail uses. Major improvements are scheduled to begin in 2014 that will add travel lanes and greatly improve the interchange.

OFFICE MIXED USE (OMU)

Office Mixed Use, with 23.6 acres, provides opportunities for corporate, executive, professional offices, banking, savings and loan institutions, medical facilities, laboratories, pharmacies, durable medical equipment sales and leasing. The three planning areas designated OMU are located at the intersections of Pepper Avenue/San Bernardino Avenue and Pepper Avenue/Valley Blvd, both major arterial roadways north and south of the ARMC. The OMU designation provides for uses is complementary to ARMC, e.g., opportunities for medical related offices, research and development, and services such as pharmacies, medical and equipment supplies. To promote other compatible uses, the land use designation includes flexibility to incorporate Business Park and Retail uses.

BUSINESS PARK (BP)
Business Park (BP) uses totaling 51.7 acres will be located along the I-10 Freeway and Valley Blvd corridors on the west side of the CHCCSP project area. With excellent freeway visibility, frontage and direct access along Valley Blvd, this location is well suited to single and multi-tenant users, point of sale, flex space and incubator uses.

RETAIL MIXED USE (RMU)
Retail Mixed Use uses totaling 68.8 acres will be located along the I-10 Freeway and Valley Blvd corridors. With its location and visibility along major transportation corridors, it is conducive to a mix of retail, office and business uses. While retail is preferred as the primary land use, the RMU designation is intended to provide broad flexibility to respond to both the City's vision and market needs of the region.

RESIDENTIAL MEDIUM AND RESIDENTIAL M1 (RES-M& RES-M1)
There are two residential land uses types, Residential Medium (RES-M) and Residential Medium M1 (RES-M1). The RES-M planning areas total 26.9 acres and are planned for approximately 108 single-family residential dwelling units on minimum 7,200 square feet lots. The intent is to meet the needs of those seeking high quality traditional residential dwelling units with pool sized yards that would not otherwise be available in the nearby area. Their location will complement the single-family detached residential character of the existing neighborhoods adjacent to San Bernardino Avenue to the north. In addition to providing housing opportunities for the general area and future commercial and business uses, the future residential dwelling units are also expected to appeal to doctors, nurses and others associated with the ARMC due to their close proximity to the medical center.

RES-M1 planning areas total 15.2 acres and provide for single-family and attached dwelling units. This land use provides opportunities for small lot single-family detached residential dwelling units, duplex / paired homes and attached townhomes. As is the case in the RES-M designation, the RES-M1 land use will also provide housing opportunities for the general area, future commercial and business uses and many professionals associated with the ARMC. Within Planning Areas 7 and 8, higher densities will be permitted for senior housing subject to a Conditional Use Permit.

OPEN SPACE/ PARKS (OS/P)
A 4.5 acre neighborhood park is centrally located within walking distance of the residential uses in planning areas 12 and 14. A park master plan concept is included in the Specific Plan Community Design Guidelines, and includes areas for free play, picnic stations, a basketball court, parking and a restroom.

OPEN SPACE/ HABITAT (OS/H)
There are four planning areas (3, 6, 11, and 18) where habitat for Delhi Sands Flower-loving Fly (DSF) will be managed under an approved Habitat Conservation Plan (HCP) for DSF. These planning areas are located in the northerly portion of the project area that comprises 48.4 acres. The location and total acres preserved was based on requirements of the US Fish and Wildlife Service (USFWS). While the habitat areas will remain passive open space with no access, many of the future residential dwelling units adjacent to or near the OS/H uses will be able to take advantage of the wide open vistas these areas afford. When combined with existing habitat in or immediately adjacent to the project area the total area

managed under the HCP is 63.6 acres and includes planning areas within the CHCCSP project area as well as existing and proposed conservation areas that are within the ARMC and Hermosa Gardens Cemetery sites.

EXISTING DEVELOPMENT
Existing development within the CHCCSP project area is permitted to remain indefinitely. Any improvements to buildings and / or land will be subject to conditions provided under Non-Conforming uses in the General Provisions of Development Regulations, (CHCCSP Section 4.0), and other City of Colton Title 18 Municipal Code requirements as applicable.

D. Phasing and Timing

The proposed project would be constructed in one phase over an approximately 5 years with an anticipated start of construction in January 2015 and completion in late 2019. The proposed project is anticipated to be operational in 2020.

E. Sensitive Receptors in Project Vicinity

For the purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor to be a receptor such as a residence, hospital, or convalescent facility where it is possible that an individual could remain at the location for 24 hours. Commercial and industrial facilities are not included in the definition of sensitive receptor because employees do not typically remain on-site for a full 24 hours, but are present for shorter periods of time, such as eight hours.

The nearest sensitive receptor to the project site are the single-family detached residential dwelling units located approximately 82 feet north of the project site.

Figure 1
Project Location Map

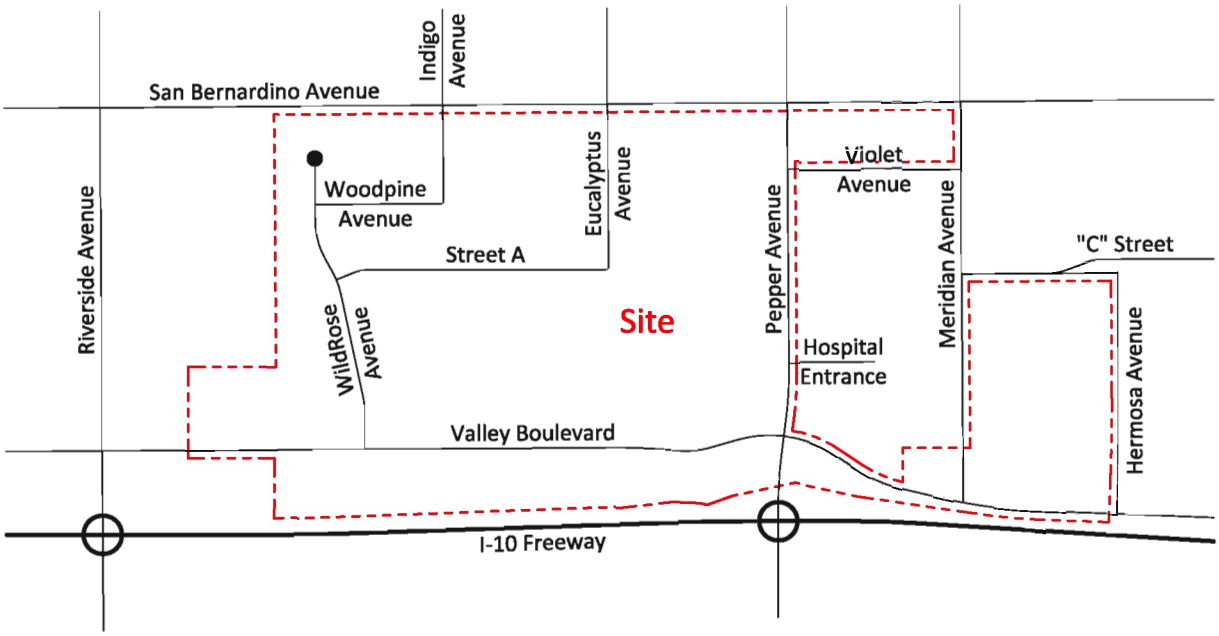

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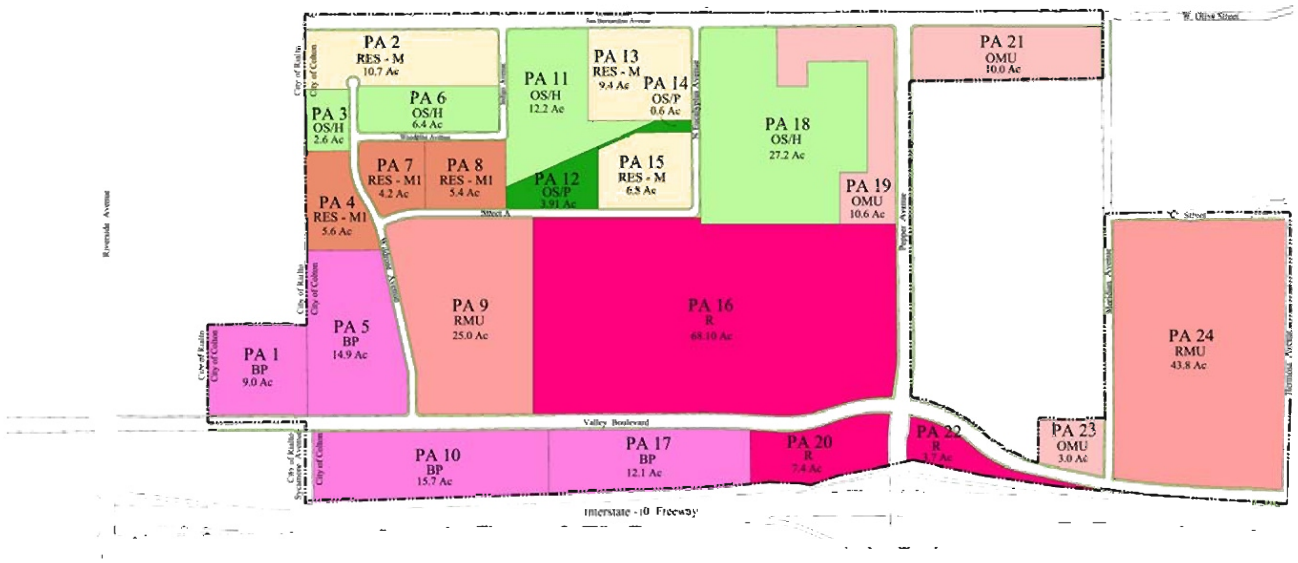
Figure 2
Proposed Specific Plan



Legend

RES-M	(Medium)	R	Retail	OS/P	Open Space / Park
RES-M1	(Medium - 1)	OMU	Office Mixed Use	OS/H	Natural Habitat
RMU	Retail Mixed Use	BP	Business Park		

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II. Atmospheric Setting

The project site is located within the western portion of San Bernardino County, which is part of the South Coast Air Basin (SCAB) that includes all of Orange County as well as the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The South Coast Air Basin is located on a coastal plain with connecting broad valleys and low hills to the east. Regionally, the South Coast Air Basin is bounded by the Pacific Ocean to the southwest and high mountains to the east forming the inland perimeter. The project site is located toward the northeast portion of the South Coast Air Basin near the foot of the San Bernardino Mountains, which define the eastern boundary of the South Coast Air Basin.

The climate of western San Bernardino County, technically called an interior valley subclimate of the Southern California's Mediterranean-type climate, is characterized by hot dry summers, mild moist winters with infrequent rainfall, moderate afternoon breezes, and generally fair weather. Occasional periods of strong Santa Ana winds and winter storms interrupt the otherwise mild weather pattern. The clouds and fog that form along the area's coastline rarely extend as far inland as western San Bernardino County. When morning clouds and fog form, they typically burn off quickly after sunrise. The most important weather pattern from an air quality perspective is associated with the warm season airflow across the populated areas of the Los Angeles Basin. This airflow brings polluted air into western San Bernardino County late in the afternoon. This transport pattern creates unhealthful air quality that may extend to the project site particularly during the summer months.

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

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

In the winter, light nocturnal winds result mainly from the drainage of cool air off of the mountains toward the valley floor while the air aloft over the valley remains warm. This forms a type of inversion known as a radiation inversion. Such winds are characterized by stagnation and poor local mixing and trap pollutants such as automobile exhaust near their source. While these inversions may lead to air pollution "hot spots" in heavily developed coastal areas of the basin,

there is not enough traffic in inland valleys to cause any winter air pollution problems. Despite light wind conditions, especially at night and in the early morning, winter is generally a period of good air quality in the project vicinity.

The temperature and precipitation levels for the City of Colton are shown below in Table 1. Table 1 shows that August is typically the warmest month and December is typically the coolest month. Rainfall in the project area varies considerably in both time and space. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April, with summers being almost completely dry.

Table 1

Colton Monthly Climate Data[1]

Descriptor	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Avg. Max. Temperature	68	68	71	76	81	87	94	95	91	83	74	67
Avg. Min. Temperature	43	44	46	49	54	57	62	62	59	53	46	42
Avg. Total Precipitation (in.)	2.33	2.50	1.69	0.68	0.20	0.09	0.04	0.09	0.16	0.46	0.81	1.37

[1] Source: http://www.weather.com/weather/wxclimatology/monthly/graph/USCA0242

III. Pollutants

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

A. Criteria Pollutants

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

1. Nitrogen Oxides

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

2. Ozone

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

with ozone are also indirect health effects associated with significant levels of NOx and VOC emissions.

3. Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are sources of CO indoors. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air. CO is described as having only a local influence because it dissipates quickly. Since CO concentrations are strongly associated with motor vehicle emissions, high CO concentrations generally occur in the immediate vicinity of roadways with high traffic volumes and traffic congestion, active parking lots, and in automobile tunnels. Areas adjacent to heavily traveled and congested intersections are particularly susceptible to high CO concentrations.

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

4. Sulfur Oxides

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

5. Lead

Lead is a metal found naturally in the environment as well as manufactured products. The major sources of lead emissions have historically been motor vehicles and industrial sources. Due to the phase out of leaded gasoline, metal processing is now the primary source of lead emissions to the air. High levels of lead in the air are typically only found near lead smelters, waste incinerators, utilities, and lead-acid battery manufacturers.

6. Particulate Matter

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

7. Volatile Organic Compounds (VOC)

Reactive organic gases (ROGs), or VOCs, are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably. Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM10 and lower visibility.

B. Other Pollutants of Concern

1. Toxic Air Contaminants

In addition to the above-listed criteria pollutants, toxic air contaminants (TACs) are another group of pollutants of concern. Sources of toxic air contaminants include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least forty different toxic air contaminants. The most important of these toxic air contaminants, in terms of health risk, are diesel particulates, benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. Public exposure to toxic air contaminants can result from emissions from normal operations as well as accidental releases. Health effects of toxic air contaminants include cancer, birth defects, neurological damage, and death.

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

According to the 2005 California Almanac of Emissions and Air Quality, the majority of the estimated health risk from toxic air contaminants can be attributed to relatively few compounds, the most important of which is diesel particulate matter (DPM). Diesel particulate matter is a subset of PM2.5 because the size of diesel particles are typically 2.5 microns and smaller. The identification of diesel particulate matter as a toxic air contaminant in 1998 led the California Air Resources Board (CARB) to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles in September 2000. The plan's goals are a 75-percent reduction in diesel particulate matter by 2010 and an 85-percent reduction by 2020 from the 2000 baseline. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and over 40 other cancer-causing substances. California's identification of diesel particulate matter as a toxic air contaminant was based on its potential to cause cancer, premature deaths, and other health problems. Exposure to diesel particulate matter is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's potential airborne cancer risk from combustion sources.

2. Asbestos

Asbestos is listed as a TAC by ARB and as a Hazardous Air Pollutant by the EPA. Asbestos occurs naturally in mineral formations and crushing or breaking these rocks, through construction or other means, can release asbestoform fibers into the air. Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. The risk of disease is dependent upon the intensity and duration of exposure. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. Naturally occurring asbestos is not present in San Bernardino County. The nearest likely locations of naturally occurring asbestos, as identified in the General Location Guide for Ultramafic Rocks in California prepared by the California Division of Mines and Geology, is located in Santa Barbara County. Due to the distance to the nearest natural occurrences of asbestos, the project site is not likely to contain asbestos.

C. Greenhouse Gases

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHG), play a critical role in the Earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO_2), methane (CH_4), ozone, water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global

warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas emissions, followed by electricity generation. Emissions of CO_2 and nitrous oxide (NOx) are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO_2, where CO_2 is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. The following provides a description of each of the greenhouse gases and their global warming potential.

1. Water Vapor

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

2. Carbon Dioxide

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

3. Methane

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

4. Nitrous Oxide

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

5. Chlorofluorocarbons

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

6. Hydrofluorocarbons

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

7. Perfluorocarbons

PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). Concentrations of CF_4 in the atmosphere are over 70 ppt. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing.

8. Sulfur Hexafluoride

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

9. Aerosols

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

10. Global Warming Potential

GHGs have varying global warming potential (GWP). The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere; it is the cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to the reference gas, CO_2. One teragram of carbon dioxide equivalent (Tg CO_2e) is essentially the emissions of the gas multiplied by the global warming potential. One teragram is equal to one million metric tons. The carbon dioxide equivalent is a good way to assess emissions because it gives weight to the global warming potential of the gas. A summary of the atmospheric lifetime and the global warming potential of selected gases are summarized in Table 2. As shown in Table 2, the global warming potential of GHGs ranges from 1 to 23,900.

Table 2

Global Warming Potentials and Atmospheric Lifetimes[1]

Gas	Atmospheric Lifetime	Global Warming Potential[2] (100 Year Horizon)
Carbon Dioxide	50-200	1
Methane	12 ± 3	21
Nitrous Oxide	120	310
HFC-23	264	11,700
HFC-134a	14.6	1,300
HFC-152a	1.5	140
PFC: Tetrafluoromethane	50,000	6,500
PFC: Hexafluoroethane	10,000	9,200
Sulfur Hexafluoride	3,200	23,900

[1] Source: United States Environmental Protection Agency, 2006.

[2] Compared to the same quantity of CO_2 emissions.

IV. Air Quality Management

A. Regulatory Setting

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

1. International

In 1988, the United Nations established the Intergovernmental Panel on Climate Change (IPCC) to evaluate the impacts of global climate change and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling GHG emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The plan consists of more than 50 voluntary programs.

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

2. Federal - United States Environmental Protection Agency

The United States Environmental Protection Agency (EPA) is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The National Ambient Air Quality Standards (NAAQS) pollutants were identified using medical evidence and are shown below in Table 3.

As part of its enforcement responsibilities, the EPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the national standards. The State Implementation Plan (SIP) must integrate federal, state, and local components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the State Implementation Plan (SIP).

As indicated below in Table 4, the Basin has been designated by the EPA as a non-attainment area for ozone (O_3) and suspended particulates (PM10 and PM2.5).

Currently, the Basin is in attainment with the ambient air quality standards for carbon monoxide (CO), lead, sulfur dioxide (SO_2), and nitrogen dioxide (NO_2).

In 2011, the Basin exceeded federal standards for either ozone or PM2.5 at one or more locations on a total of 124 days, based on the current federal standards for 8-hour ozone and 24-hour PM2.5. Despite substantial improvements in air quality over the past few decades, some air monitoring stations in the Basin still exceed the NAAQS for ozone more frequently than any other stations in the U.S. In 2011, three of the top five stations that exceeded the 8-hour ozone NAAQS were located in the Basin (Central San Bernardino Mountains, East San Bernardino Valley, and Metropolitan Riverside County).

PM2.5 in the Basin has improved significantly in recent years, with 2010 and 2011 being the cleanest years on record. In 2011, only one station in the Basin (Metropolitan Riverside County at Mira Loma) exceeded the annual PM2.5 NAAQS and the 98th percentile form of the 24-hour PM2.5 NAAQS, as well as the 3-year design values for these standards. Basin-wide, the federal PM2.5 24-hour standard level was exceeded in 2011 on 17 sampling days.

The Basin is currently in attainment for the federal standards for carbon monoxide (CO), lead, sulfur dioxide (SO_2), and nitrogen dioxide (NO_2). While the concentration level of the new 1-hour NO_2 federal standard (100 ppb) was exceeded in the Basin at two stations (Central Los Angeles and Long Beach) on the same day in 2011, the NAAQS NO_2 design value has not been exceeded. Therefore, the Basin remains in attainment of the NO_2 NAAQS.

The EPA designated the Los Angeles County portion of the Basin as nonattainment for the recently revised (2008) federal lead standard (0.15 µg/m3, rolling 3-month average), due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in Vernon and the City of Industry exceeding the new standard in the 2007-2009 period of data used. For the most recent 2009-2011 data period, only one of these stations (Vernon) still exceeded the lead standard.

In Massachusetts v. Environmental Protection Agency (Docket No. 05–1120), argued November 29, 2006 and decided April 2, 2007, the U.S. Supreme Court held that not only did the EPA have authority to regulate greenhouse gases, but the EPA's reasons for not regulating this area did not fit the statutory requirements. As such, the U.S. Supreme Court ruled that the EPA should be required to regulate CO_2 and other greenhouse gases as pollutants under the federal Clean Air Act (CAA).

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

engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions to submit annual reports to EPA.

On December 7, 2009, the EPA Administrator signed two distinct findings under section 202(a) of the Clean Air Act. One is an endangerment finding that finds concentrations of the six GHGs in the atmosphere threaten the public health and welfare of current and future generations. The other is a cause or contribute finding, that finds emissions from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare. These actions will not themselves impose any requirements on industry or other entities. However, it is a prerequisite to finalizing the EPA's proposed GHG emission standards for light-duty vehicles, which were jointly proposed by the EPA and Department of Transportation on September 15, 2009.

3. State – California Air Resources Board

The California Air Resources Board (CARB), which is a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the State Implementation Plan (SIP). The California Ambient Air Quality Standards (CAAQS) for criteria pollutants are shown in Table 3. In addition, the CARB establishes emission standards for motor vehicles sold in California, consumer products (e.g. hairspray, aerosol paints, and barbeque lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

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

On June 20, 2002, the CARB revised the PM10 annual average standard to 20 µg/m3 and established an annual average standard for PM2.5 of 12 µg/m3. These standards were approved by the Office of Administrative Law in June 2003 and are now effective. On September 27, 2007 CARB approved the South Coast Air Basin and the Coachella Valley 2007 Air Quality Management Plan for Attaining the Federal 8-hour Ozone and PM2.5 Standards. The plan projects attainment for the 8-hour Ozone standard by 2024 and the PM2.5 standard by 2015.

On December 12, 2008 the CARB adopted Resolution 08-43, which limits NOx, PM10 and PM2.5 emissions from on-road diesel truck fleets that operate in California. On October 12, 2009 Executive Order R-09-010 was adopted that codified Resolution 08-43 into Section 2025, title 13 of the California Code of Regulations. This regulation requires that by the year 2023 all commercial diesel trucks that operate in California shall meet model year 2010 (Tier 4 Final) or latter emission standards. In the interim period, this regulation provides annual interim targets for fleet owners to meet. This

regulation also provides a few exemptions including a onetime per year 3-day pass for trucks registered outside of California.

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

CARB also proposed interim statewide CEQA thresholds for GHG emissions and released Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act, on October 24, 2008. The State currently has no regulations that establish ambient air quality standards for GHGs. However, the State has passed laws directing CARB to develop actions to reduce GHG emissions, which are listed below.

Assembly Bill 1493

California Assembly Bill 1493 enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. In 2005, the CARB submitted a "waiver" request to the EPA from a portion of the federal Clean Air Act in order to allow the State to set more stringent tailpipe emission standards for CO_2 and other GHG emissions from passenger vehicles and light duty trucks. On December 19, 2007 the EPA announced that it denied the "waiver" request. On January 21, 2009, CARB submitted a letter to the EPA administrator regarding the State's request to reconsider the waiver denial. The EPA approved the waiver on June 30, 2009.

Executive Order S-3-05

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

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

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

Assembly Bill 32

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

On December 6, 2007 CARB released the calculated Year 1990 GHG emissions of 427 million metric tons of CO_2e ($MMTCO_2e$). The 2020 target of 427 $MMTCO_2e$ requires the reduction of 169 $MMTCO_2e$, or approximately 30 percent from the State's projected 2020 business as usual emissions of 596 $MMTCO_2e$ and the reduction of 42 $MMTCO_2e$, or almost 10 percent from the 2002-2004 average GHG emissions. Under AB 32, CARB was required to adopt regulations by January 1, 2011 to achieve reductions in GHGs to meet the 1990 cap by 2020. Early measures CARB took to lower GHG emissions included requiring operators of the largest industrial facilities that emit 25,000 metric tons of CO_2 in a calendar year to submit verification of GHG emissions by December 1, 2010. The CARB Board also approved nine discrete early action measures that include regulations affecting landfills, motor vehicle fuels, refrigerants in cars, port operations and other sources that became enforceable on or before January 1, 2010.

On December 11, 2008 the CARB Board approved a Scoping Plan, with final adoption May 11, 2009 that proposed a variety of measures including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, a market-based cap-and-trade system, and a fee regulation to fund the program. In current pending litigation, Association of Irritated Residents v. California Air Resources Board, a California State trial court found that the analysis of the alternatives identified in the AB 32 Scoping Plan Functional Equivalent Document (FED) was not sufficient for informed decision-making and public review under CEQA. In response, CARB has appealed the decision. In addition, CARB prepared the *Supplement to the AB 32 Scoping Plan Functional Equivalent Document,* June 13, 2011. On August 24, 2011 CARB recertified the complete AB 32 Scoping Plan Functional Equivalent Environmental Document revised by the Final Supplement. In December, 2011 the Final Supplement was accepted as sufficient to fulfill the trial court's March order.

Senate Bill 1368

Senate Bill 1368 (SB 1368) is the companion Bill of AB 32 and was adopted September, 2006. SB 1368 requires the California Public Utilities Commission (CPUC) to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007 and for local publicly owned utilities by June 30, 2007. These standards could not exceed the GHG emissions rate from a baseload combined-cycle, natural gas-fired plant. Furthermore, the legislation states that all electricity provided to the State,

including imported electricity, must be generated by plants that meet the standards set by California Public Utilities Commission (CPUC) and California Energy Commission (CEC).

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

On April 23, 2009 CARB approved the proposed regulation to implement the low carbon fuel standard. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. The low carbon fuel standard is designed to provide a framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. The framework establishes performance standards that fuel producers and importers must meet each year beginning in 2011. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are "back-loaded", with more reductions required in the last five years, than the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today's fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the low carbon fuel standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at ten percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also may be low carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles are also considered as low carbon fuels for the low carbon fuel standard.

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

Pursuant to the requirements of SB 97 as stated above, on December 30, 2009 the Natural Resources Agency adopted amendments to the state CEQA

guidelines that address GHG emissions. The CEQA Guidelines Amendments changed 14 sections of the CEQA Guidelines and incorporate GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance are provided and no specific mitigation measures are identified. The GHG emission reduction amendments went into effect on March 18, 2010 and are summarized below:

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

Senate Bills 1078, 107, and X1-2 and Executive Orders S-14-08 and S-21-09

Senate Bill 1078 (SB 1078) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) changed the target date to 2010. Executive Order S-14-08 was signed on November 2008 and expands the State's Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

Senate Bill 375

Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and

land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's sustainable communities strategy or alternate planning strategy for consistency with its assigned targets.

The proposed project is located within the Southern California Association of Governments (SCAG), which has authority to develop the SCS or APS. For the SCAG region, the targets set by CARB are at eight percent below 2005 per capita GHG emissions levels by 2020 and 13 percent below 2005 per capita GHG emissions levels by 2035. On April 4, 2012, SCAG adopted the 2012-2035 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), which meets the CARB emission reduction requirements. The Housing Element Update is required by the State to be completed within 18 months after RTP/SCS adoption or by October 2013.

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

Senate Bill X7-7

Senate Bill X7-7 (SB X7-7), enacted on November 9, 2009, mandates water conservation targets and efficiency improvements for urban and agricultural water suppliers. SB X7-7 requires the Department of Water Resources (DWR) to develop a task force and technical panel to develop alternative best management practices for the water sector. In addition SB X7-7 required the DWR to develop criteria for baseline uses for residential, commercial, and industrial uses for both indoor and landscaped area uses. The DWR was also required to develop targets and regulations that achieve a statewide 20 percent reduction in water usage.

Assembly Bill 939 and Senate Bill 1374

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

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

CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

The Energy Commission adopted 2008 Standards on April 23, 2008 and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. CalEEMod modeling defaults to 2008 standards. 2013 Standards became effective on January 1, 2014.

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

CCR Title 24, Part 11: California Green Building Standards (Title 24) became effective in 2001 in response to continued efforts to reduce GHG emissions associated with energy consumption. CCR Title 24, Part 11 now require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. One focus of CCR Title 24, Part 11 is water conservation measures, which reduce GHG emissions by reducing electrical consumption associated with pumping and treating water. CCR Title 24, Part 11 has approximately 52 nonresidential mandatory measures and an additional 130 provisions for optional use. Some key mandatory measures for commercial occupancies include specified parking for clean air vehicles, a 20 percent reduction of potable water use within buildings, a 50 percent construction waste diversion from landfills, use of building finish materials that emit low levels of volatile organic compounds, and commissioning for new, nonresidential buildings over 10,000 square feet.

All buildings for which an application for a building permit is submitted on or after January 1, 2014 must follow the 2013 standards. The 2013 standards are estimated to be 30 percent more efficient than the 2008 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

4. Regional

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

South Coast Air Quality Management District

The SCAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emission sources, and enforces such measures through educational programs or fines, when necessary. The SCAQMD is directly responsible for reducing emissions from stationary, mobile, and indirect sources. It has responded to this requirement by preparing a sequence of AQMPs. A revised draft of the 2012 AQMP was released on September, 2012, was adopted by the SCAQMD Board on December 7, 2012, and was adopted by CARB via Resolution 13-3 on January 25, 2013. The 2012 AQMP was prepared in order to meet the federal Clean Air Act requirement that all 24-hour PM2.5 non-attainment areas prepare a SIP, that were required to be submitted to the U.S. EPA by December 14, 2012 and demonstrate attainment with the 24-hour PM2.5 standard by 2014. The 2012 AQMP demonstrates attainment of the federal 24-hour PM2.5 standard by 2014 in the Basin through adoption of all feasible measures, and therefore, no extension of the attainment date is needed.

The 2007 AQMP demonstrated attainment with the 1997 8-hour ozone (80 ppb) standard by 2023, through implementation of future improvements in control techniques and technologies. These "black box" emissions reductions represent 65 percent of the remaining NOx emission reductions by 2023 in order to show attainment with the 1997 8-hour ozone NAAQS. Given the magnitude of these needed emissions reductions, additional NOx control measures have been provided in this AQMP even though the primary purpose of this AQMP is to show compliance with 24-hour PM2.5 emissions standards.

The 2012 AQMP is designed to satisfy the California Clean Air Act's (CCAA) emission reductions of 5 percent per year or adoption of all feasible measures requirements and fulfill the EPA's requirement to update transportation conformity emissions budgets based on the latest approved motor vehicle emissions model and planning assumptions. The 2012 AQMP updates and revises the previous 2007 AQMP. The 2012 AQMP was prepared to comply with the Federal and State CCAA and amendments, to accommodate growth, to reduce the high pollutant levels in the Basin, to meet Federal and State ambient air quality standards, and to minimize the fiscal impact that pollution control measures have on the local economy. The purpose of the 2012 AQMP for the Basin is to set forth a comprehensive program that will lead this area into compliance with all federal and state air-quality planning requirements.

The 2012 AQMP builds upon the approaches taken in the 2007 AQMP for the attainment of federal PM and ozone standards, and highlights the significant amount of reductions needed and the need to engage in interagency coordinated planning of mobile sources to meet all of the federal criteria pollutant standards. Compared with the 2007 AQMP, the 2012 AQMP utilizes revised emissions inventory projections that use 2008 as the base year. On-road emissions are calculated using CARB EMFAC2011 emission factors and the transportation activity data provided by SCAG from their 2012 Regional Transportation Plan (2012 RTP). Off-road emissions were updated using CARB's 2011 In-Use Off-Road Fleet Inventory Model. Since the 2007 AQMP was finalized new area source categories such as LPG transmission losses, storage tank and pipeline cleaning and degassing, and architectural colorants, were created and included in the emissions inventories. The 2012 AQMP also includes analysis of

several additional sources of GHG emissions such as landfills and could also assist in reaching the GHG target goals in the AB32 Scoping Plan.

The control measures in the 2012 AQMP consist of three components: 1) Basin-wide and episodic short-term PM2.5 measures; 2) Section 182(e)(5) implementation measures; and 3) Transportation control measures. Many of the control measures are not based on command and control regulations, but instead focus on incentives, outreach, and education to bring about emissions reductions through voluntary participation and behavioral changes. More broadly, a transition to zero- and near-zero emission technologies is necessary to meet 2023 and 2032 air quality standards and 2050 climate goals. Many of the same technologies will address both air quality and climate needs.

During construction and operation, the project must comply with applicable rules and regulations. The following are rules the project may be required to comply with, either directly, or indirectly:

SCAQMD Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

SCAQMD Rule 403 governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

Rule 403 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Applicable dust suppression techniques from Rule 403 are summarized below. Implementation of these dust suppression techniques can reduce the fugitive dust generation (and thus the PM_{10} component). Compliance with these rules would reduce impacts on nearby sensitive receptors. Rule 403 measures may include but are not limited to the following:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least three times daily. (Locations where grading is to occur will be thoroughly watered prior to earthmoving.)

- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 0.6 meters (2 feet) of freeboard (vertical space between the top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code section 23114.
- Reduce traffic speeds on all unpaved roads to 15 miles per hour (mph) or less.
- Suspension of all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph.
- Bumper strips or similar best management practices shall be provided where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip.
- Replanting disturbed areas as soon as practical.
- During all construction activities, construction contractors shall sweep on-site and off-site streets if silt is carried to adjacent public thoroughfares, to reduce the amount of particulate matter on public streets. All sweepers shall be compliant with SCAQMD Rule 1186.1, Less Polluting Sweepers.

SCAQMD Rule 445 prohibits permanently installed wood burning devices into any new development. A wood burning device means any fireplace, wood burning heater, or pellet-fueled wood heater, or any similarly enclosed, permanently installed, indoor or outdoor device burning any solid fuel for aesthetic or space-heating purposes, which has a heat input of less than one million British thermal units per hour.

SCAQMD Rule 481 applies to all spray painting and spray coating operations and equipment. The rule states that a person shall not use or operate any spray painting or spray coating equipment unless one of the following conditions is met:

(1) The spray coating equipment is operated inside a control enclosure, which is approved by the Executive Officer. Any control enclosure for which an application for permit for new construction, alteration, or change of ownership or location is submitted after the date of adoption of this rule shall be exhausted only through filters at a design face velocity not less than 100 feet per minute nor greater than 300 feet per minute, or through a water wash system designed to be equally effective for the purpose of air pollution control.

(2) Coatings are applied with high-volume low-pressure, electrostatic and/or airless spray equipment.

(3) An alternative method of coating application or control is used which has effectiveness equal to or greater than the equipment specified in the rule.

SCAQMD Rule 1108 governs the sale, use, and manufacturing of asphalt and limits the volatile organic compound (VOC) content in asphalt used in the South Coast Air Basin. This rule would regulate the VOC content of asphalt used during construction. Therefore, all asphalt used during construction of the project must comply with SCAQMD Rule 1108.

SCAQMD Rule 1113 governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC

content of paints available during construction. Therefore, all paints and solvents used during construction and operation of the project must comply with SCAQMD Rule 1113.

SCAQMD Rule 1143 governs the manufacture, sale, and use of paint thinners and solvents used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations by limiting their VOC content. This rule regulates the VOC content of solvents used during construction. Solvents used during the construction phase must comply with this rule.

SCAQMD Rule 1186 limits the presence of fugitive dust on paved and unpaved roads and sets certification protocols and requirements for street sweepers that are under contract to provide sweeping services to any federal, state, county, agency or special district such as water, air, sanitation, transit, or school district.

SCAQMD Rule 1303 governs the permitting of re-located or new major emission sources, requiring Best Available Control Measures and setting significance limits for PM_{10} among other pollutants.

SCAQMD Rule 1401, New Source Review of Toxic Air Contaminants, specifies limits for maximum individual cancer risk, cancer burden, and non-cancer acute and chronic hazard index from new permit units, relocations, or modifications to existing permit units, which emit toxic air contaminants.

SCAQMD Rule 2202, On-Road Motor Vehicle Mitigation Options, is to provide employers with a menu of options to reduce mobile source emissions generated from employee commutes, to comply with federal and state Clean Air Act requirements, Health & Safety Code Section 40458, and Section 182(d)(1)(B) of the federal Clean Air Act. It applies to any employer who employs 250 or more employees on a full or part-time basis at a worksite for a consecutive six-month period calculated as a monthly average.

In order to assist local agencies with direction on GHG emissions, the SCAQMD organized a working group and adopted Rules 2700, 2701, 2702, and 3002 which are described below.

SCAQMD Stakeholder Working Group

Since neither CARB nor the OPR has developed GHG emissions threshold, the SCAQMD formed a Working Group to develop significance thresholds related to GHG emissions. At the September 28, 2010 Working Group meeting, the SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that provides a quantitative annual thresholds of 10,000 MTCO2e for industrial uses.

Rules 2700 and 2701

The SCAQMD adopted Rules 2700 and 2701 on December 5, 2008, which establishes the administrative structure for a voluntary program designed to quantify GHG emission reductions. Rule 2701 provides specific protocols for private parties to follow

to generate certified GHG emission reductions for projects within the district. Approved protocols include forest projects, urban tree planting, and manure management. The SCAQMD is currently developing additional protocols for other reduction measures. For a GHG emission reduction project to qualify, it must be verified and certified by the SCAQMD Executive Officer, who has 60 days to approve or deny the Plan. Upon approval of the Plan, the Executive Officer issues required to issue a certified receipt of the GHG emission reductions within 90 days.

Rule 2702

The SCAQMD adopted Rule 2702 on February 6, 2009, which establishes a voluntary air quality investment program from which SCAQMD can collect funds from parties that desire certified GHG emission reductions, pool those funds, and use them to purchase or fund GHG emission reduction projects within two years, unless extended by the Governing Board. Priority will be given to projects that result in co-benefit emission reductions of GHG emissions and criteria or toxic air pollutants within environmental justice areas. Further, this voluntary program may compete with the cap-and-trade program identified for implementation in CARB's Scoping Plan, or a Federal cap and trade program.

Rule 3002

The SCAQMD amended Rule 3002 on November 5, 2010 to include facilities that emit greater than 100,000 tons per year of CO_2e are required to apply for a Title V permit by July 1, 2011. A Title V permit is for facilities that are considered major sources of emissions.

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

Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and addresses regional issues relating to

transportation, the economy, community development and the environment. SCAG is the Federally designated MPO for the majority of the southern California region and is the largest MPO in the nation. With respect to air quality planning, SCAG has prepared the Regional Transportation Plan and Regional Transportation Improvement Plan (RTIP), which addresses regional development and growth forecasts. These plans form the basis for the land use and transportation components of the AQMP, which are utilized in the preparation of air quality forecasts and in the consistency analysis included in the AQMP. The Regional Transportation Plan, Regional Transportation Improvement Plan, and AQMP are based on projections originating within the City and County General Plans.

5. Local – City of Colton

Local jurisdictions, such as the City of Colton, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City is also responsible for the implementation of transportation control measures as outlined in the 2007 and 2012 AQMPs. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation.

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

B. Monitored Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air basin. Estimates of the existing emissions in the Basin provided in the Final 2012 Air Quality Management Plan, prepared by SCAQMD, December 2012, indicate that collectively, mobile sources account for 59 percent of the VOC, 88 percent of the NOx emissions and 40 percent of directly emitted PM2.5, with another 10 percent of PM2.5 from road dust.

The SCAQMD has divided the South Coast Air Basin into 38 air-monitoring areas with a designated ambient air monitoring station representative of each area. The project site is located in Central San Bernardino Valley Air Monitoring Area (Area 34), which is located in San Bernardino County and covers the area from the Riverside County line on the south to approximately I-15 Freeway on the north and west and Highland to the east. The nearest air monitoring station to the project site is the Rubidoux – Mission Boulevard Air Monitoring Station (Rubidoux Station). The Rubidoux Station is located approximately 5.5

miles southwest of the project site at 5888 Mission Boulevard, Riverside. Table 5 presents the monitored pollutant levels from the Rubidoux Station. However, it should be noted that due to the air monitoring station distance from the project site, recorded air pollution levels at the air monitoring station reflect with varying degrees of accuracy, local air quality conditions at the project site.

The monitoring data presented in Table 5 shows that ozone and particulate matter (PM10 and PM2.5) are the air pollutants of primary concern in the project area, which are detailed below.

Ozone

During the 2009 to 2011 monitoring period, the State 1-hour concentration standard for ozone has been exceeded between 25 and 52 days each year at the Rubidoux Station. The State 8-hour ozone standard has been exceeded between 57 and 92 days each year over the past three years at the Rubidoux Station. The Federal 8-hour ozone standard was exceeded between 36 and 67 days each year over the past three years at the Rubidoux Station.

Ozone is a secondary pollutant as it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO_2, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the oxidant concentrations experienced in the area. Many areas of the SCAQMD contribute to the ozone levels experienced at the monitoring station, with the more significant areas being those directly upwind.

Carbon Monoxide

CO is another important pollutant that is due mainly to motor vehicles. The Rubidoux Station did not record an exceedance of the state or federal 1-hour or 8-hour CO standards for the last three years.

Nitrogen Dioxide

The Rubidoux Station did not record an exceedance of the State or Federal NO_2 standards for the last three years.

Particulate Matter

During the 2009 to 2011 monitoring period, the State 24-hour concentration standard for PM10 has been exceeded between 7 and 27 days each year at the Rubidoux Station and the State annual concentration standard was exceeded each year during this time period. Over the same time period the Federal 24-hour and annual standards for PM10 have not been exceeded at the Rubidoux Station.

The Federal 24 hour standard for PM2.5 was exceeded between 4 and 15 days each year during the 2009 to 2011 monitoring period at the Rubidoux Station. The annual average PM2.5 concentrations exceeded the State standard each year during the 2009 to 201 monitoring period and did not exceed the Federal standard during the same time period.

According to the EPA, some people are much more sensitive than others to breathing fine particles (PM10 and PM2.5). People with influenza, chronic respiratory and cardiovascular

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

Table 3

State and Federal Criteria Pollutant Standards

Air Pollutant	Concentration / Averaging Time		Most Relevant Effects
	California Standards	Federal Primary Standards	
Ozone (O_3)	0.09 ppm/1-hour 0.07 ppm/8-hour	0.075 ppm/8-hour	(a) Pulmonary function decrements and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; (f) Property damage.
Carbon Monoxide (CO)	20.0 ppm/1-hour 9.0 ppm/8-hour	35.0 ppm/1-hour 9.0 ppm/8-hour	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses.
Nitrogen Dioxide (NO_2)	0.18 ppm/1-hour 0.03 ppm/annual	100 ppb/1-hour 0.053 ppm/annual	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration.
Sulfur Dioxide (SO_2)	0.25 ppm/1-hour 0.04 ppm/24-hour	75 ppb/1-hour 0.14 ppm/annual	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Suspended Particulate Matter (PM_{10})	50 µg/m^3/24-hour 20 µg/m^3/annual	150 µg/m^3/24-hour	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; (c) Increased risk of premature death from heart or lung diseases in elderly.
Suspended Particulate Matter ($PM_{2.5}$)	12 µg/m^3 / annual	35 µg/m^3/24-hour 15 µg/m^3/annual	
Sulfates	25 µg/m^3/24-hour	No Federal Standards	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) property damage.
Lead	1.5 µg/m^3/30-day	0.15 µg/m^3/3-month rolling	(a) Learning disabilities; (b) Impairment of blood formation and nerve conduction.
Visibility Reducing Particles	Extinction coefficient of 0.23 per kilometer-visibility of 10 miles or more due to particles when humidity is less than 70 percent.	No Federal Standards	Visibility impairment on days when relative humidity is less than 70 percent.

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

Table 4

South Coast Air Basin Attainment Status

Pollutant	Averaging Time	National Standards[1]	Attainment Date[2]	California Standards[3]
1979 1-Hour Ozone[4]	1-Hour (0.12 ppm)	Nonattainment (Extreme)	11/15/2010 (Not attained[4])	Extreme Nonattainment
1997 8-Hour Ozone[5]	8-Hour (0.08 ppm)	Nonattainment (Extreme)	6/15/2024	Nonattainment
2008 8-Hour Ozone	8-Hour (0.075 ppm)	Nonattainment (Extreme)	12/31/2032	
CO	1-Hour (35 ppm) 8-Hour (9 ppm)	Attainment (Maintenance)	6/11/2007 (Attained)	Maintenance
NO_2[6]	1-Hour (100 ppb) Annual (0.053 ppm)	Attainment (Maintenance)	9/22/1998 (Attained)	Attainment
SO_2[7]	1-Hour (75 ppb)	Designations Pending	Pending	Attainment
	24-Hour (0.14 ppm) Annual (0.03 ppm)	Unclassifiable/ Attainment	3/19/1979 (Attained)	
PM10	24-Hour (150 µg/m^3)	Nonattainment (Serious)[8]	12/31/2006 (Redesignation request submitted)[8]	Nonattainment
PM2.5	24-Hour (35 µg/m^3)	Unclassifiable/ Attainment	Attained	Unclassified
Lead	3-Months Rolling (0.15 µg/m^3)	Nonattainment (Partial)[9]	12/31/2015	Nonattainment

[1] Obtained from Draft 2012 AQMP, SCAQMD, 2012. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassified/Attainment or Unclassifiable.

[2] A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for attainment demonstration.

[3] Obtained from http://www.arb.ca.gov/desig/adm/adm.htm.

[4] 1-hour O_3 standard (0.13 ppm) was revoked, effective June 15, 2005; however, the Basin has not attained this standard based on 2008-2010 data has some continuing obligations under the former standard.

[5] 1997 8-hour O_3 standard (0.08 ppm) was reduced (0.075 ppm), effective May 27, 2008; the 1997 O3 standard and most related implementation rules remain in place until the 1997 standard is revoked by U.S. EPA.

[6] New NO_2 1-hour standard, effective August 2, 2010; attainment designations January 20, 2012; annual NO_2 standard retained.

[7] The 1971 annual and 24-hour SO_2 standards were revoked, effective August 23, 2010; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO_2 1-hour standard. Area designations expected in 2012, with SSAB designated Unclassifiable/Attainment.

[8] Annual PM10 standard was revoked, effective December 18, 2006; redesignation request to Attainment of the 24-hour PM10 standard is pending with U.S. EPA

[9] Partial Nonattainment designation - Los Angeles County portion of Basin only.

Table 5

Local Area Air Quality Levels from the Rubidoux Air Monitoring Station [1]

Pollutant (Standard)[2]	Year		
	2010	2011	2012
Ozone:			
Maximum 1-Hour Concentration (ppm)	0.128	0.128	0.126
Days > CAAQS (0.09 ppm)	**31**	**52**	**27**
Maximum 8-Hour Concentration (ppm)	0.098	0.115	0.102
Days > NAAQS (0.08 ppm)	**47**	**67**	**47**
Days > CAAQS (0.070 ppm)	**74**	**92**	**70**
Carbon Monoxide:			
Maximum 1-Hour Concentration (ppm)	2.2	2.0	2.0
Days > NAAQS (20 ppm)	0	0	0
Maximum 8-Hour Concentration (ppm)	1.84	1.35	1.59
Days > NAAQS (9 ppm)	0	0	0
Nitrogen Dioxide:			
Maximum 1-Hour Concentration (ppb)	64.5	63.3	61.7
Days > NAAQS (100 ppb)	0	0	0
Sulfur Dioxide:			
Maximum 24-Hour Concentration (ppm)	0.005	N/D	N/D
Days > NAAQS (0.25 ppm)	0	0	0
Inhalable Particulates (PM10):			
Maximum 24-Hour Concentration (ug/m^3)	75.0	82.7	67.0
Days > NAAQS (150 ug/m^3)	0	0	0
Days > CAAQS (50 ug/m^3)	7	10	N/D
Annual Arithmetic Mean (AAM) (ug/m^3)	33.1	33.5	34.5
Annual > NAAQS (50 ug/m^3)	no	no	no
Annual > CAAQS (20 ug/m^3)	**yes**	**yes**	**yes**
Ultra-Fine Particulates (PM2.5):			
Maximum 24-Hour Concentration (pg/m^3)	46.5	60.8	38.1
Days > NAAQS (35 ug/m^3)	**4**	**5**	**7**
Annual Arithmetic Mean (AAM) (ug/m^3)	13.2	13.8	13.7
Annual > NAAQS (15 ug/m3)	no	no	no
Annual > CAAQS (12 ug/m^3)	**yes**	**yes**	**yes**

[1] Source: http://www.arb.ca.gov/adam/

[2] CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million; ppb=parts per billion; N/D = no data available

V. Air Quality Standards

A. Regional Air Quality

Many air quality impacts that derive from dispersed mobile sources, which are the dominate pollution generators in the basin, often occurs hours later and miles away after photochemical processes have converted primary exhaust pollutants into secondary contaminants such as ozone. The incremental regional air quality impact of an individual project is generally very small and difficult to measure. Therefore, the SCAQMD has developed significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a project is not quantifiable on a regional scale. The SCAQMD CEQA Handbook states that any project in the South Coast Air Basin with daily emissions that exceed any of the identified significance thresholds should be considered as having an individually and cumulatively significant air quality impact. For the purposes to this air quality impact analysis, a regional air quality impact would be considered significant if emissions exceed the SCAQMD significance thresholds identified in Table 6.

B. Local Air Quality

Project-related construction air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the South Coast Air Basin. In order to assess local air quality impacts the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the project-related air emissions in the project vicinity. The SCAQMD has also provided Final Localized Significant Threshold Methodology (LST Methodology), June 2003, which details the methodology to analyze local air emission impacts. The Localized Significant Threshold Methodology found that the primary emissions of concern are NO_2, CO, PM10, and PM2.5.

The significance thresholds for the local emissions of NO_2 and CO are determined by subtracting the highest background concentration from the last three years of these pollutants from Table 5 above, from the most restrictive ambient air quality standards for these pollutants that are outlined in the Localized Significant Thresholds. Since PM10 and PM2.5 currently exceed the most restrictive ambient air quality standards in the Basin, their thresholds has been directly on the Localized Significant Thresholds and background concentrations of PM10 and PM2.5 are not factored into the threshold. Table 6 shows the Localized Significant Thresholds for NO_2, CO, and PM10 and PM2.5 as well as the background concentrations and resultant significance concentrations.

C. Toxic Air Contaminants

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

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

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

D. Odor Impacts

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

> "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
>
> The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals."

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

E. Greenhouse Gases

Through SANBAG, the City of Colton forms the Colton Chapter of the San Bernardino County Regional GHG Reduction Plan. The Plan has been prepared to assist the City in conforming to the GHG emissions reductions as mandated under AB 32. Based on the CARB Scoping Plan, reducing GHG emissions to 1990 levels by 2020 means cutting approximately 30 percent from business-as-usual (BAU) emissions levels, or about 15 percent from year 2008 levels, which is the baseline year for the GHG Reduction Plan. Consistent with the CARB Scoping Plan, the City of Colton has chosen a reduction target of 15 percent below 2008 GHG emissions levels by 2020.

Therefore, a proposed project would be considered to create a significant cumulative GHG emissions impact if the proposed project's GHG emissions are not 15 percent less in 2020 than GHG emissions from business-as-usual (BAU)[1] conditions for a similar size project in year 2008. As modeling for year 2008 emissions is not an option in CalEEMod, year 2010 emissions was used for generation of BAU (see Table 14 for results).

[1] Business as usual greenhouse gas emissions do not take into account project design features or mitigation measures to reduce greenhouse gas emissions. The business-as-usual forecast does not take any credit for reductions from measures included in this CARB Scoping Plan, including the Pavley greenhouse gas emissions standards for vehicles, full implementation of the Renewables Portfolio Standard beyond current levels of renewable energy, or the solar measures."

Table 6

SCAQMD Air Quality Significance Thresholds[1]

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

Toxic Air Contaminants, Odor and GHG Thresholds	
TACs	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index > 1.0 (project increment)
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402
GHG	10,000 MT/yr CO2e for industrial facilities

Local Air Quality Thresholds			
Pollutant	SCAQMD LSTs	Background Level	Significance Threshold
NO_2 -1-hour average	0.18 ppm (338 µg/m^3)	121 µg/m^3	217 µg/m^3
PM10 -24-hour average			
Construction	10.4 µg/m^3	--	10.4 µg/m^3
Operations	2.5 ug/m^3	--	2.5 ug/m^3
PM2.5 -24-hour average			
Construction	10.4 µg/m^3	--	10.4 µg/m^3
Operations	2.5 µg/m^3	--	2.5 ug/m^3
SO_2			
1-hour average	0.25 ppm		0.25 ppm
24-hour average	0.04 ppm	9 µg/m^3	0.04 ppm
CO			
1-hour average	20 ppm (23,000 µg/m^3)	2300 µg/m^3	20700 µg/m^3
8-hour average	9 ppm (10,000 µg/m^3)	1767 µg/m^3	8233 µg/m^3
Lead			
30-day average	1.5 µg/m^3	--	1.5 µg/m^3
Rolling 3-month average	0.15 µg/m^3	--	0.15 µg/m^3
Quarterly average	1.5 µg/m^3	--	1.5 µg/m^3

[1] Source: http://www.aqmd.gov/ceqa/handbook/signthres.pdf

VI. Short-Term Construction Impacts

Construction activities associated with the proposed project would have the potential to generate air emissions, toxic air contaminant emissions, and odor impacts. Assumptions for the phasing, duration, and required equipment for the construction of the proposed project were obtained from the project applicant. As this project is a Specific Plan, the exact timing is not currently known; therefore, to estimate the worst-case emissions, it was assumed that the entire site would be graded over a period of 261 working days. As stated previously, the proposed project is anticipated to start construction in January of 2015 and would be operational in 2020.

A. Construction-Related Regional Impacts

The construction-related regional air quality impacts have been analyzed for both criteria pollutants and GHGs.

1. Construction-Related Criteria Pollutants Analysis

The following provides a discussion of the methodology used to calculate regional construction air emissions and an analysis of the proposed project's short-term construction emissions for the criteria pollutants.

Methodology

Typical emission rates from construction activities were obtained from CalEEMod Version 2013.2.2 CalEEMod is a computer model published by the SCAQMD for estimating air pollutant emissions. The CalEEMod program uses the EMFAC2011 computer program to calculate the emission rates specific for the western portion of San Bernardino County for construction-related employee vehicle trips and the OFFROAD2011 computer program to calculate emission rates for heavy truck operations. EMFAC2011 and OFFROAD2011 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour. Using CalEEMod, the peak daily air pollutant emissions during each phase was calculated and presented below. These emissions represent the highest level of emissions for each of the construction phases in terms of air pollutant emissions. The construction emissions printouts from CalEEMod are provided in Appendix B.

The Project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, such as application of water or chemical stabilizers to disturbed soils, managing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent, stabilizing ground cover on finished sites. In addition, projects that disturb 50 acres or more of soil or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or

a Large Operation Notification Form to SCAQMD. Based on the size of the Project area (approximately 373 acres) a Fugitive Dust Control Plan or Large Operation Notification would be required.

SCAQMD's Rule 403 minimum requirements require that the application of the best available dust control measures are used for all grading operations and include the application of water or other soil stabilizers in sufficient quantity to prevent the generation of visible dust plumes. Compliance with Rule 403 would require the use of water trucks during all phases where earth moving operations would occur. Mitigation Measure 1 was included to ensure compliance with Rule 403.

The phases of the construction activities which have been analyzed below are: 1) grading, 2) building construction, 3) paving, and 4) application of architectural coatings. For details on construction modeling, please see Appendix B.

The application of architectural coatings would occur after the completion of the construction phase. Per SCAQMD Rule 1113 as amended on June 3, 2011, the architectural coatings that would be applied after July 1, 2014 will be limited to an average of 50 grams per liter or less and the CalEEMod model default VOC emissions have been adjusted accordingly.

Project Impacts

The construction-related criteria pollutant emissions for each phase are shown below in Table 7. Table 7 shows that if the building construction phase occurred at the same time as painting and paving, that criteria pollutants would exceed the regional emissions thresholds. Table 8 includes mitigation measures that reduce architectural coating s to 5g/L or less and requires all construction equipment to be Tier 4 final and have Level 3 diesel particulate filters and oxidation catalysts that have a 25 percent emissions reduction. Even though these strict mitigation measures are incorporated, the emissions from construction of the project exceed SCAQMD regional thresholds. The impact is considered to be significant and unavoidable.

B. <u>Construction-Related Local Impacts</u>

Construction-related air emissions may also have the potential to exceed the State and Federal air quality standards in the project vicinity. The proposed project has been analyzed for the potential local air quality impacts created from: construction-related fugitive dust and diesel emissions; from toxic air contaminants; and from construction-related odor impacts.

1. <u>Local Air Quality Impacts from Construction</u>

The SCAQMD has published a "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds" (South Coast Air Quality Management District 2011b). CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. In order to compare CalEEMod reported emissions against the localized significance

threshold lookup tables, the CEQA document should contain in its project design features or its mitigation measures the following parameters:

1) The off-road equipment list (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions.
2) The maximum number of acres disturbed on the peak day.
3) Any emission control devices added onto off-road equipment.
4) Specific dust suppression techniques used on the day of construction activity with maximum emissions.

The CalEEMod output sheets included in Appendix B show the equipment used for this analysis.

As shown in Table 9, the maximum number of acres disturbed in a day would be five acres.

The local air quality emissions from construction were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold Look-up Tables and the methodology described in Localized Significance Threshold Methodology, prepared by SCAQMD, revised July 2008. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NOx, PM10, and PM2.5 from the proposed project could result in a significant impact to the local air quality. The localized assessment methodology limits the emissions in the analysis to those generated from on-site activities. The emission thresholds were calculated based on the Central San Bernardino Valley source receptor area, a disturbance of five acres per day (which is the maximum area anticipated to be disturbed each day during construction). However, in order to assure that the 5 acre limitation is adhered to during grading operations, Mitigation Measure 1 is provided that limits the daily disturbed area during the grading phases to 5 acres per day.

The nearest sensitive receptor to the project site are the single-family detached residential dwelling units located approximately 82 feet (25 meters) north of the project site. Table 10 shows the on-site emissions from the CalEEMod model for the different construction phases and the calculated emissions thresholds.

The data provided in Table 10 shows that none of the analyzed criteria pollutants would exceed the calculated local emissions thresholds at the nearest sensitive receptors. Therefore, a less than significant local air quality impact would occur from construction of the proposed project.

2. Construction-Related Toxic Air Contaminant Impacts

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk". "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of

toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the relatively limited number of heavy-duty construction equipment and the relatively short-term construction schedule, the proposed project would not result in a long-term (i.e., 70 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed project.

3. Construction-Related Odor Impacts

Potential sources that may emit odors during construction activities include the application of materials such as asphalt pavement and diesel exhaust emissions. The objectionable odors that may be produced during the construction process are of short-term in nature and the odor emissions are expected cease upon the drying or hardening of the odor producing materials. Due to the short-term nature and limited amounts of odor producing materials being utilized, no significant impact related to odors would occur during construction of the proposed project.

Table 7

Unmitigated Construction-Related Regional Criteria Pollutant Emissions [1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading						
On-Site	6.78	79.05	50.84	0.06	2.96	1.37
Off-Site	0.10	0.12	1.53	0.00	0.23	0.06
Total	**6.87**	**79.16**	**52.37**	**0.06**	**3.18**	**1.43**
Building Construction						
On-Site	3.41	28.51	18.51	0.03	1.97	1.85
Off-Site	40.47	216.20	586.97	1.19	74.60	22.39
Total	**43.88**	**244.70**	**605.48**	**1.22**	**76.57**	**24.24**
Paving						
On-Site	2.50	22.39	14.82	0.02	1.26	1.16
Off-Site	0.06	0.08	1.03	0.00	0.17	0.05
Total	**2.56**	**22.46**	**15.85**	**0.02**	**1.43**	**1.21**
Architectural Coating						
On-Site	68.36	2.37	1.88	0.00	0.20	0.20
Off-Site	4.42	5.37	70.74	0.14	11.56	3.12
Total	**72.78**	**7.74**	**72.63**	**0.14**	**11.76**	**3.32**
Total of overlapping phases [4]	**119**	**275**	**694**	**1**	**90**	**29**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds	yes	yes	yes	no	no	no

[1] Source: CalEEMod Version 2013.2.2

[2] On-site emissions from equipment operated on-site that is not operated on public roads.

[3] Off-site emissions from equipment operated on public roads.

[4] Construction, architectural coatings and paving phases may overlap.

Table 8

Construction-Related Regional Criteria Pollutant Emissions with Mitigation [1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading						
On-Site	0.76	2.46	34.78	0.06	2.96	1.37
Off-Site	0.10	0.12	1.53	0.00	0.23	0.06
Total	**0.85**	**2.58**	**36.31**	**0.06**	**3.18**	**1.43**
Building Construction						
On-Site	0.33	1.67	17.41	0.03	0.01	0.01
Off-Site	40.47	216.20	586.97	1.19	74.60	22.39
Total	**40.80**	**217.87**	**604.38**	**1.22**	**74.61**	**22.40**
Paving						
On-Site	0.68	0.89	16.93	0.02	0.01	0.01
Off-Site	0.06	0.08	1.03	0.00	0.17	0.05
Total	**0.74**	**0.97**	**17.96**	**0.02**	**0.17**	**0.05**
Architectural Coating						
On-Site	68.02	0.10	1.83	0.00	0.00	0.00
Off-Site	4.42	5.37	70.74	0.14	11.56	3.12
Total	**72.44**	**5.47**	**72.58**	**0.14**	**11.57**	**3.12**
Total of overlapping phases [4]	**114**	**224**	**695**	**1**	**86**	**26**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds	yes	yes	yes	no	no	no

[1] Source: CalEEMod Version 2013.2.2

[2] On-site emissions from equipment operated on-site that is not operated on public roads.

[3] Off-site emissions from equipment operated on public roads.

[4] Construction, architectural coatings and paving phases may overlap.

Table 9

Maximum Number of Acres Disturbed Per Day[1]

Activity	Equipment	Number	Acres/8hr-day	Total Acres
Site Grading	Graders	1	0.5	0.5
	Rubber Tired Dozers	1	0.5	0.5
	Excavators	2	0.5	1
	Scrapers	2	1	2
	Tractors/Loaders/Backhoes	2	0.5	1
Total per phase		-	-	**5**

[1] Source: South Coast AQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds

Table 10

Unmitigated Local Construction Emissions at the Nearest Receptor[1]

Phase	On-Site Pollutant Emissions (pounds/day)			
	NOx	CO	PM10	PM2.5
Grading	79.05	50.84	2.96	1.37
Building Construction	28.51	18.51	1.97	1.85
Paving	22.39	14.82	1.26	1.16
Architectural Coating	2.37	1.88	0.20	0.20
SCAQMD Threshold for 25 meters (82 feet)[2]	**270**	**1,746**	**14**	**8**
Exceeds Threshold?	no	no	no	no

[1] Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for five acres in Central San Bernardino Valley, Revised October 21, 2009.

[2] The estimated distance from the project site to the nearest existing home located north of the project site is 82 feet.

VII. Long-Term Air Quality Operational Impacts

The on-going operation of the proposed project would result in a long-term increase in air quality emissions. This increase would be mainly due to emissions from the project-generated vehicle trips and through operational emissions from the on-going use of the proposed project. The following section provides an analysis of potential long-term air quality impacts due to: regional air quality and local air quality impacts with the on-going operation of the proposed project.

A. Operations-Related Regional Air Quality Impacts

The potential operations-related air emissions have been analyzed below for the criteria pollutants and cumulative impacts.

1. Operations-Related Criteria Pollutant Analysis

The operations-related criteria air quality impacts created by the proposed project have been analyzed through use of the CalEEMod model. The proposed project is located in the City of Colton, which has its own electric utility; however, the CO_2 intensity factor (lb/MWhr) is not listed in CalEEMod; therefore, to be conservative, the Statewide Average was used. The use of the Statewide Average may have over-estimated the project's energy use as the City of Colton has electric rates approximately 25 percent lower than Southern California Edison.

The proposed project was analyzed in the CalEEMod model based on 275 medium residential dwelling units located on 42.1 acres, 223.3 acres of commercial/business uses, 52.91 acres of open space/park and 54.89 acres of streets. The operating emissions were based on the year 2020, which is the anticipated opening year for the proposed project. The operations daily emissions printouts from the CalEEMod model are provided in Appendix B. The CalEEMod analyzes operational emissions from area sources, energy usage, and mobile sources, which are analyzed below.

Mobile sources include emissions from the additional vehicle miles generated from the proposed project. The vehicle trips associated with the proposed project have been analyzed by inputting the project-generated vehicular trips from the Colton's Hub City Center Specific Plan Traffic Impact Analysis (Traffic Impact Analysis), prepared by Kunzman Associates, Inc., October 4, 2013, into the CalEEMod Model. The project has varying trip generation rates for similar land uses located in different planning areas (PA). For example, the trip generation rate for the shopping center in PA 9 has a trip generation rate of 77.69 per thousand square feet (TSF), whereas the shopping center in PA 16 has a trip generation rate of 33.68 per TSF. Office uses within the PAs also varied in trip generation rate. CalEEMod does not provide the ability to assign different trip generation to the same types of land use and rather lumps all the same uses together; therefore, the operational emissions for these similar land uses within different planning areas with different trip generation rates had to be assessed using discrete CalEEMod runs. The project's emissions were broken down into five parts,

then the operational emissions from each part were added together to yield the results shown in Table 11. Please see Appendix B for details.

The Colton's Hub City Centre Specific Plan has created a variety of regulations regarding the business park uses. Maximum building floor areas have been defined to avoid "big box" warehousing and distribution uses in order to ensure that the scale of the new development will be compatible with other planned uses and to protect the health, safety and general welfare of the community. Therefore, there would be minimal potential for heavy duty vehicle idling on-site.

The worst-case summer or winter VOC, NOx, CO, SO_2, PM10, and PM2.5 emissions created from the proposed project's long-term operations have been calculated and are summarized below in Table 11. The data provided in Table 11 shows that for the on-going operations activities for the proposed project, all but SO_2 emissions would exceed the SCAQMD regional thresholds of significance discussed above in Section V. Therefore, operation of the proposed project would create a significant regional impact from VOC, NOx, CO, PM-10 and PM 2.5 emissions.

Mitigation Measures 4 through 14 are provided to reduce the operational emissions (see Section XI. Mitigation Measures for details on the measures).

The mitigated operational regional criteria pollutant emissions are shown below in Table 12. Table 12 shows that with incorporation of the aforementioned mitigation measures, operational regional criteria pollutant emissions would still exceed regional operational thresholds for VOC, NOx, CO, PM-10 and PM-2.5. The majority of emissions are from mobile sources using the site. The impact is considered to be significant and unavoidable.

2. Cumulative Regional Air Quality Impacts

Cumulative projects include local development as well as general growth within the project area. However, as with most development, the greatest source of emissions is from mobile sources, which travel well out of the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and when wind patterns are considered, would cover an even larger area. Accordingly, the cumulative analysis for the project's air quality must be generic by nature.

The project area is out of attainment for both ozone and PM10 particulate matter. Construction and operation of cumulative projects will further degrade the local air quality, as well as the air quality of the South Coast Air Basin. The greatest cumulative impact on the quality of regional air cell will be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with the construction of these projects. Air quality will be temporarily degraded during construction activities that occur separately or simultaneously. In accordance with the SCAQMD methodology, projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact.

However, even with mitigation, the project's short-term construction and long-term operational emissions exceed criteria pollutant thresholds. This project would create a significant and unavoidable cumulative impact.

B. Operations-Related Local Air Quality Impacts

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

1. Local CO Emission Impacts from Project-Generated Vehicular Trips

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with project CO levels to the State and Federal CO standards which were presented in above in Section V.

To determine if the proposed project could cause emission levels in excess of the CO standards discussed above in Section V, a sensitivity analysis is typically conducted to determine the potential for CO "hot spots" at a number of intersections in the general project vicinity. Because of reduced speeds and vehicle queuing, "hot spots" typically occur at high traffic volume intersections with a Level of Service E or worse.

The Traffic Impact Analysis found that with the proposed road improvements, no analyzed intersection would operate at a Level of Service E or worse. Therefore no CO "hot spot" modeling was performed and no significant long-term air quality impact is anticipated to local air quality with the on-going use of the proposed project.

2. Local Air Quality Impacts from On-Site Operations

The proposed project involves the construction of a Specific Plan with residential, commercial, and open space /park uses. The long-term emissions, as discussed previously, are primarily in the form of mobile source emissions and consumer products. According to SCAQMD LST methodology, LSTs would apply to the operational phase of a project if the project includes stationary sources, or attracts mobile sources that may spend long periods queuing and idling at the site; such as warehouse/transfer facilities. The proposed project does not include such uses and, as stated previously, the Specific Plan has regulations in place to avoid "big box" warehousing and distribution uses in order to ensure that the scale of the new development will be compatible with other planned uses and to protect the health, safety and general welfare of the community. Therefore, due to the lack of stationary source emissions, no long-term LST analysis is warranted.

3. Operations-Related Odor Impacts

Potential sources that may emit odors during the on-going operations of the proposed project would include odor emissions from diesel truck emissions and trash storage areas. Due to the distance of the nearest receptors from the project site and through compliance with SCAQMD's Rule 402 no significant impact related to odors would occur during the on-going operations of the proposed project.

Table 11

Unmitigated Operational Criteria Pollutant Regional Air Emissions[1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO2	PM10	PM2.5
Area Sources[2]	442.50	2.10	161.60	0.22	21.13	21.13
Energy Usage[3]	0.79	6.99	4.90	0.04	0.54	0.54
Mobile Sources[4]	2,174.72	6,595.61	25,051.60	74.47	4,981.65	1,398.40
Total Emissions	**2,618**	**6,605**	**25,218**	**75**	**5,003**	**1,420**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	**yes**	**yes**	**yes**	no	**yes**	**yes**

[1] Source: CalEEMod Version 2013.2.2

[2] Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

[3] Energy usage consists of emissions from on-site natural gas usage.

[4] Mobile sources consist of emissions from vehicles and road dust.

Table 12

Mitigated Operational Criteria Pollutants Regional Air Emissions[1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO2	PM10	PM2.5
Area Sources[2]	298.52	0.27	23.40	0.00	0.46	0.46
Energy Usage[3]	0.57	5.04	3.50	0.03	0.39	0.40
Mobile Sources[4]	2,102.96	4,249.91	17,053.14	44.06	2,890.16	813.54
Total Emissions	**2,402**	**4,255**	**17,080**	**44**	**2,891**	**814**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	**yes**	**yes**	**yes**	no	**yes**	**yes**

[1] Source: CalEEMod Version 2013.2.2

[2] Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

[3] Energy usage consists of emissions from on-site natural gas usage.

[4] Mobile sources consist of emissions from vehicles and road dust.

VIII. Diesel Emissions Health Risk Assessment

According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology.

According to the SCAQMD's MATES-III study, the project area has an estimated cancer risk of between 848 in one million on the northern portion of the site and 1051 in one million cancer risk on the southern portion of the site (adjacent to W, Valley Boulevard) from toxic air contaminants (TACs). In comparison the average cancer risk for San Bernardino County is 631 in one million. The project site is in proximity to two major sources of diesel particulate matter (DPM). The project is located adjacent to the I-10 Freeway, and the Union Pacific Colton Railyard is located south of the project, on the south side of the freeway.

A project-specific health risk assessment for the West Valley SPA was performed by Mestre Greve Associates, October 15, 2008 and is the basis for the discussion of project-associated health risks. Within the study it states that "CARB has identified railyards as a considerable source of DPM emissions and has completed health risk assessments (HRA) for many of the rail yards in the state, including the Union Pacific Colton Railyard. Potential health risks at the uses proposed by the project are reported (in the HRA) based on the results from CARB's railyard study as well as site specific modeling to estimate the risk from the I-10 Freeway."

The project itself is not expected to be a considerable source of DPM as commercial uses implemented by project would consist of primarily business parks uses with no industrial or distribution facility uses that would be expected to attract large numbers of diesel trucks. As stated previously, the CHCCSP regulations are designed to avoid "big box" warehousing and distribution uses in order to ensure that the scale of the new development will be compatible with other planned uses and to protect the health, safety and general welfare of the community. The type of trucks associated with business parks would be large 2-axle trucks which are predominantly gasoline fueled; there should not be a considerable number of heavy truck trips associated with the proposed business park uses. Therefore the project would not be considered to be a point source for DPM emissions.

The project is, however, located adjacent to the 1-10 Freeway and the UPRR Colton Railyard. The Mestre Greve Associates study analyzed the impacts to both commercial and residential receptors. The land use plan has been modified since the 2008 analysis, and commercial uses are now proposed at the locations that were previously designated for residential development. Health risks from diesel particulate matter are twofold. First, diesel particulate matter is a carcinogen according to the State of California. Second, long-term chronic exposure to diesel particulate matter can cause non-cancer health effects to the respiratory system. Each of these health risks is discussed below.

Cancer Risks from the I-10 Freeway. Receptors 1, 2 and 3 will still be located at business park-type commercial uses, Receptor 4 is located retail/mixed use and Receptor 5 is the closest residential receptor (see Figure 3). The maximum cancer risk commercial uses would be exposed

to, from the I-10 Freeway, would be at the location of Receptor 1. There, the risk is 59.6 in one million. The maximum cancer risk the closest residential use would be exposed to (Receptor 5), from the I-10 Freeway, would be 29.9 in one million. All receptors are projected to be exposed to cancer risks in excess of the 10 in a million SCAQMD threshold. The maximum total[2] cancer risks of 71 and 35.6 per million, respectively, are much lower than the risks for San Bernardino County, as detailed above, and the 1,200 in a million average basin wide risk from the MATES-III study.

Furthermore, the residential uses would be located at least 1,473 feet from the I-10 Freeway. The California Air Resources Board's 2005 Air Quality and Land Use Handbook: A Community Health Perspective, recommends to "avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day." The closest sensitive receptor is over 1,400 feet away. Therefore, the project complies with this recommendation.

Non-Cancer Risk from the I-10 Freeway. Based on the peak 24-hour DPM concentration and the Chronic Inhalation Reference Exposure Level published by the OEHHA of 5 µg/m3, the Hazard Index for each receptor due to the I-10 Freeway DPM emissions was calculated by Mestre Greve Associates. The highest Hazard Index is 0.7444 at Receptor 1 (a commercial receptor). This is lower than the non-cancer risk significance threshold of 1. The non-cancer risk at the project site due to DPM from the I-10 Freeway is less than the significance threshold.

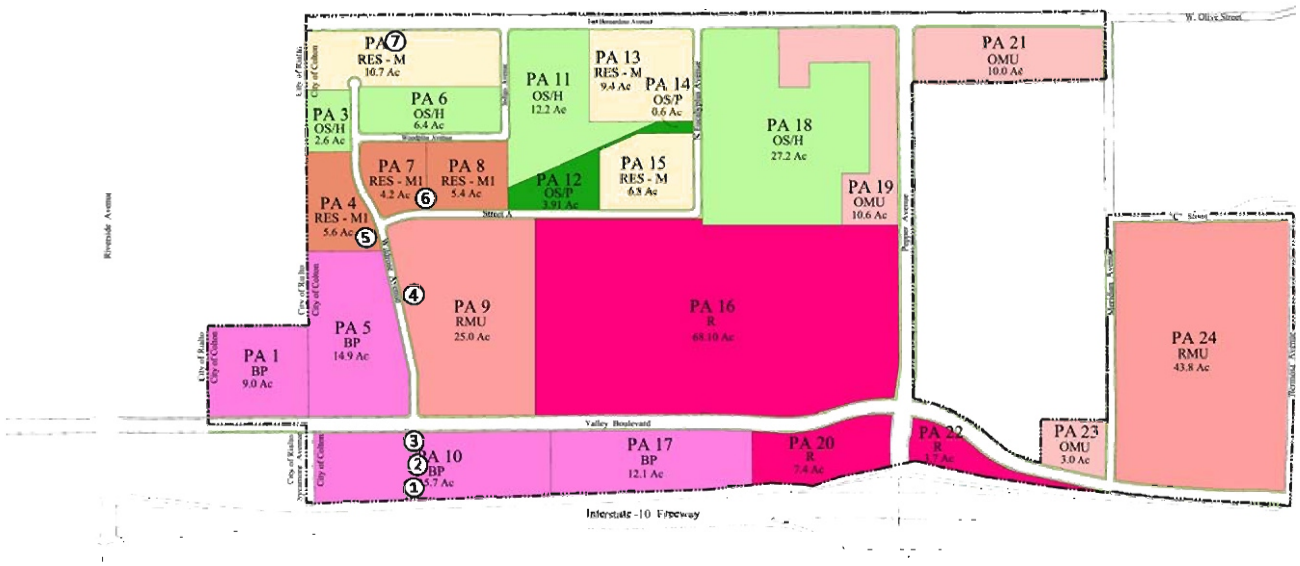
Cancer Risk from UPRR Colton Railyard. According to the Mestre Greve Associates study, the cancer risk at the closest sensitive receptor would be between 100 and 50 in one million (see Figure 4). The cancer risk at the closest commercial receptor would be 250 in one million; which translates to 63 in one million for an employee exposure.

Non-Cancer Risk from UPRR Colton Railyard. The CARB study presents the estimated Hazard Index from emissions associated with the railyard operations and the results are shown on Figure 5. The greatest Hazard Index of approximately 0.25 is experienced at the southwest corner of the project site which is proposed to be a commercial use. The greatest hazard index for the residential areas proposed by the project is approximately 0.05. Again these are lower than the non-cancer risk significance threshold of 1.

The combined cancer risk from exposure to both UPRR Railyard and the I-10 Freeway at the closest sensitive receptor would be 131 in one million (36 in one million from the 1-10 freeway plus 95 in one million from the UPRR Railyard). While cancer risk at the project site due to TAC's may be higher than other areas in San Bernardino County that are located further from the railroad and I-10 Freeway , the combined risk on the site, will be less than the majority of San Bernardino County and much less than the average in the South Coast Air Basin. For example, the MATES-III study shows that risks in south-central Los Angeles area and the Los Angeles/Long Beach Harbor area are 2 to 3 times greater than the majority of San Bernardino County. Even with future emission reductions, this ratio would not be expected to change substantially as these reductions would generally affect all areas equally. For these reasons it is concluded that the project site is not significantly impacted by TAC (Mestre Greve Associates, 2008).

[2] Assumes DPM cancer risk is 84% of total risk of toxic air contaminants.

Figure 3
DPM Receptor Locations



Legend

① = Receptor Locations

N

NTS

4147f/3

KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 4
Near Source Cancer Risk from UPRR

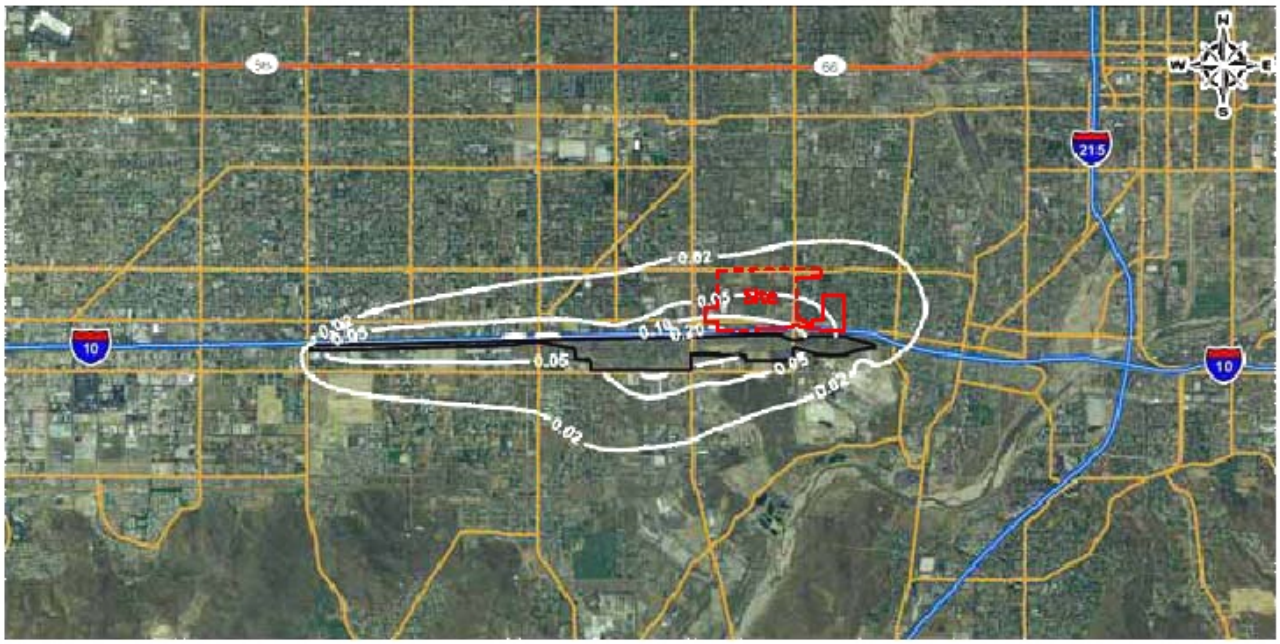
NTS

KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

4147f/4

Figure 5
Non-Cancer Chronic Risk from UPRR



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NTS

KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

4147f/5

IX. Global Climate Change Analysis

The proposed project is anticipated to generate GHG emissions from area sources, energy usage, mobile sources, waste, water, and construction equipment. The following provides the methodology used to calculate the project-related GHG emissions, the project impacts and a consistency analysis of the proposed project with any applicable GHG reduction plans, policies or regulations.

A. Methodology

The CalEEMod Version 2013.2.2 was used to calculate the GHG emissions from the proposed project. Through SANBAG, the City of Colton forms the Colton Chapter of the San Bernardino County Regional GHG Reduction Plan. The Plan has been prepared to assist the City in conforming to the GHG emissions reductions as mandated under AB 32. Based on the CARB Scoping Plan, reducing GHG emissions to 1990 levels by 2020 means cutting approximately 30 percent from business-as-usual (BAU) emissions levels, or about 15 percent from year 2008 levels, which is the baseline year for the GHG Reduction Plan. Consistent with the CARB Scoping Plan, the City of Colton has chosen a reduction target of 15 percent below 2008 GHG emissions levels by 2020.

Therefore, a proposed project would be considered to create a significant cumulative GHG emissions impact if the proposed project's GHG emissions are not 15 percent less in 2020 than GHG emissions from business-as-usual conditions for a similar size project in year 2008. As modeling for the year 2008 is not an option in CalEEMod, the BAU emissions were modeled for year 2010. The operating emissions were based on the year 2020, which is the anticipated opening year for the proposed project. Each source of GHG emissions is described in greater detail below.

1. Area Sources

   Area sources include emissions from consumer products, landscape equipment and architectural coatings. No changes were made to the default area source emissions.

2. Energy Usage

   Energy usage includes emissions from the generation of electricity and natural gas used on-site. The energy usage was based on the CalEEMod default emissions. No changes were made to the default energy usage parameters.

3. Mobile Sources

   Mobile sources include emissions from the additional vehicle miles generated from the proposed project. The vehicle trips associated with the proposed project have been analyzed by inputting the project-generated vehicular trips from the Traffic Impact Analysis into the CalEEMod Model.

4. Solid Waste

Solid waste includes the GHG emissions generated from the processing of waste from the proposed project as well as the GHG emissions from the waste once it is interred into a landfill. The CalEEMod default value for waste generated was utilized in the analysis.

5. Water

Water includes the water used for the interior of the building as well as for landscaping and is based on the GHG emissions associated with the energy used to transport and filter the water. CalEEMod defaults were used.

6. Construction

The construction-related GHG emissions were also included in the analysis and were based on a 30 year amortization rate as recommended in the SCAQMD GHG Working Group meeting on November 19, 2009. The construction-related GHG emissions were calculated by CalEEMod and detailed above in Section VI.

B. Project Greenhouse Gas Emissions

To comply with the methodology called for in the SANBAG GHG reduction Plan, the project's year 2020 emissions were compared to the project's BAU emissions (which are emissions without the benefit of regulation, mitigation or project design features to reduce emissions). The BAU forecast does not take any credit for reductions from measures included in this Plan, including the Pavley greenhouse gas emissions standards for vehicles, full implementation of the Renewables Portfolio Standard beyond current levels of renewable energy, or the solar measures (CARB 2008). The project's BAU emissions would be approximately 1,141,086 551 metric tons of CO_2e per year and would exceed the SCAQMD draft threshold of significance of 3,000 metric tons of CO_2e per year for greenhouse gas emissions for all uses.

A summary of the BAU results are shown below in Table 13 and the CalEEMod Model run for the proposed project is provided in Appendix C. The data provided in Table 14 shows that the proposed project's mitigated year 2020 (opening year) emissions would be approximately 561,551 metric tons of CO_2e per year. Although the project still exceeds the SCAQMD draft threshold, it meets the percent reduction threshold called for in the SANBAG GHG Reduction Plan. With mitigation, compliance with regulation (such as Pavley, the Renewable Energy Standard, compliance with Green Building Standards and 2013 Title 24 standards [approximately 30% more efficient than 2008 Title 24 standards] etc.), and sequestration from the planting of at least 2,551 new trees on the project site, the project's year 2020 emissions would be reduced by 50.8 percent from BAU emissions; which meets the SANBAG GHG Reduction Plan threshold of a 15 percent reduction from BAU emissions. Therefore, with incorporation of mitigation measures 4 through 14, the proposed project would create not a cumulative significant impact to global climate change.

The project is subject to the requirements of the California Green Building Standards Code. On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. The Code is a comprehensive and uniform regulatory code for all residential, commercial and school buildings.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official.

The California Green Building Standards Code (code section in parentheses) requires:

- Water Efficiency and Conservation [Indoor Water Use (4.303.1)]. Fixtures and fixture fittings reducing the overall use of potable water within the building by at least 20 percent shall be provided. The 20 percent reduction shall be demonstrated by one of the following methods:

    - Prescriptive Method: Showerheads (≤ 2.0 gpm @ 80 psi); Residential Lavatory Faucets (≤ 1.5 gpm @ 60 psi); Nonresidential Lavatory Faucets (≤ .4 gpm @ 60 psi); Kitchen Faucets (≤ 1.8 gpm @ 60 psi); Toilets (≤ 1.28 gal/flush); and urinals (≤ 0.5 gal/flush).

    - Performance Method: Provide a calculation demonstrating a 20% reduction of indoor potable water using the baseline values set forth in Table 4.303.1. The calculation will be limited to the total water usage of showerheads, lavatory faucets, water closets and urinals within the dwelling.

- Water Efficiency and Conservation [Outdoor Water Use (4.304.1)]. Irrigation Controllers. Automatic irrigation system controllers for landscaping provided by the builder and installed at the time of final inspection shall comply with the following:

    - Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' watering needs as weather or soil conditions change.

    - Weather-based controllers without integral rain sensors or communication systems that account for rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s).

- Construction Waste Reduction of at least 50 percent (4.408.1). Recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4; OR

meet a more stringent local construction and demolition waste management ordinance. Documentation is required per Section 4.408.5. Exceptions:

- Excavated soil and land-clearing debris.
- Alternate waste reduction methods developed by working with local enforcing agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.
- The enforcing agency may make exceptions to the requirements of this section when jobsites are located in areas beyond the haul boundaries of the diversion facility.

- Materials pollution control (4.504.1 – 4.504.6). Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring and particleboard.

- Installer and Special Inspector Qualifications (702.1-702.2). Mandatory special installer inspector qualifications for installation and inspection of energy systems (e.g., heat furnace, air conditioner, mechanical equipment).

C. <u>Greenhouse Gas Plan Consistency</u>

Through SANBAG, the City of Colton forms the Colton Chapter of the San Bernardino County Regional GHG Reduction Plan. The Plan has been prepared to assist the City in conforming to the GHG emissions reductions as mandated under AB 32. Based on the CARB Scoping Plan, reducing GHG emissions to 1990 levels by 2020 means cutting approximately 30 percent from business-as-usual (BAU) emissions levels, or about 15 percent from year 2008 levels, which is the baseline year for the GHG Reduction Plan. Consistent with the CARB Scoping Plan, the City of Colton has chosen a reduction target of 15 percent below 2008 GHG emissions levels by 2020.

Therefore, a proposed project would be considered to create a significant cumulative GHG emissions impact if the proposed project's GHG emissions are not 15 percent less in 2020 than GHG emissions from business-as-usual conditions for a similar size project in year 2008. As stated above, and shown in Table 15, with mitigation, the project's year 2020 emissions are over 50 percent less than the project's BAU emissions. Therefore, the project is in compliance with the goal of the GHG Reduction Plan (see Table 14). Impacts are considered to be less than significant.

Table 13

Project-Related BAU* Greenhouse Gas Emissions[1]

Category	Greenhouse Gas Emissions (Metric Tons/Year)					
	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e
Area Sources[2]	29.21	60.90	90.11	0.09	0.00	92.69
Energy Usage[3]	0.00	33,755.47	33,755.47	0.96	0.22	33,843.81
Mobile Sources[4]	0.00	3,516.52	3,516.52	67.92	0.00	1,093,025.54
Solid Waste[5]	1,184.45	0.00	1,184.45	70.00	0.00	2,654.43
Water and Wastewater[6]	297.72	8,482.91	8,780.62	30.82	0.77	9,667.50
Construction[7]	0.00	1,800.76	1,800.76	0.01	0.00	1,802.49
Total Emissions	1,511.38	47,616.56	49,127.93	169.81	0.99	**1,141,086.46**
SCAQMD Draft Threshold						**3,000**

* BAU means business as usual, calculated emissions for year 2010.

[1] Source: CalEEMod Version 2013.2.2

[2] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.

[3] Energy usage consist of GHG emissions from electricity and natural gas usage.

[4] Mobile sources consist of GHG emissions from vehicles

[5] Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.

[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.

[7] Construction GHG emissions based on a 30 year amortization rate.

Table 14

Mitigated Project-Related Greenhouse Gas Emissions 2020[1]

Category	Greenhouse Gas Emissions (Metric Tons/Year)					
	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e
Area Sources[2]	0.00	64.20	64.20	0.01	0.00	64.67
Energy Usage[3]	0.00	28,627.32	28,627.32	0.82	0.20	28,701.60
Mobile Sources[4]	0.00	3,516.52	3,516.52	18.35	0.00	523,319.03
Solid Waste[5]	587.66	51.18	638.83	34.81	0.00	1,327.21
Water and Wastewater[6]	238.17	7,193.83	7,432.00	24.67	0.62	8,142.14
Construction[7]	0.00	1,800.76	1,800.76	0.01	0.00	1,802.49
Sequestration[8]						-1,806.11
Total Emissions	825.83	41,253.81	42,079.64	78.66	0.82	**561,551.03**
					Project's Percent Reduction from BAU	**50.79**
					Percent Reduction Threshold from GHG Reduction Plan	**15**
					Meets Reduction threshold?	**Yes**

[1] Source: CalEEMod Version 2013.2.2. Calculated emissions for year 2020.

[2] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.

[3] Energy usage consist of GHG emissions from electricity and natural gas usage.

[4] Mobile sources consist of GHG emissions from vehicles

[5] Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.

[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.

[7] Construction GHG emissions based on a 30 year amortization rate.

[8] From approximately 2551 new trees planted on-site

X. Air Quality Compliance

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

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

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

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

(2) Whether the project will exceed the assumptions in the AQMP in 2010 or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

A. Criterion 1 - Increase in the Frequency or Severity of Violations

Based on the air quality modeling analysis contained in this Air Analysis, even with implementation of Mitigation Measures 1, 2 and 3, short-term construction impacts would still result in significant impacts based on the SCAQMD regional thresholds of significance. This Air Analysis also found that even with implementation of Mitigation Measures 4 through 14, long-term operations impacts would still result in significant impacts based on the SCAQMD local, regional, and toxic air contaminant thresholds of significance.

Therefore, the proposed project will contribute to the exceedance of any air pollutant concentration standards and is found to be inconsistent with the AQMP for the first criterion.

B. Criterion 2 - Exceed Assumptions in the AQMP?

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to insure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. The Regional Comprehensive Plan and Guide (RCP&G) consists of three sections: Core Chapters, Ancillary Chapters, and Bridge Chapters. The Growth Management, Regional Mobility, Air Quality, Water Quality, and Hazardous Waste Management chapters constitute the Core Chapters of the document. These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA. For this project, the City of Colton General Plan defines the assumptions that are represented in the AQMP.

Under the West Valley Specific Plan (WVSP) amendment, the CHCCSP project area may be developed with a variety of land uses including retail, office, business park, residential, and open space for recreation uses. Habitat conservation is also a component of the CHCCSP. Therefore, the proposed project would not result in an inconsistency with the current land use designation. Therefore, the proposed project is not anticipated to exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP for the second criterion.

However, based on the above, the project fails to meet Criterion 1; therefore, the proposed project will result in an inconsistency with the SCAQMD AQMP. A significant and unavoidable impact will occur.

XI. Mitigation Measures

A. Construction Measures

Mitigation Measure 1. The project applicant shall require that the grading contractors comply with SCAQMD Rule 403 minimum requirements for controlling fugitive dust and limit the grading area to no more than 5 acres per day.

Mitigation Measure 2. The project applicant shall require that architectural coating products are used that do not exceed more than 5g/L VOC content.

Mitigation Measure 3. The project applicant shall require that all diesel construction equipment used on -site be certified Tier 4 Final, with level 3 diesel particulate filters and oxidative catalysts that are at least 25 percent efficient.

B. Operational Measures

Mitigation Measure 4. The project applicant shall provide sidewalks along and within the property boundaries.

Mitigation Measure 5. The project applicant shall require that any future tenants institute a ride sharing program and employee vanpool/shuttle that is open to all employees.

Mitigation Measure 6. The project applicant shall ensure that local school district serving the project will offer a school bus program for children of future residents.

Mitigation Measure 7. The project applicant shall require that any future commercial tenants restrict delivery truck idling on the project site.

Mitigation Measure 8. The project applicant shall require all future tenants to institute a recycling program that reduces waste to landfills by a minimum of 50 percent and includes designated recycling bins at each proposed trash storage area and requires all green waste to be processed at a recycling or composting facility.

Mitigation Measure 9. The project applicant shall require that all building structures exceed 2013 Title 24, Part 6 Standards by 3 percent, and meet Green Building Code Standards.

Mitigation Measure 10. The project applicant shall require that all faucets, toilets and showers installed in the proposed structures utilize low-flow fixtures.

Mitigation Measure 11. The project applicant shall require that a water-efficient irrigation system be installed that conforms to the requirements of Colton Municipal Code.

Mitigation Measure 12. The project applicant shall require that ENERGY STAR-compliant appliances are installed wherever appliances are needed in buildings on-site and that natural gas only hearths be installed when needed.

Mitigation Measure 13. The project applicant shall require that high-efficiency lighting be installed on-site that is at least 10% more efficient than standard lighting.

Mitigation Measure 14. The project applicant shall require that architectural coating products used for maintenance/re-application do not exceed more than 5g/L VOC content.

XII. References

California Air Pollution Control Officers Association

2009 Health Risk Assessments for Proposed Land Use Projects

California Air Resources Board

2008 Resolution 08-43

2008 Airborne Toxic Control Measure for in-use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, Section 2477 of Division 3, Chapter 9, Title 13, California Code of Regulations

2008 Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act

2008 ARB Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk – Frequently Asked Questions

2008 Climate Change Scoping Plan, a framework for change.

2011 Supplement to the AB 32 Scoping Plan Functional Equivalent Document

2013 Historical Air Quality, Top 4 Summary

City of Colton

1987 Final Preliminary Plan for the City of Colton

2013 City of Colton General Plan Update Draft Environmental Impact Report

2013 Colton's Hub City Center Specific Plan. October 29.

Governor's Office of Planning and Research

2008 CEQA and Climate: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review

2009 CEQA Guideline Sections to be Added or Amended

Kunzman Associates, Inc.

2013 Colton's Hub City Center Specific Plan Traffic Impact Analysis

Mestre Greve Associates.

2008 Diesel Particulates Health Risk Assessment. West Valley Specific Plan Amendment. October 15.

Office of Environmental Health Hazard Assessment
2003 Air Toxics Hot Spots Program Risk Assessment Guidelines

San Bernardino Associated Governments (SANBAG)
2013 San Bernardino County Regional Greenhouse Gas Emissions Inventories and Reduction Plan Environmental Impact Report. Volume VI (Section 4.5 [City of Colton]).

South Coast Air Quality Management District
1993 CEQA Air Quality Handbook

2003 Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis

2005 Rule 403 Fugitive Dust

2007 2007 Air Quality Management Plan

2008 Final Localized Significance Threshold Methodology, Revised

2008 Draft Report Multiple Air Toxics Exposure Study in the South Coast Air Basin, MATES III

2011 Appendix A Calculation Details for CalEEMod

2012 Final 2012 Air Quality Management Plan

U.S. Department of Energy
1999 A Full Fuel-Cycle Analysis of Energy and Emissions Impacts of Transportation Fuels Produced from Natural Gas.

2002 UPS CNG Truck Fleet Alternative Fuel Truck Evaluation Project

2005 Emission Testing of Washington Metropolitan Area Transit Authority (WMATA) Natural Gas and Diesel Transit Buses

Appendices

Appendix A – Glossary of Terms

Appendix B – CalEEMod Model Daily Emissions Printouts

Appendix C – CalEEMod Model Annual Emissions Printouts and Mitigation Report

APPENDIX A

Glossary of Terms

AQMP	Air Quality Management Plan
BACT	Best Available Control Technologies
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH4	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DPM	Diesel particulate matter
EPA	U.S. Environmental Protection Agency
GHG	Greenhouse gas
GWP	Global warming potential
HIDPM	Hazard Index Diesel Particulate Matter
HFCs	Hydrofluorocarbons
IPCC	International Panel on Climate Change
LCFS	Low Carbon Fuel Standard
LST	Localized Significant Thresholds
$MTCO_2e$	Metric tons of carbon dioxide equivalent
$MMTCO_2e$	Million metric tons of carbon dioxide equivalent
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NOx	Nitrogen Oxides
NO_2	Nitrogen dioxide
N_2O	Nitrous oxide
O_3	Ozone
OPR	Governor's Office of Planning and Research
PFCs	Perfluorocarbons
PM	Particle matter
PM10	Particles that are less than 10 micrometers in diameter
PM2.5	Particles that are less than 2.5 micrometers in diameter
PMI	Point of maximum impact
PPM	Parts per million
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SANBAG	San Bernardino Association of Governments
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District

SF_6	Sulfur hexafluoride
SIP	State Implementation Plan
SOx	Sulfur Oxides
T7	Heavy-Heavy Duty Trucks from EMFAC 2007 classifications
TAC	Toxic air contaminants
VOC	Volatile organic compounds

APPENDIX B

CalEEMod Model Daily Emissions Printouts

Colton Hub City Center 2020 - 1

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	130.68	1000sqft	3.00	130,680.00	0
Office Park	4,217.45	1000sqft	96.82	4,217,450.00	0
Other Asphalt Surfaces	144.74	Acre	144.74	6,304,874.40	0
Other Non-Asphalt Surfaces	48.90	Acre	48.90	2,130,084.00	0
City Park	4.51	Acre	4.51	196,455.60	0
Single Family Housing	275.00	Dwelling Unit	42.10	495,000.00	787
Regional Shopping Center	68.05	1000sqft	1.56	68,050.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 341.63 acres of the 373.2 acres

Construction Phase - Timing from developer for the entire project.

Grading - Project is 373.2 acres

Architectural Coating - SCAQMD Rule 1113 Paint limited to 50g/L.

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating - SCAQMD Rule 1113

Sequestration - Conservative estimate of 2 trees per dwelling unit and 25 trees per acre for parks and open spaces plus ~678 trees along roadways.

Construction Off-road Equipment Mitigation - Comstruction emissions if all Tier 4 final off-road vehicles were used with a level 3 DPF and an oxidation catalyst that (per CARB) can achieve a 25% reduction of TPM.

Mobile Land Use Mitigation - 1.21 miles to downtown Colton. Omni trans bus routes along Valley Blvd, Pepper Avenue, W San Bernardino Avenue, N Windrose Avenue. Jobs per acre estimates from appendix E of Riverside General Plan.

Mobile Commute Mitigation - Estimated that 50 percent of future residents would use a school bus program if one was implemented. Employee passenger vehicle traffic makes up approximately 19% of traffic for land uses analyzed.

Area Mitigation - Use of coatings that have no more than 5g/L VOC. Only natural gas hearths would be installed.

Energy Mitigation - 2013 Title 24 is 30% more efficient that 2008 Title 24 standards. Project will install high efficiency lights that are 10% more efficient than current standards. Energy STAR appliances will be installed at residential uses.

Water Mitigation - Green Building standards

Waste Mitigation - Institute recycling and composting on-site

Table Name	Column Name	Default Value	New Value
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tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
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tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	5
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tblConstructionPhase	PhaseEndDate	8/1/2023	12/31/2019
tblConstructionPhase	PhaseEndDate	8/1/2023	12/31/2019
tblConstructionPhase	PhaseStartDate	1/1/2020	6/1/2016
tblConstructionPhase	PhaseStartDate	1/1/2020	6/1/2016
tblGrading	AcresOfGrading	652.50	373.20
tblLandUse	LotAcreage	89.29	42.10
tblProjectCharacteristics	OperationalYear	2014	2020
tblSequestration	NumberOfNewTrees	0.00	2,551.00
tblVehicleTrips	ST_TR	1.59	16.74
tblVehicleTrips	ST_TR	2.37	2.17
tblVehicleTrips	ST_TR	1.64	149.79
tblVehicleTrips	ST_TR	49.97	86.57
tblVehicleTrips	ST_TR	10.08	9.91
tblVehicleTrips	SU_TR	1.59	16.74
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	0.76	149.79
tblVehicleTrips	SU_TR	25.24	50.98
tblVehicleTrips	SU_TR	8.77	8.62
tblVehicleTrips	WD_TR	1.59	1.89
tblVehicleTrips	WD_TR	11.01	12.31
tblVehicleTrips	WD_TR	11.42	149.79
tblVehicleTrips	WD_TR	42.94	77.69
tblVehicleTrips	WD_TR	9.57	9.52

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					
2015	6.8714	79.1634	52.3721	0.0646	7.7620	3.8039	11.5660	3.5333	3.4996	7.0329	0.0000	6,728.4939	6,728.4939	1.9491	0.0000	6,769.4253
2016	119.2169	274.9097	675.9585	1.3919	82.6873	7.0715	89.7588	22.2056	6.5581	28.7637	0.0000	124,695.4459	124,695.4459	5.3192	0.0000	124,807.1490
2017	114.3296	250.0222	621.1445	1.3911	82.6884	6.3821	89.0706	22.2060	5.9200	28.1260	0.0000	121,022.7812	121,022.7812	4.9937	0.0000	121,127.6483
2018	109.7829	226.4317	572.0841	1.3900	82.6862	5.6952	88.3814	22.2050	5.2839	27.4889	0.0000	117,542.2374	117,542.2374	4.7260	0.0000	117,641.4833
2019	106.5311	206.5342	533.6103	1.3820	82.6846	5.2160	87.9006	22.2042	4.8381	27.0423	0.0000	113,625.6772	113,625.6772	4.4644	0.0000	113,719.4295
Total	**456.7319**	**1,037.0613**	**2,455.1695**	**5.6195**	**338.5086**	**28.1687**	**366.6773**	**92.3541**	**26.0997**	**118.4537**	**0.0000**	**483,614.6356**	**483,614.6356**	**21.4524**	**0.0000**	**484,065.1354**

2.1 Overall Construction (Maximum Daily Emission)

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					
2015	0.8527	2.5751	36.3109	0.0646	3.1636	0.0169	3.1804	1.4141	0.0167	1.4309	0.0000	6,728.4939	6,728.4939	1.9491	0.0000	6,769.4253
2016	113.9832	224.3056	676.9214	1.3919	82.6873	3.6587	86.3460	22.2056	3.3651	25.5708	0.0000	124,695.4459	124,695.4459	5.3192	0.0000	124,807.1490
2017	109.6182	203.7955	622.5913	1.3911	82.6884	3.3013	85.9898	22.2060	3.0385	25.2445	0.0000	121,022.7812	121,022.7812	4.9937	0.0000	121,127.6483
2018	105.8349	186.6627	574.3738	1.3900	82.6862	3.1239	85.8101	22.2050	2.8772	25.0822	0.0000	117,542.2374	117,542.2374	4.7260	0.0000	117,641.4833
2019	103.1179	171.4588	536.4545	1.3820	82.6846	3.0049	85.6895	22.2042	2.7686	24.9728	0.0000	113,625.6772	113,625.6772	4.4644	0.0000	113,719.4295
Total	**433.4069**	**788.7978**	**2,446.6519**	**5.6195**	**333.9101**	**13.1058**	**347.0158**	**90.2349**	**12.0661**	**102.3010**	**0.0000**	**483,614.6356**	**483,614.6356**	**21.4524**	**0.0000**	**484,065.1353**

	ROG	NOx	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	**5.11**	**23.94**	**0.35**	**0.00**	**1.36**	**53.47**	**5.36**	**2.29**	**53.77**	**13.64**	**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	408.2764	2.0960	161.4639	0.2212		21.1337	21.1337		21.1304	21.1304	2,575.9026	4,991.8618	7,567.7643	7.7244	0.1748	7,784.1749
Energy	0.6757	5.9928	4.0622	0.0369		0.4668	0.4668		0.4668	0.4668		7,370.9372	7,370.9372	0.1413	0.1351	7,415.7954
Mobile	2,005.6034	5,915.3984	23,401.8901	70.0247	4,585.9660	97.0834	4,683.0494	1,224.7669	89.4910	1,314.2579		5,423,493.1867	5,423,493.1867	172.8029		5,427,122.0478
Total	**2,414.5554**	**5,923.4871**	**23,567.4162**	**70.2827**	**4,585.9660**	**118.6839**	**4,704.6498**	**1,224.7669**	**111.0882**	**1,335.8551**	**2,575.9026**	**5,435,855.9856**	**5,438,431.8881**	**180.6686**	**0.3100**	**5,442,322.0181**

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	271.1033	0.2677	23.2636	1.2300e-003		0.4588	0.4588		0.4553	0.4553	0.0000	5,283.0382	5,283.0382	0.1430	0.0961	5,315.8285
Energy	0.4877	4.3205	2.8977	0.0266		0.3369	0.3369		0.3369	0.3369		5,319.8530	5,319.8530	0.1020	0.0975	5,352.2287
Mobile	1,726.5969	3,785.1117	15,757.2192	40.9280	2,629.9387	57.9516	2,687.8903	702.3737	53.4284	755.8020		3,169,916.5344	3,169,916.5344	105.1619		3,172,124.9336
Total	**1,998.1879**	**3,789.6999**	**15,783.3804**	**40.9558**	**2,629.9387**	**58.7473**	**2,688.6861**	**702.3737**	**54.2206**	**756.5943**	**0.0000**	**3,180,519.4256**	**3,180,519.4256**	**105.4068**	**0.1936**	**3,182,792.9908**

	ROG	NOx	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	**17.24**	**36.02**	**33.03**	**41.73**	**42.65**	**50.50**	**42.85**	**42.65**	**51.19**	**43.36**	**100.00**	**41.49**	**41.52**	**41.66**	**37.53**	**41.52**

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	1/1/2015	12/31/2015	5	261	
2	Building Construction	Building Construction	1/1/2016	12/31/2019	5	1043	
3	Paving	Paving	6/1/2016	12/31/2019	5	935	
4	Architectural Coating	Architectural Coating	6/1/2016	12/31/2019	5	935	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 373.2

Acres of Paving: 0

Residential Indoor: 1,002,375; Residential Outdoor: 334,125; Non-Residential Indoor: 19,571,391; Non-Residential Outdoor: 6,523,797 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	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	125	0.42
Paving	Paving Equipment	2	8.00	130	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	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	5,137.00	2,168.00	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	1,027.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2015

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					7.5385	0.0000	7.5385	3.4740	0.0000	3.4740			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980		6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**7.5385**	**3.8022**	**11.3407**	**3.4740**	**3.4980**	**6.9720**		**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

3.2 Grading - 2015

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	0.0962	0.1168	1.5321	2.8100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6000e-003	0.0609		242.2506	242.2506	0.0127		242.5173
Total	**0.0962**	**0.1168**	**1.5321**	**2.8100e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6000e-003**	**0.0609**		**242.2506**	**242.2506**	**0.0127**		**242.5173**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9400	0.0000	2.9400	1.3549	0.0000	1.3549			0.0000			0.0000
Off-Road	0.7564	2.4584	34.7787	0.0618		0.0151	0.0151		0.0151	0.0151	0.0000	6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**0.7564**	**2.4584**	**34.7787**	**0.0618**	**2.9400**	**0.0151**	**2.9551**	**1.3549**	**0.0151**	**1.3700**	**0.0000**	**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

3.2 Grading - 2015

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	0.0962	0.1168	1.5321	2.8100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6000e-003	0.0609		242.2506	242.2506	0.0127		242.5173
Total	**0.0962**	**0.1168**	**1.5321**	**2.8100e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6000e-003**	**0.0609**		**242.2506**	**242.2506**	**0.0127**		**242.5173**

3.3 Building Construction - 2016

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	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.3 Building Construction - 2016

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	18.3744	189.3427	215.1148	0.4712	13.6207	3.1340	16.7546	3.8888	2.8821	6.7709		47,271.3487	47,271.3487	0.3404		47,278.4963
Worker	22.0977	26.8552	353.8582	0.7221	57.4195	0.4261	57.8457	15.2279	0.3915	15.6194		59,988.7421	59,988.7421	2.9804		60,051.3300
Total	**40.4721**	**216.1979**	**568.9730**	**1.1934**	**71.0402**	**3.5601**	**74.6003**	**19.1168**	**3.2736**	**22.3903**		**107,260.0908**	**107,260.0908**	**3.3207**		**107,329.8262**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3265	1.6717	17.4110	0.0268		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**0.3265**	**1.6717**	**17.4110**	**0.0268**		**6.0900e-003**	**6.0900e-003**		**6.0900e-003**	**6.0900e-003**	**0.0000**	**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.3 Building Construction - 2016

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	18.3744	189.3427	215.1148	0.4712	13.6207	3.1340	16.7546	3.8888	2.8821	6.7709		47,271.3487	47,271.3487	0.3404		47,278.4963
Worker	22.0977	26.8552	353.8582	0.7221	57.4195	0.4261	57.8457	15.2279	0.3915	15.6194		59,988.7421	59,988.7421	2.9804		60,051.3300
Total	**40.4721**	**216.1979**	**568.9730**	**1.1934**	**71.0402**	**3.5601**	**74.6003**	**19.1168**	**3.2736**	**22.3903**		**107,260.0908**	**107,260.0908**	**3.3207**		**107,329.8262**

3.3 Building Construction - 2017

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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.3 Building Construction - 2017

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	16.9719	172.1733	204.0929	0.4706	13.6218	2.7956	16.4174	3.8892	2.5712	6.4603		46,493.5381	46,493.5381	0.3289		46,500.4445
Worker	19.6349	24.0779	317.8533	0.7219	57.4195	0.4103	57.8299	15.2279	0.3784	15.6064		57,635.9353	57,635.9353	2.7323		57,693.3126
Total	**36.6067**	**196.2511**	**521.9462**	**1.1925**	**71.0413**	**3.2059**	**74.2473**	**19.1171**	**2.9496**	**22.0667**		**104,129.4734**	**104,129.4734**	**3.0611**		**104,193.7571**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3265	1.6717	17.4110	0.0268		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**0.3265**	**1.6717**	**17.4110**	**0.0268**		**6.0900e-003**	**6.0900e-003**		**6.0900e-003**	**6.0900e-003**	**0.0000**	**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.3 Building Construction - 2017

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	16.9719	172.1733	204.0929	0.4706	13.6218	2.7956	16.4174	3.8892	2.5712	6.4603		46,493.5381	46,493.5381	0.3289		46,500.4445
Worker	19.6349	24.0779	317.8533	0.7219	57.4195	0.4103	57.8299	15.2279	0.3784	15.6064		57,635.9353	57,635.9353	2.7323		57,693.3126
Total	**36.6067**	**196.2511**	**521.9462**	**1.1925**	**71.0413**	**3.2059**	**74.2473**	**19.1171**	**2.9496**	**22.0667**		**104,129.4734**	**104,129.4734**	**3.0611**		**104,193.7571**

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	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

3.3 Building Construction - 2018

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	15.7095	157.8589	192.6158	0.4698	13.6196	2.6301	16.2496	3.8882	2.4193	6.3075		45,697.9197	45,697.9197	0.3266		45,704.7789
Worker	17.5390	21.7348	287.3087	0.7217	57.4195	0.4004	57.8200	15.2279	0.3705	15.5985		55,458.3675	55,458.3675	2.5231		55,511.3535
Total	**33.2485**	**179.5937**	**479.9245**	**1.1915**	**71.0391**	**3.0305**	**74.0696**	**19.1161**	**2.7898**	**21.9060**		**101,156.2873**	**101,156.2873**	**2.8498**		**101,216.1324**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3265	1.6717	17.4110	0.0268		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**0.3265**	**1.6717**	**17.4110**	**0.0268**		**6.0900e-003**	**6.0900e-003**		**6.0900e-003**	**6.0900e-003**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

3.3 Building Construction - 2018

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	15.7095	157.8589	192.6158	0.4698	13.6196	2.6301	16.2496	3.8882	2.4193	6.3075		45,697.9197	45,697.9197	0.3266		45,704.7789
Worker	17.5390	21.7348	287.3087	0.7217	57.4195	0.4004	57.8200	15.2279	0.3705	15.5985		55,458.3675	55,458.3675	2.5231		55,511.3535
Total	**33.2485**	**179.5937**	**479.9245**	**1.1915**	**71.0391**	**3.0305**	**74.0696**	**19.1161**	**2.7898**	**21.9060**		**101,156.2873**	**101,156.2873**	**2.8498**		**101,216.1324**

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	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

3.3 Building Construction - 2019

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	14.8914	144.9726	186.8340	0.4665	13.6179	2.5224	16.1404	3.8874	2.3204	6.2078		44,652.9381	44,652.9381	0.3157		44,659.5667
Worker	15.9604	19.8079	260.5907	0.7179	57.4195	0.3910	57.8106	15.2279	0.3625	15.5904		53,125.4724	53,125.4724	2.3263		53,174.3246
Total	**30.8518**	**164.7805**	**447.4247**	**1.1843**	**71.0375**	**2.9135**	**73.9509**	**19.1154**	**2.6829**	**21.7982**		**97,778.4105**	**97,778.4105**	**2.6420**		**97,833.8913**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3265	1.6717	17.4110	0.0268		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**0.3265**	**1.6717**	**17.4110**	**0.0268**		**6.0900e-003**	**6.0900e-003**		**6.0900e-003**	**6.0900e-003**	**0.0000**	**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

3.3 Building Construction - 2019

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	14.8914	144.9726	186.8340	0.4665	13.6179	2.5224	16.1404	3.8874	2.3204	6.2078		44,652.9381	44,652.9381	0.3157		44,659.5667
Worker	15.9604	19.8079	260.5907	0.7179	57.4195	0.3910	57.8106	15.2279	0.3625	15.5904		53,125.4724	53,125.4724	2.3263		53,174.3246
Total	**30.8518**	**164.7805**	**447.4247**	**1.1843**	**71.0375**	**2.9135**	**73.9509**	**19.1154**	**2.6829**	**21.7982**		**97,778.4105**	**97,778.4105**	**2.6420**		**97,833.8913**

3.4 Paving - 2016

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	2.0898	22.3859	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601		2,316.3767	2,316.3767	0.6987		2,331.0495
Paving	0.4056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4954**	**22.3859**	**14.8176**	**0.0223**		**1.2610**	**1.2610**		**1.1601**	**1.1601**		**2,316.3767**	**2,316.3767**	**0.6987**		**2,331.0495**

3.4 Paving - 2016

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	0.0645	0.0784	1.0333	2.1100e-003	0.1677	1.2400e-003	0.1689	0.0445	1.1400e-003	0.0456		175.1667	175.1667	8.7000e-003		175.3494
Total	**0.0645**	**0.0784**	**1.0333**	**2.1100e-003**	**0.1677**	**1.2400e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**175.1667**	**175.1667**	**8.7000e-003**		**175.3494**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2745	0.8921	16.9276	0.0223		5.4900e-003	5.4900e-003		5.4900e-003	5.4900e-003	0.0000	2,316.3767	2,316.3767	0.6987		2,331.0495
Paving	0.4056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6801**	**0.8921**	**16.9276**	**0.0223**		**5.4900e-003**	**5.4900e-003**		**5.4900e-003**	**5.4900e-003**	**0.0000**	**2,316.3767**	**2,316.3767**	**0.6987**		**2,331.0495**

3.4 Paving - 2016

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	0.0645	0.0784	1.0333	2.1100e-003	0.1677	1.2400e-003	0.1689	0.0445	1.1400e-003	0.0456		175.1667	175.1667	8.7000e-003		175.3494
Total	**0.0645**	**0.0784**	**1.0333**	**2.1100e-003**	**0.1677**	**1.2400e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**175.1667**	**175.1667**	**8.7000e-003**		**175.3494**

3.4 Paving - 2017

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	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.4056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.3130**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**		**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

3.4 Paving - 2017

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	0.0573	0.0703	0.9281	2.1100e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		168.2965	168.2965	7.9800e-003		168.4640
Total	**0.0573**	**0.0703**	**0.9281**	**2.1100e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**168.2965**	**168.2965**	**7.9800e-003**		**168.4640**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2745	0.8921	16.9276	0.0223		5.4900e-003	5.4900e-003		5.4900e-003	5.4900e-003	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.4056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6801**	**0.8921**	**16.9276**	**0.0223**		**5.4900e-003**	**5.4900e-003**		**5.4900e-003**	**5.4900e-003**	**0.0000**	**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

3.4 Paving - 2017

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	0.0573	0.0703	0.9281	2.1100e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		168.2965	168.2965	7.9800e-003		168.4640
Total	**0.0573**	**0.0703**	**0.9281**	**2.1100e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**168.2965**	**168.2965**	**7.9800e-003**		**168.4640**

3.4 Paving - 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	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.4056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0170**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**		**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

3.4 Paving - 2018

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	0.0512	0.0635	0.8389	2.1100e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0456		161.9380	161.9380	7.3700e-003		162.0927
Total	**0.0512**	**0.0635**	**0.8389**	**2.1100e-003**	**0.1677**	**1.1700e-003**	**0.1688**	**0.0445**	**1.0800e-003**	**0.0456**		**161.9380**	**161.9380**	**7.3700e-003**		**162.0927**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2745	0.8921	16.9276	0.0223		5.4900e-003	5.4900e-003		5.4900e-003	5.4900e-003	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.4056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6801**	**0.8921**	**16.9276**	**0.0223**		**5.4900e-003**	**5.4900e-003**		**5.4900e-003**	**5.4900e-003**	**0.0000**	**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

3.4 Paving - 2018

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	0.0512	0.0635	0.8389	2.1100e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0456		161.9380	161.9380	7.3700e-003		162.0927
Total	**0.0512**	**0.0635**	**0.8389**	**2.1100e-003**	**0.1677**	**1.1700e-003**	**0.1688**	**0.0445**	**1.0800e-003**	**0.0456**		**161.9380**	**161.9380**	**7.3700e-003**		**162.0927**

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	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.9731	2,208.9731	0.6989		2,223.6499
Paving	0.4056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8314**	**14.9353**	**14.3652**	**0.0223**		**0.8094**	**0.8094**		**0.7447**	**0.7447**		**2,208.9731**	**2,208.9731**	**0.6989**		**2,223.6499**

3.4 Paving - 2019

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	0.0466	0.0578	0.7609	2.1000e-003	0.1677	1.1400e-003	0.1688	0.0445	1.0600e-003	0.0455		155.1260	155.1260	6.7900e-003		155.2686
Total	**0.0466**	**0.0578**	**0.7609**	**2.1000e-003**	**0.1677**	**1.1400e-003**	**0.1688**	**0.0445**	**1.0600e-003**	**0.0455**		**155.1260**	**155.1260**	**6.7900e-003**		**155.2686**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2745	0.8921	16.9276	0.0223		5.4900e-003	5.4900e-003		5.4900e-003	5.4900e-003	0.0000	2,208.9731	2,208.9731	0.6989		2,223.6499
Paving	0.4056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6801**	**0.8921**	**16.9276**	**0.0223**		**5.4900e-003**	**5.4900e-003**		**5.4900e-003**	**5.4900e-003**	**0.0000**	**2,208.9731**	**2,208.9731**	**0.6989**		**2,223.6499**

3.4 Paving - 2019

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	0.0466	0.0578	0.7609	2.1000e-003	0.1677	1.1400e-003	0.1688	0.0445	1.0600e-003	0.0455		155.1260	155.1260	6.7900e-003		155.2686
Total	**0.0466**	**0.0578**	**0.7609**	**2.1000e-003**	**0.1677**	**1.1400e-003**	**0.1688**	**0.0445**	**1.0600e-003**	**0.0455**		**155.1260**	**155.1260**	**6.7900e-003**		**155.2686**

3.5 Architectural Coating - 2016

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	67.9925					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**68.3609**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.5 Architectural Coating - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	4.4178	5.3689	70.7441	0.1444	11.4794	0.0852	11.5646	3.0444	0.0783	3.1227		11,993.0773	11,993.0773	0.5958		12,005.5900
Total	**4.4178**	**5.3689**	**70.7441**	**0.1444**	**11.4794**	**0.0852**	**11.5646**	**3.0444**	**0.0783**	**3.1227**		**11,993.0773**	**11,993.0773**	**0.5958**		**12,005.5900**

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	67.9925					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.0966	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**68.0222**	**0.0966**	**1.8324**	**2.9700e-003**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.5 Architectural Coating - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	4.4178	5.3689	70.7441	0.1444	11.4794	0.0852	11.5646	3.0444	0.0783	3.1227		11,993.0773	11,993.0773	0.5958		12,005.5900
Total	**4.4178**	**5.3689**	**70.7441**	**0.1444**	**11.4794**	**0.0852**	**11.5646**	**3.0444**	**0.0783**	**3.1227**		**11,993.0773**	**11,993.0773**	**0.5958**		**12,005.5900**

3.5 Architectural Coating - 2017

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	67.9925					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**68.3248**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.5 Architectural Coating - 2017

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	3.9254	4.8137	63.5459	0.1443	11.4794	0.0820	11.5615	3.0444	0.0757	3.1201		11,522.6992	11,522.6992	0.5462		11,534.1701
Total	**3.9254**	**4.8137**	**63.5459**	**0.1443**	**11.4794**	**0.0820**	**11.5615**	**3.0444**	**0.0757**	**3.1201**		**11,522.6992**	**11,522.6992**	**0.5462**		**11,534.1701**

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	67.9925					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.0966	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**68.0222**	**0.0966**	**1.8324**	**2.9700e-003**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.5 Architectural Coating - 2017

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	3.9254	4.8137	63.5459	0.1443	11.4794	0.0820	11.5615	3.0444	0.0757	3.1201		11,522.6992	11,522.6992	0.5462		11,534.1701
Total	**3.9254**	**4.8137**	**63.5459**	**0.1443**	**11.4794**	**0.0820**	**11.5615**	**3.0444**	**0.0757**	**3.1201**		**11,522.6992**	**11,522.6992**	**0.5462**		**11,534.1701**

3.5 Architectural Coating - 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					
Archit. Coating	67.9925					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**68.2911**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

3.5 Architectural Coating - 2018

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	3.5064	4.3453	57.4394	0.1443	11.4794	0.0801	11.5595	3.0444	0.0741	3.1185		11,087.3552	11,087.3552	0.5044		11,097.9482
Total	**3.5064**	**4.3453**	**57.4394**	**0.1443**	**11.4794**	**0.0801**	**11.5595**	**3.0444**	**0.0741**	**3.1185**		**11,087.3552**	**11,087.3552**	**0.5044**		**11,097.9482**

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	67.9925					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.0966	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**68.0222**	**0.0966**	**1.8324**	**2.9700e-003**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

3.5 Architectural Coating - 2018

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	3.5064	4.3453	57.4394	0.1443	11.4794	0.0801	11.5595	3.0444	0.0741	3.1185		11,087.3552	11,087.3552	0.5044		11,097.9482
Total	**3.5064**	**4.3453**	**57.4394**	**0.1443**	**11.4794**	**0.0801**	**11.5595**	**3.0444**	**0.0741**	**3.1185**		**11,087.3552**	**11,087.3552**	**0.5044**		**11,097.9482**

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	67.9925					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		281.9473
Total	**68.2589**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

3.5 Architectural Coating - 2019

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	3.1908	3.9600	52.0979	0.1435	11.4794	0.0782	11.5576	3.0444	0.0725	3.1169		10,620.9578	10,620.9578	0.4651		10,630.7244
Total	**3.1908**	**3.9600**	**52.0979**	**0.1435**	**11.4794**	**0.0782**	**11.5576**	**3.0444**	**0.0725**	**3.1169**		**10,620.9578**	**10,620.9578**	**0.4651**		**10,630.7244**

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	67.9925					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.0966	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**68.0222**	**0.0966**	**1.8324**	**2.9700e-003**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

3.5 Architectural Coating - 2019

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	3.1908	3.9600	52.0979	0.1435	11.4794	0.0782	11.5576	3.0444	0.0725	3.1169		10,620.9578	10,620.9578	0.4651		10,630.7244
Total	**3.1908**	**3.9600**	**52.0979**	**0.1435**	**11.4794**	**0.0782**	**11.5576**	**3.0444**	**0.0725**	**3.1169**		**10,620.9578**	**10,620.9578**	**0.4651**		**10,630.7244**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

Provide Riade Sharing Program

Implement School Bus 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	lb/day										lb/day					
Mitigated	1,726.5969	3,785.1117	15,757.2192	40.9280	2,629.9387	57.9516	2,687.8903	702.3737	53.4284	755.8020		3,169,916.5344	3,169,916.5344	105.1619		3,172,124.9336
Unmitigated	2,005.6034	5,915.3984	23,401.8901	70.0247	4,585.9660	97.0834	4,683.0494	1,224.7669	89.4910	1,314.2579		5,423,493.1867	5,423,493.1867	172.8029		5,427,122.0478

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	8.52	75.50	75.50	79,590	45,632
General Office Building	1,608.67	283.58	137.21	3,895,273	2,233,265
Office Park	631,731.84	631,731.84	631731.84	2,134,401,227	1,223,707,950
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Regional Shopping Center	5,286.80	5,891.09	3469.19	11,059,641	6,360,412
Single Family Housing	2,618.00	2,725.25	2370.50	8,877,639	5,375,905
Total	641,253.83	640,707.25	637,784.24	2,158,313,370	1,237,723,164

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
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
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.468914	0.065172	0.173428	0.156844	0.056897	0.009079	0.016419	0.042157	0.001108	0.001337	0.005012	0.000672	0.002962

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.4877	4.3205	2.8977	0.0266		0.3369	0.3369		0.3369	0.3369		5,319.8530	5,319.8530	0.1020	0.0975	5,352.2287
NaturalGas Unmitigated	0.6757	5.9928	4.0622	0.0369		0.4668	0.4668		0.4668	0.4668		7,370.9372	7,370.9372	0.1413	0.1351	7,415.7954

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					
Office Park	35472.8	0.3826	3.4777	2.9213	0.0209		0.2643	0.2643		0.2643	0.2643		4,173.2704	4,173.2704	0.0800	0.0765	4,198.6683
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
Regional Shopping Center	432.537	4.6600e-003	0.0424	0.0356	2.5000e-004		3.2200e-003	3.2200e-003		3.2200e-003	3.2200e-003		50.8867	50.8867	9.8000e-004	9.3000e-004	51.1964
Single Family Housing	25440.8	0.2744	2.3446	0.9977	0.0150		0.1896	0.1896		0.1896	0.1896		2,993.0388	2,993.0388	0.0574	0.0549	3,011.2540
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	1306.8	0.0141	0.1281	0.1076	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003		153.7412	153.7412	2.9500e-003	2.8200e-003	154.6768
Total		**0.6757**	**5.9928**	**4.0622**	**0.0369**		**0.4668**	**0.4668**		**0.4668**	**0.4668**		**7,370.9372**	**7,370.9372**	**0.1413**	**0.1351**	**7,415.7955**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Office Park	24.831	0.2678	2.4344	2.0449	0.0146		0.1850	0.1850		0.1850	0.1850		2,921.2893	2,921.2893	0.0560	0.0536	2,939.0678
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
Regional Shopping Center	0.319555	3.4500e-003	0.0313	0.0263	1.9000e-004		2.3800e-003	2.3800e-003		2.3800e-003	2.3800e-003		37.5948	37.5948	7.2000e-004	6.9000e-004	37.8235
Single Family Housing	19.1535	0.2066	1.7651	0.7511	0.0113		0.1427	0.1427		0.1427	0.1427		2,253.3501	2,253.3501	0.0432	0.0413	2,267.0636
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0.91476	9.8700e-003	0.0897	0.0753	5.4000e-004		6.8200e-003	6.8200e-003		6.8200e-003	6.8200e-003		107.6188	107.6188	2.0600e-003	1.9700e-003	108.2738
Total		**0.4877**	**4.3205**	**2.8977**	**0.0266**		**0.3369**	**0.3369**		**0.3369**	**0.3369**		**5,319.8530**	**5,319.8530**	**0.1020**	**0.0975**	**5,352.2287**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	271.1033	0.2677	23.2636	1.2300e-003		0.4588	0.4588		0.4553	0.4553	0.0000	5,283.0382	5,283.0382	0.1430	0.0961	5,315.8285
Unmitigated	408.2764	2.0960	161.4639	0.2212		21.1337	21.1337		21.1304	21.1304	2,575.9026	4,991.8618	7,567.7643	7.7244	0.1748	7,784.1749

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	67.3353					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	268.1434					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	72.0599	1.8283	138.2265	0.2199		21.0068	21.0068		21.0035	21.0035	2,575.9026	4,950.0000	7,525.9026	7.6818	0.1748	7,741.4197
Landscaping	0.7378	0.2677	23.2374	1.2300e-003		0.1269	0.1269		0.1269	0.1269		41.8618	41.8618	0.0425		42.7552
Total	**408.2764**	**2.0960**	**161.4639**	**0.2211**		**21.1337**	**21.1337**		**21.1304**	**21.1304**	**2,575.9026**	**4,991.8618**	**7,567.7643**	**7.7244**	**0.1748**	**7,784.1749**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.7417					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	268.1434					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4804	2.0000e-005	0.0262	0.0000		0.3319	0.3319		0.3285	0.3285	0.0000	5,241.1765	5,241.1765	0.1005	0.0961	5,273.0734
Landscaping	0.7378	0.2677	23.2374	1.2300e-003		0.1269	0.1269		0.1269	0.1269		41.8618	41.8618	0.0425		42.7552
Total	**271.1033**	**0.2677**	**23.2636**	**1.2300e-003**		**0.4588**	**0.4588**		**0.4553**	**0.4553**	**0.0000**	**5,283.0382**	**5,283.0382**	**0.1430**	**0.0961**	**5,315.8286**

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

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Vegetation

Colton Hub City Center 2020 - 1

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	130.68	1000sqft	3.00	130,680.00	0
Office Park	4,217.45	1000sqft	96.82	4,217,450.00	0
Other Asphalt Surfaces	144.74	Acre	144.74	6,304,874.40	0
Other Non-Asphalt Surfaces	48.90	Acre	48.90	2,130,084.00	0
City Park	4.51	Acre	4.51	196,455.60	0
Single Family Housing	275.00	Dwelling Unit	42.10	495,000.00	787
Regional Shopping Center	68.05	1000sqft	1.56	68,050.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 341.63 acres of the 373.2 acres

Construction Phase - Timing from developer for the entire project.

Grading - Project is 373.2 acres

Architectural Coating - SCAQMD Rule 1113 Paint limited to 50g/L.

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating - SCAQMD Rule 1113

Sequestration - Conservative estimate of 2 trees per dwelling unit and 25 trees per acre for parks and open spaces plus ~678 trees along roadways.

Construction Off-road Equipment Mitigation - Comstruction emissions if all Tier 4 final off-road vehicles were used with a level 3 DPF and an oxidation catalyst that (per CARB) can achieve a 25% reduction of TPM.

Mobile Land Use Mitigation - 1.21 miles to downtown Colton. Omni trans bus routes along Valley Blvd, Pepper Avenue, W San Bernardino Avenue, N Windrose Avenue. Jobs per acre estimates from appendix E of Riverside General Plan.

Mobile Commute Mitigation - Estimated that 50 percent of future residents would use a school bus program if one was implemented. Employee passenger vehicle traffic makes up approximately 19% of traffic for land uses analyzed.

Area Mitigation - Use of coatings that have no more than 5g/L VOC. Only natural gas hearths would be installed.

Energy Mitigation - 2013 Title 24 is 30% more efficient that 2008 Title 24 standards. Project will install high efficiency lights that are 10% more efficient than current standards. Energy STAR appliances will be installed at residential uses.

Water Mitigation - Green Building standards

Waste Mitigation - Institute recycling and composting on-site

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	5
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	5
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	5

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstEquipMitigation	OxidationCatalyst	0.00	25.00

tblConstEquipMitigation	OxidationCatalyst	0.00	25.00
tblConstEquipMitigation	OxidationCatalyst	0.00	25.00
tblConstEquipMitigation	OxidationCatalyst	0.00	25.00
tblConstEquipMitigation	OxidationCatalyst	0.00	25.00
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tblConstEquipMitigation	OxidationCatalyst	0.00	25.00
tblConstEquipMitigation	OxidationCatalyst	0.00	25.00
tblConstEquipMitigation	OxidationCatalyst	0.00	25.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	NumDays	440.00	935.00
tblConstructionPhase	NumDays	6,200.00	1,043.00
tblConstructionPhase	NumDays	620.00	261.00
tblConstructionPhase	NumDays	440.00	935.00

tblConstructionPhase	PhaseEndDate	8/1/2023	12/31/2019
tblConstructionPhase	PhaseEndDate	8/1/2023	12/31/2019
tblConstructionPhase	PhaseStartDate	1/1/2020	6/1/2016
tblConstructionPhase	PhaseStartDate	1/1/2020	6/1/2016
tblGrading	AcresOfGrading	652.50	373.20
tblLandUse	LotAcreage	89.29	42.10
tblProjectCharacteristics	OperationalYear	2014	2020
tblSequestration	NumberOfNewTrees	0.00	2,551.00
tblVehicleTrips	ST_TR	1.59	16.74
tblVehicleTrips	ST_TR	2.37	2.17
tblVehicleTrips	ST_TR	1.64	149.79
tblVehicleTrips	ST_TR	49.97	86.57
tblVehicleTrips	ST_TR	10.08	9.91
tblVehicleTrips	SU_TR	1.59	16.74
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	0.76	149.79
tblVehicleTrips	SU_TR	25.24	50.98
tblVehicleTrips	SU_TR	8.77	8.62
tblVehicleTrips	WD_TR	1.59	1.89
tblVehicleTrips	WD_TR	11.01	12.31
tblVehicleTrips	WD_TR	11.42	149.79
tblVehicleTrips	WD_TR	42.94	77.69
tblVehicleTrips	WD_TR	9.57	9.52

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					
2015	6.8658	79.1715	52.1539	0.0643	7.7620	3.8039	11.5660	3.5333	3.4996	7.0329	0.0000	6,706.9429	6,706.9429	1.9491	0.0000	6,747.8743
2016	118.7770	282.2311	646.2512	1.3100	82.6873	7.1031	89.7904	22.2056	6.5872	28.7928	0.0000	117,870.4056	117,870.4056	5.3293	0.0000	117,982.3201
2017	113.8894	256.5066	596.6745	1.3090	82.6884	6.4089	89.0974	22.2060	5.9446	28.1506	0.0000	114,445.9400	114,445.9400	5.0039	0.0000	114,551.0216
2018	109.3292	232.2264	552.3614	1.3079	82.6862	5.7196	88.4058	22.2050	5.3063	27.5113	0.0000	111,198.2468	111,198.2468	4.7365	0.0000	111,297.7130
2019	106.1437	211.7252	517.8709	1.3004	82.6846	5.2382	87.9228	22.2042	4.8585	27.0627	0.0000	107,537.6177	107,537.6177	4.4751	0.0000	107,631.5944
Total	**455.0050**	**1,061.8608**	**2,365.3119**	**5.2916**	**338.5086**	**28.2737**	**366.7823**	**92.3541**	**26.1963**	**118.5503**	**0.0000**	**457,759.1530**	**457,759.1530**	**21.4938**	**0.0000**	**458,210.5235**

2.1 Overall Construction (Maximum Daily Emission)

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					
2015	0.8471	2.5832	36.0927	0.0643	3.1636	0.0169	3.1804	1.4141	0.0167	1.4309	0.0000	6,706.9429	6,706.9429	1.9491	0.0000	6,747.8743
2016	113.5433	231.6270	647.2141	1.3100	82.6873	3.6903	86.3776	22.2056	3.3942	25.5998	0.0000	117,870.4055	117,870.4055	5.3293	0.0000	117,982.3201
2017	109.1780	210.2799	598.1213	1.3090	82.6884	3.3282	86.0166	22.2060	3.0632	25.2692	0.0000	114,445.9400	114,445.9400	5.0039	0.0000	114,551.0216
2018	105.3811	192.4574	554.6512	1.3079	82.6862	3.1483	85.8345	22.2050	2.8996	25.1046	0.0000	111,198.2468	111,198.2468	4.7365	0.0000	111,297.7130
2019	102.7305	176.6498	520.7151	1.3004	82.6846	3.0271	85.7117	22.2042	2.7890	24.9932	0.0000	107,537.6177	107,537.6177	4.4751	0.0000	107,631.5944
Total	**431.6800**	**813.5973**	**2,356.7943**	**5.2916**	**333.9101**	**13.2108**	**347.1208**	**90.2349**	**12.1627**	**102.3976**	**0.0000**	**457,759.1530**	**457,759.1530**	**21.4938**	**0.0000**	**458,210.5235**

	ROG	NOx	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	**5.13**	**23.38**	**0.36**	**0.00**	**1.36**	**53.28**	**5.36**	**2.29**	**53.57**	**13.63**	**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	408.2764	2.0960	161.4639	0.2212		21.1337	21.1337		21.1304	21.1304	2,575.9026	4,991.8618	7,567.7643	7.7244	0.1748	7,784.1749
Energy	0.6757	5.9928	4.0622	0.0369		0.4668	0.4668		0.4668	0.4668		7,370.9372	7,370.9372	0.1413	0.1351	7,415.7954
Mobile	1,938.2814	6,173.0204	21,866.9241	65.2242	4,585.9660	97.4072	4,683.3732	1,224.7669	89.7889	1,314.5558		5,077,568.2107	5,077,568.2107	173.0453		5,081,202.1609
Total	**2,347.2334**	**6,181.1091**	**22,032.4502**	**65.4822**	**4,585.9660**	**119.0077**	**4,704.9737**	**1,224.7669**	**111.3861**	**1,336.1529**	**2,575.9026**	**5,089,931.0096**	**5,092,506.9121**	**180.9109**	**0.3100**	**5,096,402.1312**

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	271.1033	0.2677	23.2636	1.2300e-003		0.4588	0.4588		0.4553	0.4553	0.0000	5,283.0382	5,283.0382	0.1430	0.0961	5,315.8285
Energy	0.4877	4.3205	2.8977	0.0266		0.3369	0.3369		0.3369	0.3369		5,319.8530	5,319.8530	0.1020	0.0975	5,352.2287
Mobile	1,674.4595	3,932.3371	15,448.7683	38.1538	2,629.9387	58.2755	2,688.2142	702.3737	53.7262	756.0999		2,968,751.3039	2,968,751.3039	105.4042		2,970,964.7921
Total	**1,946.0504**	**3,936.9253**	**15,474.9296**	**38.1817**	**2,629.9387**	**59.0712**	**2,689.0099**	**702.3737**	**54.5185**	**756.8922**	**0.0000**	**2,979,354.1951**	**2,979,354.1951**	**105.6492**	**0.1936**	**2,981,632.8494**

	ROG	NOx	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	**17.09**	**36.31**	**29.76**	**41.69**	**42.65**	**50.36**	**42.85**	**42.65**	**51.05**	**43.35**	**100.00**	**41.47**	**41.50**	**41.60**	**37.53**	**41.50**

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	1/1/2015	12/31/2015	5	261	
2	Building Construction	Building Construction	1/1/2016	12/31/2019	5	1043	
3	Paving	Paving	6/1/2016	12/31/2019	5	935	
4	Architectural Coating	Architectural Coating	6/1/2016	12/31/2019	5	935	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 373.2

Acres of Paving: 0

Residential Indoor: 1,002,375; Residential Outdoor: 334,125; Non-Residential Indoor: 19,571,391; Non-Residential Outdoor: 6,523,797 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	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	125	0.42
Paving	Paving Equipment	2	8.00	130	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	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	5,137.00	2,168.00	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	1,027.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2015

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					7.5385	0.0000	7.5385	3.4740	0.0000	3.4740			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980		6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**7.5385**	**3.8022**	**11.3407**	**3.4740**	**3.4980**	**6.9720**		**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

3.2 Grading - 2015

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	0.0907	0.1248	1.3139	2.5600e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6000e-003	0.0609		220.6996	220.6996	0.0127		220.9663
Total	**0.0907**	**0.1248**	**1.3139**	**2.5600e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6000e-003**	**0.0609**		**220.6996**	**220.6996**	**0.0127**		**220.9663**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9400	0.0000	2.9400	1.3549	0.0000	1.3549			0.0000			0.0000
Off-Road	0.7564	2.4584	34.7787	0.0618		0.0151	0.0151		0.0151	0.0151	0.0000	6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**0.7564**	**2.4584**	**34.7787**	**0.0618**	**2.9400**	**0.0151**	**2.9551**	**1.3549**	**0.0151**	**1.3700**	**0.0000**	**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

3.2 Grading - 2015

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	0.0907	0.1248	1.3139	2.5600e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6000e-003	0.0609		220.6996	220.6996	0.0127		220.9663
Total	**0.0907**	**0.1248**	**1.3139**	**2.5600e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6000e-003**	**0.0609**		**220.6996**	**220.6996**	**0.0127**		**220.9663**

3.3 Building Construction - 2016

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	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.3 Building Construction - 2016

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	19.5479	194.4523	247.0215	0.4677	13.6207	3.1656	16.7862	3.8888	2.9111	6.7999		46,874.9288	46,874.9288	0.3504		46,882.2878
Worker	20.7564	28.6940	302.6345	0.6569	57.4195	0.4261	57.8457	15.2279	0.3915	15.6194		54,644.2166	54,644.2166	2.9804		54,706.8045
Total	**40.3043**	**223.1463**	**549.6560**	**1.1247**	**71.0402**	**3.5917**	**74.6319**	**19.1168**	**3.3026**	**22.4194**		**101,519.1453**	**101,519.1453**	**3.3308**		**101,589.0923**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3265	1.6717	17.4110	0.0268		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**0.3265**	**1.6717**	**17.4110**	**0.0268**		**6.0900e-003**	**6.0900e-003**		**6.0900e-003**	**6.0900e-003**	**0.0000**	**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.3 Building Construction - 2016

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	19.5479	194.4523	247.0215	0.4677	13.6207	3.1656	16.7862	3.8888	2.9111	6.7999		46,874.9288	46,874.9288	0.3504		46,882.2878
Worker	20.7564	28.6940	302.6345	0.6569	57.4195	0.4261	57.8457	15.2279	0.3915	15.6194		54,644.2166	54,644.2166	2.9804		54,706.8045
Total	**40.3043**	**223.1463**	**549.6560**	**1.1247**	**71.0402**	**3.5917**	**74.6319**	**19.1168**	**3.3026**	**22.4194**		**101,519.1453**	**101,519.1453**	**3.3308**		**101,589.0923**

3.3 Building Construction - 2017

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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.3 Building Construction - 2017

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	18.0426	176.7024	235.9656	0.4671	13.6218	2.8224	16.4442	3.8892	2.5958	6.4850		46,102.5849	46,102.5849	0.3391		46,109.7059
Worker	18.3787	25.7034	271.0120	0.6566	57.4195	0.4103	57.8299	15.2279	0.3784	15.6064		52,493.2088	52,493.2088	2.7323		52,550.5861
Total	**36.4213**	**202.4057**	**506.9776**	**1.1237**	**71.0413**	**3.2328**	**74.2741**	**19.1171**	**2.9742**	**22.0914**		**98,595.7938**	**98,595.7938**	**3.0713**		**98,660.2920**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3265	1.6717	17.4110	0.0268		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**0.3265**	**1.6717**	**17.4110**	**0.0268**		**6.0900e-003**	**6.0900e-003**		**6.0900e-003**	**6.0900e-003**	**0.0000**	**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.3 Building Construction - 2017

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	18.0426	176.7024	235.9656	0.4671	13.6218	2.8224	16.4442	3.8892	2.5958	6.4850		46,102.5849	46,102.5849	0.3391		46,109.7059
Worker	18.3787	25.7034	271.0120	0.6566	57.4195	0.4103	57.8299	15.2279	0.3784	15.6064		52,493.2088	52,493.2088	2.7323		52,550.5861
Total	**36.4213**	**202.4057**	**506.9776**	**1.1237**	**71.0413**	**3.2328**	**74.2741**	**19.1171**	**2.9742**	**22.0914**		**98,595.7938**	**98,595.7938**	**3.0713**		**98,660.2920**

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	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

3.3 Building Construction - 2018

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	16.6755	161.9143	224.7468	0.4663	13.6196	2.6545	16.2740	3.8882	2.4418	6.3299		45,312.7076	45,312.7076	0.3371		45,319.7871
Worker	16.3587	23.1807	244.1994	0.6564	57.4195	0.4004	57.8200	15.2279	0.3705	15.5985		50,504.4519	50,504.4519	2.5231		50,557.4378
Total	**33.0342**	**185.0950**	**468.9462**	**1.1227**	**71.0391**	**3.0549**	**74.0940**	**19.1161**	**2.8123**	**21.9284**		**95,817.1595**	**95,817.1595**	**2.8603**		**95,877.2249**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3265	1.6717	17.4110	0.0268		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**0.3265**	**1.6717**	**17.4110**	**0.0268**		**6.0900e-003**	**6.0900e-003**		**6.0900e-003**	**6.0900e-003**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

3.3 Building Construction - 2018

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	16.6755	161.9143	224.7468	0.4663	13.6196	2.6545	16.2740	3.8882	2.4418	6.3299		45,312.7076	45,312.7076	0.3371		45,319.7871
Worker	16.3587	23.1807	244.1994	0.6564	57.4195	0.4004	57.8200	15.2279	0.3705	15.5985		50,504.4519	50,504.4519	2.5231		50,557.4378
Total	**33.0342**	**185.0950**	**468.9462**	**1.1227**	**71.0391**	**3.0549**	**74.0940**	**19.1161**	**2.8123**	**21.9284**		**95,817.1595**	**95,817.1595**	**2.8603**		**95,877.2249**

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	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

3.3 Building Construction - 2019

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	15.8117	148.5940	218.5726	0.4629	13.6179	2.5446	16.1626	3.8874	2.3408	6.2282		44,273.4909	44,273.4909	0.3263		44,280.3439
Worker	14.8732	21.1129	221.1192	0.6529	57.4195	0.3910	57.8106	15.2279	0.3625	15.5904		48,379.5359	48,379.5359	2.3263		48,428.3882
Total	**30.6849**	**169.7069**	**439.6918**	**1.1158**	**71.0375**	**2.9356**	**73.9731**	**19.1154**	**2.7033**	**21.8186**		**92,653.0268**	**92,653.0268**	**2.6526**		**92,708.7321**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3265	1.6717	17.4110	0.0268		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**0.3265**	**1.6717**	**17.4110**	**0.0268**		**6.0900e-003**	**6.0900e-003**		**6.0900e-003**	**6.0900e-003**	**0.0000**	**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

3.3 Building Construction - 2019

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	15.8117	148.5940	218.5726	0.4629	13.6179	2.5446	16.1626	3.8874	2.3408	6.2282		44,273.4909	44,273.4909	0.3263		44,280.3439
Worker	14.8732	21.1129	221.1192	0.6529	57.4195	0.3910	57.8106	15.2279	0.3625	15.5904		48,379.5359	48,379.5359	2.3263		48,428.3882
Total	**30.6849**	**169.7069**	**439.6918**	**1.1158**	**71.0375**	**2.9356**	**73.9731**	**19.1154**	**2.7033**	**21.8186**		**92,653.0268**	**92,653.0268**	**2.6526**		**92,708.7321**

3.4 Paving - 2016

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	2.0898	22.3859	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601		2,316.3767	2,316.3767	0.6987		2,331.0495
Paving	0.4056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4954**	**22.3859**	**14.8176**	**0.0223**		**1.2610**	**1.2610**		**1.1601**	**1.1601**		**2,316.3767**	**2,316.3767**	**0.6987**		**2,331.0495**

3.4 Paving - 2016

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	0.0606	0.0838	0.8837	1.9200e-003	0.1677	1.2400e-003	0.1689	0.0445	1.1400e-003	0.0456		159.5607	159.5607	8.7000e-003		159.7434
Total	**0.0606**	**0.0838**	**0.8837**	**1.9200e-003**	**0.1677**	**1.2400e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**159.5607**	**159.5607**	**8.7000e-003**		**159.7434**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2745	0.8921	16.9276	0.0223		5.4900e-003	5.4900e-003		5.4900e-003	5.4900e-003	0.0000	2,316.3767	2,316.3767	0.6987		2,331.0495
Paving	0.4056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6801**	**0.8921**	**16.9276**	**0.0223**		**5.4900e-003**	**5.4900e-003**		**5.4900e-003**	**5.4900e-003**	**0.0000**	**2,316.3767**	**2,316.3767**	**0.6987**		**2,331.0495**

3.4 Paving - 2016

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	0.0606	0.0838	0.8837	1.9200e-003	0.1677	1.2400e-003	0.1689	0.0445	1.1400e-003	0.0456		159.5607	159.5607	8.7000e-003		159.7434
Total	**0.0606**	**0.0838**	**0.8837**	**1.9200e-003**	**0.1677**	**1.2400e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**159.5607**	**159.5607**	**8.7000e-003**		**159.7434**

3.4 Paving - 2017

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	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.4056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.3130**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**		**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

3.4 Paving - 2017

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	0.0537	0.0751	0.7914	1.9200e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		153.2798	153.2798	7.9800e-003		153.4473
Total	**0.0537**	**0.0751**	**0.7914**	**1.9200e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**153.2798**	**153.2798**	**7.9800e-003**		**153.4473**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2745	0.8921	16.9276	0.0223		5.4900e-003	5.4900e-003		5.4900e-003	5.4900e-003	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.4056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6801**	**0.8921**	**16.9276**	**0.0223**		**5.4900e-003**	**5.4900e-003**		**5.4900e-003**	**5.4900e-003**	**0.0000**	**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

3.4 Paving - 2017

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	0.0537	0.0751	0.7914	1.9200e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		153.2798	153.2798	7.9800e-003		153.4473
Total	**0.0537**	**0.0751**	**0.7914**	**1.9200e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**153.2798**	**153.2798**	**7.9800e-003**		**153.4473**

3.4 Paving - 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	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.4056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0170**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**		**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

3.4 Paving - 2018

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	0.0478	0.0677	0.7131	1.9200e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0456		147.4726	147.4726	7.3700e-003		147.6273
Total	**0.0478**	**0.0677**	**0.7131**	**1.9200e-003**	**0.1677**	**1.1700e-003**	**0.1688**	**0.0445**	**1.0800e-003**	**0.0456**		**147.4726**	**147.4726**	**7.3700e-003**		**147.6273**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2745	0.8921	16.9276	0.0223		5.4900e-003	5.4900e-003		5.4900e-003	5.4900e-003	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.4056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6801**	**0.8921**	**16.9276**	**0.0223**		**5.4900e-003**	**5.4900e-003**		**5.4900e-003**	**5.4900e-003**	**0.0000**	**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

3.4 Paving - 2018

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	0.0478	0.0677	0.7131	1.9200e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0456		147.4726	147.4726	7.3700e-003		147.6273
Total	**0.0478**	**0.0677**	**0.7131**	**1.9200e-003**	**0.1677**	**1.1700e-003**	**0.1688**	**0.0445**	**1.0800e-003**	**0.0456**		**147.4726**	**147.4726**	**7.3700e-003**		**147.6273**

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	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.9731	2,208.9731	0.6989		2,223.6499
Paving	0.4056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8314**	**14.9353**	**14.3652**	**0.0223**		**0.8094**	**0.8094**		**0.7447**	**0.7447**		**2,208.9731**	**2,208.9731**	**0.6989**		**2,223.6499**

3.4 Paving - 2019

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	0.0434	0.0617	0.6457	1.9100e-003	0.1677	1.1400e-003	0.1688	0.0445	1.0600e-003	0.0455		141.2679	141.2679	6.7900e-003		141.4105
Total	**0.0434**	**0.0617**	**0.6457**	**1.9100e-003**	**0.1677**	**1.1400e-003**	**0.1688**	**0.0445**	**1.0600e-003**	**0.0455**		**141.2679**	**141.2679**	**6.7900e-003**		**141.4105**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2745	0.8921	16.9276	0.0223		5.4900e-003	5.4900e-003		5.4900e-003	5.4900e-003	0.0000	2,208.9731	2,208.9731	0.6989		2,223.6499
Paving	0.4056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6801**	**0.8921**	**16.9276**	**0.0223**		**5.4900e-003**	**5.4900e-003**		**5.4900e-003**	**5.4900e-003**	**0.0000**	**2,208.9731**	**2,208.9731**	**0.6989**		**2,223.6499**

3.4 Paving - 2019

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	0.0434	0.0617	0.6457	1.9100e-003	0.1677	1.1400e-003	0.1688	0.0445	1.0600e-003	0.0455		141.2679	141.2679	6.7900e-003		141.4105
Total	**0.0434**	**0.0617**	**0.6457**	**1.9100e-003**	**0.1677**	**1.1400e-003**	**0.1688**	**0.0445**	**1.0600e-003**	**0.0455**		**141.2679**	**141.2679**	**6.7900e-003**		**141.4105**

3.5 Architectural Coating - 2016

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	67.9925					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**68.3609**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.5 Architectural Coating - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	4.1497	5.7366	60.5033	0.1313	11.4794	0.0852	11.5646	3.0444	0.0783	3.1227		10,924.5884	10,924.5884	0.5958		10,937.1011
Total	**4.1497**	**5.7366**	**60.5033**	**0.1313**	**11.4794**	**0.0852**	**11.5646**	**3.0444**	**0.0783**	**3.1227**		**10,924.5884**	**10,924.5884**	**0.5958**		**10,937.1011**

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	67.9925					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.0966	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**68.0222**	**0.0966**	**1.8324**	**2.9700e-003**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.5 Architectural Coating - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	4.1497	5.7366	60.5033	0.1313	11.4794	0.0852	11.5646	3.0444	0.0783	3.1227		10,924.5884	10,924.5884	0.5958		10,937.1011
Total	**4.1497**	**5.7366**	**60.5033**	**0.1313**	**11.4794**	**0.0852**	**11.5646**	**3.0444**	**0.0783**	**3.1227**		**10,924.5884**	**10,924.5884**	**0.5958**		**10,937.1011**

3.5 Architectural Coating - 2017

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	67.9925					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**68.3248**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.5 Architectural Coating - 2017

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	3.6743	5.1387	54.1813	0.1313	11.4794	0.0820	11.5615	3.0444	0.0757	3.1201		10,494.5543	10,494.5543	0.5462		10,506.0253
Total	**3.6743**	**5.1387**	**54.1813**	**0.1313**	**11.4794**	**0.0820**	**11.5615**	**3.0444**	**0.0757**	**3.1201**		**10,494.5543**	**10,494.5543**	**0.5462**		**10,506.0253**

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	67.9925					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.0966	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**68.0222**	**0.0966**	**1.8324**	**2.9700e-003**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.5 Architectural Coating - 2017

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	3.6743	5.1387	54.1813	0.1313	11.4794	0.0820	11.5615	3.0444	0.0757	3.1201		10,494.5543	10,494.5543	0.5462		10,506.0253
Total	**3.6743**	**5.1387**	**54.1813**	**0.1313**	**11.4794**	**0.0820**	**11.5615**	**3.0444**	**0.0757**	**3.1201**		**10,494.5543**	**10,494.5543**	**0.5462**		**10,506.0253**

3.5 Architectural Coating - 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					
Archit. Coating	67.9925					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**68.2911**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

3.5 Architectural Coating - 2018

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	3.2705	4.6343	48.8209	0.1312	11.4794	0.0801	11.5595	3.0444	0.0741	3.1185		10,096.9578	10,096.9578	0.5044		10,107.5508
Total	**3.2705**	**4.6343**	**48.8209**	**0.1312**	**11.4794**	**0.0801**	**11.5595**	**3.0444**	**0.0741**	**3.1185**		**10,096.9578**	**10,096.9578**	**0.5044**		**10,107.5508**

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	67.9925					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.0966	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**68.0222**	**0.0966**	**1.8324**	**2.9700e-003**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

3.5 Architectural Coating - 2018

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	3.2705	4.6343	48.8209	0.1312	11.4794	0.0801	11.5595	3.0444	0.0741	3.1185		10,096.9578	10,096.9578	0.5044		10,107.5508
Total	**3.2705**	**4.6343**	**48.8209**	**0.1312**	**11.4794**	**0.0801**	**11.5595**	**3.0444**	**0.0741**	**3.1185**		**10,096.9578**	**10,096.9578**	**0.5044**		**10,107.5508**

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	67.9925					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		281.9473
Total	**68.2589**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

3.5 Architectural Coating - 2019

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	2.9735	4.2209	44.2066	0.1305	11.4794	0.0782	11.5576	3.0444	0.0725	3.1169		9,672.1400	9,672.1400	0.4651		9,681.9067
Total	**2.9735**	**4.2209**	**44.2066**	**0.1305**	**11.4794**	**0.0782**	**11.5576**	**3.0444**	**0.0725**	**3.1169**		**9,672.1400**	**9,672.1400**	**0.4651**		**9,681.9067**

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	67.9925					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.0966	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**68.0222**	**0.0966**	**1.8324**	**2.9700e-003**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

3.5 Architectural Coating - 2019

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	2.9735	4.2209	44.2066	0.1305	11.4794	0.0782	11.5576	3.0444	0.0725	3.1169		9,672.1400	9,672.1400	0.4651		9,681.9067
Total	**2.9735**	**4.2209**	**44.2066**	**0.1305**	**11.4794**	**0.0782**	**11.5576**	**3.0444**	**0.0725**	**3.1169**		**9,672.1400**	**9,672.1400**	**0.4651**		**9,681.9067**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

Provide Riade Sharing Program

Implement School Bus 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	lb/day										lb/day					
Mitigated	1,674.4595	3,932.3371	15,448.7683	38.1538	2,629.9387	58.2755	2,688.2142	702.3737	53.7262	756.0999		2,968,751.3039	2,968,751.3039	105.4042		2,970,964.7921
Unmitigated	1,938.2814	6,173.0204	21,866.9241	65.2242	4,585.9660	97.4072	4,683.3732	1,224.7669	89.7889	1,314.5558		5,077,568.2107	5,077,568.2107	173.0453		5,081,202.1609

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	8.52	75.50	75.50	79,590	45,632
General Office Building	1,608.67	283.58	137.21	3,895,273	2,233,265
Office Park	631,731.84	631,731.84	631731.84	2,134,401,227	1,223,707,950
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Regional Shopping Center	5,286.80	5,891.09	3469.19	11,059,641	6,360,412
Single Family Housing	2,618.00	2,725.25	2370.50	8,877,639	5,375,905
Total	641,253.83	640,707.25	637,784.24	2,158,313,370	1,237,723,164

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
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
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.468914	0.065172	0.173428	0.156844	0.056897	0.009079	0.016419	0.042157	0.001108	0.001337	0.005012	0.000672	0.002962

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.4877	4.3205	2.8977	0.0266		0.3369	0.3369		0.3369	0.3369		5,319.8530	5,319.8530	0.1020	0.0975	5,352.2287
NaturalGas Unmitigated	0.6757	5.9928	4.0622	0.0369		0.4668	0.4668		0.4668	0.4668		7,370.9372	7,370.9372	0.1413	0.1351	7,415.7954

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					
Office Park	35472.8	0.3826	3.4777	2.9213	0.0209		0.2643	0.2643		0.2643	0.2643		4,173.2704	4,173.2704	0.0800	0.0765	4,198.6683
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
Regional Shopping Center	432.537	4.6600e-003	0.0424	0.0356	2.5000e-004		3.2200e-003	3.2200e-003		3.2200e-003	3.2200e-003		50.8867	50.8867	9.8000e-004	9.3000e-004	51.1964
Single Family Housing	25440.8	0.2744	2.3446	0.9977	0.0150		0.1896	0.1896		0.1896	0.1896		2,993.0388	2,993.0388	0.0574	0.0549	3,011.2540
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	1306.8	0.0141	0.1281	0.1076	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003		153.7412	153.7412	2.9500e-003	2.8200e-003	154.6768
Total		**0.6757**	**5.9928**	**4.0622**	**0.0369**		**0.4668**	**0.4668**		**0.4668**	**0.4668**		**7,370.9372**	**7,370.9372**	**0.1413**	**0.1351**	**7,415.7955**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Office Park	24.831	0.2678	2.4344	2.0449	0.0146		0.1850	0.1850		0.1850	0.1850		2,921.2893	2,921.2893	0.0560	0.0536	2,939.0678
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
Regional Shopping Center	0.319555	3.4500e-003	0.0313	0.0263	1.9000e-004		2.3800e-003	2.3800e-003		2.3800e-003	2.3800e-003		37.5948	37.5948	7.2000e-004	6.9000e-004	37.8235
Single Family Housing	19.1535	0.2066	1.7651	0.7511	0.0113		0.1427	0.1427		0.1427	0.1427		2,253.3501	2,253.3501	0.0432	0.0413	2,267.0636
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0.91476	9.8700e-003	0.0897	0.0753	5.4000e-004		6.8200e-003	6.8200e-003		6.8200e-003	6.8200e-003		107.6188	107.6188	2.0600e-003	1.9700e-003	108.2738
Total		**0.4877**	**4.3205**	**2.8977**	**0.0266**		**0.3369**	**0.3369**		**0.3369**	**0.3369**		**5,319.8530**	**5,319.8530**	**0.1020**	**0.0975**	**5,352.2287**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	271.1033	0.2677	23.2636	1.2300e-003		0.4588	0.4588		0.4553	0.4553	0.0000	5,283.0382	5,283.0382	0.1430	0.0961	5,315.8285
Unmitigated	408.2764	2.0960	161.4639	0.2212		21.1337	21.1337		21.1304	21.1304	2,575.9026	4,991.8618	7,567.7643	7.7244	0.1748	7,784.1749

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	67.3353					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	268.1434					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	72.0599	1.8283	138.2265	0.2199		21.0068	21.0068		21.0035	21.0035	2,575.9026	4,950.0000	7,525.9026	7.6818	0.1748	7,741.4197
Landscaping	0.7378	0.2677	23.2374	1.2300e-003		0.1269	0.1269		0.1269	0.1269		41.8618	41.8618	0.0425		42.7552
Total	**408.2764**	**2.0960**	**161.4639**	**0.2211**		**21.1337**	**21.1337**		**21.1304**	**21.1304**	**2,575.9026**	**4,991.8618**	**7,567.7643**	**7.7244**	**0.1748**	**7,784.1749**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.7417					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	268.1434					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4804	2.0000e-005	0.0262	0.0000		0.3319	0.3319		0.3285	0.3285	0.0000	5,241.1765	5,241.1765	0.1005	0.0961	5,273.0734
Landscaping	0.7378	0.2677	23.2374	1.2300e-003		0.1269	0.1269		0.1269	0.1269		41.8618	41.8618	0.0425		42.7552
Total	**271.1033**	**0.2677**	**23.2636**	**1.2300e-003**		**0.4588**	**0.4588**		**0.4553**	**0.4553**	**0.0000**	**5,283.0382**	**5,283.0382**	**0.1430**	**0.0961**	**5,315.8286**

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

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Vegetation

Colton Hub City Center 2020 - 2

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	73.88	1000sqft	1.70	73,880.00	0
Regional Shopping Center	741.61	1000sqft	17.03	741,610.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 18.73 acres of the 373.2 acres

Construction Phase - Modeling for operational emissions only

Grading - Project is 373.2 acres

Architectural Coating - Operational analysis only

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating - SCAQMD Rule 1113

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - 1.21 miles to downtown Colton. Omni trans bus routes along Valley Blvd, Pepper Avenue, W San Bernardino Avenue, N Windrose Avenue. Jobs per acre estimates from appendix E of Riverside General Plan.

Mobile Commute Mitigation - Employee passenger vehicle traffic makes up approximately 50% of traffic for land uses analyzed.

Area Mitigation - Use of coatings that have no more than 5g/L VOC.

Energy Mitigation - 2013 Title 24 is 30% more efficient that 2008 Title 24 standards. Project will install high efficiency lights that are 10% more efficient than current standards. Energy STAR appliances will be installed at shopping center uses as needed.

Water Mitigation - Green Building standards

Waste Mitigation - Institute recycling and composting on-site

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExterior Value	50	5
tblAreaMitigation	UseLowVOCPaintNonresidentialInterior Value	250	5
tblAreaMitigation	UseLowVOCPaintResidentialExteriorVa lue	100	5
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValu e	50	5
tblGrading	AcresOfGrading	75.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	2.37	2.46
tblVehicleTrips	ST_TR	49.97	44.02
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	25.24	21.31
tblVehicleTrips	WD_TR	11.01	14.21
tblVehicleTrips	WD_TR	42.94	33.68

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	20.2968	7.7000e-004	0.0838	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1785	0.1785	4.8000e-004		0.1885
Energy	0.0588	0.5346	0.4490	3.2100e-003		0.0406	0.0406		0.0406	0.0406		641.4818	641.4818	0.0123	0.0118	645.3857
Mobile	93.3162	219.2675	900.9580	2.4296	156.9547	3.4201	160.3749	41.9177	3.1530	45.0707		188,173.5713	188,173.5713	6.1737		188,303.2198
Total	**113.6719**	**219.8028**	**901.4908**	**2.4328**	**156.9547**	**3.4611**	**160.4158**	**41.9177**	**3.1940**	**45.1116**		**188,815.2315**	**188,815.2315**	**6.1865**	**0.0118**	**188,948.7940**

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	16.2581	7.7000e-004	0.0838	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1785	0.1785	4.8000e-004		0.1885
Energy	0.0431	0.3921	0.3294	2.3500e-003		0.0298	0.0298		0.0298	0.0298		470.5505	470.5505	9.0200e-003	8.6300e-003	473.4142
Mobile	86.0229	163.5807	701.1223	1.6690	105.8232	2.3972	108.2204	28.2620	2.2103	30.4724		129,263.9095	129,263.9095	4.4056		129,356.4263
Total	**102.3241**	**163.9736**	**701.5355**	**1.6713**	**105.8232**	**2.4273**	**108.2505**	**28.2620**	**2.2404**	**30.5025**		**129,734.6384**	**129,734.6384**	**4.4151**	**8.6300e-003**	**129,830.0291**

	ROG	NOx	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	**9.98**	**25.40**	**22.18**	**31.30**	**32.58**	**29.87**	**32.52**	**32.58**	**29.85**	**32.38**	**0.00**	**31.29**	**31.29**	**28.63**	**26.62**	**31.29**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

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	lb/day										lb/day					
Mitigated	86.0229	163.5807	701.1223	1.6690	105.8232	2.3972	108.2204	28.2620	2.2103	30.4724		129,263.9095	129,263.9095	4.4056		129,356.4263
Unmitigated	93.3162	219.2675	900.9580	2.4296	156.9547	3.4201	160.3749	41.9177	3.1530	45.0707		188,173.5713	188,173.5713	6.1737		188,303.2198

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	1,049.83	181.74	77.57	2,535,056	1,704,037
Regional Shopping Center	24,977.42	32,645.67	15803.71	53,557,116	36,114,897
Total	26,027.26	32,827.42	15,881.28	56,092,172	37,818,934

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.468914	0.065172	0.173428	0.156844	0.056897	0.009079	0.016419	0.042157	0.001108	0.001337	0.005012	0.000672	0.002962

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0431	0.3921	0.3294	2.3500e-003		0.0298	0.0298		0.0298	0.0298		470.5505	470.5505	9.0200e-003	8.6300e-003	473.4142
NaturalGas Unmitigated	0.0588	0.5346	0.4490	3.2100e-003		0.0406	0.0406		0.0406	0.0406		641.4818	641.4818	0.0123	0.0118	645.3857

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					
General Office Building	738.8	7.9700e-003	0.0724	0.0608	4.3000e-004		5.5000e-003	5.5000e-003		5.5000e-003	5.5000e-003		86.9177	86.9177	1.6700e-003	1.5900e-003	87.4466
Regional Shopping Center	4713.8	0.0508	0.4621	0.3882	2.7700e-003		0.0351	0.0351		0.0351	0.0351		554.5641	554.5641	0.0106	0.0102	557.9391
Total		**0.0588**	**0.5346**	**0.4490**	**3.2000e-003**		**0.0406**	**0.0406**		**0.0406**	**0.0406**		**641.4818**	**641.4818**	**0.0123**	**0.0118**	**645.3857**

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					
General Office Building	0.51716	5.5800e-003	0.0507	0.0426	3.0000e-004		3.8500e-003	3.8500e-003		3.8500e-003	3.8500e-003		60.8424	60.8424	1.1700e-003	1.1200e-003	61.2126
Regional Shopping Center	3.48252	0.0376	0.3414	0.2868	2.0500e-003		0.0260	0.0260		0.0260	0.0260		409.7082	409.7082	7.8500e-003	7.5100e-003	412.2016
Total		**0.0431**	**0.3921**	**0.3294**	**2.3500e-003**		**0.0298**	**0.0298**		**0.0298**	**0.0298**		**470.5505**	**470.5505**	**9.0200e-003**	**8.6300e-003**	**473.4142**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	16.2581	7.7000e-004	0.0838	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1785	0.1785	4.8000e-004		0.1885
Unmitigated	20.2968	7.7000e-004	0.0838	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1785	0.1785	4.8000e-004		0.1885

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	4.1422					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.1467					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.8800e-003	7.7000e-004	0.0838	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1785	0.1785	4.8000e-004		0.1885
Total	**20.2968**	**7.7000e-004**	**0.0838**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**		**0.1785**	**0.1785**	**4.8000e-004**		**0.1885**

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	0.1036					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.1467					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.8800e-003	7.7000e-004	0.0838	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1785	0.1785	4.8000e-004		0.1885
Total	**16.2581**	**7.7000e-004**	**0.0838**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**		**0.1785**	**0.1785**	**4.8000e-004**		**0.1885**

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

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Vegetation

Colton Hub City Center 2020 - 2

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	73.88	1000sqft	1.70	73,880.00	0
Regional Shopping Center	741.61	1000sqft	17.03	741,610.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 18.73 acres of the 373.2 acres

Construction Phase - Modeling for operational emissions only

Grading - Project is 373.2 acres

Architectural Coating - Operational analysis only

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating - SCAQMD Rule 1113

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - 1.21 miles to downtown Colton. Omni trans bus routes along Valley Blvd, Pepper Avenue, W San Bernardino Avenue, N Windrose Avenue. Jobs per acre estimates from appendix E of Riverside General Plan.

Mobile Commute Mitigation - Employee passenger vehicle traffic makes up approximately 50% of traffic for land uses analyzed.

Area Mitigation - Use of coatings that have no more than 5g/L VOC.

Energy Mitigation - 2013 Title 24 is 30% more efficient that 2008 Title 24 standards. Project will install high efficiency lights that are 10% more efficient than current standards. Energy STAR appliances will be installed at shopping center uses as needed.

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Waste Mitigation - Institute recycling and composting on-site

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tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	5
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	5
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	5
tblGrading	AcresOfGrading	75.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	2.37	2.46
tblVehicleTrips	ST_TR	49.97	44.02
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	25.24	21.31
tblVehicleTrips	WD_TR	11.01	14.21
tblVehicleTrips	WD_TR	42.94	33.68

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	20.2968	7.7000e-004	0.0838	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1785	0.1785	4.8000e-004		0.1885
Energy	0.0588	0.5346	0.4490	3.2100e-003		0.0406	0.0406		0.0406	0.0406		641.4818	641.4818	0.0123	0.0118	645.3857
Mobile	90.4330	228.0626	872.9005	2.2644	156.9547	3.4371	160.3919	41.9177	3.1687	45.0863		176,215.0409	176,215.0409	6.1865		176,344.9565
Total	**110.7886**	**228.5979**	**873.4334**	**2.2676**	**156.9547**	**3.4781**	**160.4328**	**41.9177**	**3.2096**	**45.1273**		**176,856.7011**	**176,856.7011**	**6.1992**	**0.0118**	**176,990.5307**

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	16.2581	7.7000e-004	0.0838	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1785	0.1785	4.8000e-004		0.1885
Energy	0.0431	0.3921	0.3294	2.3500e-003		0.0298	0.0298		0.0298	0.0298		470.5505	470.5505	9.0200e-003	8.6300e-003	473.4142
Mobile	83.5365	169.4900	705.1266	1.5567	105.8232	2.4142	108.2374	28.2620	2.2260	30.4880		121,089.4738	121,089.4738	4.4183		121,182.2578
Total	**99.8378**	**169.8829**	**705.5398**	**1.5591**	**105.8232**	**2.4443**	**108.2675**	**28.2620**	**2.2561**	**30.5181**		**121,560.2028**	**121,560.2028**	**4.4278**	**8.6300e-003**	**121,655.8605**

	ROG	NOx	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	**9.88**	**25.68**	**19.22**	**31.24**	**32.58**	**29.72**	**32.52**	**32.58**	**29.71**	**32.37**	**0.00**	**31.27**	**31.27**	**28.58**	**26.62**	**31.26**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

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	lb/day										lb/day					
Mitigated	83.5365	169.4900	705.1266	1.5567	105.8232	2.4142	108.2374	28.2620	2.2260	30.4880		121,089.4738	121,089.4738	4.4183		121,182.2578
Unmitigated	90.4330	228.0626	872.9005	2.2644	156.9547	3.4371	160.3919	41.9177	3.1687	45.0863		176,215.0409	176,215.0409	6.1865		176,344.9565

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	1,049.83	181.74	77.57	2,535,056	1,704,037
Regional Shopping Center	24,977.42	32,645.67	15803.71	53,557,116	36,114,897
Total	26,027.26	32,827.42	15,881.28	56,092,172	37,818,934

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.468914	0.065172	0.173428	0.156844	0.056897	0.009079	0.016419	0.042157	0.001108	0.001337	0.005012	0.000672	0.002962

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0431	0.3921	0.3294	2.3500e-003		0.0298	0.0298		0.0298	0.0298		470.5505	470.5505	9.0200e-003	8.6300e-003	473.4142
NaturalGas Unmitigated	0.0588	0.5346	0.4490	3.2100e-003		0.0406	0.0406		0.0406	0.0406		641.4818	641.4818	0.0123	0.0118	645.3857

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					
General Office Building	738.8	7.9700e-003	0.0724	0.0608	4.3000e-004		5.5000e-003	5.5000e-003		5.5000e-003	5.5000e-003		86.9177	86.9177	1.6700e-003	1.5900e-003	87.4466
Regional Shopping Center	4713.8	0.0508	0.4621	0.3882	2.7700e-003		0.0351	0.0351		0.0351	0.0351		554.5641	554.5641	0.0106	0.0102	557.9391
Total		**0.0588**	**0.5346**	**0.4490**	**3.2000e-003**		**0.0406**	**0.0406**		**0.0406**	**0.0406**		**641.4818**	**641.4818**	**0.0123**	**0.0118**	**645.3857**

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					
General Office Building	0.51716	5.5800e-003	0.0507	0.0426	3.0000e-004		3.8500e-003	3.8500e-003		3.8500e-003	3.8500e-003		60.8424	60.8424	1.1700e-003	1.1200e-003	61.2126
Regional Shopping Center	3.48252	0.0376	0.3414	0.2868	2.0500e-003		0.0260	0.0260		0.0260	0.0260		409.7082	409.7082	7.8500e-003	7.5100e-003	412.2016
Total		**0.0431**	**0.3921**	**0.3294**	**2.3500e-003**		**0.0298**	**0.0298**		**0.0298**	**0.0298**		**470.5505**	**470.5505**	**9.0200e-003**	**8.6300e-003**	**473.4142**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	16.2581	7.7000e-004	0.0838	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1785	0.1785	4.8000e-004		0.1885
Unmitigated	20.2968	7.7000e-004	0.0838	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1785	0.1785	4.8000e-004		0.1885

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	4.1422					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.1467					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.8800e-003	7.7000e-004	0.0838	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1785	0.1785	4.8000e-004		0.1885
Total	**20.2968**	**7.7000e-004**	**0.0838**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**		**0.1785**	**0.1785**	**4.8000e-004**		**0.1885**

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	0.1036					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.1467					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.8800e-003	7.7000e-004	0.0838	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1785	0.1785	4.8000e-004		0.1885
Total	**16.2581**	**7.7000e-004**	**0.0838**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**		**0.1785**	**0.1785**	**4.8000e-004**		**0.1885**

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

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Vegetation

Colton Hub City Center 2020 - 3

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	69.70	1000sqft	1.60	69,700.00	0
Regional Shopping Center	80.59	1000sqft	1.85	80,590.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 3.45 acres of the 373.2 acres

Construction Phase - Modeling for operational emissions only

Grading - Project is 373.2 acres

Architectural Coating - Operational analysis only

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating - SCAQMD Rule 1113

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - 1.21 miles to downtown Colton. Omni trans bus routes along Valley Blvd, Pepper Avenue, W San Bernardino Avenue, N Windrose Avenue. Jobs per acre estimates from appendix E of Riverside General Plan.

Mobile Commute Mitigation - Employee passenger vehicle traffic makes up approximately 50% of traffic for land uses analyzed.

Area Mitigation - Use of coatings that have no more than 5g/L VOC.

Energy Mitigation - 2013 Title 24 is 30% more efficient that 2008 Title 24 standards. Project will install high efficiency lights that are 10% more efficient than current standards. Energy STAR appliances will be installed at shopping center uses as needed.
Water Mitigation - Green Building standards

Waste Mitigation - Institute recycling and composting on-site

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	5
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	5
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	5
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	2.37	2.49
tblVehicleTrips	ST_TR	49.97	100.80
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	25.24	67.94
tblVehicleTrips	WD_TR	11.01	14.32
tblVehicleTrips	WD_TR	42.94	73.24

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.7406	1.4000e-004	0.0154	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0329	0.0329	9.0000e-005		0.0347
Energy	0.0130	0.1186	0.0996	7.1000e-004		9.0100e-003	9.0100e-003		9.0100e-003	9.0100e-003		142.2639	142.2639	2.7300e-003	2.6100e-003	143.1297
Mobile	25.4899	61.1030	250.1604	0.6816	44.0918	0.9579	45.0497	11.7755	0.8831	12.6586		52,786.7816	52,786.7816	1.7267		52,823.0424
Total	**29.2436**	**61.2217**	**250.2755**	**0.6823**	**44.0918**	**0.9670**	**45.0588**	**11.7755**	**0.8922**	**12.6677**		**52,929.0784**	**52,929.0784**	**1.7295**	**2.6100e-003**	**52,966.2069**

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	2.9963	1.4000e-004	0.0154	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0329	0.0329	9.0000e-005		0.0347
Energy	9.3400e-003	0.0849	0.0714	5.1000e-004		6.4600e-003	6.4600e-003		6.4600e-003	6.4600e-003		101.9226	101.9226	1.9500e-003	1.8700e-003	102.5429
Mobile	23.4364	45.4236	193.8938	0.4674	29.6949	0.6699	30.3649	7.9306	0.6177	8.5483		36,199.9150	36,199.9150	1.2289		36,225.7209
Total	**26.4420**	**45.5087**	**193.9806**	**0.4679**	**29.6949**	**0.6764**	**30.3714**	**7.9306**	**0.6242**	**8.5548**		**36,301.8705**	**36,301.8705**	**1.2309**	**1.8700e-003**	**36,328.2985**

	ROG	NOx	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	**9.58**	**25.67**	**22.49**	**31.42**	**32.65**	**30.05**	**32.60**	**32.65**	**30.04**	**32.47**	**0.00**	**31.41**	**31.41**	**28.83**	**28.35**	**31.41**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

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	lb/day										lb/day					
Mitigated	23.4364	45.4236	193.8938	0.4674	29.6949	0.6699	30.3649	7.9306	0.6177	8.5483		36,199.9150	36,199.9150	1.2289		36,225.7209
Unmitigated	25.4899	61.1030	250.1604	0.6816	44.0918	0.9579	45.0497	11.7755	0.8831	12.6586		52,786.7816	52,786.7816	1.7267		52,823.0424

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	998.10	173.55	73.19	2,410,232	1,618,895
Regional Shopping Center	5,902.41	8,123.47	5475.28	13,320,281	8,975,345
Total	6,900.52	8,297.03	5,548.47	15,730,512	10,594,240

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.468914	0.065172	0.173428	0.156844	0.056897	0.009079	0.016419	0.042157	0.001108	0.001337	0.005012	0.000672	0.002962

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	9.3400e-003	0.0849	0.0714	5.1000e-004		6.4600e-003	6.4600e-003		6.4600e-003	6.4600e-003		101.9226	101.9226	1.9500e-003	1.8700e-003	102.5429
NaturalGas Unmitigated	0.0130	0.1186	0.0996	7.1000e-004		9.0100e-003	9.0100e-003		9.0100e-003	9.0100e-003		142.2639	142.2639	2.7300e-003	2.6100e-003	143.1297

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					
Regional Shopping Center	512.243	5.5200e-003	0.0502	0.0422	3.0000e-004		3.8200e-003	3.8200e-003		3.8200e-003	3.8200e-003		60.2639	60.2639	1.1600e-003	1.1000e-003	60.6307
General Office Building	697	7.5200e-003	0.0683	0.0574	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003		82.0000	82.0000	1.5700e-003	1.5000e-003	82.4990
Total		**0.0130**	**0.1186**	**0.0996**	**7.1000e-004**		**9.0100e-003**	**9.0100e-003**		**9.0100e-003**	**9.0100e-003**		**142.2639**	**142.2639**	**2.7300e-003**	**2.6000e-003**	**143.1297**

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					
Regional Shopping Center	0.378442	4.0800e-003	0.0371	0.0312	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003		44.5226	44.5226	8.5000e-004	8.2000e-004	44.7935
General Office Building	0.4879	5.2600e-003	0.0478	0.0402	2.9000e-004		3.6400e-003	3.6400e-003		3.6400e-003	3.6400e-003		57.4000	57.4000	1.1000e-003	1.0500e-003	57.7493
Total		**9.3400e-003**	**0.0849**	**0.0714**	**5.1000e-004**		**6.4600e-003**	**6.4600e-003**		**6.4600e-003**	**6.4600e-003**		**101.9226**	**101.9226**	**1.9500e-003**	**1.8700e-003**	**102.5429**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.9963	1.4000e-004	0.0154	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0329	0.0329	9.0000e-005		0.0347
Unmitigated	3.7406	1.4000e-004	0.0154	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0329	0.0329	9.0000e-005		0.0347

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	0.7634					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9757					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4500e-003	1.4000e-004	0.0154	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0329	0.0329	9.0000e-005		0.0347
Total	**3.7406**	**1.4000e-004**	**0.0154**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0329**	**0.0329**	**9.0000e-005**		**0.0347**

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	0.0191					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9757					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4500e-003	1.4000e-004	0.0154	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0329	0.0329	9.0000e-005		0.0347
Total	**2.9963**	**1.4000e-004**	**0.0154**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0329**	**0.0329**	**9.0000e-005**		**0.0347**

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

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Vegetation

Colton Hub City Center 2020 - 3

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	69.70	1000sqft	1.60	69,700.00	0
Regional Shopping Center	80.59	1000sqft	1.85	80,590.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 3.45 acres of the 373.2 acres

Construction Phase - Modeling for operational emissions only

Grading - Project is 373.2 acres

Architectural Coating - Operational analysis only

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating - SCAQMD Rule 1113

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - 1.21 miles to downtown Colton. Omni trans bus routes along Valley Blvd, Pepper Avenue, W San Bernardino Avenue, N Windrose Avenue. Jobs per acre estimates from appendix E of Riverside General Plan.

Mobile Commute Mitigation - Employee passenger vehicle traffic makes up approximately 50% of traffic for land uses analyzed.

Area Mitigation - Use of coatings that have no more than 5g/L VOC.

Energy Mitigation - 2013 Title 24 is 30% more efficient that 2008 Title 24 standards. Project will install high efficiency lights that are 10% more efficient than current standards. Energy STAR appliances will be installed at shopping center uses as needed.

Water Mitigation - Green Building standards

Waste Mitigation - Institute recycling and composting on-site

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	5
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	5
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	5
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	2.37	2.49
tblVehicleTrips	ST_TR	49.97	100.80
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	25.24	67.94
tblVehicleTrips	WD_TR	11.01	14.32
tblVehicleTrips	WD_TR	42.94	73.24

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.7406	1.4000e-004	0.0154	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0329	0.0329	9.0000e-005		0.0347
Energy	0.0130	0.1186	0.0996	7.1000e-004		9.0100e-003	9.0100e-003		9.0100e-003	9.0100e-003		142.2639	142.2639	2.7300e-003	2.6100e-003	143.1297
Mobile	24.6970	63.5744	241.5598	0.6352	44.0918	0.9625	45.0543	11.7755	0.8873	12.6629		49,430.8883	49,430.8883	1.7302		49,467.2215
Total	**28.4506**	**63.6931**	**241.6749**	**0.6359**	**44.0918**	**0.9716**	**45.0634**	**11.7755**	**0.8964**	**12.6719**		**49,573.1851**	**49,573.1851**	**1.7330**	**2.6100e-003**	**49,610.3859**

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	2.9963	1.4000e-004	0.0154	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0329	0.0329	9.0000e-005		0.0347
Energy	9.3400e-003	0.0849	0.0714	5.1000e-004		6.4600e-003	6.4600e-003		6.4600e-003	6.4600e-003		101.9226	101.9226	1.9500e-003	1.8700e-003	102.5429
Mobile	22.7552	47.0824	194.3207	0.4359	29.6949	0.6745	30.3695	7.9306	0.6219	8.5525		33,909.4883	33,909.4883	1.2323		33,935.3665
Total	**25.7608**	**47.1675**	**194.4075**	**0.4364**	**29.6949**	**0.6810**	**30.3760**	**7.9306**	**0.6284**	**8.5590**		**34,011.4437**	**34,011.4437**	**1.2343**	**1.8700e-003**	**34,037.9441**

	ROG	NOx	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	**9.45**	**25.95**	**19.56**	**31.37**	**32.65**	**29.91**	**32.59**	**32.65**	**29.89**	**32.46**	**0.00**	**31.39**	**31.39**	**28.77**	**28.35**	**31.39**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

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	lb/day										lb/day					
Mitigated	22.7552	47.0824	194.3207	0.4359	29.6949	0.6745	30.3695	7.9306	0.6219	8.5525		33,909.4883	33,909.4883	1.2323		33,935.3665
Unmitigated	24.6970	63.5744	241.5598	0.6352	44.0918	0.9625	45.0543	11.7755	0.8873	12.6629		49,430.8883	49,430.8883	1.7302		49,467.2215

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	998.10	173.55	73.19	2,410,232	1,618,895
Regional Shopping Center	5,902.41	8,123.47	5475.28	13,320,281	8,975,345
Total	6,900.52	8,297.03	5,548.47	15,730,512	10,594,240

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-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.468914	0.065172	0.173428	0.156844	0.056897	0.009079	0.016419	0.042157	0.001108	0.001337	0.005012	0.000672	0.002962

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	9.3400e-003	0.0849	0.0714	5.1000e-004		6.4600e-003	6.4600e-003		6.4600e-003	6.4600e-003		101.9226	101.9226	1.9500e-003	1.8700e-003	102.5429
NaturalGas Unmitigated	0.0130	0.1186	0.0996	7.1000e-004		9.0100e-003	9.0100e-003		9.0100e-003	9.0100e-003		142.2639	142.2639	2.7300e-003	2.6100e-003	143.1297

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					
Regional Shopping Center	512.243	5.5200e-003	0.0502	0.0422	3.0000e-004		3.8200e-003	3.8200e-003		3.8200e-003	3.8200e-003		60.2639	60.2639	1.1600e-003	1.1000e-003	60.6307
General Office Building	697	7.5200e-003	0.0683	0.0574	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003		82.0000	82.0000	1.5700e-003	1.5000e-003	82.4990
Total		**0.0130**	**0.1186**	**0.0996**	**7.1000e-004**		**9.0100e-003**	**9.0100e-003**		**9.0100e-003**	**9.0100e-003**		**142.2639**	**142.2639**	**2.7300e-003**	**2.6000e-003**	**143.1297**

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					
Regional Shopping Center	0.378442	4.0800e-003	0.0371	0.0312	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003		44.5226	44.5226	8.5000e-004	8.2000e-004	44.7935
General Office Building	0.4879	5.2600e-003	0.0478	0.0402	2.9000e-004		3.6400e-003	3.6400e-003		3.6400e-003	3.6400e-003		57.4000	57.4000	1.1000e-003	1.0500e-003	57.7493
Total		**9.3400e-003**	**0.0849**	**0.0714**	**5.1000e-004**		**6.4600e-003**	**6.4600e-003**		**6.4600e-003**	**6.4600e-003**		**101.9226**	**101.9226**	**1.9500e-003**	**1.8700e-003**	**102.5429**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.9963	1.4000e-004	0.0154	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0329	0.0329	9.0000e-005		0.0347
Unmitigated	3.7406	1.4000e-004	0.0154	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0329	0.0329	9.0000e-005		0.0347

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	0.7634					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9757					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4500e-003	1.4000e-004	0.0154	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0329	0.0329	9.0000e-005		0.0347
Total	**3.7406**	**1.4000e-004**	**0.0154**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0329**	**0.0329**	**9.0000e-005**		**0.0347**

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	0.0191					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9757					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4500e-003	1.4000e-004	0.0154	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0329	0.0329	9.0000e-005		0.0347
Total	**2.9963**	**1.4000e-004**	**0.0154**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0329**	**0.0329**	**9.0000e-005**		**0.0347**

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

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Vegetation

Colton Hub City Center 2020 - 4

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	20.91	1000sqft	0.48	20,910.00	0
Regional Shopping Center	40.29	1000sqft	0.92	40,290.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 1.40 acres of the 373.2 acres
Construction Phase - Modeling for operational emissions only

Grading - Project is 373.2 acres

Architectural Coating - Operational analysis only

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating - SCAQMD Rule 1113

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - 1.21 miles to downtown Colton. Omni trans bus routes along Valley Blvd, Pepper Avenue, W San Bernardino Avenue, N Windrose Avenue. Jobs per acre estimates from appendix E of Riverside General Plan.

Mobile Commute Mitigation - Employee passenger vehicle traffic makes up approximately 50% of traffic for land uses analyzed.

Area Mitigation - Use of coatings that have no more than 5g/L VOC.

Energy Mitigation - 2013 Title 24 is 30% more efficient that 2008 Title 24 standards. Project will install high efficiency lights that are 10% more efficient than current standards. Energy STAR appliances will be installed at shopping center uses as needed.

Water Mitigation - Green Building standards

Waste Mitigation - Institute recycling and composting on-site

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	5
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	5
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	5
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	2.37	3.55
tblVehicleTrips	ST_TR	49.97	129.34
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	25.24	120.25
tblVehicleTrips	WD_TR	11.01	19.13
tblVehicleTrips	WD_TR	42.94	93.34

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.5232	6.0000e-005	6.2900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Energy	5.0200e-003	0.0456	0.0383	2.7000e-004		3.4700e-003	3.4700e-003		3.4700e-003	3.4700e-003		54.7282	54.7282	1.0500e-003	1.0000e-003	55.0613
Mobile	15.6115	37.0641	152.0077	0.4121	26.6425	0.5797	27.2221	7.1154	0.5344	7.6497		31,918.0648	31,918.0648	1.0456		31,940.0217
Total	**17.1398**	**37.1098**	**152.0523**	**0.4124**	**26.6425**	**0.5831**	**27.2256**	**7.1154**	**0.5379**	**7.6532**		**31,972.8065**	**31,972.8065**	**1.0467**	**1.0000e-003**	**31,995.0971**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.2201	6.0000e-005	6.2900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Energy	3.6200e-003	0.0329	0.0276	2.0000e-004		2.5000e-003	2.5000e-003		2.5000e-003	2.5000e-003		39.4785	39.4785	7.6000e-004	7.2000e-004	39.7188
Mobile	14.3717	27.5978	118.0374	0.2828	17.9505	0.4058	18.3563	4.7940	0.3741	5.1682		21,903.9494	21,903.9494	0.7450		21,919.5942
Total	**15.5955**	**27.6308**	**118.0713**	**0.2830**	**17.9505**	**0.4083**	**18.3588**	**4.7940**	**0.3767**	**5.1707**		**21,943.4413**	**21,943.4413**	**0.7458**	**7.2000e-004**	**21,959.3272**

	ROG	NOx	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	**9.01**	**25.54**	**22.35**	**31.37**	**32.62**	**29.99**	**32.57**	**32.62**	**29.97**	**32.44**	**0.00**	**31.37**	**31.37**	**28.75**	**28.00**	**31.37**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

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	lb/day										lb/day					
Mitigated	14.3717	27.5978	118.0374	0.2828	17.9505	0.4058	18.3563	4.7940	0.3741	5.1682		21,903.9494	21,903.9494	0.7450		21,919.5942
Unmitigated	15.6115	37.0641	152.0077	0.4121	26.6425	0.5797	27.2221	7.1154	0.5344	7.6497		31,918.0648	31,918.0648	1.0456		31,940.0217

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	400.01	74.23	21.96	964,702	648,127
Regional Shopping Center	3,760.67	5,211.11	4844.87	8,916,888	6,009,770
Total	4,160.68	5,285.34	4,866.83	9,881,590	6,657,896

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-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.468914	0.065172	0.173428	0.156844	0.056897	0.009079	0.016419	0.042157	0.001108	0.001337	0.005012	0.000672	0.002962

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	3.6200e-003	0.0329	0.0276	2.0000e-004		2.5000e-003	2.5000e-003		2.5000e-003	2.5000e-003		39.4785	39.4785	7.6000e-004	7.2000e-004	39.7188
NaturalGas Unmitigated	5.0200e-003	0.0456	0.0383	2.7000e-004		3.4700e-003	3.4700e-003		3.4700e-003	3.4700e-003		54.7282	54.7282	1.0500e-003	1.0000e-003	55.0613

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					
General Office Building	209.1	2.2600e-003	0.0205	0.0172	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003		24.6000	24.6000	4.7000e-004	4.5000e-004	24.7497
Regional Shopping Center	256.09	2.7600e-003	0.0251	0.0211	1.5000e-004		1.9100e-003	1.9100e-003		1.9100e-003	1.9100e-003		30.1282	30.1282	5.8000e-004	5.5000e-004	30.3116
Total		**5.0200e-003**	**0.0456**	**0.0383**	**2.7000e-004**		**3.4700e-003**	**3.4700e-003**		**3.4700e-003**	**3.4700e-003**		**54.7282**	**54.7282**	**1.0500e-003**	**1.0000e-003**	**55.0613**

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					
Regional Shopping Center	0.189197	2.0400e-003	0.0186	0.0156	1.1000e-004		1.4100e-003	1.4100e-003		1.4100e-003	1.4100e-003		22.2585	22.2585	4.3000e-004	4.1000e-004	22.3940
General Office Building	0.14637	1.5800e-003	0.0144	0.0121	9.0000e-005		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003		17.2200	17.2200	3.3000e-004	3.2000e-004	17.3248
Total		**3.6200e-003**	**0.0329**	**0.0276**	**2.0000e-004**		**2.5000e-003**	**2.5000e-003**		**2.5000e-003**	**2.5000e-003**		**39.4785**	**39.4785**	**7.6000e-004**	**7.3000e-004**	**39.7188**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.2201	6.0000e-005	6.2900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Unmitigated	1.5232	6.0000e-005	6.2900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142

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	0.3109					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2118					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.9000e-004	6.0000e-005	6.2900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Total	**1.5232**	**6.0000e-005**	**6.2900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0134**	**0.0134**	**4.0000e-005**		**0.0142**

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	7.7700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2118					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.9000e-004	6.0000e-005	6.2900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Total	**1.2201**	**6.0000e-005**	**6.2900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0134**	**0.0134**	**4.0000e-005**		**0.0142**

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

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Vegetation

Colton Hub City Center 2020 - 4

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	20.91	1000sqft	0.48	20,910.00	0
Regional Shopping Center	40.29	1000sqft	0.92	40,290.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 1.40 acres of the 373.2 acres

Construction Phase - Modeling for operational emissions only

Grading - Project is 373.2 acres

Architectural Coating - Operational analysis only

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating - SCAQMD Rule 1113

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - 1.21 miles to downtown Colton. Omni trans bus routes along Valley Blvd, Pepper Avenue, W San Bernardino Avenue, N Windrose Avenue. Jobs per acre estimates from appendix E of Riverside General Plan.

Mobile Commute Mitigation - Employee passenger vehicle traffic makes up approximately 50% of traffic for land uses analyzed.

Area Mitigation - Use of coatings that have no more than 5g/L VOC.

Energy Mitigation - 2013 Title 24 is 30% more efficient that 2008 Title 24 standards. Project will install high efficiency lights that are 10% more efficient than current standards. Energy STAR appliances will be installed at shopping center uses as needed.

Water Mitigation - Green Building standards

Waste Mitigation - Institute recycling and composting on-site

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	5
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	5
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	5
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	2.37	3.55
tblVehicleTrips	ST_TR	49.97	129.34
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	25.24	120.25
tblVehicleTrips	WD_TR	11.01	19.13
tblVehicleTrips	WD_TR	42.94	93.34

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.5232	6.0000e-005	6.2900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Energy	5.0200e-003	0.0456	0.0383	2.7000e-004		3.4700e-003	3.4700e-003		3.4700e-003	3.4700e-003		54.7282	54.7282	1.0500e-003	1.0000e-003	55.0613
Mobile	15.1275	38.5572	147.0183	0.3841	26.6425	0.5825	27.2249	7.1154	0.5370	7.6523		29,889.2558	29,889.2558	1.0477		29,911.2571
Total	**16.6557**	**38.6029**	**147.0629**	**0.3843**	**26.6425**	**0.5860**	**27.2284**	**7.1154**	**0.5405**	**7.6558**		**29,943.9974**	**29,943.9974**	**1.0488**	**1.0000e-003**	**29,966.3325**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.2201	6.0000e-005	6.2900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Energy	3.6200e-003	0.0329	0.0276	2.0000e-004		2.5000e-003	2.5000e-003		2.5000e-003	2.5000e-003		39.4785	39.4785	7.6000e-004	7.2000e-004	39.7188
Mobile	13.9552	28.6004	118.4983	0.2638	17.9505	0.4086	18.3591	4.7940	0.3767	5.1708		20,518.4026	20,518.4026	0.7471		20,534.0919
Total	**15.1789**	**28.6334**	**118.5322**	**0.2640**	**17.9505**	**0.4111**	**18.3617**	**4.7940**	**0.3793**	**5.1733**		**20,557.8945**	**20,557.8945**	**0.7479**	**7.2000e-004**	**20,573.8248**

	ROG	NOx	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	**8.87**	**25.83**	**19.40**	**31.32**	**32.62**	**29.84**	**32.56**	**32.62**	**29.83**	**32.43**	**0.00**	**31.35**	**31.35**	**28.69**	**28.00**	**31.34**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

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	lb/day										lb/day					
Mitigated	13.9552	28.6004	118.4983	0.2638	17.9505	0.4086	18.3591	4.7940	0.3767	5.1708		20,518.4026	20,518.4026	0.7471		20,534.0919
Unmitigated	15.1275	38.5572	147.0183	0.3841	26.6425	0.5825	27.2249	7.1154	0.5370	7.6523		29,889.2558	29,889.2558	1.0477		29,911.2571

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	400.01	74.23	21.96	964,702	648,127
Regional Shopping Center	3,760.67	5,211.11	4844.87	8,916,888	6,009,770
Total	4,160.68	5,285.34	4,866.83	9,881,590	6,657,896

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.468914	0.065172	0.173428	0.156844	0.056897	0.009079	0.016419	0.042157	0.001108	0.001337	0.005012	0.000672	0.002962

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	3.6200e-003	0.0329	0.0276	2.0000e-004		2.5000e-003	2.5000e-003		2.5000e-003	2.5000e-003		39.4785	39.4785	7.6000e-004	7.2000e-004	39.7188
NaturalGas Unmitigated	5.0200e-003	0.0456	0.0383	2.7000e-004		3.4700e-003	3.4700e-003		3.4700e-003	3.4700e-003		54.7282	54.7282	1.0500e-003	1.0000e-003	55.0613

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					
General Office Building	209.1	2.2600e-003	0.0205	0.0172	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003		24.6000	24.6000	4.7000e-004	4.5000e-004	24.7497
Regional Shopping Center	256.09	2.7600e-003	0.0251	0.0211	1.5000e-004		1.9100e-003	1.9100e-003		1.9100e-003	1.9100e-003		30.1282	30.1282	5.8000e-004	5.5000e-004	30.3116
Total		**5.0200e-003**	**0.0456**	**0.0383**	**2.7000e-004**		**3.4700e-003**	**3.4700e-003**		**3.4700e-003**	**3.4700e-003**		**54.7282**	**54.7282**	**1.0500e-003**	**1.0000e-003**	**55.0613**

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					
Regional Shopping Center	0.189197	2.0400e-003	0.0186	0.0156	1.1000e-004		1.4100e-003	1.4100e-003		1.4100e-003	1.4100e-003		22.2585	22.2585	4.3000e-004	4.1000e-004	22.3940
General Office Building	0.14637	1.5800e-003	0.0144	0.0121	9.0000e-005		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003		17.2200	17.2200	3.3000e-004	3.2000e-004	17.3248
Total		**3.6200e-003**	**0.0329**	**0.0276**	**2.0000e-004**		**2.5000e-003**	**2.5000e-003**		**2.5000e-003**	**2.5000e-003**		**39.4785**	**39.4785**	**7.6000e-004**	**7.3000e-004**	**39.7188**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.2201	6.0000e-005	6.2900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Unmitigated	1.5232	6.0000e-005	6.2900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142

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	0.3109					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2118					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.9000e-004	6.0000e-005	6.2900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Total	**1.5232**	**6.0000e-005**	**6.2900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0134**	**0.0134**	**4.0000e-005**		**0.0142**

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	7.7700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2118					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.9000e-004	6.0000e-005	6.2900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Total	**1.2201**	**6.0000e-005**	**6.2900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0134**	**0.0134**	**4.0000e-005**		**0.0142**

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

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Vegetation

Colton Hub City Center 2020 - 5

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	228.95	1000sqft	5.26	228,950.00	0
Regional Shopping Center	119.25	1000sqft	2.74	119,250.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 8 acres of the 373.2 acres

Construction Phase - Modeling for operational emissions only

Grading - Project is 373.2 acres

Architectural Coating - Operational analysis only

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating - SCAQMD Rule 1113

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - 1.21 miles to downtown Colton. Omni trans bus routes along Valley Blvd, Pepper Avenue, W San Bernardino Avenue, N Windrose Avenue. Jobs per acre estimates from appendix E of Riverside General Plan.

Mobile Commute Mitigation - Employee passenger vehicle traffic makes up approximately 50% of traffic for land uses analyzed.

Area Mitigation - Use of coatings that have no more than 5g/L VOC.

Energy Mitigation - 2013 Title 24 is 30% more efficient that 2008 Title 24 standards. Project will install high efficiency lights that are 10% more efficient than current standards. Energy STAR appliances will be installed at shopping center uses as needed.

Water Mitigation - Green Building standards

Waste Mitigation - Institute recycling and composting on-site

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	5
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	5
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	5
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	2.37	2.17
tblVehicleTrips	ST_TR	49.97	86.57
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	25.24	50.98
tblVehicleTrips	WD_TR	11.01	10.76
tblVehicleTrips	WD_TR	42.94	63.85

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.6664	3.3000e-004	0.0358	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0762	0.0762	2.0000e-004		0.0805
Energy	0.0329	0.2988	0.2510	1.7900e-003		0.0227	0.0227		0.0227	0.0227		358.5262	358.5262	6.8700e-003	6.5700e-003	360.7081
Mobile	36.0737	88.2596	360.0256	0.9910	64.1996	1.3907	65.5903	17.1457	1.2820	18.4277		76,752.2116	76,752.2116	2.5032		76,804.7792
Total	**44.7730**	**88.5587**	**360.3124**	**0.9928**	**64.1996**	**1.4135**	**65.6132**	**17.1457**	**1.3049**	**18.4506**		**77,110.8140**	**77,110.8140**	**2.5103**	**6.5700e-003**	**77,165.5678**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.9419	3.3000e-004	0.0358	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0762	0.0762	2.0000e-004		0.0805
Energy	0.0233	0.2120	0.1781	1.2700e-003		0.0161	0.0161		0.0161	0.0161		254.4276	254.4276	4.8800e-003	4.6600e-003	255.9760
Mobile	33.0792	65.3954	277.9760	0.6787	43.2058	0.9707	44.1764	11.5389	0.8950	12.4339		52,564.7647	52,564.7647	1.7772		52,602.0865
Total	**40.0444**	**65.6078**	**278.1899**	**0.6800**	**43.2058**	**0.9869**	**44.1927**	**11.5389**	**0.9112**	**12.4501**		**52,819.2685**	**52,819.2685**	**1.7823**	**4.6600e-003**	**52,858.1431**

	ROG	NOx	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	**10.56**	**25.92**	**22.79**	**31.51**	**32.70**	**30.18**	**32.65**	**32.70**	**30.17**	**32.52**	**0.00**	**31.50**	**31.50**	**29.00**	**29.07**	**31.50**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

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	lb/day										lb/day					
Mitigated	33.0792	65.3954	277.9760	0.6787	43.2058	0.9707	44.1764	11.5389	0.8950	12.4339		52,564.7647	52,564.7647	1.7772		52,602.0865
Unmitigated	36.0737	88.2596	360.0256	0.9910	64.1996	1.3907	65.5903	17.1457	1.2820	18.4277		76,752.2116	76,752.2116	2.5032		76,804.7792

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	2,463.50	496.82	240.40	6,007,900	4,033,804
Regional Shopping Center	7,614.11	10,323.47	6079.37	16,831,066	11,336,569
Total	10,077.61	10,820.29	6,319.76	22,838,966	15,370,373

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.468914	0.065172	0.173428	0.156844	0.056897	0.009079	0.016419	0.042157	0.001108	0.001337	0.005012	0.000672	0.002962

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0233	0.2120	0.1781	1.2700e-003		0.0161	0.0161		0.0161	0.0161		254.4276	254.4276	4.8800e-003	4.6600e-003	255.9760
NaturalGas Unmitigated	0.0329	0.2988	0.2510	1.7900e-003		0.0227	0.0227		0.0227	0.0227		358.5262	358.5262	6.8700e-003	6.5700e-003	360.7081

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					
Regional Shopping Center	757.973	8.1700e-003	0.0743	0.0624	4.5000e-004		5.6500e-003	5.6500e-003		5.6500e-003	5.6500e-003		89.1733	89.1733	1.7100e-003	1.6300e-003	89.7159
General Office Building	2289.5	0.0247	0.2245	0.1886	1.3500e-003		0.0171	0.0171		0.0171	0.0171		269.3529	269.3529	5.1600e-003	4.9400e-003	270.9922
Total		**0.0329**	**0.2988**	**0.2510**	**1.8000e-003**		**0.0227**	**0.0227**		**0.0227**	**0.0227**		**358.5262**	**358.5262**	**6.8700e-003**	**6.5700e-003**	**360.7081**

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					
General Office Building	1.60265	0.0173	0.1571	0.1320	9.4000e-004		0.0119	0.0119		0.0119	0.0119		188.5471	188.5471	3.6100e-003	3.4600e-003	189.6945
Regional Shopping Center	0.559985	6.0400e-003	0.0549	0.0461	3.3000e-004		4.1700e-003	4.1700e-003		4.1700e-003	4.1700e-003		65.8806	65.8806	1.2600e-003	1.2100e-003	66.2815
Total		**0.0233**	**0.2120**	**0.1781**	**1.2700e-003**		**0.0161**	**0.0161**		**0.0161**	**0.0161**		**254.4276**	**254.4276**	**4.8700e-003**	**4.6700e-003**	**255.9760**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.9419	3.3000e-004	0.0358	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0762	0.0762	2.0000e-004		0.0805
Unmitigated	8.6664	3.3000e-004	0.0358	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0762	0.0762	2.0000e-004		0.0805

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	1.7687					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.8944					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.3700e-003	3.3000e-004	0.0358	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0762	0.0762	2.0000e-004		0.0805
Total	**8.6664**	**3.3000e-004**	**0.0358**	**0.0000**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**		**0.0762**	**0.0762**	**2.0000e-004**		**0.0805**

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	0.0442					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.8944					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.3700e-003	3.3000e-004	0.0358	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0762	0.0762	2.0000e-004		0.0805
Total	**6.9420**	**3.3000e-004**	**0.0358**	**0.0000**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**		**0.0762**	**0.0762**	**2.0000e-004**		**0.0805**

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

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Vegetation

Colton Hub City Center 2020 - 5

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	228.95	1000sqft	5.26	228,950.00	0
Regional Shopping Center	119.25	1000sqft	2.74	119,250.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 8 acres of the 373.2 acres

Construction Phase - Modeling for operational emissions only

Grading - Project is 373.2 acres

Architectural Coating - Operational analysis only

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating - SCAQMD Rule 1113

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - 1.21 miles to downtown Colton. Omni trans bus routes along Valley Blvd, Pepper Avenue, W San Bernardino Avenue, N Windrose Avenue. Jobs per acre estimates from appendix E of Riverside General Plan.

Mobile Commute Mitigation - Employee passenger vehicle traffic makes up approximately 50% of traffic for land uses analyzed.

Area Mitigation - Use of coatings that have no more than 5g/L VOC.

Energy Mitigation - 2013 Title 24 is 30% more efficient that 2008 Title 24 standards. Project will install high efficiency lights that are 10% more efficient than current standards. Energy STAR appliances will be installed at shopping center uses as needed.

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Waste Mitigation - Institute recycling and composting on-site

Table Name	Column Name	Default Value	New Value
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tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	5
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	5
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	5
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	2.37	2.17
tblVehicleTrips	ST_TR	49.97	86.57
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	25.24	50.98
tblVehicleTrips	WD_TR	11.01	10.76
tblVehicleTrips	WD_TR	42.94	63.85

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.6664	3.3000e-004	0.0358	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0762	0.0762	2.0000e-004		0.0805
Energy	0.0329	0.2988	0.2510	1.7900e-003		0.0227	0.0227		0.0227	0.0227		358.5262	358.5262	6.8700e-003	6.5700e-003	360.7081
Mobile	34.9435	91.8590	346.4703	0.9235	64.1996	1.3971	65.5968	17.1457	1.2880	18.4337		71,870.9078	71,870.9078	2.5080		71,923.5767
Total	**43.6428**	**92.1581**	**346.7570**	**0.9253**	**64.1996**	**1.4200**	**65.6196**	**17.1457**	**1.3108**	**18.4565**		**72,229.5101**	**72,229.5101**	**2.5151**	**6.5700e-003**	**72,284.3653**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.9419	3.3000e-004	0.0358	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0762	0.0762	2.0000e-004		0.0805
Energy	0.0233	0.2120	0.1781	1.2700e-003		0.0161	0.0161		0.0161	0.0161		254.4276	254.4276	4.8800e-003	4.6600e-003	255.9760
Mobile	32.1120	67.8099	277.5848	0.6329	43.2058	0.9771	44.1829	11.5389	0.9009	12.4398		49,237.1549	49,237.1549	1.7821		49,274.5781
Total	**39.0772**	**68.0223**	**277.7986**	**0.6342**	**43.2058**	**0.9934**	**44.1991**	**11.5389**	**0.9172**	**12.4561**		**49,491.6587**	**49,491.6587**	**1.7871**	**4.6600e-003**	**49,530.6346**

	ROG	NOx	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	**10.46**	**26.19**	**19.89**	**31.46**	**32.70**	**30.04**	**32.64**	**32.70**	**30.03**	**32.51**	**0.00**	**31.48**	**31.48**	**28.94**	**29.07**	**31.48**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

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	lb/day										lb/day					
Mitigated	32.1120	67.8099	277.5848	0.6329	43.2058	0.9771	44.1829	11.5389	0.9009	12.4398		49,237.1549	49,237.1549	1.7821		49,274.5781
Unmitigated	34.9435	91.8590	346.4703	0.9235	64.1996	1.3971	65.5968	17.1457	1.2880	18.4337		71,870.9078	71,870.9078	2.5080		71,923.5767

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	2,463.50	496.82	240.40	6,007,900	4,033,804
Regional Shopping Center	7,614.11	10,323.47	6079.37	16,831,066	11,336,569
Total	10,077.61	10,820.29	6,319.76	22,838,966	15,370,373

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.468914	0.065172	0.173428	0.156844	0.056897	0.009079	0.016419	0.042157	0.001108	0.001337	0.005012	0.000672	0.002962

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0233	0.2120	0.1781	1.2700e-003		0.0161	0.0161		0.0161	0.0161		254.4276	254.4276	4.8800e-003	4.6600e-003	255.9760
NaturalGas Unmitigated	0.0329	0.2988	0.2510	1.7900e-003		0.0227	0.0227		0.0227	0.0227		358.5262	358.5262	6.8700e-003	6.5700e-003	360.7081

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					
Regional Shopping Center	757.973	8.1700e-003	0.0743	0.0624	4.5000e-004		5.6500e-003	5.6500e-003		5.6500e-003	5.6500e-003		89.1733	89.1733	1.7100e-003	1.6300e-003	89.7159
General Office Building	2289.5	0.0247	0.2245	0.1886	1.3500e-003		0.0171	0.0171		0.0171	0.0171		269.3529	269.3529	5.1600e-003	4.9400e-003	270.9922
Total		**0.0329**	**0.2988**	**0.2510**	**1.8000e-003**		**0.0227**	**0.0227**		**0.0227**	**0.0227**		**358.5262**	**358.5262**	**6.8700e-003**	**6.5700e-003**	**360.7081**

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					
Regional Shopping Center	0.559985	6.0400e-003	0.0549	0.0461	3.3000e-004		4.1700e-003	4.1700e-003		4.1700e-003	4.1700e-003		65.8806	65.8806	1.2600e-003	1.2100e-003	66.2815
General Office Building	1.60265	0.0173	0.1571	0.1320	9.4000e-004		0.0119	0.0119		0.0119	0.0119		188.5471	188.5471	3.6100e-003	3.4600e-003	189.6945
Total		**0.0233**	**0.2120**	**0.1781**	**1.2700e-003**		**0.0161**	**0.0161**		**0.0161**	**0.0161**		**254.4276**	**254.4276**	**4.8700e-003**	**4.6700e-003**	**255.9760**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.9419	3.3000e-004	0.0358	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0762	0.0762	2.0000e-004		0.0805
Unmitigated	8.6664	3.3000e-004	0.0358	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0762	0.0762	2.0000e-004		0.0805

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	1.7687					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.8944					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.3700e-003	3.3000e-004	0.0358	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0762	0.0762	2.0000e-004		0.0805
Total	**8.6664**	**3.3000e-004**	**0.0358**	**0.0000**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**		**0.0762**	**0.0762**	**2.0000e-004**		**0.0805**

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	0.0442					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.8944					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.3700e-003	3.3000e-004	0.0358	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0762	0.0762	2.0000e-004		0.0805
Total	**6.9420**	**3.3000e-004**	**0.0358**	**0.0000**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**		**0.0762**	**0.0762**	**2.0000e-004**		**0.0805**

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

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Vegetation

APPENDIX C

CalEEMod Model Annual Emissions Printouts and Mitigation Report

Colton Hub City Center BAU - 1

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	130.68	1000sqft	3.00	130,680.00	0
Office Park	4,217.45	1000sqft	96.82	4,217,450.00	0
Other Asphalt Surfaces	144.74	Acre	144.74	6,304,874.40	0
Other Non-Asphalt Surfaces	48.90	Acre	48.90	2,130,084.00	0
City Park	4.51	Acre	4.51	196,455.60	0
Single Family Housing	275.00	Dwelling Unit	42.10	495,000.00	787
Regional Shopping Center	68.05	1000sqft	1.56	68,050.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2010
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 341.63 acres of the 373.2 acres
Construction Phase - Timing from developer for the entire project.

Grading - Project is 373.2 acres

Architectural Coating - SCAQMD Rule 1113 Paint limited to 50g/L.

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating - SCAQMD Rule 1113

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Mobile Commute Mitigation - .

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	440.00	935.00
tblConstructionPhase	NumDays	6,200.00	1,043.00
tblConstructionPhase	NumDays	620.00	261.00
tblConstructionPhase	NumDays	440.00	935.00
tblConstructionPhase	PhaseEndDate	8/1/2023	12/31/2019
tblConstructionPhase	PhaseEndDate	8/1/2023	12/31/2019
tblConstructionPhase	PhaseStartDate	1/1/2020	6/1/2016
tblConstructionPhase	PhaseStartDate	1/1/2020	6/1/2016
tblGrading	AcresOfGrading	652.50	373.20
tblLandUse	LotAcreage	89.29	42.10
tblProjectCharacteristics	OperationalYear	2014	2010
tblVehicleTrips	ST_TR	1.59	16.74
tblVehicleTrips	ST_TR	2.37	2.17
tblVehicleTrips	ST_TR	1.64	149.79
tblVehicleTrips	ST_TR	49.97	86.57
tblVehicleTrips	ST_TR	10.08	9.91

tblVehicleTrips	SU_TR	1.59	16.74
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	0.76	149.79
tblVehicleTrips	SU_TR	25.24	50.98
tblVehicleTrips	SU_TR	8.77	8.62
tblVehicleTrips	WD_TR	1.59	1.89
tblVehicleTrips	WD_TR	11.01	12.31
tblVehicleTrips	WD_TR	11.42	149.79
tblVehicleTrips	WD_TR	42.94	77.69
tblVehicleTrips	WD_TR	9.57	9.52

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					
2015	0.8954	10.3325	6.8126	8.4000e-003	1.0124	0.4964	1.5088	0.4610	0.4567	0.9177	0.0000	794.4219	794.4219	0.2308	0.0000	799.2676
2016	31.1426	35.8326	82.5713	0.1642	9.9737	0.8412	10.8149	2.6849	0.7799	3.4648	0.0000	13,423.1713	13,423.1713	0.5648	0.0000	13,435.0312
2017	48.3906	33.9486	79.8738	0.1721	10.5502	0.8311	11.3814	2.8379	0.7709	3.6088	0.0000	13,639.0249	13,639.0249	0.5894	0.0000	13,651.4029
2018	47.9932	30.8602	74.1608	0.1726	10.5905	0.7446	11.3351	2.8487	0.6908	3.5394	0.0000	13,302.3556	13,302.3556	0.5600	0.0000	13,314.1160
2019	47.5844	28.1409	69.4707	0.1716	10.5903	0.6819	11.2722	2.8486	0.6325	3.4810	0.0000	12,863.7724	12,863.7724	0.5291	0.0000	12,874.8827
Total	**176.0062**	**139.1149**	**312.8891**	**0.6890**	**42.7172**	**3.5952**	**46.3124**	**11.6809**	**3.3308**	**15.0117**	**0.0000**	**54,022.7460**	**54,022.7460**	**2.4740**	**0.0000**	**54,074.7004**

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					
2015	0.8954	10.3325	6.8125	8.4000e-003	0.4123	0.4964	0.9087	0.1844	0.4567	0.6411	0.0000	794.4210	794.4210	0.2308	0.0000	799.2667
2016	31.1426	35.8326	82.5713	0.1642	9.9737	0.8412	10.8149	2.6849	0.7799	3.4648	0.0000	13,423.1707	13,423.1707	0.5648	0.0000	13,435.0306
2017	48.3906	33.9486	79.8738	0.1721	10.5502	0.8311	11.3814	2.8379	0.7709	3.6088	0.0000	13,639.0241	13,639.0241	0.5894	0.0000	13,651.4021
2018	47.9932	30.8602	74.1608	0.1726	10.5905	0.7446	11.3351	2.8487	0.6908	3.5394	0.0000	13,302.3549	13,302.3549	0.5600	0.0000	13,314.1153
2019	47.5844	28.1409	69.4706	0.1716	10.5903	0.6819	11.2722	2.8486	0.6325	3.4810	0.0000	12,863.7717	12,863.7717	0.5291	0.0000	12,874.8820
Total	**176.0062**	**139.1149**	**312.8890**	**0.6890**	**42.1171**	**3.5952**	**45.7123**	**11.4044**	**3.3308**	**14.7351**	**0.0000**	**54,022.7424**	**54,022.7424**	**2.4740**	**0.0000**	**54,074.6967**

	ROG	NOx	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**	**1.40**	**0.00**	**1.30**	**2.37**	**0.00**	**1.84**	**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	tons/yr										MT/yr					
Area	65.2649	0.0597	4.8115	2.9000e-003		0.2778	0.2778		0.2777	0.2777	29.2102	60.8791	90.0893	0.0932	1.9800e-003	92.6602
Energy	0.1233	1.0937	0.7414	6.7300e-003		0.0852	0.0852		0.0852	0.0852	0.0000	24,662.0455	24,662.0455	0.7021	0.1628	24,727.2591
Mobile	798.4935	2,528.2913	9,560.2226	11.5551	816.1444	55.7814	871.9257	218.1910	51.1758	269.3669	0.0000	1,040,558.6582	1,040,558.6582	64.6327	0.0000	1,041,915.9447
Waste						0.0000	0.0000		0.0000	0.0000	900.9287	0.0000	900.9287	53.2434	0.0000	2,019.0393
Water						0.0000	0.0000		0.0000	0.0000	252.4603	7,197.7921	7,450.2524	26.1385	0.6554	8,202.3302
Total	**863.8818**	**2,529.4446**	**9,565.7754**	**11.5647**	**816.1444**	**56.1443**	**872.2887**	**218.1910**	**51.5387**	**269.7298**	**1,182.5992**	**1,072,479.3748**	**1,073,661.9741**	**144.8098**	**0.8202**	**1,076,957.2335**

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	65.2649	0.0597	4.8115	2.9000e-003		0.2778	0.2778		0.2777	0.2777	29.2102	60.8791	90.0893	0.0932	1.9800e-003	92.6602
Energy	0.1233	1.0937	0.7414	6.7300e-003		0.0852	0.0852		0.0852	0.0852	0.0000	24,633.0898	24,633.0898	0.7013	0.1626	24,698.2321
Mobile	757.3029	2,228.3052	8,609.5140	10.0566	707.1798	48.6488	755.8286	189.0600	44.6279	233.6879	0.0000	905,157.0865	905,157.0865	56.8965	0.0000	906,351.9120
Waste						0.0000	0.0000		0.0000	0.0000	900.9287	0.0000	900.9287	53.2434	0.0000	2,019.0393
Water						0.0000	0.0000		0.0000	0.0000	252.4603	7,197.7921	7,450.2524	26.1338	0.6544	8,201.9274
Total	**822.6912**	**2,229.4586**	**8,615.0668**	**10.0662**	**707.1798**	**49.0118**	**756.1915**	**189.0600**	**44.9908**	**234.0508**	**1,182.5992**	**937,048.8475**	**938,231.4467**	**137.0680**	**0.8190**	**941,363.7710**

	ROG	NOx	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	**4.77**	**11.86**	**9.94**	**12.96**	**13.35**	**12.70**	**13.31**	**13.35**	**12.70**	**13.23**	**0.00**	**12.63**	**12.61**	**5.35**	**0.14**	**12.59**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	0.0000
Total	**0.0000**

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	1/1/2015	12/31/2015	5	261	
2	Building Construction	Building Construction	1/1/2016	12/31/2019	5	1043	
3	Paving	Paving	6/1/2016	12/31/2019	5	935	
4	Architectural Coating	Architectural Coating	6/1/2016	12/31/2019	5	935	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 373.2

Acres of Paving: 0

Residential Indoor: 1,002,375; Residential Outdoor: 334,125; Non-Residential Indoor: 19,571,391; Non-Residential Outdoor: 6,523,797

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	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	125	0.42
Paving	Paving Equipment	2	8.00	130	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	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	5,137.00	2,168.00	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	1,027.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 2015

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					0.9838	0.0000	0.9838	0.4534	0.0000	0.4534	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.8842	10.3156	6.6346	8.0600e-003		0.4962	0.4962		0.4565	0.4565	0.0000	767.8908	767.8908	0.2293	0.0000	772.7050
Total	**0.8842**	**10.3156**	**6.6346**	**8.0600e-003**	**0.9838**	**0.4962**	**1.4800**	**0.4534**	**0.4565**	**0.9098**	**0.0000**	**767.8908**	**767.8908**	**0.2293**	**0.0000**	**772.7050**

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	0.0113	0.0169	0.1779	3.4000e-004	0.0286	2.3000e-004	0.0289	7.6000e-003	2.1000e-004	7.8100e-003	0.0000	26.5310	26.5310	1.5000e-003	0.0000	26.5626
Total	**0.0113**	**0.0169**	**0.1779**	**3.4000e-004**	**0.0286**	**2.3000e-004**	**0.0289**	**7.6000e-003**	**2.1000e-004**	**7.8100e-003**	**0.0000**	**26.5310**	**26.5310**	**1.5000e-003**	**0.0000**	**26.5626**

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					0.3837	0.0000	0.3837	0.1768	0.0000	0.1768	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.8842	10.3156	6.6346	8.0600e-003		0.4962	0.4962		0.4565	0.4565	0.0000	767.8899	767.8899	0.2293	0.0000	772.7041
Total	**0.8842**	**10.3156**	**6.6346**	**8.0600e-003**	**0.3837**	**0.4962**	**0.8799**	**0.1768**	**0.4565**	**0.6333**	**0.0000**	**767.8899**	**767.8899**	**0.2293**	**0.0000**	**772.7041**

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	0.0113	0.0169	0.1779	3.4000e-004	0.0286	2.3000e-004	0.0289	7.6000e-003	2.1000e-004	7.8100e-003	0.0000	26.5310	26.5310	1.5000e-003	0.0000	26.5626
Total	**0.0113**	**0.0169**	**0.1779**	**3.4000e-004**	**0.0286**	**2.3000e-004**	**0.0289**	**7.6000e-003**	**2.1000e-004**	**7.8100e-003**	**0.0000**	**26.5310**	**26.5310**	**1.5000e-003**	**0.0000**	**26.5626**

3.3 Building Construction - 2016

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	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0104	316.0104	0.0784	0.0000	317.6563
Total	**0.4445**	**3.7201**	**2.4151**	**3.5000e-003**		**0.2567**	**0.2567**		**0.2412**	**0.2412**	**0.0000**	**316.0104**	**316.0104**	**0.0784**	**0.0000**	**317.6563**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5356	25.8627	33.0291	0.0614	1.7492	0.4107	2.1599	0.5006	0.3777	0.8783	0.0000	5,576.6308	5,576.6308	0.0408	0.0000	5,577.4875
Worker	2.5799	3.8930	40.9769	0.0871	7.3505	0.0556	7.4061	1.9522	0.0511	2.0033	0.0000	6,569.1241	6,569.1241	0.3528	0.0000	6,576.5338
Total	**5.1154**	**29.7556**	**74.0060**	**0.1484**	**9.0997**	**0.4663**	**9.5660**	**2.4528**	**0.4288**	**2.8815**	**0.0000**	**12,145.7549**	**12,145.7549**	**0.3936**	**0.0000**	**12,154.0213**

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	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0101	316.0101	0.0784	0.0000	317.6560
Total	**0.4445**	**3.7201**	**2.4151**	**3.5000e-003**		**0.2567**	**0.2567**		**0.2412**	**0.2412**	**0.0000**	**316.0101**	**316.0101**	**0.0784**	**0.0000**	**317.6560**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5356	25.8627	33.0291	0.0614	1.7492	0.4107	2.1599	0.5006	0.3777	0.8783	0.0000	5,576.6308	5,576.6308	0.0408	0.0000	5,577.4875
Worker	2.5799	3.8930	40.9769	0.0871	7.3505	0.0556	7.4061	1.9522	0.0511	2.0033	0.0000	6,569.1241	6,569.1241	0.3528	0.0000	6,576.5338
Total	**5.1154**	**29.7556**	**74.0060**	**0.1484**	**9.0997**	**0.4663**	**9.5660**	**2.4528**	**0.4288**	**2.8815**	**0.0000**	**12,145.7549**	**12,145.7549**	**0.3936**	**0.0000**	**12,154.0213**

3.3 Building Construction - 2017

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	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3228	311.3228	0.0766	0.0000	312.9319
Total	**0.4033**	**3.4327**	**2.3568**	**3.4900e-003**		**0.2316**	**0.2316**		**0.2175**	**0.2175**	**0.0000**	**311.3228**	**311.3228**	**0.0766**	**0.0000**	**312.9319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3307	23.4140	31.4010	0.0610	1.7427	0.3649	2.1076	0.4987	0.3356	0.8343	0.0000	5,463.8049	5,463.8049	0.0393	0.0000	5,464.6300
Worker	2.2718	3.4746	36.5457	0.0867	7.3223	0.0533	7.3757	1.9447	0.0492	1.9939	0.0000	6,286.5194	6,286.5194	0.3222	0.0000	6,293.2862
Total	**4.6024**	**26.8885**	**67.9466**	**0.1478**	**9.0650**	**0.4182**	**9.4832**	**2.4434**	**0.3848**	**2.8282**	**0.0000**	**11,750.3243**	**11,750.3243**	**0.3615**	**0.0000**	**11,757.9162**

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	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3225	311.3225	0.0766	0.0000	312.9315
Total	**0.4033**	**3.4327**	**2.3568**	**3.4900e-003**		**0.2316**	**0.2316**		**0.2175**	**0.2175**	**0.0000**	**311.3225**	**311.3225**	**0.0766**	**0.0000**	**312.9315**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3307	23.4140	31.4010	0.0610	1.7427	0.3649	2.1076	0.4987	0.3356	0.8343	0.0000	5,463.8049	5,463.8049	0.0393	0.0000	5,464.6300
Worker	2.2718	3.4746	36.5457	0.0867	7.3223	0.0533	7.3757	1.9447	0.0492	1.9939	0.0000	6,286.5194	6,286.5194	0.3222	0.0000	6,293.2862
Total	**4.6024**	**26.8885**	**67.9466**	**0.1478**	**9.0650**	**0.4182**	**9.4832**	**2.4434**	**0.3848**	**2.8282**	**0.0000**	**11,750.3243**	**11,750.3243**	**0.3615**	**0.0000**	**11,757.9162**

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	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9844	308.9844	0.0756	0.0000	310.5723
Total	**0.3483**	**3.0355**	**2.2880**	**3.5000e-003**		**0.1950**	**0.1950**		**0.1833**	**0.1833**	**0.0000**	**308.9844**	**308.9844**	**0.0756**	**0.0000**	**310.5723**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1617	21.5387	29.9870	0.0612	1.7491	0.3446	2.0936	0.5005	0.3170	0.8174	0.0000	5,390.9136	5,390.9136	0.0392	0.0000	5,391.7366
Worker	2.0262	3.1463	33.0487	0.0870	7.3505	0.0523	7.4027	1.9522	0.0484	2.0006	0.0000	6,071.7240	6,071.7240	0.2987	0.0000	6,077.9969
Total	**4.1879**	**24.6850**	**63.0357**	**0.1482**	**9.0995**	**0.3968**	**9.4964**	**2.4527**	**0.3653**	**2.8180**	**0.0000**	**11,462.6376**	**11,462.6376**	**0.3379**	**0.0000**	**11,469.7335**

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	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9841	308.9841	0.0756	0.0000	310.5720
Total	**0.3483**	**3.0355**	**2.2880**	**3.5000e-003**		**0.1950**	**0.1950**		**0.1833**	**0.1833**	**0.0000**	**308.9841**	**308.9841**	**0.0756**	**0.0000**	**310.5720**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1617	21.5387	29.9870	0.0612	1.7491	0.3446	2.0936	0.5005	0.3170	0.8174	0.0000	5,390.9136	5,390.9136	0.0392	0.0000	5,391.7366
Worker	2.0262	3.1463	33.0487	0.0870	7.3505	0.0523	7.4027	1.9522	0.0484	2.0006	0.0000	6,071.7240	6,071.7240	0.2987	0.0000	6,077.9969
Total	**4.1879**	**24.6850**	**63.0357**	**0.1482**	**9.0995**	**0.3968**	**9.4964**	**2.4527**	**0.3653**	**2.8180**	**0.0000**	**11,462.6376**	**11,462.6376**	**0.3379**	**0.0000**	**11,469.7335**

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	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577	0.0000	305.5302	305.5302	0.0743	0.0000	307.0913
Total	**0.3069**	**2.7359**	**2.2342**	**3.5000e-003**		**0.1677**	**0.1677**		**0.1577**	**0.1577**	**0.0000**	**305.5302**	**305.5302**	**0.0743**	**0.0000**	**307.0913**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0479	19.7690	29.1316	0.0607	1.7489	0.3304	2.0793	0.5004	0.3039	0.8043	0.0000	5,267.4874	5,267.4874	0.0379	0.0000	5,268.2833
Worker	1.8389	2.8661	29.9207	0.0866	7.3505	0.0510	7.4015	1.9522	0.0473	1.9995	0.0000	5,816.1580	5,816.1580	0.2754	0.0000	5,821.9415
Total	**3.8868**	**22.6350**	**59.0523**	**0.1473**	**9.0993**	**0.3814**	**9.4808**	**2.4526**	**0.3512**	**2.8038**	**0.0000**	**11,083.6454**	**11,083.6454**	**0.3133**	**0.0000**	**11,090.2248**

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	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577	0.0000	305.5299	305.5299	0.0743	0.0000	307.0909
Total	**0.3069**	**2.7359**	**2.2342**	**3.5000e-003**		**0.1677**	**0.1677**		**0.1577**	**0.1577**	**0.0000**	**305.5299**	**305.5299**	**0.0743**	**0.0000**	**307.0909**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0479	19.7690	29.1316	0.0607	1.7489	0.3304	2.0793	0.5004	0.3039	0.8043	0.0000	5,267.4874	5,267.4874	0.0379	0.0000	5,268.2833
Worker	1.8389	2.8661	29.9207	0.0866	7.3505	0.0510	7.4015	1.9522	0.0473	1.9995	0.0000	5,816.1580	5,816.1580	0.2754	0.0000	5,821.9415
Total	**3.8868**	**22.6350**	**59.0523**	**0.1473**	**9.0993**	**0.3814**	**9.4808**	**2.4526**	**0.3512**	**2.8038**	**0.0000**	**11,083.6454**	**11,083.6454**	**0.3133**	**0.0000**	**11,090.2248**

3.4 Paving - 2016

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	0.1599	1.7125	1.1336	1.7100e-003		0.0965	0.0965		0.0888	0.0888	0.0000	160.7557	160.7557	0.0485	0.0000	161.7740
Paving	0.0310					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1909**	**1.7125**	**1.1336**	**1.7100e-003**		**0.0965**	**0.0965**		**0.0888**	**0.0888**	**0.0000**	**160.7557**	**160.7557**	**0.0485**	**0.0000**	**161.7740**

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	4.4200e-003	6.6600e-003	0.0701	1.5000e-004	0.0126	1.0000e-004	0.0127	3.3400e-003	9.0000e-005	3.4300e-003	0.0000	11.2445	11.2445	6.0000e-004	0.0000	11.2572
Total	**4.4200e-003**	**6.6600e-003**	**0.0701**	**1.5000e-004**	**0.0126**	**1.0000e-004**	**0.0127**	**3.3400e-003**	**9.0000e-005**	**3.4300e-003**	**0.0000**	**11.2445**	**11.2445**	**6.0000e-004**	**0.0000**	**11.2572**

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	0.1599	1.7125	1.1336	1.7100e-003		0.0965	0.0965		0.0888	0.0888	0.0000	160.7555	160.7555	0.0485	0.0000	161.7738
Paving	0.0310					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1909**	**1.7125**	**1.1336**	**1.7100e-003**		**0.0965**	**0.0965**		**0.0888**	**0.0888**	**0.0000**	**160.7555**	**160.7555**	**0.0485**	**0.0000**	**161.7738**

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	4.4200e-003	6.6600e-003	0.0701	1.5000e-004	0.0126	1.0000e-004	0.0127	3.3400e-003	9.0000e-005	3.4300e-003	0.0000	11.2445	11.2445	6.0000e-004	0.0000	11.2572
Total	**4.4200e-003**	**6.6600e-003**	**0.0701**	**1.5000e-004**	**0.0126**	**1.0000e-004**	**0.0127**	**3.3400e-003**	**9.0000e-005**	**3.4300e-003**	**0.0000**	**11.2445**	**11.2445**	**6.0000e-004**	**0.0000**	**11.2572**

3.4 Paving - 2017

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	0.2480	2.6385	1.9145	2.9000e-003		0.1480	0.1480		0.1362	0.1362	0.0000	269.0144	269.0144	0.0824	0.0000	270.7454
Paving	0.0527					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3007**	**2.6385**	**1.9145**	**2.9000e-003**		**0.1480**	**0.1480**		**0.1362**	**0.1362**	**0.0000**	**269.0144**	**269.0144**	**0.0824**	**0.0000**	**270.7454**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6300e-003	0.0102	0.1067	2.5000e-004	0.0214	1.6000e-004	0.0215	5.6800e-003	1.4000e-004	5.8200e-003	0.0000	18.3566	18.3566	9.4000e-004	0.0000	18.3764
Total	**6.6300e-003**	**0.0102**	**0.1067**	**2.5000e-004**	**0.0214**	**1.6000e-004**	**0.0215**	**5.6800e-003**	**1.4000e-004**	**5.8200e-003**	**0.0000**	**18.3566**	**18.3566**	**9.4000e-004**	**0.0000**	**18.3764**

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	0.2480	2.6385	1.9145	2.9000e-003		0.1480	0.1480		0.1362	0.1362	0.0000	269.0141	269.0141	0.0824	0.0000	270.7450
Paving	0.0527					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3007**	**2.6385**	**1.9145**	**2.9000e-003**		**0.1480**	**0.1480**		**0.1362**	**0.1362**	**0.0000**	**269.0141**	**269.0141**	**0.0824**	**0.0000**	**270.7450**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6300e-003	0.0102	0.1067	2.5000e-004	0.0214	1.6000e-004	0.0215	5.6800e-003	1.4000e-004	5.8200e-003	0.0000	18.3566	18.3566	9.4000e-004	0.0000	18.3764
Total	**6.6300e-003**	**0.0102**	**0.1067**	**2.5000e-004**	**0.0214**	**1.6000e-004**	**0.0215**	**5.6800e-003**	**1.4000e-004**	**5.8200e-003**	**0.0000**	**18.3566**	**18.3566**	**9.4000e-004**	**0.0000**	**18.3764**

3.4 Paving - 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	0.2103	2.2397	1.8915	2.9100e-003		0.1225	0.1225		0.1127	0.1127	0.0000	265.8121	265.8121	0.0828	0.0000	267.5499
Paving	0.0529					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2632**	**2.2397**	**1.8915**	**2.9100e-003**		**0.1225**	**0.1225**		**0.1127**	**0.1127**	**0.0000**	**265.8121**	**265.8121**	**0.0828**	**0.0000**	**267.5499**

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	5.9200e-003	9.1900e-003	0.0965	2.5000e-004	0.0215	1.5000e-004	0.0216	5.7000e-003	1.4000e-004	5.8400e-003	0.0000	17.7294	17.7294	8.7000e-004	0.0000	17.7477
Total	**5.9200e-003**	**9.1900e-003**	**0.0965**	**2.5000e-004**	**0.0215**	**1.5000e-004**	**0.0216**	**5.7000e-003**	**1.4000e-004**	**5.8400e-003**	**0.0000**	**17.7294**	**17.7294**	**8.7000e-004**	**0.0000**	**17.7477**

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	0.2103	2.2397	1.8915	2.9100e-003		0.1225	0.1225		0.1127	0.1127	0.0000	265.8118	265.8118	0.0828	0.0000	267.5495
Paving	0.0529					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2632**	**2.2397**	**1.8915**	**2.9100e-003**		**0.1225**	**0.1225**		**0.1127**	**0.1127**	**0.0000**	**265.8118**	**265.8118**	**0.0828**	**0.0000**	**267.5495**

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	5.9200e-003	9.1900e-003	0.0965	2.5000e-004	0.0215	1.5000e-004	0.0216	5.7000e-003	1.4000e-004	5.8400e-003	0.0000	17.7294	17.7294	8.7000e-004	0.0000	17.7477
Total	**5.9200e-003**	**9.1900e-003**	**0.0965**	**2.5000e-004**	**0.0215**	**1.5000e-004**	**0.0216**	**5.7000e-003**	**1.4000e-004**	**5.8400e-003**	**0.0000**	**17.7294**	**17.7294**	**8.7000e-004**	**0.0000**	**17.7477**

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	0.1861	1.9491	1.8747	2.9100e-003		0.1056	0.1056		0.0972	0.0972	0.0000	261.5151	261.5151	0.0827	0.0000	263.2526
Paving	0.0529					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2390**	**1.9491**	**1.8747**	**2.9100e-003**		**0.1056**	**0.1056**		**0.0972**	**0.0972**	**0.0000**	**261.5151**	**261.5151**	**0.0827**	**0.0000**	**263.2526**

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	5.3700e-003	8.3700e-003	0.0874	2.5000e-004	0.0215	1.5000e-004	0.0216	5.7000e-003	1.4000e-004	5.8400e-003	0.0000	16.9831	16.9831	8.0000e-004	0.0000	17.0000
Total	**5.3700e-003**	**8.3700e-003**	**0.0874**	**2.5000e-004**	**0.0215**	**1.5000e-004**	**0.0216**	**5.7000e-003**	**1.4000e-004**	**5.8400e-003**	**0.0000**	**16.9831**	**16.9831**	**8.0000e-004**	**0.0000**	**17.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1861	1.9491	1.8747	2.9100e-003		0.1056	0.1056		0.0972	0.0972	0.0000	261.5147	261.5147	0.0827	0.0000	263.2523
Paving	0.0529					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2390**	**1.9491**	**1.8747**	**2.9100e-003**		**0.1056**	**0.1056**		**0.0972**	**0.0972**	**0.0000**	**261.5147**	**261.5147**	**0.0827**	**0.0000**	**263.2523**

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	5.3700e-003	8.3700e-003	0.0874	2.5000e-004	0.0215	1.5000e-004	0.0216	5.7000e-003	1.4000e-004	5.8400e-003	0.0000	16.9831	16.9831	8.0000e-004	0.0000	17.0000
Total	**5.3700e-003**	**8.3700e-003**	**0.0874**	**2.5000e-004**	**0.0215**	**1.5000e-004**	**0.0216**	**5.7000e-003**	**1.4000e-004**	**5.8400e-003**	**0.0000**	**16.9831**	**16.9831**	**8.0000e-004**	**0.0000**	**17.0000**

3.5 Architectural Coating - 2016

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	25.0568					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0282	0.1815	0.1441	2.3000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	19.5324	19.5324	2.3000e-003	0.0000	19.5808
Total	**25.0850**	**0.1815**	**0.1441**	**2.3000e-004**		**0.0150**	**0.0150**		**0.0150**	**0.0150**	**0.0000**	**19.5324**	**19.5324**	**2.3000e-003**	**0.0000**	**19.5808**

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	0.3024	0.4562	4.8023	0.0102	0.8614	6.5200e-003	0.8680	0.2288	5.9900e-003	0.2348	0.0000	769.8733	769.8733	0.0414	0.0000	770.7417
Total	**0.3024**	**0.4562**	**4.8023**	**0.0102**	**0.8614**	**6.5200e-003**	**0.8680**	**0.2288**	**5.9900e-003**	**0.2348**	**0.0000**	**769.8733**	**769.8733**	**0.0414**	**0.0000**	**770.7417**

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	25.0568					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0282	0.1815	0.1441	2.3000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	19.5324	19.5324	2.3000e-003	0.0000	19.5807
Total	**25.0850**	**0.1815**	**0.1441**	**2.3000e-004**		**0.0150**	**0.0150**		**0.0150**	**0.0150**	**0.0000**	**19.5324**	**19.5324**	**2.3000e-003**	**0.0000**	**19.5807**

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	0.3024	0.4562	4.8023	0.0102	0.8614	6.5200e-003	0.8680	0.2288	5.9900e-003	0.2348	0.0000	769.8733	769.8733	0.0414	0.0000	770.7417
Total	**0.3024**	**0.4562**	**4.8023**	**0.0102**	**0.8614**	**6.5200e-003**	**0.8680**	**0.2288**	**5.9900e-003**	**0.2348**	**0.0000**	**769.8733**	**769.8733**	**0.0414**	**0.0000**	**770.7417**

3.5 Architectural Coating - 2017

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	42.5802					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659
Total	**42.6234**	**0.2841**	**0.2429**	**3.9000e-004**		**0.0225**	**0.0225**		**0.0225**	**0.0225**	**0.0000**	**33.1923**	**33.1923**	**3.5000e-003**	**0.0000**	**33.2659**

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	0.4542	0.6946	7.3063	0.0173	1.4639	0.0107	1.4746	0.3888	9.8300e-003	0.3986	0.0000	1,256.8144	1,256.8144	0.0644	0.0000	1,258.1672
Total	**0.4542**	**0.6946**	**7.3063**	**0.0173**	**1.4639**	**0.0107**	**1.4746**	**0.3888**	**9.8300e-003**	**0.3986**	**0.0000**	**1,256.8144**	**1,256.8144**	**0.0644**	**0.0000**	**1,258.1672**

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	42.5802					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659
Total	**42.6234**	**0.2841**	**0.2429**	**3.9000e-004**		**0.0225**	**0.0225**		**0.0225**	**0.0225**	**0.0000**	**33.1923**	**33.1923**	**3.5000e-003**	**0.0000**	**33.2659**

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	0.4542	0.6946	7.3063	0.0173	1.4639	0.0107	1.4746	0.3888	9.8300e-003	0.3986	0.0000	1,256.8144	1,256.8144	0.0644	0.0000	1,258.1672
Total	**0.4542**	**0.6946**	**7.3063**	**0.0173**	**1.4639**	**0.0107**	**1.4746**	**0.3888**	**9.8300e-003**	**0.3986**	**0.0000**	**1,256.8144**	**1,256.8144**	**0.0644**	**0.0000**	**1,258.1672**

3.5 Architectural Coating - 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					
Archit. Coating	42.7439					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0390	0.2618	0.2420	3.9000e-004		0.0197	0.0197		0.0197	0.0197	0.0000	33.3200	33.3200	3.1700e-003	0.0000	33.3865
Total	**42.7829**	**0.2618**	**0.2420**	**3.9000e-004**		**0.0197**	**0.0197**		**0.0197**	**0.0197**	**0.0000**	**33.3200**	**33.3200**	**3.1700e-003**	**0.0000**	**33.3865**

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	0.4051	0.6290	6.6072	0.0174	1.4695	0.0105	1.4800	0.3903	9.6700e-003	0.4000	0.0000	1,213.8720	1,213.8720	0.0597	0.0000	1,215.1261
Total	**0.4051**	**0.6290**	**6.6072**	**0.0174**	**1.4695**	**0.0105**	**1.4800**	**0.3903**	**9.6700e-003**	**0.4000**	**0.0000**	**1,213.8720**	**1,213.8720**	**0.0597**	**0.0000**	**1,215.1261**

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	42.7439					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0390	0.2618	0.2420	3.9000e-004		0.0197	0.0197		0.0197	0.0197	0.0000	33.3200	33.3200	3.1700e-003	0.0000	33.3865
Total	**42.7829**	**0.2618**	**0.2420**	**3.9000e-004**		**0.0197**	**0.0197**		**0.0197**	**0.0197**	**0.0000**	**33.3200**	**33.3200**	**3.1700e-003**	**0.0000**	**33.3865**

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	0.4051	0.6290	6.6072	0.0174	1.4695	0.0105	1.4800	0.3903	9.6700e-003	0.4000	0.0000	1,213.8720	1,213.8720	0.0597	0.0000	1,215.1261
Total	**0.4051**	**0.6290**	**6.6072**	**0.0174**	**1.4695**	**0.0105**	**1.4800**	**0.3903**	**9.6700e-003**	**0.4000**	**0.0000**	**1,213.8720**	**1,213.8720**	**0.0597**	**0.0000**	**1,215.1261**

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	42.7439					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0348	0.2395	0.2403	3.9000e-004		0.0168	0.0168		0.0168	0.0168	0.0000	33.3200	33.3200	2.8100e-003	0.0000	33.3791
Total	**42.7787**	**0.2395**	**0.2403**	**3.9000e-004**		**0.0168**	**0.0168**		**0.0168**	**0.0168**	**0.0000**	**33.3200**	**33.3200**	**2.8100e-003**	**0.0000**	**33.3791**

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	0.3676	0.5730	5.9818	0.0173	1.4695	0.0102	1.4797	0.3903	9.4600e-003	0.3997	0.0000	1,162.7787	1,162.7787	0.0551	0.0000	1,163.9350
Total	**0.3676**	**0.5730**	**5.9818**	**0.0173**	**1.4695**	**0.0102**	**1.4797**	**0.3903**	**9.4600e-003**	**0.3997**	**0.0000**	**1,162.7787**	**1,162.7787**	**0.0551**	**0.0000**	**1,163.9350**

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	42.7439					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0348	0.2395	0.2403	3.9000e-004		0.0168	0.0168		0.0168	0.0168	0.0000	33.3199	33.3199	2.8100e-003	0.0000	33.3790
Total	**42.7787**	**0.2395**	**0.2403**	**3.9000e-004**		**0.0168**	**0.0168**		**0.0168**	**0.0168**	**0.0000**	**33.3199**	**33.3199**	**2.8100e-003**	**0.0000**	**33.3790**

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	0.3676	0.5730	5.9818	0.0173	1.4695	0.0102	1.4797	0.3903	9.4600e-003	0.3997	0.0000	1,162.7787	1,162.7787	0.0551	0.0000	1,163.9350
Total	**0.3676**	**0.5730**	**5.9818**	**0.0173**	**1.4695**	**0.0102**	**1.4797**	**0.3903**	**9.4600e-003**	**0.3997**	**0.0000**	**1,162.7787**	**1,162.7787**	**0.0551**	**0.0000**	**1,163.9350**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Employee Vanpool/Shuttle

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	757.3029	2,228.3052	8,609.5140	10.0566	707.1798	48.6488	755.8286	189.0600	44.6279	233.6879	0.0000	905,157.0865	905,157.0865	56.8965	0.0000	906,351.9120
Unmitigated	798.4935	2,528.2913	9,560.2226	11.5551	816.1444	55.7814	871.9257	218.1910	51.1758	269.3669	0.0000	1,040,558.6582	1,040,558.6582	64.6327	0.0000	1,041,915.9447

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	8.52	75.50	75.50	79,590	68,948
General Office Building	1,608.67	283.58	137.21	3,895,273	3,374,380
Office Park	631,731.84	631,731.84	631731.84	2,134,401,227	1,848,977,293
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Regional Shopping Center	5,286.80	5,891.09	3469.19	11,059,641	9,610,347
Single Family Housing	2,618.00	2,725.25	2370.50	8,877,639	8,122,793
Total	641,253.83	640,707.25	637,784.24	2,158,313,370	1,870,153,761

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
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
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.486544	0.064021	0.169147	0.160108	0.054635	0.009206	0.014429	0.031168	0.001207	0.001399	0.004490	0.000757	0.002888

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive 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	23,412.7485	23,412.7485	0.6779	0.1403	23,470.4640
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	23,441.7042	23,441.7042	0.6787	0.1404	23,499.4910
NaturalGas Mitigated	0.1233	1.0937	0.7414	6.7300e-003		0.0852	0.0852		0.0852	0.0852	0.0000	1,220.3413	1,220.3413	0.0234	0.0224	1,227.7681
NaturalGas Unmitigated	0.1233	1.0937	0.7414	6.7300e-003		0.0852	0.0852		0.0852	0.0852	0.0000	1,220.3413	1,220.3413	0.0234	0.0224	1,227.7681

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					
Office Park	1.29476e+007	0.0698	0.6347	0.5331	3.8100e-003		0.0482	0.0482		0.0482	0.0482	0.0000	690.9317	690.9317	0.0132	0.0127	695.1366
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
Regional Shopping Center	157876	8.5000e-004	7.7400e-003	6.5000e-003	5.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	8.4249	8.4249	1.6000e-004	1.5000e-004	8.4761
Single Family Housing	9.2859e+006	0.0501	0.4279	0.1821	2.7300e-003		0.0346	0.0346		0.0346	0.0346	0.0000	495.5312	495.5312	9.5000e-003	9.0800e-003	498.5469
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	476982	2.5700e-003	0.0234	0.0196	1.4000e-004		1.7800e-003	1.7800e-003		1.7800e-003	1.7800e-003	0.0000	25.4536	25.4536	4.9000e-004	4.7000e-004	25.6085
Total		**0.1233**	**1.0937**	**0.7414**	**6.7300e-003**		**0.0852**	**0.0852**		**0.0852**	**0.0852**	**0.0000**	**1,220.3413**	**1,220.3413**	**0.0234**	**0.0224**	**1,227.7681**

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					
Office Park	1.29476e+007	0.0698	0.6347	0.5331	3.8100e-003		0.0482	0.0482		0.0482	0.0482	0.0000	690.9317	690.9317	0.0132	0.0127	695.1366
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
Regional Shopping Center	157876	8.5000e-004	7.7400e-003	6.5000e-003	5.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	8.4249	8.4249	1.6000e-004	1.5000e-004	8.4761
Single Family Housing	9.2859e+006	0.0501	0.4279	0.1821	2.7300e-003		0.0346	0.0346		0.0346	0.0346	0.0000	495.5312	495.5312	9.5000e-003	9.0800e-003	498.5469
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	476982	2.5700e-003	0.0234	0.0196	1.4000e-004		1.7800e-003	1.7800e-003		1.7800e-003	1.7800e-003	0.0000	25.4536	25.4536	4.9000e-004	4.7000e-004	25.6085
Total		**0.1233**	**1.0937**	**0.7414**	**6.7300e-003**		**0.0852**	**0.0852**		**0.0852**	**0.0852**	**0.0000**	**1,220.3413**	**1,220.3413**	**0.0234**	**0.0224**	**1,227.7681**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
General Office Building	1.39697e+006	634.6494	0.0184	3.8000e-003	636.2139
Office Park	4.70246e+007	21,363.4731	0.6186	0.1280	21,416.1368
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
Regional Shopping Center	1.06566e+006	484.1355	0.0140	2.9000e-003	485.3290
Single Family Housing	2.1119e+006	959.4462	0.0278	5.7500e-003	961.8113
Total		**23,441.7042**	**0.6788**	**0.1404**	**23,499.4910**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
General Office Building	1.39697e+006	634.6494	0.0184	3.8000e-003	636.2139
Office Park	4.70246e+007	21,363.4731	0.6186	0.1280	21,416.1368
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
Regional Shopping Center	1.06566e+006	484.1355	0.0140	2.9000e-003	485.3290
Single Family Housing	2.04816e+006	930.4905	0.0269	5.5700e-003	932.7843
Total		**23,412.7485**	**0.6779**	**0.1403**	**23,470.4640**

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	65.2649	0.0597	4.8115	2.9000e-003		0.2778	0.2778		0.2777	0.2777	29.2102	60.8791	90.0893	0.0932	1.9800e-003	92.6602
Unmitigated	65.2649	0.0597	4.8115	2.9000e-003		0.2778	0.2778		0.2777	0.2777	29.2102	60.8791	90.0893	0.0932	1.9800e-003	92.6602

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	15.3125					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	48.9362					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.9008	0.0229	1.7278	2.7500e-003		0.2626	0.2626		0.2625	0.2625	29.2102	56.1321	85.3423	0.0871	1.9800e-003	87.7862
Landscaping	0.1155	0.0368	3.0836	1.5000e-004		0.0152	0.0152		0.0152	0.0152	0.0000	4.7470	4.7470	6.0500e-003	0.0000	4.8740
Total	**65.2649**	**0.0597**	**4.8115**	**2.9000e-003**		**0.2778**	**0.2778**		**0.2777**	**0.2777**	**29.2102**	**60.8791**	**90.0893**	**0.0932**	**1.9800e-003**	**92.6602**

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	15.3125					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	48.9362					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.9008	0.0229	1.7278	2.7500e-003		0.2626	0.2626		0.2625	0.2625	29.2102	56.1321	85.3423	0.0871	1.9800e-003	87.7862
Landscaping	0.1155	0.0368	3.0836	1.5000e-004		0.0152	0.0152		0.0152	0.0152	0.0000	4.7470	4.7470	6.0500e-003	0.0000	4.8740
Total	**65.2649**	**0.0597**	**4.8115**	**2.9000e-003**		**0.2778**	**0.2778**		**0.2777**	**0.2777**	**29.2102**	**60.8791**	**90.0893**	**0.0932**	**1.9800e-003**	**92.6602**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7,450.2524	26.1338	0.6544	8,201.9274
Unmitigated	7,450.2524	26.1385	0.6554	8,202.3302

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 5.37358	27.1222	7.9000e-004	1.6000e-004	27.1891
General Office Building	23.2262 / 14.2354	216.6143	0.7629	0.0191	238.5633
Office Park	749.583 / 459.422	6,990.8179	24.6207	0.6172	7,699.1804
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
Regional Shopping Center	5.04064 / 3.08942	47.0103	0.1656	4.1500e-003	51.7738
Single Family Housing	17.9174 / 11.2957	168.6876	0.5886	0.0148	185.6236
Total		**7,450.2524**	**26.1385**	**0.6554**	**8,202.3302**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 5.37358	27.1222	7.9000e-004	1.6000e-004	27.1891
General Office Building	23.2262 / 14.2354	216.6143	0.7628	0.0191	238.5516
Office Park	749.583 / 459.422	6,990.8179	24.6163	0.6163	7,698.8011
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
Regional Shopping Center	5.04064 / 3.08942	47.0103	0.1655	4.1400e-003	51.7712
Single Family Housing	17.9174 / 11.2957	168.6876	0.5885	0.0147	185.6145
Total		**7,450.2524**	**26.1338**	**0.6544**	**8,201.9274**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	900.9287	53.2434	0.0000	2,019.0393
Unmitigated	900.9287	53.2434	0.0000	2,019.0393

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.39	0.0792	4.6800e-003	0.0000	0.1774
General Office Building	121.53	24.6695	1.4579	0.0000	55.2859
Office Park	3922.23	796.1772	47.0527	0.0000	1,784.2845
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
Regional Shopping Center	71.45	14.5037	0.8571	0.0000	32.5037
Single Family Housing	322.67	65.4991	3.8709	0.0000	146.7877
Total		**900.9287**	**53.2434**	**0.0000**	**2,019.0393**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.39	0.0792	4.6800e-003	0.0000	0.1774
General Office Building	121.53	24.6695	1.4579	0.0000	55.2859
Office Park	3922.23	796.1772	47.0527	0.0000	1,784.2845
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
Regional Shopping Center	71.45	14.5037	0.8571	0.0000	32.5037
Single Family Housing	322.67	65.4991	3.8709	0.0000	146.7877
Total		**900.9287**	**53.2434**	**0.0000**	**2,019.0393**

9.0 Operational Offroad

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

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	0.0000	0.0000	0.0000	0.0000

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Colton Hub City Center BAU - 2

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	73.88	1000sqft	1.70	73,880.00	0
Regional Shopping Center	741.61	1000sqft	17.03	741,610.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2010
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 18.73 acres of the 373.2 acres

Construction Phase - Modeling for operational emissions only

Grading - Project is 373.2 acres

Architectural Coating - Operational analysis only

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating -

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Vechicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblGrading	AcresOfGrading	75.00	18.73
tblProjectCharacteristics	OperationalYear	2014	2010
tblVehicleTrips	ST_TR	2.37	2.46
tblVehicleTrips	ST_TR	49.97	44.02
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	25.24	21.31
tblVehicleTrips	WD_TR	11.01	14.21
tblVehicleTrips	WD_TR	42.94	33.68

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.8930	1.1000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0202	0.0202	7.0000e-005	0.0000	0.0217
Energy	0.0107	0.0976	0.0820	5.9000e-004		7.4100e-003	7.4100e-003		7.4100e-003	7.4100e-003	0.0000	5,741.1204	5,741.1204	0.1652	0.0357	5,755.6576
Mobile	27.5575	69.6160	282.3419	0.3049	21.2107	1.4825	22.6932	5.6705	1.3596	7.0302	0.0000	27,409.6749	27,409.6749	1.7726	0.0000	27,446.9001
Waste						0.0000	0.0000		0.0000	0.0000	172.0145	0.0000	172.0145	10.1658	0.0000	385.4957
Water						0.0000	0.0000		0.0000	0.0000	21.5935	613.1889	634.7825	2.2356	0.0560	699.1034
Total	**31.4612**	**69.7136**	**282.4355**	**0.3055**	**21.2107**	**1.4899**	**22.7006**	**5.6705**	**1.3671**	**7.0376**	**193.6081**	**33,764.0045**	**33,957.6125**	**14.3393**	**0.0917**	**34,287.1785**

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	3.8930	1.1000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0202	0.0202	7.0000e-005	0.0000	0.0217
Energy	0.0107	0.0976	0.0820	5.9000e-004		7.4100e-003	7.4100e-003		7.4100e-003	7.4100e-003	0.0000	5,709.7872	5,709.7872	0.1643	0.0355	5,724.2471
Mobile	27.5575	69.6160	282.3419	0.3049	21.2107	1.4825	22.6932	5.6705	1.3596	7.0302	0.0000	27,409.6749	27,409.6749	1.7726	0.0000	27,446.9001
Waste						0.0000	0.0000		0.0000	0.0000	172.0145	0.0000	172.0145	10.1658	0.0000	385.4957
Water						0.0000	0.0000		0.0000	0.0000	21.5935	613.1889	634.7825	2.2352	0.0560	699.0690
Total	**31.4612**	**69.7136**	**282.4355**	**0.3055**	**21.2107**	**1.4899**	**22.7006**	**5.6705**	**1.3671**	**7.0376**	**193.6081**	**33,732.6712**	**33,926.2793**	**14.3380**	**0.0915**	**34,255.7335**

	ROG	NOx	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**	**0.09**	**0.09**	**0.01**	**0.28**	**0.09**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	0.0000
Total	**0.0000**

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	27.5575	69.6160	282.3419	0.3049	21.2107	1.4825	22.6932	5.6705	1.3596	7.0302	0.0000	27,409.6749	27,409.6749	1.7726	0.0000	27,446.9001
Unmitigated	27.5575	69.6160	282.3419	0.3049	21.2107	1.4825	22.6932	5.6705	1.3596	7.0302	0.0000	27,409.6749	27,409.6749	1.7726	0.0000	27,446.9001

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	1,049.83	181.74	77.57	2,535,056	2,535,056
Regional Shopping Center	24,977.42	32,645.67	15803.71	53,557,116	53,557,116
Total	26,027.26	32,827.42	15,881.28	56,092,172	56,092,172

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-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.486544	0.064021	0.169147	0.160108	0.054635	0.009206	0.014429	0.031168	0.001207	0.001399	0.004490	0.000757	0.002888

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive 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	5,603.5827	5,603.5827	0.1623	0.0336	5,617.3962
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5,634.9159	5,634.9159	0.1632	0.0338	5,648.8067
NaturalGas Mitigated	0.0107	0.0976	0.0820	5.9000e-004		7.4100e-003	7.4100e-003		7.4100e-003	7.4100e-003	0.0000	106.2045	106.2045	2.0400e-003	1.9500e-003	106.8508
NaturalGas Unmitigated	0.0107	0.0976	0.0820	5.9000e-004		7.4100e-003	7.4100e-003		7.4100e-003	7.4100e-003	0.0000	106.2045	106.2045	2.0400e-003	1.9500e-003	106.8508

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					
General Office Building	269662	1.4500e-003	0.0132	0.0111	8.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	14.3902	14.3902	2.8000e-004	2.6000e-004	14.4778
Regional Shopping Center	1.72054e+006	9.2800e-003	0.0843	0.0709	5.1000e-004		6.4100e-003	6.4100e-003		6.4100e-003	6.4100e-003	0.0000	91.8143	91.8143	1.7600e-003	1.6800e-003	92.3731
Total		**0.0107**	**0.0976**	**0.0820**	**5.9000e-004**		**7.4100e-003**	**7.4100e-003**		**7.4100e-003**	**7.4100e-003**	**0.0000**	**106.2045**	**106.2045**	**2.0400e-003**	**1.9400e-003**	**106.8509**

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					
General Office Building	269662	1.4500e-003	0.0132	0.0111	8.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	14.3902	14.3902	2.8000e-004	2.6000e-004	14.4778
Regional Shopping Center	1.72054e+006	9.2800e-003	0.0843	0.0709	5.1000e-004		6.4100e-003	6.4100e-003		6.4100e-003	6.4100e-003	0.0000	91.8143	91.8143	1.7600e-003	1.6800e-003	92.3731
Total		**0.0107**	**0.0976**	**0.0820**	**5.9000e-004**		**7.4100e-003**	**7.4100e-003**		**7.4100e-003**	**7.4100e-003**	**0.0000**	**106.2045**	**106.2045**	**2.0400e-003**	**1.9400e-003**	**106.8509**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	789777	358.7993	0.0104	2.1500e-003	359.6838
Regional Shopping Center	1.16136e+007	5,276.1166	0.1528	0.0316	5,289.1229
Total		**5,634.9159**	**0.1632**	**0.0338**	**5,648.8067**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	789777	358.7993	0.0104	2.1500e-003	359.6838
Regional Shopping Center	1.15446e+007	5,244.7833	0.1519	0.0314	5,257.7124
Total		**5,603.5827**	**0.1623**	**0.0336**	**5,617.3962**

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	3.8930	1.1000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0202	0.0202	7.0000e-005	0.0000	0.0217
Unmitigated	3.8930	1.1000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0202	0.0202	7.0000e-005	0.0000	0.0217

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	0.9450					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.9468					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2900e-003	1.1000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0202	0.0202	7.0000e-005	0.0000	0.0217
Total	**3.8930**	**1.1000e-004**	**0.0116**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0202**	**0.0202**	**7.0000e-005**	**0.0000**	**0.0217**

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	0.9450					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.9468					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2900e-003	1.1000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0202	0.0202	7.0000e-005	0.0000	0.0217
Total	**3.8930**	**1.1000e-004**	**0.0116**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0202**	**0.0202**	**7.0000e-005**	**0.0000**	**0.0217**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	634.7825	2.2352	0.0560	699.0690
Unmitigated	634.7825	2.2356	0.0560	699.1034

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	13.131 / 8.04801	122.4630	0.4313	0.0108	134.8719
Regional Shopping Center	54.9329 / 33.6686	512.3195	1.8043	0.0452	564.2315
Total		**634.7825**	**2.2356**	**0.0560**	**699.1034**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	13.131 / 8.04801	122.4630	0.4312	0.0108	134.8652
Regional Shopping Center	54.9329 / 33.6686	512.3195	1.8040	0.0452	564.2037
Total		**634.7825**	**2.2352**	**0.0560**	**699.0690**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	172.0145	10.1658	0.0000	385.4957
Unmitigated	172.0145	10.1658	0.0000	385.4957

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	68.71	13.9475	0.8243	0.0000	31.2573
Regional Shopping Center	778.69	158.0670	9.3415	0.0000	354.2384
Total		**172.0145**	**10.1658**	**0.0000**	**385.4957**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	68.71	13.9475	0.8243	0.0000	31.2573
Regional Shopping Center	778.69	158.0670	9.3415	0.0000	354.2384
Total		**172.0145**	**10.1658**	**0.0000**	**385.4957**

9.0 Operational Offroad

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

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	0.0000	0.0000	0.0000	0.0000

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Colton Hub City Center BAU - 3

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	69.70	1000sqft	1.60	69,700.00	0
Regional Shopping Center	80.59	1000sqft	1.85	80,590.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2010
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 3.45 acres of the 373.2 acres.

Construction Phase - Modeling for operational emissions only

Grading - Project is 373.2 acres

Architectural Coating - Operational analysis only

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating - SCAQMD Rule 1113

Sequestration -

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
tblProjectCharacteristics	OperationalYear	2014	2010
tblVehicleTrips	ST_TR	2.37	2.49
tblVehicleTrips	ST_TR	49.97	100.80
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	25.24	67.94
tblVehicleTrips	WD_TR	11.01	14.32
tblVehicleTrips	WD_TR	42.94	73.24

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7175	2.0000e-005	2.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	4.0000e-003
Energy	2.3800e-003	0.0216	0.0182	1.3000e-004		1.6400e-003	1.6400e-003		1.6400e-003	1.6400e-003	0.0000	935.4027	935.4027	0.0269	5.8900e-003	937.7939
Mobile	7.5308	19.4097	78.1970	0.0854	5.9483	0.4148	6.3631	1.5903	0.3804	1.9707	0.0000	7,676.1412	7,676.1412	0.4944	0.0000	7,686.5240
Waste						0.0000	0.0000		0.0000	0.0000	30.3350	0.0000	30.3350	1.7928	0.0000	67.9826
Water						0.0000	0.0000		0.0000	0.0000	5.8240	165.3835	171.2075	0.6030	0.0151	188.5555
Total	**8.2506**	**19.4314**	**78.2173**	**0.0855**	**5.9483**	**0.4164**	**6.3648**	**1.5903**	**0.3821**	**1.9723**	**36.1590**	**8,776.9311**	**8,813.0901**	**2.9170**	**0.0210**	**8,880.8600**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7175	2.0000e-005	2.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	4.0000e-003
Energy	2.3800e-003	0.0216	0.0182	1.3000e-004		1.6400e-003	1.6400e-003		1.6400e-003	1.6400e-003	0.0000	931.9977	931.9977	0.0268	5.8700e-003	934.3805
Mobile	7.5308	19.4097	78.1970	0.0854	5.9483	0.4148	6.3631	1.5903	0.3804	1.9707	0.0000	7,676.1412	7,676.1412	0.4944	0.0000	7,686.5240
Waste						0.0000	0.0000		0.0000	0.0000	30.3350	0.0000	30.3350	1.7928	0.0000	67.9826
Water						0.0000	0.0000		0.0000	0.0000	5.8240	165.3835	171.2075	0.6029	0.0151	188.5463
Total	**8.2506**	**19.4314**	**78.2173**	**0.0855**	**5.9483**	**0.4164**	**6.3648**	**1.5903**	**0.3821**	**1.9723**	**36.1590**	**8,773.5261**	**8,809.6851**	**2.9168**	**0.0210**	**8,877.4374**

	ROG	NOx	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**	**0.04**	**0.04**	**0.01**	**0.24**	**0.04**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	0.0000
Total	**0.0000**

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	7.5308	19.4097	78.1970	0.0854	5.9483	0.4148	6.3631	1.5903	0.3804	1.9707	0.0000	7,676.1412	7,676.1412	0.4944	0.0000	7,686.5240
Unmitigated	7.5308	19.4097	78.1970	0.0854	5.9483	0.4148	6.3631	1.5903	0.3804	1.9707	0.0000	7,676.1412	7,676.1412	0.4944	0.0000	7,686.5240

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	998.10	173.55	73.19	2,410,232	2,410,232
Regional Shopping Center	5,902.41	8,123.47	5475.28	13,320,281	13,320,281
Total	6,900.52	8,297.03	5,548.47	15,730,512	15,730,512

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.486544	0.064021	0.169147	0.160108	0.054635	0.009206	0.014429	0.031168	0.001207	0.001399	0.004490	0.000757	0.002888

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive 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	908.4444	908.4444	0.0263	5.4400e-003	910.6838
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	911.8493	911.8493	0.0264	5.4600e-003	914.0971
NaturalGas Mitigated	2.3800e-003	0.0216	0.0182	1.3000e-004		1.6400e-003	1.6400e-003		1.6400e-003	1.6400e-003	0.0000	23.5534	23.5534	4.5000e-004	4.3000e-004	23.6967
NaturalGas Unmitigated	2.3800e-003	0.0216	0.0182	1.3000e-004		1.6400e-003	1.6400e-003		1.6400e-003	1.6400e-003	0.0000	23.5534	23.5534	4.5000e-004	4.3000e-004	23.6967

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					
Regional Shopping Center	186969	1.0100e-003	9.1700e-003	7.7000e-003	5.0000e-005		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	9.9774	9.9774	1.9000e-004	1.8000e-004	10.0381
General Office Building	254405	1.3700e-003	0.0125	0.0105	7.0000e-005		9.5000e-004	9.5000e-004		9.5000e-004	9.5000e-004	0.0000	13.5760	13.5760	2.6000e-004	2.5000e-004	13.6586
Total		**2.3800e-003**	**0.0216**	**0.0182**	**1.2000e-004**		**1.6500e-003**	**1.6500e-003**		**1.6500e-003**	**1.6500e-003**	**0.0000**	**23.5534**	**23.5534**	**4.5000e-004**	**4.3000e-004**	**23.6967**

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					
Regional Shopping Center	186969	1.0100e-003	9.1700e-003	7.7000e-003	5.0000e-005		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	9.9774	9.9774	1.9000e-004	1.8000e-004	10.0381
General Office Building	254405	1.3700e-003	0.0125	0.0105	7.0000e-005		9.5000e-004	9.5000e-004		9.5000e-004	9.5000e-004	0.0000	13.5760	13.5760	2.6000e-004	2.5000e-004	13.6586
Total		**2.3800e-003**	**0.0216**	**0.0182**	**1.2000e-004**		**1.6500e-003**	**1.6500e-003**		**1.6500e-003**	**1.6500e-003**	**0.0000**	**23.5534**	**23.5534**	**4.5000e-004**	**4.3000e-004**	**23.6967**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	745093	338.4991	9.8000e-003	2.0300e-003	339.3336
Regional Shopping Center	1.26204e+006	573.3502	0.0166	3.4300e-003	574.7636
Total		**911.8493**	**0.0264**	**5.4600e-003**	**914.0971**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	745093	338.4991	9.8000e-003	2.0300e-003	339.3336
Regional Shopping Center	1.25454e+006	569.9452	0.0165	3.4100e-003	571.3502
Total		**908.4444**	**0.0263**	**5.4400e-003**	**910.6838**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7175	2.0000e-005	2.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	4.0000e-003
Unmitigated	0.7175	2.0000e-005	2.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	4.0000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1742					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5431					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.4000e-004	2.0000e-005	2.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	4.0000e-003
Total	**0.7175**	**2.0000e-005**	**2.1300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.7300e-003**	**3.7300e-003**	**1.0000e-005**	**0.0000**	**4.0000e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1742					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5431					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.4000e-004	2.0000e-005	2.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	4.0000e-003
Total	**0.7175**	**2.0000e-005**	**2.1300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.7300e-003**	**3.7300e-003**	**1.0000e-005**	**0.0000**	**4.0000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	171.2075	0.6029	0.0151	188.5463
Unmitigated	171.2075	0.6030	0.0151	188.5555

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	12.388 / 7.59267	115.5343	0.4069	0.0102	127.2411
Regional Shopping Center	5.9695 / 3.65873	55.6732	0.1961	4.9200e-003	61.3145
Total		**171.2075**	**0.6030**	**0.0151**	**188.5555**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	12.388 / 7.59267	115.5343	0.4068	0.0102	127.2348
Regional Shopping Center	5.9695 / 3.65873	55.6732	0.1960	4.9100e-003	61.3114
Total		**171.2075**	**0.6029**	**0.0151**	**188.5463**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	30.3350	1.7928	0.0000	67.9826
Unmitigated	30.3350	1.7928	0.0000	67.9826

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	64.82	13.1579	0.7776	0.0000	29.4876
Regional Shopping Center	84.62	17.1771	1.0151	0.0000	38.4950
Total		**30.3350**	**1.7928**	**0.0000**	**67.9826**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	64.82	13.1579	0.7776	0.0000	29.4876
Regional Shopping Center	84.62	17.1771	1.0151	0.0000	38.4950
Total		**30.3350**	**1.7928**	**0.0000**	**67.9826**

9.0 Operational Offroad

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

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	0.0000	0.0000	0.0000	0.0000

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Colton Hub City Center BAU - 4

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	20.91	1000sqft	0.48	20,910.00	0
Regional Shopping Center	40.29	1000sqft	0.92	40,290.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2010
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 1.40 acres of the 373.2 acres

Construction Phase - Modeling for operational emissions only

Grading - Project is 373.2 acres

Architectural Coating - Operational analysis only

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating -

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2010
tblVehicleTrips	ST_TR	2.37	3.55
tblVehicleTrips	ST_TR	49.97	129.34
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	25.24	120.25
tblVehicleTrips	WD_TR	11.01	19.13
tblVehicleTrips	WD_TR	42.94	93.34

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2922	1.0000e-005	8.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5200e-003	1.5200e-003	1.0000e-005	0.0000	1.6300e-003
Energy	9.2000e-004	8.3200e-003	6.9900e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	397.2501	397.2501	0.0114	2.4900e-003	398.2622
Mobile	4.7945	12.2295	49.4396	0.0537	3.7366	0.2609	3.9975	0.9990	0.2393	1.2382	0.0000	4,825.4363	4,825.4363	0.3115	0.0000	4,831.9769
Waste						0.0000	0.0000		0.0000	0.0000	12.5347	0.0000	12.5347	0.7408	0.0000	28.0911
Water						0.0000	0.0000		0.0000	0.0000	2.1259	60.3676	62.4934	0.2201	5.5200e-003	68.8258
Total	**5.0876**	**12.2378**	**49.4475**	**0.0537**	**3.7366**	**0.2615**	**3.9981**	**0.9990**	**0.2399**	**1.2389**	**14.6605**	**5,283.0556**	**5,297.7161**	**1.2838**	**8.0100e-003**	**5,327.1576**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2922	1.0000e-005	8.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5200e-003	1.5200e-003	1.0000e-005	0.0000	1.6300e-003
Energy	9.2000e-004	8.3200e-003	6.9900e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	395.5479	395.5479	0.0114	2.4800e-003	396.5558
Mobile	4.7945	12.2295	49.4396	0.0537	3.7366	0.2609	3.9975	0.9990	0.2393	1.2382	0.0000	4,825.4363	4,825.4363	0.3115	0.0000	4,831.9769
Waste						0.0000	0.0000		0.0000	0.0000	12.5347	0.0000	12.5347	0.7408	0.0000	28.0911
Water						0.0000	0.0000		0.0000	0.0000	2.1259	60.3676	62.4934	0.2201	5.5100e-003	68.8224
Total	**5.0876**	**12.2378**	**49.4475**	**0.0537**	**3.7366**	**0.2615**	**3.9981**	**0.9990**	**0.2399**	**1.2389**	**14.6605**	**5,281.3533**	**5,296.0139**	**1.2837**	**7.9900e-003**	**5,325.4477**

	ROG	NOx	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**	**0.03**	**0.03**	**0.01**	**0.25**	**0.03**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	0.0000
Total	**0.0000**

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	4.7945	12.2295	49.4396	0.0537	3.7366	0.2609	3.9975	0.9990	0.2393	1.2382	0.0000	4,825.4363	4,825.4363	0.3115	0.0000	4,831.9769
Unmitigated	4.7945	12.2295	49.4396	0.0537	3.7366	0.2609	3.9975	0.9990	0.2393	1.2382	0.0000	4,825.4363	4,825.4363	0.3115	0.0000	4,831.9769

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	400.01	74.23	21.96	964,702	964,702
Regional Shopping Center	3,760.67	5,211.11	4844.87	8,916,888	8,916,888
Total	4,160.68	5,285.34	4,866.83	9,881,590	9,881,590

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.486544	0.064021	0.169147	0.160108	0.054635	0.009206	0.014429	0.031168	0.001207	0.001399	0.004490	0.000757	0.002888

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive 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	386.4870	386.4870	0.0112	2.3200e-003	387.4397
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	388.1893	388.1893	0.0112	2.3300e-003	389.1462
NaturalGas Mitigated	9.2000e-004	8.3200e-003	6.9900e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	9.0609	9.0609	1.7000e-004	1.7000e-004	9.1160
NaturalGas Unmitigated	9.2000e-004	8.3200e-003	6.9900e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	9.0609	9.0609	1.7000e-004	1.7000e-004	9.1160

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					
General Office Building	76321.5	4.1000e-004	3.7400e-003	3.1400e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0728	4.0728	8.0000e-005	7.0000e-005	4.0976
Regional Shopping Center	93472.8	5.0000e-004	4.5800e-003	3.8500e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	4.9881	4.9881	1.0000e-004	9.0000e-005	5.0184
Total		**9.1000e-004**	**8.3200e-003**	**6.9900e-003**	**5.0000e-005**		**6.3000e-004**	**6.3000e-004**		**6.3000e-004**	**6.3000e-004**	**0.0000**	**9.0609**	**9.0609**	**1.8000e-004**	**1.6000e-004**	**9.1160**

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					
General Office Building	76321.5	4.1000e-004	3.7400e-003	3.1400e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0728	4.0728	8.0000e-005	7.0000e-005	4.0976
Regional Shopping Center	93472.8	5.0000e-004	4.5800e-003	3.8500e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	4.9881	4.9881	1.0000e-004	9.0000e-005	5.0184
Total		**9.1000e-004**	**8.3200e-003**	**6.9900e-003**	**5.0000e-005**		**6.3000e-004**	**6.3000e-004**		**6.3000e-004**	**6.3000e-004**	**0.0000**	**9.0609**	**9.0609**	**1.8000e-004**	**1.6000e-004**	**9.1160**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	223528	101.5497	2.9400e-003	6.1000e-004	101.8001
Regional Shopping Center	630941	286.6395	8.3000e-003	1.7200e-003	287.3461
Total		**388.1893**	**0.0112**	**2.3300e-003**	**389.1462**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	223528	101.5497	2.9400e-003	6.1000e-004	101.8001
Regional Shopping Center	627194	284.9373	8.2500e-003	1.7100e-003	285.6397
Total		**386.4870**	**0.0112**	**2.3200e-003**	**387.4397**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2922	1.0000e-005	8.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5200e-003	1.5200e-003	1.0000e-005	0.0000	1.6300e-003
Unmitigated	0.2922	1.0000e-005	8.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5200e-003	1.5200e-003	1.0000e-005	0.0000	1.6300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0709					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2212					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-004	1.0000e-005	8.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5200e-003	1.5200e-003	1.0000e-005	0.0000	1.6300e-003
Total	**0.2922**	**1.0000e-005**	**8.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.5200e-003**	**1.5200e-003**	**1.0000e-005**	**0.0000**	**1.6300e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0709					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2212					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-004	1.0000e-005	8.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5200e-003	1.5200e-003	1.0000e-005	0.0000	1.6300e-003
Total	**0.2922**	**1.0000e-005**	**8.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.5200e-003**	**1.5200e-003**	**1.0000e-005**	**0.0000**	**1.6300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	62.4934	0.2201	5.5100e-003	68.8224
Unmitigated	62.4934	0.2201	5.5200e-003	68.8258

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	3.71641 / 2.2778	34.6603	0.1221	3.0600e-003	38.1723
Regional Shopping Center	2.98438 / 1.82914	27.8332	0.0980	2.4600e-003	30.6534
Total		**62.4934**	**0.2201**	**5.5200e-003**	**68.8258**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	3.71641 / 2.2778	34.6603	0.1221	3.0600e-003	38.1704
Regional Shopping Center	2.98438 / 1.82914	27.8332	0.0980	2.4500e-003	30.6519
Total		**62.4934**	**0.2201**	**5.5100e-003**	**68.8224**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.5347	0.7408	0.0000	28.0911
Unmitigated	12.5347	0.7408	0.0000	28.0911

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	19.45	3.9482	0.2333	0.0000	8.8481
Regional Shopping Center	42.3	8.5865	0.5075	0.0000	19.2429
Total		**12.5347**	**0.7408**	**0.0000**	**28.0911**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	19.45	3.9482	0.2333	0.0000	8.8481
Regional Shopping Center	42.3	8.5865	0.5075	0.0000	19.2429
Total		**12.5347**	**0.7408**	**0.0000**	**28.0911**

9.0 Operational Offroad

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

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	0.0000	0.0000	0.0000	0.0000

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Colton Hub City Center BAU - 5

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	228.95	1000sqft	5.26	228,950.00	0
Regional Shopping Center	119.25	1000sqft	2.74	119,250.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2010
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 8 acres of the 373.2 acres

Construction Phase - Modeling for operational emissions only

Grading - Project is 373.2 acres

Architectural Coating - Operational analysis only

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating -

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2010
tblVehicleTrips	ST_TR	2.37	2.17
tblVehicleTrips	ST_TR	49.97	86.57
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	25.24	50.98
tblVehicleTrips	WD_TR	11.01	10.76
tblVehicleTrips	WD_TR	42.94	63.85

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6623	5.0000e-005	4.9500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6400e-003	8.6400e-003	3.0000e-005	0.0000	9.2800e-003
Energy	6.0000e-003	0.0545	0.0458	3.3000e-004		4.1400e-003	4.1400e-003		4.1400e-003	4.1400e-003	0.0000	2,019.6504	2,019.6504	0.0579	0.0128	2,024.8440
Mobile	10.6424	28.0134	112.0823	0.1238	8.6363	0.6008	9.2372	2.3089	0.5511	2.8599	0.0000	11,129.2028	11,129.2028	0.7139	0.0000	11,144.1940
Waste						0.0000	0.0000		0.0000	0.0000	68.6373	0.0000	68.6373	4.0564	0.0000	153.8207
Water						0.0000	0.0000		0.0000	0.0000	15.7121	446.1743	461.8864	1.6267	0.0408	508.6882
Total	**12.3106**	**28.0680**	**112.1330**	**0.1241**	**8.6363**	**0.6050**	**9.2413**	**2.3089**	**0.5552**	**2.8641**	**84.3494**	**13,595.0362**	**13,679.3856**	**6.4549**	**0.0536**	**13,831.5562**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6623	5.0000e-005	4.9500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6400e-003	8.6400e-003	3.0000e-005	0.0000	9.2800e-003
Energy	6.0000e-003	0.0545	0.0458	3.3000e-004		4.1400e-003	4.1400e-003		4.1400e-003	4.1400e-003	0.0000	2,014.6121	2,014.6121	0.0578	0.0128	2,019.7933
Mobile	10.6424	28.0134	112.0823	0.1238	8.6363	0.6008	9.2372	2.3089	0.5511	2.8599	0.0000	11,129.2028	11,129.2028	0.7139	0.0000	11,144.1940
Waste						0.0000	0.0000		0.0000	0.0000	68.6373	0.0000	68.6373	4.0564	0.0000	153.8207
Water						0.0000	0.0000		0.0000	0.0000	15.7121	446.1743	461.8864	1.6264	0.0407	508.6632
Total	**12.3106**	**28.0680**	**112.1330**	**0.1241**	**8.6363**	**0.6050**	**9.2413**	**2.3089**	**0.5552**	**2.8641**	**84.3494**	**13,589.9978**	**13,674.3473**	**6.4544**	**0.0535**	**13,826.4804**

	ROG	NOx	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**	**0.04**	**0.04**	**0.01**	**0.17**	**0.04**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	0.0000
Total	**0.0000**

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	10.6424	28.0134	112.0823	0.1238	8.6363	0.6008	9.2372	2.3089	0.5511	2.8599	0.0000	11,129.2028	11,129.2028	0.7139	0.0000	11,144.1940
Unmitigated	10.6424	28.0134	112.0823	0.1238	8.6363	0.6008	9.2372	2.3089	0.5511	2.8599	0.0000	11,129.2028	11,129.2028	0.7139	0.0000	11,144.1940

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	2,463.50	496.82	240.40	6,007,900	6,007,900
Regional Shopping Center	7,614.11	10,323.47	6079.37	16,831,066	16,831,066
Total	10,077.61	10,820.29	6,319.76	22,838,966	22,838,966

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.486544	0.064021	0.169147	0.160108	0.054635	0.009206	0.014429	0.031168	0.001207	0.001399	0.004490	0.000757	0.002888

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive 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	1,955.2540	1,955.2540	0.0566	0.0117	1,960.0740
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,960.2924	1,960.2924	0.0568	0.0117	1,965.1248
NaturalGas Mitigated	6.0000e-003	0.0545	0.0458	3.3000e-004		4.1400e-003	4.1400e-003		4.1400e-003	4.1400e-003	0.0000	59.3580	59.3580	1.1400e-003	1.0900e-003	59.7193
NaturalGas Unmitigated	6.0000e-003	0.0545	0.0458	3.3000e-004		4.1400e-003	4.1400e-003		4.1400e-003	4.1400e-003	0.0000	59.3580	59.3580	1.1400e-003	1.0900e-003	59.7193

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					
Regional Shopping Center	276660	1.4900e-003	0.0136	0.0114	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.7636	14.7636	2.8000e-004	2.7000e-004	14.8535
General Office Building	835668	4.5100e-003	0.0410	0.0344	2.5000e-004		3.1100e-003	3.1100e-003		3.1100e-003	3.1100e-003	0.0000	44.5944	44.5944	8.5000e-004	8.2000e-004	44.8658
Total		**6.0000e-003**	**0.0545**	**0.0458**	**3.3000e-004**		**4.1400e-003**	**4.1400e-003**		**4.1400e-003**	**4.1400e-003**	**0.0000**	**59.3580**	**59.3580**	**1.1300e-003**	**1.0900e-003**	**59.7193**

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					
Regional Shopping Center	276660	1.4900e-003	0.0136	0.0114	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.7636	14.7636	2.8000e-004	2.7000e-004	14.8535
General Office Building	835668	4.5100e-003	0.0410	0.0344	2.5000e-004		3.1100e-003	3.1100e-003		3.1100e-003	3.1100e-003	0.0000	44.5944	44.5944	8.5000e-004	8.2000e-004	44.8658
Total		**6.0000e-003**	**0.0545**	**0.0458**	**3.3000e-004**		**4.1400e-003**	**4.1400e-003**		**4.1400e-003**	**4.1400e-003**	**0.0000**	**59.3580**	**59.3580**	**1.1300e-003**	**1.0900e-003**	**59.7193**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	2.44748e+006	1,111.8992	0.0322	6.6600e-003	1,114.6401
Regional Shopping Center	1.86746e+006	848.3932	0.0246	5.0800e-003	850.4846
Total		**1,960.2924**	**0.0568**	**0.0117**	**1,965.1248**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	2.44748e+006	1,111.8992	0.0322	6.6600e-003	1,114.6401
Regional Shopping Center	1.85636e+006	843.3549	0.0244	5.0500e-003	845.4339
Total		**1,955.2540**	**0.0566**	**0.0117**	**1,960.0740**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.6623	5.0000e-005	4.9500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6400e-003	8.6400e-003	3.0000e-005	0.0000	9.2800e-003
Unmitigated	1.6623	5.0000e-005	4.9500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6400e-003	8.6400e-003	3.0000e-005	0.0000	9.2800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4035					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2582					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.5000e-004	5.0000e-005	4.9500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6400e-003	8.6400e-003	3.0000e-005	0.0000	9.2800e-003
Total	**1.6623**	**5.0000e-005**	**4.9500e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.6400e-003**	**8.6400e-003**	**3.0000e-005**	**0.0000**	**9.2800e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4035					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2582					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.5000e-004	5.0000e-005	4.9500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6400e-003	8.6400e-003	3.0000e-005	0.0000	9.2800e-003
Total	**1.6623**	**5.0000e-005**	**4.9500e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.6400e-003**	**8.6400e-003**	**3.0000e-005**	**0.0000**	**9.2800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	461.8864	1.6264	0.0407	508.6632
Unmitigated	461.8864	1.6267	0.0408	508.6882

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	40.6921 / 24.9403	379.5060	1.3366	0.0335	417.9605
Regional Shopping Center	8.83315 / 5.41387	82.3804	0.2901	7.2700e-003	90.7278
Total		**461.8864**	**1.6267**	**0.0408**	**508.6882**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	40.6921 / 24.9403	379.5060	1.3363	0.0335	417.9399
Regional Shopping Center	8.83315 / 5.41387	82.3804	0.2901	7.2600e-003	90.7233
Total		**461.8864**	**1.6264**	**0.0407**	**508.6632**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	68.6373	4.0564	0.0000	153.8207
Unmitigated	68.6373	4.0564	0.0000	153.8207

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	212.92	43.2208	2.5543	0.0000	96.8607
Regional Shopping Center	125.21	25.4165	1.5021	0.0000	56.9600
Total		**68.6373**	**4.0564**	**0.0000**	**153.8207**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	212.92	43.2208	2.5543	0.0000	96.8607
Regional Shopping Center	125.21	25.4165	1.5021	0.0000	56.9600
Total		**68.6373**	**4.0564**	**0.0000**	**153.8207**

9.0 Operational Offroad

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

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	0.0000	0.0000	0.0000	0.0000

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Colton Hub City Center 2020 - 1

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	130.68	1000sqft	3.00	130,680.00	0
Office Park	4,217.45	1000sqft	96.82	4,217,450.00	0
Other Asphalt Surfaces	144.74	Acre	144.74	6,304,874.40	0
Other Non-Asphalt Surfaces	48.90	Acre	48.90	2,130,084.00	0
City Park	4.51	Acre	4.51	196,455.60	0
Single Family Housing	275.00	Dwelling Unit	42.10	495,000.00	787
Regional Shopping Center	68.05	1000sqft	1.56	68,050.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 341.63 acres of the 373.2 acres

Construction Phase - Timing from developer for the entire project.

Grading - Project is 373.2 acres

Architectural Coating - SCAQMD Rule 1113 Paint limited to 50g/L.

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating - SCAQMD Rule 1113

Sequestration - Conservative estimate of 2 trees per dwelling unit and 25 trees per acre for parks and open spaces plus ~678 trees along roadways.

Construction Off-road Equipment Mitigation - Comstruction emissions if all Tier 4 final off-road vehicles were used with a level 3 DPF and an oxidation catalyst that (per CARB) can achieve a 25% reduction of TPM.

Mobile Land Use Mitigation - 1.21 miles to downtown Colton. Omni trans bus routes along Valley Blvd, Pepper Avenue, W San Bernardino Avenue, N Windrose Avenue. Jobs per acre estimates from appendix E of Riverside General Plan.

Mobile Commute Mitigation - Estimated that 50 percent of future residents would use a school bus program if one was implemented. Employee passenger vehicle traffic makes up approximately 19% of traffic for land uses analyzed.

Area Mitigation - Use of coatings that have no more than 5g/L VOC. Only natural gas hearths would be installed.

Energy Mitigation - 2013 Title 24 is 30% more efficient that 2008 Title 24 standards. Project will install high efficiency lights that are 10% more efficient than current standards. Energy STAR appliances will be installed at residential uses.

Water Mitigation - Green Building standards

Waste Mitigation - Institute recycling and composting on-site

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	5
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	5
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	5

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	OxidationCatalyst	0.00	25.00
tblConstEquipMitigation	OxidationCatalyst	0.00	25.00

tblConstEquipMitigation	OxidationCatalyst	0.00	25.00
tblConstEquipMitigation	OxidationCatalyst	0.00	25.00
tblConstEquipMitigation	OxidationCatalyst	0.00	25.00
tblConstEquipMitigation	OxidationCatalyst	0.00	25.00
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tblConstEquipMitigation	OxidationCatalyst	0.00	25.00
tblConstEquipMitigation	OxidationCatalyst	0.00	25.00
tblConstEquipMitigation	OxidationCatalyst	0.00	25.00
tblConstEquipMitigation	OxidationCatalyst	0.00	25.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	440.00	935.00
tblConstructionPhase	NumDays	6,200.00	1,043.00
tblConstructionPhase	NumDays	620.00	261.00
tblConstructionPhase	NumDays	440.00	935.00

tblConstructionPhase	PhaseEndDate	8/1/2023	12/31/2019
tblConstructionPhase	PhaseEndDate	8/1/2023	12/31/2019
tblConstructionPhase	PhaseStartDate	1/1/2020	6/1/2016
tblConstructionPhase	PhaseStartDate	1/1/2020	6/1/2016
tblGrading	AcresOfGrading	652.50	373.20
tblLandUse	LotAcreage	89.29	42.10
tblProjectCharacteristics	OperationalYear	2014	2020
tblSequestration	NumberOfNewTrees	0.00	2,551.00
tblVehicleTrips	ST_TR	1.59	16.74
tblVehicleTrips	ST_TR	2.37	2.17
tblVehicleTrips	ST_TR	1.64	149.79
tblVehicleTrips	ST_TR	49.97	86.57
tblVehicleTrips	ST_TR	10.08	9.91
tblVehicleTrips	SU_TR	1.59	16.74
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	0.76	149.79
tblVehicleTrips	SU_TR	25.24	50.98
tblVehicleTrips	SU_TR	8.77	8.62
tblVehicleTrips	WD_TR	1.59	1.89
tblVehicleTrips	WD_TR	11.01	12.31
tblVehicleTrips	WD_TR	11.42	149.79
tblVehicleTrips	WD_TR	42.94	77.69
tblVehicleTrips	WD_TR	9.57	9.52

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					
2015	0.8954	10.3325	6.8126	8.4000e-003	1.0124	0.4964	1.5088	0.4610	0.4567	0.9177	0.0000	794.4219	794.4219	0.2308	0.0000	799.2676
2016	11.2872	35.8326	82.5713	0.1642	9.9737	0.8412	10.8149	2.6849	0.7799	3.4648	0.0000	13,423.1713	13,423.1713	0.5648	0.0000	13,435.0312
2017	14.6494	33.9486	79.8738	0.1721	10.5502	0.8311	11.3814	2.8379	0.7709	3.6088	0.0000	13,639.0249	13,639.0249	0.5894	0.0000	13,651.4029
2018	14.1223	30.8602	74.1608	0.1726	10.5905	0.7446	11.3351	2.8487	0.6908	3.5394	0.0000	13,302.3556	13,302.3556	0.5600	0.0000	13,314.1160
2019	13.7135	28.1409	69.4707	0.1716	10.5903	0.6819	11.2722	2.8486	0.6325	3.4810	0.0000	12,863.7724	12,863.7724	0.5291	0.0000	12,874.8827
Total	**54.6679**	**139.1149**	**312.8891**	**0.6890**	**42.7172**	**3.5952**	**46.3124**	**11.6809**	**3.3308**	**15.0117**	**0.0000**	**54,022.7460**	**54,022.7460**	**2.4740**	**0.0000**	**54,074.7004**

2.1 Overall Construction

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					
2015	0.1100	0.3378	4.7166	8.4000e-003	0.4123	2.2000e-003	0.4145	0.1844	2.1800e-003	0.1866	0.0000	794.4210	794.4210	0.2308	0.0000	799.2667
2016	10.7205	30.5123	82.5858	0.1642	9.9737	0.4742	10.4479	2.6849	0.4361	3.1210	0.0000	13,423.1707	13,423.1707	0.5648	0.0000	13,435.0306
2017	14.0370	27.9392	80.0619	0.1721	10.5502	0.4306	10.9809	2.8379	0.3964	3.2342	0.0000	13,639.0241	13,639.0241	0.5894	0.0000	13,651.4021
2018	13.6071	25.6704	74.4596	0.1726	10.5905	0.4090	10.9995	2.8487	0.3767	3.2254	0.0000	13,302.3549	13,302.3549	0.5600	0.0000	13,314.1153
2019	13.2681	23.5636	69.8418	0.1716	10.5903	0.3934	10.9837	2.8486	0.3624	3.2110	0.0000	12,863.7717	12,863.7717	0.5291	0.0000	12,874.8820
Total	**51.7426**	**108.0232**	**311.6656**	**0.6890**	**42.1171**	**1.7094**	**43.8265**	**11.4044**	**1.5738**	**12.9781**	**0.0000**	**54,022.7424**	**54,022.7424**	**2.4740**	**0.0000**	**54,074.6967**

	ROG	NOx	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	**5.35**	**22.35**	**0.39**	**0.00**	**1.40**	**52.45**	**5.37**	**2.37**	**52.75**	**13.55**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	62.2178	0.0563	4.6325	2.9000e-003		0.2784	0.2784		0.2784	0.2784	29.2102	60.8791	90.0893	0.0919	1.9800e-003	92.6346
Energy	0.1233	1.0937	0.7414	6.7300e-003		0.0852	0.0852		0.0852	0.0852	0.0000	24,662.0455	24,662.0455	0.7021	0.1628	24,727.2591
Mobile	339.0397	1,145.6439	4,090.2761	11.9818	817.6427	17.6435	835.2862	218.7045	16.2636	234.9682	0.0000	845,402.7835	845,402.7835	28.4661	0.0000	846,000.5718
Waste						0.0000	0.0000		0.0000	0.0000	900.9287	0.0000	900.9287	53.2434	0.0000	2,019.0393
Water						0.0000	0.0000		0.0000	0.0000	252.4603	7,197.7921	7,450.2524	26.1385	0.6554	8,202.3302
Total	**401.3809**	**1,146.7939**	**4,095.6500**	**11.9914**	**817.6427**	**18.0071**	**835.6498**	**218.7045**	**16.6272**	**235.3318**	**1,182.5992**	**877,323.5001**	**878,506.0994**	**108.6420**	**0.8202**	**881,041.8350**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	49.3523	0.0335	2.9050	1.5000e-004		0.0200	0.0200		0.0200	0.0200	0.0000	64.1810	64.1810	5.9600e-003	1.0900e-003	64.6440
Energy	0.0890	0.7885	0.5288	4.8500e-003		0.0615	0.0615		0.0615	0.0615	0.0000	20,994.5289	20,994.5289	0.5993	0.1366	21,049.4721
Mobile	290.4954	729.6768	2,884.5494	7.0105	468.8918	10.5415	479.4332	125.4200	9.7187	135.1387	0.0000	494,439.4885	494,439.4885	17.3294	0.0000	494,803.4063
Waste						0.0000	0.0000		0.0000	0.0000	450.4644	0.0000	450.4644	26.6217	0.0000	1,009.5196
Water						0.0000	0.0000		0.0000	0.0000	201.9682	6,104.4035	6,306.3718	20.9170	0.5256	6,908.5652
Total	**339.9367**	**730.4988**	**2,887.9832**	**7.0155**	**468.8918**	**10.6230**	**479.5147**	**125.4200**	**9.8001**	**135.2201**	**652.4326**	**521,602.6019**	**522,255.0344**	**65.4734**	**0.6633**	**523,835.6072**

	ROG	NOx	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	**15.31**	**36.30**	**29.49**	**41.50**	**42.65**	**41.01**	**42.62**	**42.65**	**41.06**	**42.54**	**44.83**	**40.55**	**40.55**	**39.73**	**19.12**	**40.54**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	1,806.1080
Total	**1,806.1080**

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	1/1/2015	12/31/2015	5	261	
2	Building Construction	Building Construction	1/1/2016	12/31/2019	5	1043	
3	Paving	Paving	6/1/2016	12/31/2019	5	935	
4	Architectural Coating	Architectural Coating	6/1/2016	12/31/2019	5	935	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 373.2

Acres of Paving: 0

Residential Indoor: 1,002,375; Residential Outdoor: 334,125; Non-Residential Indoor: 19,571,391; Non-Residential Outdoor: 6,523,797 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	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	125	0.42
Paving	Paving Equipment	2	8.00	130	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	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	5,137.00	2,168.00	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	1,027.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2015

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					0.9838	0.0000	0.9838	0.4534	0.0000	0.4534	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.8842	10.3156	6.6346	8.0600e-003		0.4962	0.4962		0.4565	0.4565	0.0000	767.8908	767.8908	0.2293	0.0000	772.7050
Total	**0.8842**	**10.3156**	**6.6346**	**8.0600e-003**	**0.9838**	**0.4962**	**1.4800**	**0.4534**	**0.4565**	**0.9098**	**0.0000**	**767.8908**	**767.8908**	**0.2293**	**0.0000**	**772.7050**

3.2 Grading - 2015

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	0.0113	0.0169	0.1779	3.4000e-004	0.0286	2.3000e-004	0.0289	7.6000e-003	2.1000e-004	7.8100e-003	0.0000	26.5310	26.5310	1.5000e-003	0.0000	26.5626
Total	**0.0113**	**0.0169**	**0.1779**	**3.4000e-004**	**0.0286**	**2.3000e-004**	**0.0289**	**7.6000e-003**	**2.1000e-004**	**7.8100e-003**	**0.0000**	**26.5310**	**26.5310**	**1.5000e-003**	**0.0000**	**26.5626**

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					0.3837	0.0000	0.3837	0.1768	0.0000	0.1768	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0987	0.3208	4.5386	8.0600e-003		1.9700e-003	1.9700e-003		1.9700e-003	1.9700e-003	0.0000	767.8899	767.8899	0.2293	0.0000	772.7041
Total	**0.0987**	**0.3208**	**4.5386**	**8.0600e-003**	**0.3837**	**1.9700e-003**	**0.3856**	**0.1768**	**1.9700e-003**	**0.1788**	**0.0000**	**767.8899**	**767.8899**	**0.2293**	**0.0000**	**772.7041**

3.2 Grading - 2015

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	0.0113	0.0169	0.1779	3.4000e-004	0.0286	2.3000e-004	0.0289	7.6000e-003	2.1000e-004	7.8100e-003	0.0000	26.5310	26.5310	1.5000e-003	0.0000	26.5626
Total	**0.0113**	**0.0169**	**0.1779**	**3.4000e-004**	**0.0286**	**2.3000e-004**	**0.0289**	**7.6000e-003**	**2.1000e-004**	**7.8100e-003**	**0.0000**	**26.5310**	**26.5310**	**1.5000e-003**	**0.0000**	**26.5626**

3.3 Building Construction - 2016

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	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0104	316.0104	0.0784	0.0000	317.6563
Total	**0.4445**	**3.7201**	**2.4151**	**3.5000e-003**		**0.2567**	**0.2567**		**0.2412**	**0.2412**	**0.0000**	**316.0104**	**316.0104**	**0.0784**	**0.0000**	**317.6563**

3.3 Building Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5356	25.8627	33.0291	0.0614	1.7492	0.4107	2.1599	0.5006	0.3777	0.8783	0.0000	5,576.6308	5,576.6308	0.0408	0.0000	5,577.4875
Worker	2.5799	3.8930	40.9769	0.0871	7.3505	0.0556	7.4061	1.9522	0.0511	2.0033	0.0000	6,569.1241	6,569.1241	0.3528	0.0000	6,576.5338
Total	**5.1154**	**29.7556**	**74.0060**	**0.1484**	**9.0997**	**0.4663**	**9.5660**	**2.4528**	**0.4288**	**2.8815**	**0.0000**	**12,145.7549**	**12,145.7549**	**0.3936**	**0.0000**	**12,154.0213**

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	0.0426	0.2182	2.2721	3.5000e-003		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	316.0101	316.0101	0.0784	0.0000	317.6560
Total	**0.0426**	**0.2182**	**2.2721**	**3.5000e-003**		**7.9000e-004**	**7.9000e-004**		**7.9000e-004**	**7.9000e-004**	**0.0000**	**316.0101**	**316.0101**	**0.0784**	**0.0000**	**317.6560**

3.3 Building Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5356	25.8627	33.0291	0.0614	1.7492	0.4107	2.1599	0.5006	0.3777	0.8783	0.0000	5,576.6308	5,576.6308	0.0408	0.0000	5,577.4875
Worker	2.5799	3.8930	40.9769	0.0871	7.3505	0.0556	7.4061	1.9522	0.0511	2.0033	0.0000	6,569.1241	6,569.1241	0.3528	0.0000	6,576.5338
Total	**5.1154**	**29.7556**	**74.0060**	**0.1484**	**9.0997**	**0.4663**	**9.5660**	**2.4528**	**0.4288**	**2.8815**	**0.0000**	**12,145.7549**	**12,145.7549**	**0.3936**	**0.0000**	**12,154.0213**

3.3 Building Construction - 2017

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	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3228	311.3228	0.0766	0.0000	312.9319
Total	**0.4033**	**3.4327**	**2.3568**	**3.4900e-003**		**0.2316**	**0.2316**		**0.2175**	**0.2175**	**0.0000**	**311.3228**	**311.3228**	**0.0766**	**0.0000**	**312.9319**

3.3 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3307	23.4140	31.4010	0.0610	1.7427	0.3649	2.1076	0.4987	0.3356	0.8343	0.0000	5,463.8049	5,463.8049	0.0393	0.0000	5,464.6300
Worker	2.2718	3.4746	36.5457	0.0867	7.3223	0.0533	7.3757	1.9447	0.0492	1.9939	0.0000	6,286.5194	6,286.5194	0.3222	0.0000	6,293.2862
Total	**4.6024**	**26.8885**	**67.9466**	**0.1478**	**9.0650**	**0.4182**	**9.4832**	**2.4434**	**0.3848**	**2.8282**	**0.0000**	**11,750.3243**	**11,750.3243**	**0.3615**	**0.0000**	**11,757.9162**

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	0.0424	0.2173	2.2634	3.4900e-003		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	311.3225	311.3225	0.0766	0.0000	312.9315
Total	**0.0424**	**0.2173**	**2.2634**	**3.4900e-003**		**7.9000e-004**	**7.9000e-004**		**7.9000e-004**	**7.9000e-004**	**0.0000**	**311.3225**	**311.3225**	**0.0766**	**0.0000**	**312.9315**

3.3 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3307	23.4140	31.4010	0.0610	1.7427	0.3649	2.1076	0.4987	0.3356	0.8343	0.0000	5,463.8049	5,463.8049	0.0393	0.0000	5,464.6300
Worker	2.2718	3.4746	36.5457	0.0867	7.3223	0.0533	7.3757	1.9447	0.0492	1.9939	0.0000	6,286.5194	6,286.5194	0.3222	0.0000	6,293.2862
Total	**4.6024**	**26.8885**	**67.9466**	**0.1478**	**9.0650**	**0.4182**	**9.4832**	**2.4434**	**0.3848**	**2.8282**	**0.0000**	**11,750.3243**	**11,750.3243**	**0.3615**	**0.0000**	**11,757.9162**

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	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9844	308.9844	0.0756	0.0000	310.5723
Total	**0.3483**	**3.0355**	**2.2880**	**3.5000e-003**		**0.1950**	**0.1950**		**0.1833**	**0.1833**	**0.0000**	**308.9844**	**308.9844**	**0.0756**	**0.0000**	**310.5723**

3.3 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1617	21.5387	29.9870	0.0612	1.7491	0.3446	2.0936	0.5005	0.3170	0.8174	0.0000	5,390.9136	5,390.9136	0.0392	0.0000	5,391.7366
Worker	2.0262	3.1463	33.0487	0.0870	7.3505	0.0523	7.4027	1.9522	0.0484	2.0006	0.0000	6,071.7240	6,071.7240	0.2987	0.0000	6,077.9969
Total	**4.1879**	**24.6850**	**63.0357**	**0.1482**	**9.0995**	**0.3968**	**9.4964**	**2.4527**	**0.3653**	**2.8180**	**0.0000**	**11,462.6376**	**11,462.6376**	**0.3379**	**0.0000**	**11,469.7335**

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	0.0426	0.2182	2.2721	3.5000e-003		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	308.9841	308.9841	0.0756	0.0000	310.5720
Total	**0.0426**	**0.2182**	**2.2721**	**3.5000e-003**		**7.9000e-004**	**7.9000e-004**		**7.9000e-004**	**7.9000e-004**	**0.0000**	**308.9841**	**308.9841**	**0.0756**	**0.0000**	**310.5720**

3.3 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1617	21.5387	29.9870	0.0612	1.7491	0.3446	2.0936	0.5005	0.3170	0.8174	0.0000	5,390.9136	5,390.9136	0.0392	0.0000	5,391.7366
Worker	2.0262	3.1463	33.0487	0.0870	7.3505	0.0523	7.4027	1.9522	0.0484	2.0006	0.0000	6,071.7240	6,071.7240	0.2987	0.0000	6,077.9969
Total	**4.1879**	**24.6850**	**63.0357**	**0.1482**	**9.0995**	**0.3968**	**9.4964**	**2.4527**	**0.3653**	**2.8180**	**0.0000**	**11,462.6376**	**11,462.6376**	**0.3379**	**0.0000**	**11,469.7335**

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	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577	0.0000	305.5302	305.5302	0.0743	0.0000	307.0913
Total	**0.3069**	**2.7359**	**2.2342**	**3.5000e-003**		**0.1677**	**0.1677**		**0.1577**	**0.1577**	**0.0000**	**305.5302**	**305.5302**	**0.0743**	**0.0000**	**307.0913**

3.3 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0479	19.7690	29.1316	0.0607	1.7489	0.3304	2.0793	0.5004	0.3039	0.8043	0.0000	5,267.4874	5,267.4874	0.0379	0.0000	5,268.2833
Worker	1.8389	2.8661	29.9207	0.0866	7.3505	0.0510	7.4015	1.9522	0.0473	1.9995	0.0000	5,816.1580	5,816.1580	0.2754	0.0000	5,821.9415
Total	**3.8868**	**22.6350**	**59.0523**	**0.1473**	**9.0993**	**0.3814**	**9.4808**	**2.4526**	**0.3512**	**2.8038**	**0.0000**	**11,083.6454**	**11,083.6454**	**0.3133**	**0.0000**	**11,090.2248**

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	0.0426	0.2182	2.2721	3.5000e-003		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	305.5299	305.5299	0.0743	0.0000	307.0909
Total	**0.0426**	**0.2182**	**2.2721**	**3.5000e-003**		**7.9000e-004**	**7.9000e-004**		**7.9000e-004**	**7.9000e-004**	**0.0000**	**305.5299**	**305.5299**	**0.0743**	**0.0000**	**307.0909**

3.3 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0479	19.7690	29.1316	0.0607	1.7489	0.3304	2.0793	0.5004	0.3039	0.8043	0.0000	5,267.4874	5,267.4874	0.0379	0.0000	5,268.2833
Worker	1.8389	2.8661	29.9207	0.0866	7.3505	0.0510	7.4015	1.9522	0.0473	1.9995	0.0000	5,816.1580	5,816.1580	0.2754	0.0000	5,821.9415
Total	**3.8868**	**22.6350**	**59.0523**	**0.1473**	**9.0993**	**0.3814**	**9.4808**	**2.4526**	**0.3512**	**2.8038**	**0.0000**	**11,083.6454**	**11,083.6454**	**0.3133**	**0.0000**	**11,090.2248**

3.4 Paving - 2016

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	0.1599	1.7125	1.1336	1.7100e-003		0.0965	0.0965		0.0888	0.0888	0.0000	160.7557	160.7557	0.0485	0.0000	161.7740
Paving	0.0310					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1909**	**1.7125**	**1.1336**	**1.7100e-003**		**0.0965**	**0.0965**		**0.0888**	**0.0888**	**0.0000**	**160.7557**	**160.7557**	**0.0485**	**0.0000**	**161.7740**

3.4 Paving - 2016

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	4.4200e-003	6.6600e-003	0.0701	1.5000e-004	0.0126	1.0000e-004	0.0127	3.3400e-003	9.0000e-005	3.4300e-003	0.0000	11.2445	11.2445	6.0000e-004	0.0000	11.2572
Total	**4.4200e-003**	**6.6600e-003**	**0.0701**	**1.5000e-004**	**0.0126**	**1.0000e-004**	**0.0127**	**3.3400e-003**	**9.0000e-005**	**3.4300e-003**	**0.0000**	**11.2445**	**11.2445**	**6.0000e-004**	**0.0000**	**11.2572**

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	0.0210	0.0683	1.2950	1.7100e-003		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	160.7555	160.7555	0.0485	0.0000	161.7738
Paving	0.0310					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0520**	**0.0683**	**1.2950**	**1.7100e-003**		**4.2000e-004**	**4.2000e-004**		**4.2000e-004**	**4.2000e-004**	**0.0000**	**160.7555**	**160.7555**	**0.0485**	**0.0000**	**161.7738**

3.4 Paving - 2016

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	4.4200e-003	6.6600e-003	0.0701	1.5000e-004	0.0126	1.0000e-004	0.0127	3.3400e-003	9.0000e-005	3.4300e-003	0.0000	11.2445	11.2445	6.0000e-004	0.0000	11.2572
Total	**4.4200e-003**	**6.6600e-003**	**0.0701**	**1.5000e-004**	**0.0126**	**1.0000e-004**	**0.0127**	**3.3400e-003**	**9.0000e-005**	**3.4300e-003**	**0.0000**	**11.2445**	**11.2445**	**6.0000e-004**	**0.0000**	**11.2572**

3.4 Paving - 2017

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	0.2480	2.6385	1.9145	2.9000e-003		0.1480	0.1480		0.1362	0.1362	0.0000	269.0144	269.0144	0.0824	0.0000	270.7454
Paving	0.0527					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3007**	**2.6385**	**1.9145**	**2.9000e-003**		**0.1480**	**0.1480**		**0.1362**	**0.1362**	**0.0000**	**269.0144**	**269.0144**	**0.0824**	**0.0000**	**270.7454**

3.4 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6300e-003	0.0102	0.1067	2.5000e-004	0.0214	1.6000e-004	0.0215	5.6800e-003	1.4000e-004	5.8200e-003	0.0000	18.3566	18.3566	9.4000e-004	0.0000	18.3764
Total	**6.6300e-003**	**0.0102**	**0.1067**	**2.5000e-004**	**0.0214**	**1.6000e-004**	**0.0215**	**5.6800e-003**	**1.4000e-004**	**5.8200e-003**	**0.0000**	**18.3566**	**18.3566**	**9.4000e-004**	**0.0000**	**18.3764**

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	0.0357	0.1160	2.2006	2.9000e-003		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	269.0141	269.0141	0.0824	0.0000	270.7450
Paving	0.0527					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0884**	**0.1160**	**2.2006**	**2.9000e-003**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**269.0141**	**269.0141**	**0.0824**	**0.0000**	**270.7450**

3.4 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6300e-003	0.0102	0.1067	2.5000e-004	0.0214	1.6000e-004	0.0215	5.6800e-003	1.4000e-004	5.8200e-003	0.0000	18.3566	18.3566	9.4000e-004	0.0000	18.3764
Total	**6.6300e-003**	**0.0102**	**0.1067**	**2.5000e-004**	**0.0214**	**1.6000e-004**	**0.0215**	**5.6800e-003**	**1.4000e-004**	**5.8200e-003**	**0.0000**	**18.3566**	**18.3566**	**9.4000e-004**	**0.0000**	**18.3764**

3.4 Paving - 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	0.2103	2.2397	1.8915	2.9100e-003		0.1225	0.1225		0.1127	0.1127	0.0000	265.8121	265.8121	0.0828	0.0000	267.5499
Paving	0.0529					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2632**	**2.2397**	**1.8915**	**2.9100e-003**		**0.1225**	**0.1225**		**0.1127**	**0.1127**	**0.0000**	**265.8121**	**265.8121**	**0.0828**	**0.0000**	**267.5499**

3.4 Paving - 2018

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	5.9200e-003	9.1900e-003	0.0965	2.5000e-004	0.0215	1.5000e-004	0.0216	5.7000e-003	1.4000e-004	5.8400e-003	0.0000	17.7294	17.7294	8.7000e-004	0.0000	17.7477
Total	**5.9200e-003**	**9.1900e-003**	**0.0965**	**2.5000e-004**	**0.0215**	**1.5000e-004**	**0.0216**	**5.7000e-003**	**1.4000e-004**	**5.8400e-003**	**0.0000**	**17.7294**	**17.7294**	**8.7000e-004**	**0.0000**	**17.7477**

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	0.0358	0.1164	2.2091	2.9100e-003		7.2000e-004	7.2000e-004		7.2000e-004	7.2000e-004	0.0000	265.8118	265.8118	0.0828	0.0000	267.5495
Paving	0.0529					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0888**	**0.1164**	**2.2091**	**2.9100e-003**		**7.2000e-004**	**7.2000e-004**		**7.2000e-004**	**7.2000e-004**	**0.0000**	**265.8118**	**265.8118**	**0.0828**	**0.0000**	**267.5495**

3.4 Paving - 2018

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	5.9200e-003	9.1900e-003	0.0965	2.5000e-004	0.0215	1.5000e-004	0.0216	5.7000e-003	1.4000e-004	5.8400e-003	0.0000	17.7294	17.7294	8.7000e-004	0.0000	17.7477
Total	**5.9200e-003**	**9.1900e-003**	**0.0965**	**2.5000e-004**	**0.0215**	**1.5000e-004**	**0.0216**	**5.7000e-003**	**1.4000e-004**	**5.8400e-003**	**0.0000**	**17.7294**	**17.7294**	**8.7000e-004**	**0.0000**	**17.7477**

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	0.1861	1.9491	1.8747	2.9100e-003		0.1056	0.1056		0.0972	0.0972	0.0000	261.5151	261.5151	0.0827	0.0000	263.2526
Paving	0.0529					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2390**	**1.9491**	**1.8747**	**2.9100e-003**		**0.1056**	**0.1056**		**0.0972**	**0.0972**	**0.0000**	**261.5151**	**261.5151**	**0.0827**	**0.0000**	**263.2526**

3.4 Paving - 2019

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	5.3700e-003	8.3700e-003	0.0874	2.5000e-004	0.0215	1.5000e-004	0.0216	5.7000e-003	1.4000e-004	5.8400e-003	0.0000	16.9831	16.9831	8.0000e-004	0.0000	17.0000
Total	**5.3700e-003**	**8.3700e-003**	**0.0874**	**2.5000e-004**	**0.0215**	**1.5000e-004**	**0.0216**	**5.7000e-003**	**1.4000e-004**	**5.8400e-003**	**0.0000**	**16.9831**	**16.9831**	**8.0000e-004**	**0.0000**	**17.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0358	0.1164	2.2091	2.9100e-003		7.2000e-004	7.2000e-004		7.2000e-004	7.2000e-004	0.0000	261.5147	261.5147	0.0827	0.0000	263.2523
Paving	0.0529					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0888**	**0.1164**	**2.2091**	**2.9100e-003**		**7.2000e-004**	**7.2000e-004**		**7.2000e-004**	**7.2000e-004**	**0.0000**	**261.5147**	**261.5147**	**0.0827**	**0.0000**	**263.2523**

3.4 Paving - 2019

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	5.3700e-003	8.3700e-003	0.0874	2.5000e-004	0.0215	1.5000e-004	0.0216	5.7000e-003	1.4000e-004	5.8400e-003	0.0000	16.9831	16.9831	8.0000e-004	0.0000	17.0000
Total	**5.3700e-003**	**8.3700e-003**	**0.0874**	**2.5000e-004**	**0.0215**	**1.5000e-004**	**0.0216**	**5.7000e-003**	**1.4000e-004**	**5.8400e-003**	**0.0000**	**16.9831**	**16.9831**	**8.0000e-004**	**0.0000**	**17.0000**

3.5 Architectural Coating - 2016

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	5.2014					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0282	0.1815	0.1441	2.3000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	19.5324	19.5324	2.3000e-003	0.0000	19.5808
Total	**5.2296**	**0.1815**	**0.1441**	**2.3000e-004**		**0.0150**	**0.0150**		**0.0150**	**0.0150**	**0.0000**	**19.5324**	**19.5324**	**2.3000e-003**	**0.0000**	**19.5808**

3.5 Architectural Coating - 2016

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	0.3024	0.4562	4.8023	0.0102	0.8614	6.5200e-003	0.8680	0.2288	5.9900e-003	0.2348	0.0000	769.8733	769.8733	0.0414	0.0000	770.7417
Total	**0.3024**	**0.4562**	**4.8023**	**0.0102**	**0.8614**	**6.5200e-003**	**0.8680**	**0.2288**	**5.9900e-003**	**0.2348**	**0.0000**	**769.8733**	**769.8733**	**0.0414**	**0.0000**	**770.7417**

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	5.2014					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2700e-003	7.3900e-003	0.1402	2.3000e-004		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	19.5324	19.5324	2.3000e-003	0.0000	19.5807
Total	**5.2037**	**7.3900e-003**	**0.1402**	**2.3000e-004**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**19.5324**	**19.5324**	**2.3000e-003**	**0.0000**	**19.5807**

3.5 Architectural Coating - 2016

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	0.3024	0.4562	4.8023	0.0102	0.8614	6.5200e-003	0.8680	0.2288	5.9900e-003	0.2348	0.0000	769.8733	769.8733	0.0414	0.0000	770.7417
Total	**0.3024**	**0.4562**	**4.8023**	**0.0102**	**0.8614**	**6.5200e-003**	**0.8680**	**0.2288**	**5.9900e-003**	**0.2348**	**0.0000**	**769.8733**	**769.8733**	**0.0414**	**0.0000**	**770.7417**

3.5 Architectural Coating - 2017

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	8.8390					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659
Total	**8.8822**	**0.2841**	**0.2429**	**3.9000e-004**		**0.0225**	**0.0225**		**0.0225**	**0.0225**	**0.0000**	**33.1923**	**33.1923**	**3.5000e-003**	**0.0000**	**33.2659**

3.5 Architectural Coating - 2017

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	0.4542	0.6946	7.3063	0.0173	1.4639	0.0107	1.4746	0.3888	9.8300e-003	0.3986	0.0000	1,256.8144	1,256.8144	0.0644	0.0000	1,258.1672
Total	**0.4542**	**0.6946**	**7.3063**	**0.0173**	**1.4639**	**0.0107**	**1.4746**	**0.3888**	**9.8300e-003**	**0.3986**	**0.0000**	**1,256.8144**	**1,256.8144**	**0.0644**	**0.0000**	**1,258.1672**

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	8.8390					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8600e-003	0.0126	0.2382	3.9000e-004		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659
Total	**8.8429**	**0.0126**	**0.2382**	**3.9000e-004**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**33.1923**	**33.1923**	**3.5000e-003**	**0.0000**	**33.2659**

3.5 Architectural Coating - 2017

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	0.4542	0.6946	7.3063	0.0173	1.4639	0.0107	1.4746	0.3888	9.8300e-003	0.3986	0.0000	1,256.8144	1,256.8144	0.0644	0.0000	1,258.1672
Total	**0.4542**	**0.6946**	**7.3063**	**0.0173**	**1.4639**	**0.0107**	**1.4746**	**0.3888**	**9.8300e-003**	**0.3986**	**0.0000**	**1,256.8144**	**1,256.8144**	**0.0644**	**0.0000**	**1,258.1672**

3.5 Architectural Coating - 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					
Archit. Coating	8.8730					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0390	0.2618	0.2420	3.9000e-004		0.0197	0.0197		0.0197	0.0197	0.0000	33.3200	33.3200	3.1700e-003	0.0000	33.3865
Total	**8.9120**	**0.2618**	**0.2420**	**3.9000e-004**		**0.0197**	**0.0197**		**0.0197**	**0.0197**	**0.0000**	**33.3200**	**33.3200**	**3.1700e-003**	**0.0000**	**33.3865**

3.5 Architectural Coating - 2018

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	0.4051	0.6290	6.6072	0.0174	1.4695	0.0105	1.4800	0.3903	9.6700e-003	0.4000	0.0000	1,213.8720	1,213.8720	0.0597	0.0000	1,215.1261
Total	**0.4051**	**0.6290**	**6.6072**	**0.0174**	**1.4695**	**0.0105**	**1.4800**	**0.3903**	**9.6700e-003**	**0.4000**	**0.0000**	**1,213.8720**	**1,213.8720**	**0.0597**	**0.0000**	**1,215.1261**

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	8.8730					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8800e-003	0.0126	0.2391	3.9000e-004		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	33.3200	33.3200	3.1700e-003	0.0000	33.3865
Total	**8.8769**	**0.0126**	**0.2391**	**3.9000e-004**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**33.3200**	**33.3200**	**3.1700e-003**	**0.0000**	**33.3865**

3.5 Architectural Coating - 2018

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	0.4051	0.6290	6.6072	0.0174	1.4695	0.0105	1.4800	0.3903	9.6700e-003	0.4000	0.0000	1,213.8720	1,213.8720	0.0597	0.0000	1,215.1261
Total	**0.4051**	**0.6290**	**6.6072**	**0.0174**	**1.4695**	**0.0105**	**1.4800**	**0.3903**	**9.6700e-003**	**0.4000**	**0.0000**	**1,213.8720**	**1,213.8720**	**0.0597**	**0.0000**	**1,215.1261**

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	8.8730					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0348	0.2395	0.2403	3.9000e-004		0.0168	0.0168		0.0168	0.0168	0.0000	33.3200	33.3200	2.8100e-003	0.0000	33.3791
Total	**8.9078**	**0.2395**	**0.2403**	**3.9000e-004**		**0.0168**	**0.0168**		**0.0168**	**0.0168**	**0.0000**	**33.3200**	**33.3200**	**2.8100e-003**	**0.0000**	**33.3791**

3.5 Architectural Coating - 2019

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	0.3676	0.5730	5.9818	0.0173	1.4695	0.0102	1.4797	0.3903	9.4600e-003	0.3997	0.0000	1,162.7787	1,162.7787	0.0551	0.0000	1,163.9350
Total	**0.3676**	**0.5730**	**5.9818**	**0.0173**	**1.4695**	**0.0102**	**1.4797**	**0.3903**	**9.4600e-003**	**0.3997**	**0.0000**	**1,162.7787**	**1,162.7787**	**0.0551**	**0.0000**	**1,163.9350**

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	8.8730					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8800e-003	0.0126	0.2391	3.9000e-004		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	33.3199	33.3199	2.8100e-003	0.0000	33.3790
Total	**8.8769**	**0.0126**	**0.2391**	**3.9000e-004**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**33.3199**	**33.3199**	**2.8100e-003**	**0.0000**	**33.3790**

3.5 Architectural Coating - 2019

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	0.3676	0.5730	5.9818	0.0173	1.4695	0.0102	1.4797	0.3903	9.4600e-003	0.3997	0.0000	1,162.7787	1,162.7787	0.0551	0.0000	1,163.9350
Total	**0.3676**	**0.5730**	**5.9818**	**0.0173**	**1.4695**	**0.0102**	**1.4797**	**0.3903**	**9.4600e-003**	**0.3997**	**0.0000**	**1,162.7787**	**1,162.7787**	**0.0551**	**0.0000**	**1,163.9350**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

Provide Riade Sharing Program

Implement School Bus 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	290.4954	729.6768	2,884.5494	7.0105	468.8918	10.5415	479.4332	125.4200	9.7187	135.1387	0.0000	494,439.4885	494,439.4885	17.3294	0.0000	494,803.4063
Unmitigated	339.0397	1,145.6439	4,090.2761	11.9818	817.6427	17.6435	835.2862	218.7045	16.2636	234.9682	0.0000	845,402.7835	845,402.7835	28.4661	0.0000	846,000.5718

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	8.52	75.50	75.50	79,590	45,632
General Office Building	1,608.67	283.58	137.21	3,895,273	2,233,265
Office Park	631,731.84	631,731.84	631731.84	2,134,401,227	1,223,707,950
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Regional Shopping Center	5,286.80	5,891.09	3469.19	11,059,641	6,360,412
Single Family Housing	2,618.00	2,725.25	2370.50	8,877,639	5,375,905
Total	641,253.83	640,707.25	637,784.24	2,158,313,370	1,237,723,164

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
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
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.468914	0.065172	0.173428	0.156844	0.056897	0.009079	0.016419	0.042157	0.001108	0.001337	0.005012	0.000672	0.002962

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive 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	20,113.7676	20,113.7676	0.5824	0.1205	20,163.3506
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	23,441.7042	23,441.7042	0.6787	0.1404	23,499.4910
NaturalGas Mitigated	0.0890	0.7885	0.5288	4.8500e-003		0.0615	0.0615		0.0615	0.0615	0.0000	880.7613	880.7613	0.0169	0.0162	886.1215
NaturalGas Unmitigated	0.1233	1.0937	0.7414	6.7300e-003		0.0852	0.0852		0.0852	0.0852	0.0000	1,220.3413	1,220.3413	0.0234	0.0224	1,227.7681

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					
Office Park	1.29476e+007	0.0698	0.6347	0.5331	3.8100e-003		0.0482	0.0482		0.0482	0.0482	0.0000	690.9317	690.9317	0.0132	0.0127	695.1366
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
Regional Shopping Center	157876	8.5000e-004	7.7400e-003	6.5000e-003	5.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	8.4249	8.4249	1.6000e-004	1.5000e-004	8.4761
Single Family Housing	9.2859e+006	0.0501	0.4279	0.1821	2.7300e-003		0.0346	0.0346		0.0346	0.0346	0.0000	495.5312	495.5312	9.5000e-003	9.0800e-003	498.5469
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	476982	2.5700e-003	0.0234	0.0196	1.4000e-004		1.7800e-003	1.7800e-003		1.7800e-003	1.7800e-003	0.0000	25.4536	25.4536	4.9000e-004	4.7000e-004	25.6085
Total		**0.1233**	**1.0937**	**0.7414**	**6.7300e-003**		**0.0852**	**0.0852**		**0.0852**	**0.0852**	**0.0000**	**1,220.3413**	**1,220.3413**	**0.0234**	**0.0224**	**1,227.7681**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Office Park	9.0633e+006	0.0489	0.4443	0.3732	2.6700e-003		0.0338	0.0338		0.0338	0.0338	0.0000	483.6522	483.6522	9.2700e-003	8.8700e-003	486.5956
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
Regional Shopping Center	116638	6.3000e-004	5.7200e-003	4.8000e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	6.2242	6.2242	1.2000e-004	1.1000e-004	6.2621
Single Family Housing	6.99102e+006	0.0377	0.3221	0.1371	2.0600e-003		0.0260	0.0260		0.0260	0.0260	0.0000	373.0674	373.0674	7.1500e-003	6.8400e-003	375.3378
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	333887	1.8000e-003	0.0164	0.0138	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003	0.0000	17.8175	17.8175	3.4000e-004	3.3000e-004	17.9259
Total		**0.0890**	**0.7885**	**0.5288**	**4.8600e-003**		**0.0615**	**0.0615**		**0.0615**	**0.0615**	**0.0000**	**880.7613**	**880.7613**	**0.0169**	**0.0162**	**886.1215**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
General Office Building	1.39697e+006	634.6494	0.0184	3.8000e-003	636.2139
Office Park	4.70246e+007	21,363.4731	0.6186	0.1280	21,416.1368
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
Regional Shopping Center	1.06566e+006	484.1355	0.0140	2.9000e-003	485.3290
Single Family Housing	2.1119e+006	959.4462	0.0278	5.7500e-003	961.8113
Total		**23,441.7042**	**0.6788**	**0.1404**	**23,499.4910**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
General Office Building	1.19572e+006	543.2219	0.0157	3.2500e-003	544.5610
Office Park	4.02556e+007	18,288.2826	0.5295	0.1096	18,333.3656
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
Regional Shopping Center	899485	408.6401	0.0118	2.4500e-003	409.6474
Single Family Housing	1.92299e+006	873.6230	0.0253	5.2300e-003	875.7766
Total		**20,113.7676**	**0.5824**	**0.1205**	**20,163.3506**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive 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	49.3523	0.0335	2.9050	1.5000e-004		0.0200	0.0200		0.0200	0.0200	0.0000	64.1810	64.1810	5.9600e-003	1.0900e-003	64.6440
Unmitigated	62.2178	0.0563	4.6325	2.9000e-003		0.2784	0.2784		0.2784	0.2784	29.2102	60.8791	90.0893	0.0919	1.9800e-003	92.6346

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	12.2887					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	48.9362					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.9008	0.0229	1.7278	2.7500e-003		0.2626	0.2626		0.2625	0.2625	29.2102	56.1321	85.3423	0.0871	1.9800e-003	87.7862
Landscaping	0.0922	0.0335	2.9047	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	4.7470	4.7470	4.8200e-003	0.0000	4.8484
Total	**62.2178**	**0.0563**	**4.6325**	**2.9000e-003**		**0.2784**	**0.2784**		**0.2784**	**0.2784**	**29.2102**	**60.8791**	**90.0893**	**0.0919**	**1.9800e-003**	**92.6346**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3179					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	48.9362					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.0100e-003	0.0000	3.3000e-004	0.0000		4.1500e-003	4.1500e-003		4.1100e-003	4.1100e-003	0.0000	59.4339	59.4339	1.1400e-003	1.0900e-003	59.7957
Landscaping	0.0922	0.0335	2.9047	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	4.7470	4.7470	4.8200e-003	0.0000	4.8484
Total	**49.3523**	**0.0335**	**2.9050**	**1.5000e-004**		**0.0200**	**0.0200**		**0.0200**	**0.0200**	**0.0000**	**64.1810**	**64.1810**	**5.9600e-003**	**1.0900e-003**	**64.6440**

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

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	6,306.3718	20.9170	0.5256	6,908.5652
Unmitigated	7,450.2524	26.1385	0.6554	8,202.3302

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 5.37358	27.1222	7.9000e-004	1.6000e-004	27.1891
General Office Building	23.2262 / 14.2354	216.6143	0.7629	0.0191	238.5633
Office Park	749.583 / 459.422	6,990.8179	24.6207	0.6172	7,699.1804
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
Regional Shopping Center	5.04064 / 3.08942	47.0103	0.1656	4.1500e-003	51.7738
Single Family Housing	17.9174 / 11.2957	168.6876	0.5886	0.0148	185.6236
Total		**7,450.2524**	**26.1385**	**0.6554**	**8,202.3302**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 5.04579	25.4677	7.4000e-004	1.5000e-004	25.5305
General Office Building	18.581 / 13.3671	183.2787	0.6105	0.0153	200.8532
Office Park	599.667 / 431.397	5,914.9746	19.7023	0.4949	6,482.1557
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
Regional Shopping Center	4.03251 / 2.90097	39.7757	0.1325	3.3300e-003	43.5898
Single Family Housing	14.3339 / 10.6067	142.8749	0.4710	0.0118	156.4360
Total		**6,306.3718**	**20.9170**	**0.5256**	**6,908.5652**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	450.4644	26.6217	0.0000	1,009.5196
Unmitigated	900.9287	53.2434	0.0000	2,019.0393

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.39	0.0792	4.6800e-003	0.0000	0.1774
General Office Building	121.53	24.6695	1.4579	0.0000	55.2859
Office Park	3922.23	796.1772	47.0527	0.0000	1,784.2845
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
Regional Shopping Center	71.45	14.5037	0.8571	0.0000	32.5037
Single Family Housing	322.67	65.4991	3.8709	0.0000	146.7877
Total		**900.9287**	**53.2434**	**0.0000**	**2,019.0393**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.195	0.0396	2.3400e-003	0.0000	0.0887
General Office Building	60.765	12.3348	0.7290	0.0000	27.6430
Office Park	1961.12	398.0886	23.5264	0.0000	892.1423
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
Regional Shopping Center	35.725	7.2519	0.4286	0.0000	16.2519
Single Family Housing	161.335	32.7496	1.9354	0.0000	73.3939
Total		**450.4644**	**26.6217**	**0.0000**	**1,009.5197**

9.0 Operational Offroad

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

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	1,806.1080	0.0000	0.0000	1,806.1080

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	2551	1,806.1080	0.0000	0.0000	1,806.1080
Total		**1,806.1080**	**0.0000**	**0.0000**	**1,806.1080**

Colton Hub City Center 2020 - 2

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	73.88	1000sqft	1.70	73,880.00	0
Regional Shopping Center	741.61	1000sqft	17.03	741,610.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 18.73 acres of the 373.2 acres

Construction Phase - Modeling for operational emissions only

Grading - Project is 373.2 acres

Architectural Coating - Operational analysis only

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating - SCAQMD Rule 1113

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - 1.21 miles to downtown Colton. Omni trans bus routes along Valley Blvd, Pepper Avenue, W San Bernardino Avenue, N Windrose Avenue. Jobs per acre estimates from appendix E of Riverside General Plan.

Mobile Commute Mitigation - Employee passenger vehicle traffic makes up approximately 50% of traffic for land uses analyzed.

Area Mitigation - Use of coatings that have no more than 5g/L VOC.

Energy Mitigation - 2013 Title 24 is 30% more efficient that 2008 Title 24 standards. Project will install high efficiency lights that are 10% more efficient than current standards. Energy STAR appliances will be installed at shopping center uses as needed.

Water Mitigation - Green Building standards

Waste Mitigation - Institute recycling and composting on-site

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExterio Value	50	5
tblAreaMitigation	UseLowVOCPaintNonresidentialInterior Value	250	5
tblAreaMitigation	UseLowVOCPaintResidentialExteriorVa lue	100	5
tblAreaMitigation	UseLowVOCPaintResidentialInteriorVal e	50	5
tblGrading	AcresOfGrading	75.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	2.37	2.46
tblVehicleTrips	ST_TR	49.97	44.02
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	25.24	21.31
tblVehicleTrips	WD_TR	11.01	14.21
tblVehicleTrips	WD_TR	42.94	33.68

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.7037	1.0000e-004	0.0105	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0202	0.0202	5.0000e-005	0.0000	0.0214
Energy	0.0107	0.0976	0.0820	5.9000e-004		7.4100e-003	7.4100e-003		7.4100e-003	7.4100e-003	0.0000	5,741.1204	5,741.1204	0.1652	0.0357	5,755.6576
Mobile	11.9396	32.1410	123.8506	0.3159	21.2496	0.4723	21.7220	5.6839	0.4354	6.1193	0.0000	22,284.6129	22,284.6129	0.7725	0.0000	22,300.8360
Waste						0.0000	0.0000		0.0000	0.0000	172.0145	0.0000	172.0145	10.1658	0.0000	385.4957
Water						0.0000	0.0000		0.0000	0.0000	21.5935	613.1889	634.7825	2.2356	0.0560	699.1034
Total	**15.6540**	**32.2386**	**123.9430**	**0.3165**	**21.2496**	**0.4798**	**21.7294**	**5.6839**	**0.4429**	**6.1268**	**193.6081**	**28,638.9425**	**28,832.5506**	**13.3392**	**0.0917**	**29,141.1141**

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	2.9667	1.0000e-004	0.0105	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0202	0.0202	5.0000e-005	0.0000	0.0214
Energy	7.8700e-003	0.0716	0.0601	4.3000e-004		5.4400e-003	5.4400e-003		5.4400e-003	5.4400e-003	0.0000	4,807.0483	4,807.0483	0.1384	0.0298	4,819.1803
Mobile	10.9760	23.8842	99.9176	0.2173	14.3271	0.3314	14.6585	3.8322	0.3055	4.1378	0.0000	15,318.1734	15,318.1734	0.5515	0.0000	15,329.7543
Waste						0.0000	0.0000		0.0000	0.0000	86.0073	0.0000	86.0073	5.0829	0.0000	192.7478
Water						0.0000	0.0000		0.0000	0.0000	17.2748	519.8186	537.0934	1.7890	0.0449	588.5948
Total	**13.9505**	**23.9559**	**99.9881**	**0.2177**	**14.3271**	**0.3368**	**14.6639**	**3.8322**	**0.3110**	**4.1432**	**103.2821**	**20,645.0604**	**20,748.3425**	**7.5618**	**0.0747**	**20,930.2986**

	ROG	NOx	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	**10.88**	**25.69**	**19.33**	**31.23**	**32.58**	**29.79**	**32.52**	**32.58**	**29.78**	**32.37**	**46.65**	**27.91**	**28.04**	**43.31**	**18.57**	**28.18**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	0.0000
Total	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

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	10.9760	23.8842	99.9176	0.2173	14.3271	0.3314	14.6585	3.8322	0.3055	4.1378	0.0000	15,318.1734	15,318.1734	0.5515	0.0000	15,329.7543
Unmitigated	11.9396	32.1410	123.8506	0.3159	21.2496	0.4723	21.7220	5.6839	0.4354	6.1193	0.0000	22,284.6129	22,284.6129	0.7725	0.0000	22,300.8360

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	1,049.83	181.74	77.57	2,535,056	1,704,037
Regional Shopping Center	24,977.42	32,645.67	15803.71	53,557,116	36,114,897
Total	26,027.26	32,827.42	15,881.28	56,092,172	37,818,934

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.468914	0.065172	0.173428	0.156844	0.056897	0.009079	0.016419	0.042157	0.001108	0.001337	0.005012	0.000672	0.002962

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive 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	4,729.1433	4,729.1433	0.1369	0.0283	4,740.8013
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5,634.9159	5,634.9159	0.1632	0.0338	5,648.8067
NaturalGas Mitigated	7.8700e-003	0.0716	0.0601	4.3000e-004		5.4400e-003	5.4400e-003		5.4400e-003	5.4400e-003	0.0000	77.9049	77.9049	1.4900e-003	1.4300e-003	78.3790
NaturalGas Unmitigated	0.0107	0.0976	0.0820	5.9000e-004		7.4100e-003	7.4100e-003		7.4100e-003	7.4100e-003	0.0000	106.2045	106.2045	2.0400e-003	1.9500e-003	106.8508

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					
General Office Building	269662	1.4500e-003	0.0132	0.0111	8.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	14.3902	14.3902	2.8000e-004	2.6000e-004	14.4778
Regional Shopping Center	1.72054e+006	9.2800e-003	0.0843	0.0709	5.1000e-004		6.4100e-003	6.4100e-003		6.4100e-003	6.4100e-003	0.0000	91.8143	91.8143	1.7600e-003	1.6800e-003	92.3731
Total		**0.0107**	**0.0976**	**0.0820**	**5.9000e-004**		**7.4100e-003**	**7.4100e-003**		**7.4100e-003**	**7.4100e-003**	**0.0000**	**106.2045**	**106.2045**	**2.0400e-003**	**1.9400e-003**	**106.8509**

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					
General Office Building	188763	1.0200e-003	9.2500e-003	7.7700e-003	6.0000e-005		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	10.0731	10.0731	1.9000e-004	1.8000e-004	10.1344
Regional Shopping Center	1.27112e+006	6.8500e-003	0.0623	0.0523	3.7000e-004		4.7400e-003	4.7400e-003		4.7400e-003	4.7400e-003	0.0000	67.8318	67.8318	1.3000e-003	1.2400e-003	68.2446
Total		**7.8700e-003**	**0.0716**	**0.0601**	**4.3000e-004**		**5.4400e-003**	**5.4400e-003**		**5.4400e-003**	**5.4400e-003**	**0.0000**	**77.9049**	**77.9049**	**1.4900e-003**	**1.4200e-003**	**78.3790**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	789777	358.7993	0.0104	2.1500e-003	359.6838
Regional Shopping Center	1.16136e+007	5,276.1166	0.1528	0.0316	5,289.1229
Total		**5,634.9159**	**0.1632**	**0.0338**	**5,648.8067**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	676002	307.1108	8.8900e-003	1.8400e-003	307.8678
Regional Shopping Center	9.73363e+006	4,422.0326	0.1280	0.0265	4,432.9335
Total		**4,729.1433**	**0.1369**	**0.0283**	**4,740.8013**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive 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	2.9667	1.0000e-004	0.0105	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0202	0.0202	5.0000e-005	0.0000	0.0214
Unmitigated	3.7037	1.0000e-004	0.0105	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0202	0.0202	5.0000e-005	0.0000	0.0214

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	0.7560					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.9468					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.9000e-004	1.0000e-004	0.0105	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0202	0.0202	5.0000e-005	0.0000	0.0214
Total	**3.7037**	**1.0000e-004**	**0.0105**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0202**	**0.0202**	**5.0000e-005**	**0.0000**	**0.0214**

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	0.0189					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.9468					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.9000e-004	1.0000e-004	0.0105	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0202	0.0202	5.0000e-005	0.0000	0.0214
Total	**2.9667**	**1.0000e-004**	**0.0105**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0202**	**0.0202**	**5.0000e-005**	**0.0000**	**0.0214**

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

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	537.0934	1.7890	0.0449	588.5948
Unmitigated	634.7825	2.2356	0.0560	699.1034

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	13.131 / 8.04801	122.4630	0.4313	0.0108	134.8719
Regional Shopping Center	54.9329 / 33.6686	512.3195	1.8043	0.0452	564.2315
Total		**634.7825**	**2.2356**	**0.0560**	**699.1034**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	10.5048 / 7.55708	103.6167	0.3451	8.6700e-003	113.5524
Regional Shopping Center	43.9463 / 31.6148	433.4767	1.4439	0.0363	475.0423
Total		**537.0934**	**1.7890**	**0.0449**	**588.5948**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	86.0073	5.0829	0.0000	192.7478
Unmitigated	172.0145	10.1658	0.0000	385.4957

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	68.71	13.9475	0.8243	0.0000	31.2573
Regional Shopping Center	778.69	158.0670	9.3415	0.0000	354.2384
Total		**172.0145**	**10.1658**	**0.0000**	**385.4957**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	34.355	6.9738	0.4121	0.0000	15.6286
Regional Shopping Center	389.345	79.0335	4.6708	0.0000	177.1192
Total		**86.0073**	**5.0829**	**0.0000**	**192.7478**

9.0 Operational Offroad

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

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	0.0000	0.0000	0.0000	0.0000

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Colton Hub City Center 2020 - 3

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	69.70	1000sqft	1.60	69,700.00	0
Regional Shopping Center	80.59	1000sqft	1.85	80,590.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 3.45 acres of the 373.2 acres

Construction Phase - Modeling for operational emissions only

Grading - Project is 373.2 acres

Architectural Coating - Operational analysis only

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating - SCAQMD Rule 1113

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - 1.21 miles to downtown Colton. Omni trans bus routes along Valley Blvd, Pepper Avenue, W San Bernardino Avenue, N Windrose Avenue. Jobs per acre estimates from appendix E of Riverside General Plan.

Mobile Commute Mitigation - Employee passenger vehicle traffic makes up approximately 50% of traffic for land uses analyzed.

Area Mitigation - Use of coatings that have no more than 5g/L VOC.

Energy Mitigation - 2013 Title 24 is 30% more efficient that 2008 Title 24 standards. Project will install high efficiency lights that are 10% more efficient than current standards. Energy STAR appliances will be installed at shopping center uses as needed.

Water Mitigation - Green Building standards

Waste Mitigation - Institute recycling and composting on-site

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	5
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	5
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	5
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	2.37	2.49
tblVehicleTrips	ST_TR	49.97	100.80
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	25.24	67.94
tblVehicleTrips	WD_TR	11.01	14.32
tblVehicleTrips	WD_TR	42.94	73.24

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6826	2.0000e-005	1.9300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9400e-003
Energy	2.3800e-003	0.0216	0.0182	1.3000e-004		1.6400e-003	1.6400e-003		1.6400e-003	1.6400e-003	0.0000	935.4027	935.4027	0.0269	5.8900e-003	937.7939
Mobile	3.2576	8.9450	34.2236	0.0885	5.9593	0.1321	6.0913	1.5940	0.1217	1.7157	0.0000	6,240.4095	6,240.4095	0.2157	0.0000	6,244.9392
Waste						0.0000	0.0000		0.0000	0.0000	30.3350	0.0000	30.3350	1.7928	0.0000	67.9826
Water						0.0000	0.0000		0.0000	0.0000	5.8240	165.3835	171.2075	0.6030	0.0151	188.5555
Total	**3.9425**	**8.9666**	**34.2437**	**0.0886**	**5.9593**	**0.1337**	**6.0930**	**1.5940**	**0.1234**	**1.7174**	**36.1590**	**7,341.1994**	**7,377.3584**	**2.6383**	**0.0210**	**7,439.2751**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5467	2.0000e-005	1.9300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9400e-003
Energy	1.7100e-003	0.0155	0.0130	9.0000e-005		1.1800e-003	1.1800e-003		1.1800e-003	1.1800e-003	0.0000	787.1472	787.1472	0.0226	4.9200e-003	789.1487
Mobile	2.9867	6.6241	27.4964	0.0607	4.0135	0.0924	4.1059	1.0735	0.0852	1.1588	0.0000	4,282.2711	4,282.2711	0.1536	0.0000	4,285.4960
Waste						0.0000	0.0000		0.0000	0.0000	15.1675	0.0000	15.1675	0.8964	0.0000	33.9913
Water						0.0000	0.0000		0.0000	0.0000	4.6592	140.2005	144.8597	0.4825	0.0121	158.7502
Total	**3.5352**	**6.6397**	**27.5114**	**0.0608**	**4.0135**	**0.0936**	**4.1071**	**1.0735**	**0.0864**	**1.1599**	**19.8267**	**5,209.6225**	**5,229.4492**	**1.5551**	**0.0170**	**5,267.3901**

	ROG	NOx	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	10.33	25.95	19.66	31.35	32.65	29.98	32.59	32.65	29.96	32.46	45.17	29.04	29.11	41.06	18.90	29.19

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	0.0000
Total	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

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	2.9867	6.6241	27.4964	0.0607	4.0135	0.0924	4.1059	1.0735	0.0852	1.1588	0.0000	4,282.2711	4,282.2711	0.1536	0.0000	4,285.4960
Unmitigated	3.2576	8.9450	34.2236	0.0885	5.9593	0.1321	6.0913	1.5940	0.1217	1.7157	0.0000	6,240.4095	6,240.4095	0.2157	0.0000	6,244.9392

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	998.10	173.55	73.19	2,410,232	1,618,895
Regional Shopping Center	5,902.41	8,123.47	5475.28	13,320,281	8,975,345
Total	6,900.52	8,297.03	5,548.47	15,730,512	10,594,240

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-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.468914	0.065172	0.173428	0.156844	0.056897	0.009079	0.016419	0.042157	0.001108	0.001337	0.005012	0.000672	0.002962

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive 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	770.2727	770.2727	0.0223	4.6100e-003	772.1716
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	911.8493	911.8493	0.0264	5.4600e-003	914.0971
NaturalGas Mitigated	1.7100e-003	0.0155	0.0130	9.0000e-005		1.1800e-003	1.1800e-003		1.1800e-003	1.1800e-003	0.0000	16.8744	16.8744	3.2000e-004	3.1000e-004	16.9771
NaturalGas Unmitigated	2.3800e-003	0.0216	0.0182	1.3000e-004		1.6400e-003	1.6400e-003		1.6400e-003	1.6400e-003	0.0000	23.5534	23.5534	4.5000e-004	4.3000e-004	23.6967

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					
Regional Shopping Center	186969	1.0100e-003	9.1700e-003	7.7000e-003	5.0000e-005		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	9.9774	9.9774	1.9000e-004	1.8000e-004	10.0381
General Office Building	254405	1.3700e-003	0.0125	0.0105	7.0000e-005		9.5000e-004	9.5000e-004		9.5000e-004	9.5000e-004	0.0000	13.5760	13.5760	2.6000e-004	2.5000e-004	13.6586
Total		**2.3800e-003**	**0.0216**	**0.0182**	**1.2000e-004**		**1.6500e-003**	**1.6500e-003**		**1.6500e-003**	**1.6500e-003**	**0.0000**	**23.5534**	**23.5534**	**4.5000e-004**	**4.3000e-004**	**23.6967**

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					
Regional Shopping Center	138131	7.4000e-004	6.7700e-003	5.6900e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.3712	7.3712	1.4000e-004	1.4000e-004	7.4161
General Office Building	178083	9.6000e-004	8.7300e-003	7.3300e-003	5.0000e-005		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	9.5032	9.5032	1.8000e-004	1.7000e-004	9.5611
Total		**1.7000e-003**	**0.0155**	**0.0130**	**9.0000e-005**		**1.1700e-003**	**1.1700e-003**		**1.1700e-003**	**1.1700e-003**	**0.0000**	**16.8744**	**16.8744**	**3.2000e-004**	**3.1000e-004**	**16.9771**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	745093	338.4991	9.8000e-003	2.0300e-003	339.3336
Regional Shopping Center	1.26204e+006	573.3502	0.0166	3.4300e-003	574.7636
Total		**911.8493**	**0.0264**	**5.4600e-003**	**914.0971**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	637755	289.7350	8.3900e-003	1.7400e-003	290.4492
Regional Shopping Center	1.05774e+006	480.5378	0.0139	2.8800e-003	481.7223
Total		**770.2727**	**0.0223**	**4.6200e-003**	**772.1716**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5467	2.0000e-005	1.9300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9400e-003
Unmitigated	0.6826	2.0000e-005	1.9300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1393					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5431					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9400e-003
Total	**0.6826**	**2.0000e-005**	**1.9300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.7300e-003**	**3.7300e-003**	**1.0000e-005**	**0.0000**	**3.9400e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.4800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5431					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9400e-003
Total	**0.5467**	**2.0000e-005**	**1.9300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.7300e-003**	**3.7300e-003**	**1.0000e-005**	**0.0000**	**3.9400e-003**

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

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	144.8597	0.4825	0.0121	158.7502
Unmitigated	171.2075	0.6030	0.0151	188.5555

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	12.388 / 7.59267	115.5343	0.4069	0.0102	127.2411
Regional Shopping Center	5.9695 / 3.65873	55.6732	0.1961	4.9200e-003	61.3145
Total		**171.2075**	**0.6030**	**0.0151**	**188.5555**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	9.91043 / 7.12952	97.7543	0.3256	8.1800e-003	107.1278
Regional Shopping Center	4.7756 / 3.43555	47.1055	0.1569	3.9400e-003	51.6224
Total		**144.8597**	**0.4825**	**0.0121**	**158.7502**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	15.1675	0.8964	0.0000	33.9913
Unmitigated	30.3350	1.7928	0.0000	67.9826

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	64.82	13.1579	0.7776	0.0000	29.4876
Regional Shopping Center	84.62	17.1771	1.0151	0.0000	38.4950
Total		**30.3350**	**1.7928**	**0.0000**	**67.9826**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	32.41	6.5789	0.3888	0.0000	14.7438
Regional Shopping Center	42.31	8.5886	0.5076	0.0000	19.2475
Total		**15.1675**	**0.8964**	**0.0000**	**33.9913**

9.0 Operational Offroad

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

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	0.0000	0.0000	0.0000	0.0000

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Colton Hub City Center 2020 - 4

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	20.91	1000sqft	0.48	20,910.00	0
Regional Shopping Center	40.29	1000sqft	0.92	40,290.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 1.40 acres of the 373.2 acres

Construction Phase - Modeling for operational emissions only

Grading - Project is 373.2 acres

Architectural Coating - Operational analysis only

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating - SCAQMD Rule 1113

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - 1.21 miles to downtown Colton. Omni trans bus routes along Valley Blvd, Pepper Avenue, W San Bernardino Avenue, N Windrose Avenue. Jobs per acre estimates from appendix E of Riverside General Plan.

Mobile Commute Mitigation - Employee passenger vehicle traffic makes up approximately 50% of traffic for land uses analyzed.

Area Mitigation - Use of coatings that have no more than 5g/L VOC.

Energy Mitigation - 2013 Title 24 is 30% more efficient that 2008 Title 24 standards. Project will install high efficiency lights that are 10% more efficient than current standards. Energy STAR appliances will be installed at shopping center uses as needed.
Water Mitigation - Green Building standards

Waste Mitigation - Institute recycling and composting on-site

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	5
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	5
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	5
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	2.37	3.55
tblVehicleTrips	ST_TR	49.97	129.34
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	25.24	120.25
tblVehicleTrips	WD_TR	11.01	19.13
tblVehicleTrips	WD_TR	42.94	93.34

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2780	1.0000e-005	7.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5200e-003	1.5200e-003	0.0000	0.0000	1.6000e-003
Energy	9.2000e-004	8.3200e-003	6.9900e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	397.2501	397.2501	0.0114	2.4900e-003	398.2622
Mobile	2.0757	5.6412	21.6632	0.0556	3.7435	0.0831	3.8266	1.0013	0.0766	1.0779	0.0000	3,923.0399	3,923.0399	0.1358	0.0000	3,925.8918
Waste						0.0000	0.0000		0.0000	0.0000	12.5347	0.0000	12.5347	0.7408	0.0000	28.0911
Water						0.0000	0.0000		0.0000	0.0000	2.1259	60.3676	62.4934	0.2201	5.5200e-003	68.8258
Total	**2.3546**	**5.6496**	**21.6709**	**0.0557**	**3.7435**	**0.0837**	**3.8272**	**1.0013**	**0.0772**	**1.0785**	**14.6605**	**4,380.6592**	**4,395.3197**	**1.1081**	**8.0100e-003**	**4,421.0725**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2226	1.0000e-005	7.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5200e-003	1.5200e-003	0.0000	0.0000	1.6000e-003
Energy	6.6000e-004	6.0000e-003	5.0400e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	333.6957	333.6957	9.6000e-003	2.0800e-003	334.5419
Mobile	1.9057	4.1846	17.4410	0.0382	2.5222	0.0582	2.5805	0.6747	0.0537	0.7283	0.0000	2,694.0478	2,694.0478	0.0968	0.0000	2,696.0807
Waste						0.0000	0.0000		0.0000	0.0000	6.2674	0.0000	6.2674	0.3704	0.0000	14.0455
Water						0.0000	0.0000		0.0000	0.0000	1.7007	51.1754	52.8761	0.1761	4.4200e-003	57.9463
Total	**2.1290**	**4.1906**	**17.4468**	**0.0383**	**2.5222**	**0.0587**	**2.5809**	**0.6747**	**0.0541**	**0.7288**	**7.9680**	**3,078.9204**	**3,086.8884**	**0.6529**	**6.5000e-003**	**3,102.6161**

	ROG	NOx	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	**9.58**	**25.82**	**19.49**	**31.29**	**32.62**	**29.91**	**32.56**	**32.62**	**29.90**	**32.43**	**45.65**	**29.72**	**29.77**	**41.08**	**18.85**	**29.82**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	0.0000
Total	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

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	1.9057	4.1846	17.4410	0.0382	2.5222	0.0582	2.5805	0.6747	0.0537	0.7283	0.0000	2,694.0478	2,694.0478	0.0968	0.0000	2,696.0807
Unmitigated	2.0757	5.6412	21.6632	0.0556	3.7435	0.0831	3.8266	1.0013	0.0766	1.0779	0.0000	3,923.0399	3,923.0399	0.1358	0.0000	3,925.8918

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	400.01	74.23	21.96	964,702	648,127
Regional Shopping Center	3,760.67	5,211.11	4844.87	8,916,888	6,009,770
Total	4,160.68	5,285.34	4,866.83	9,881,590	6,657,896

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.468914	0.065172	0.173428	0.156844	0.056897	0.009079	0.016419	0.042157	0.001108	0.001337	0.005012	0.000672	0.002962

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive 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	327.1596	327.1596	9.4700e-003	1.9600e-003	327.9661
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	388.1893	388.1893	0.0112	2.3300e-003	389.1462
NaturalGas Mitigated	6.6000e-004	6.0000e-003	5.0400e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	6.5361	6.5361	1.3000e-004	1.2000e-004	6.5759
NaturalGas Unmitigated	9.2000e-004	8.3200e-003	6.9900e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	9.0609	9.0609	1.7000e-004	1.7000e-004	9.1160

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					
General Office Building	76321.5	4.1000e-004	3.7400e-003	3.1400e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0728	4.0728	8.0000e-005	7.0000e-005	4.0976
Regional Shopping Center	93472.8	5.0000e-004	4.5800e-003	3.8500e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	4.9881	4.9881	1.0000e-004	9.0000e-005	5.0184
Total		**9.1000e-004**	**8.3200e-003**	**6.9900e-003**	**5.0000e-005**		**6.3000e-004**	**6.3000e-004**		**6.3000e-004**	**6.3000e-004**	**0.0000**	**9.0609**	**9.0609**	**1.8000e-004**	**1.6000e-004**	**9.1160**

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					
General Office Building	53425	2.9000e-004	2.6200e-003	2.2000e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8510	2.8510	5.0000e-005	5.0000e-005	2.8683
Regional Shopping Center	69057.1	3.7000e-004	3.3900e-003	2.8400e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	3.6852	3.6852	7.0000e-005	7.0000e-005	3.7076
Total		**6.6000e-004**	**6.0100e-003**	**5.0400e-003**	**4.0000e-005**		**4.6000e-004**	**4.6000e-004**		**4.6000e-004**	**4.6000e-004**	**0.0000**	**6.5361**	**6.5361**	**1.2000e-004**	**1.2000e-004**	**6.5759**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	223528	101.5497	2.9400e-003	6.1000e-004	101.8001
Regional Shopping Center	630941	286.6395	8.3000e-003	1.7200e-003	287.3461
Total		**388.1893**	**0.0112**	**2.3300e-003**	**389.1462**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	191327	86.9205	2.5200e-003	5.2000e-004	87.1348
Regional Shopping Center	528806	240.2391	6.9600e-003	1.4400e-003	240.8313
Total		**327.1596**	**9.4800e-003**	**1.9600e-003**	**327.9660**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2226	1.0000e-005	7.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5200e-003	1.5200e-003	0.0000	0.0000	1.6000e-003
Unmitigated	0.2780	1.0000e-005	7.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5200e-003	1.5200e-003	0.0000	0.0000	1.6000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0567					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2212					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5200e-003	1.5200e-003	0.0000	0.0000	1.6000e-003
Total	**0.2780**	**1.0000e-005**	**7.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.5200e-003**	**1.5200e-003**	**0.0000**	**0.0000**	**1.6000e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.4200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2212					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5200e-003	1.5200e-003	0.0000	0.0000	1.6000e-003
Total	**0.2226**	**1.0000e-005**	**7.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.5200e-003**	**1.5200e-003**	**0.0000**	**0.0000**	**1.6000e-003**

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

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	52.8761	0.1761	4.4200e-003	57.9463
Unmitigated	62.4934	0.2201	5.5200e-003	68.8258

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	3.71641 / 2.2778	34.6603	0.1221	3.0600e-003	38.1723
Regional Shopping Center	2.98438 / 1.82914	27.8332	0.0980	2.4600e-003	30.6534
Total		**62.4934**	**0.2201**	**5.5200e-003**	**68.8258**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	2.97313 / 2.13886	29.3263	0.0977	2.4500e-003	32.1384
Regional Shopping Center	2.38751 / 1.71756	23.5498	0.0784	1.9700e-003	25.8080
Total		**52.8761**	**0.1761**	**4.4200e-003**	**57.9463**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.2674	0.3704	0.0000	14.0455
Unmitigated	12.5347	0.7408	0.0000	28.0911

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	19.45	3.9482	0.2333	0.0000	8.8481
Regional Shopping Center	42.3	8.5865	0.5075	0.0000	19.2429
Total		**12.5347**	**0.7408**	**0.0000**	**28.0911**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	9.725	1.9741	0.1167	0.0000	4.4241
Regional Shopping Center	21.15	4.2933	0.2537	0.0000	9.6215
Total		**6.2674**	**0.3704**	**0.0000**	**14.0455**

9.0 Operational Offroad

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

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	0.0000	0.0000	0.0000	0.0000

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Colton Hub City Center 2020 - 5

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	228.95	1000sqft	5.26	228,950.00	0
Regional Shopping Center	119.25	1000sqft	2.74	119,250.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2020
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project located on a total 373.2 acres. Due to variation in trip generation rate for the same land use types, this portion of operational analysis analyzed uses on 8 acres of the 373.2 acres

Construction Phase - Modeling for operational emissions only

Grading - Project is 373.2 acres

Architectural Coating - Operational analysis only

Vehicle Trips - Trip generation rates from TIA and 9th edition ITE trip generation manual for weekend rates

Area Coating - SCAQMD Rule 1113

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - 1.21 miles to downtown Colton. Omni trans bus routes along Valley Blvd, Pepper Avenue, W San Bernardino Avenue, N Windrose Avenue. Jobs per acre estimates from appendix E of Riverside General Plan.

Mobile Commute Mitigation - Employee passenger vehicle traffic makes up approximately 50% of traffic for land uses analyzed.

Area Mitigation - Use of coatings that have no more than 5g/L VOC.

Energy Mitigation - 2013 Title 24 is 30% more efficient that 2008 Title 24 standards. Project will install high efficiency lights that are 10% more efficient than current standards. Energy STAR appliances will be installed at shopping center uses as needed.

Water Mitigation - Green Building standards

Waste Mitigation - Institute recycling and composting on-site

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	5
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	5
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	5
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	2.37	2.17
tblVehicleTrips	ST_TR	49.97	86.57
tblVehicleTrips	SU_TR	0.98	1.05
tblVehicleTrips	SU_TR	25.24	50.98
tblVehicleTrips	WD_TR	11.01	10.76
tblVehicleTrips	WD_TR	42.94	63.85

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.5814	4.0000e-005	4.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6400e-003	8.6400e-003	2.0000e-005	0.0000	9.1300e-003
Energy	6.0000e-003	0.0545	0.0458	3.3000e-004		4.1400e-003	4.1400e-003		4.1400e-003	4.1400e-003	0.0000	2,019.6504	2,019.6504	0.0579	0.0128	2,024.8440
Mobile	4.5957	12.8857	48.9372	0.1283	8.6522	0.1911	8.8433	2.3143	0.1762	2.4905	0.0000	9,046.9566	9,046.9566	0.3118	0.0000	9,053.5038
Waste						0.0000	0.0000		0.0000	0.0000	68.6373	0.0000	68.6373	4.0564	0.0000	153.8207
Water						0.0000	0.0000		0.0000	0.0000	15.7121	446.1743	461.8864	1.6267	0.0408	508.6882
Total	**6.1831**	**12.9403**	**48.9875**	**0.1286**	**8.6522**	**0.1953**	**8.8475**	**2.3143**	**0.1804**	**2.4947**	**84.3494**	**11,512.7900**	**11,597.1394**	**6.0527**	**0.0536**	**11,740.8659**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2667	4.0000e-005	4.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6400e-003	8.6400e-003	2.0000e-005	0.0000	9.1300e-003
Energy	4.2600e-003	0.0387	0.0325	2.3000e-004		2.9400e-003	2.9400e-003		2.9400e-003	2.9400e-003	0.0000	1,704.9000	1,704.9000	0.0490	0.0107	1,709.2553
Mobile	4.2018	9.5110	39.1554	0.0879	5.8228	0.1335	5.9564	1.5575	0.1231	1.6806	0.0000	6,199.6505	6,199.6505	0.2214	0.0000	6,204.3003
Waste						0.0000	0.0000		0.0000	0.0000	34.3187	0.0000	34.3187	2.0282	0.0000	76.9103
Water						0.0000	0.0000		0.0000	0.0000	12.5697	378.2353	390.8050	1.3017	0.0327	428.2789
Total	**5.4728**	**9.5498**	**39.1923**	**0.0882**	**5.8228**	**0.1365**	**5.9593**	**1.5575**	**0.1261**	**1.6836**	**46.8883**	**8,282.7944**	**8,329.6828**	**3.6003**	**0.0434**	**8,418.7539**

	ROG	NOx	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	**11.49**	**26.20**	**20.00**	**31.44**	**32.70**	**30.11**	**32.64**	**32.70**	**30.10**	**32.51**	**44.41**	**28.06**	**28.17**	**40.52**	**18.99**	**28.30**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	0.0000
Total	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

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	4.2018	9.5110	39.1554	0.0879	5.8228	0.1335	5.9564	1.5575	0.1231	1.6806	0.0000	6,199.6505	6,199.6505	0.2214	0.0000	6,204.3003
Unmitigated	4.5957	12.8857	48.9372	0.1283	8.6522	0.1911	8.8433	2.3143	0.1762	2.4905	0.0000	9,046.9566	9,046.9566	0.3118	0.0000	9,053.5038

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	2,463.50	496.82	240.40	6,007,900	4,033,804
Regional Shopping Center	7,614.11	10,323.47	6079.37	16,831,066	11,336,569
Total	10,077.61	10,820.29	6,319.76	22,838,966	15,370,373

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.468914	0.065172	0.173428	0.156844	0.056897	0.009079	0.016419	0.042157	0.001108	0.001337	0.005012	0.000672	0.002962

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive 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	1,662.7767	1,662.7767	0.0481	9.9600e-003	1,666.8756
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,960.2924	1,960.2924	0.0568	0.0117	1,965.1248
NaturalGas Mitigated	4.2600e-003	0.0387	0.0325	2.3000e-004		2.9400e-003	2.9400e-003		2.9400e-003	2.9400e-003	0.0000	42.1234	42.1234	8.1000e-004	7.7000e-004	42.3797
NaturalGas Unmitigated	6.0000e-003	0.0545	0.0458	3.3000e-004		4.1400e-003	4.1400e-003		4.1400e-003	4.1400e-003	0.0000	59.3580	59.3580	1.1400e-003	1.0900e-003	59.7193

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					
Regional Shopping Center	276660	1.4900e-003	0.0136	0.0114	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.7636	14.7636	2.8000e-004	2.7000e-004	14.8535
General Office Building	835668	4.5100e-003	0.0410	0.0344	2.5000e-004		3.1100e-003	3.1100e-003		3.1100e-003	3.1100e-003	0.0000	44.5944	44.5944	8.5000e-004	8.2000e-004	44.8658
Total		**6.0000e-003**	**0.0545**	**0.0458**	**3.3000e-004**		**4.1400e-003**	**4.1400e-003**		**4.1400e-003**	**4.1400e-003**	**0.0000**	**59.3580**	**59.3580**	**1.1300e-003**	**1.0900e-003**	**59.7193**

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					
Regional Shopping Center	204395	1.1000e-003	0.0100	8.4200e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.9073	10.9073	2.1000e-004	2.0000e-004	10.9737
General Office Building	584967	3.1500e-003	0.0287	0.0241	1.7000e-004		2.1800e-003	2.1800e-003		2.1800e-003	2.1800e-003	0.0000	31.2161	31.2161	6.0000e-004	5.7000e-004	31.4061
Total		**4.2500e-003**	**0.0387**	**0.0325**	**2.3000e-004**		**2.9400e-003**	**2.9400e-003**		**2.9400e-003**	**2.9400e-003**	**0.0000**	**42.1234**	**42.1234**	**8.1000e-004**	**7.7000e-004**	**42.3797**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	2.44748e+006	1,111.8992	0.0322	6.6600e-003	1,114.6401
Regional Shopping Center	1.86746e+006	848.3932	0.0246	5.0800e-003	850.4846
Total		**1,960.2924**	**0.0568**	**0.0117**	**1,965.1248**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	2.09489e+006	951.7191	0.0276	5.7000e-003	954.0652
Regional Shopping Center	1.56516e+006	711.0575	0.0206	4.2600e-003	712.8104
Total		**1,662.7767**	**0.0482**	**9.9600e-003**	**1,666.8756**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive 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	1.2667	4.0000e-005	4.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6400e-003	8.6400e-003	2.0000e-005	0.0000	9.1300e-003
Unmitigated	1.5814	4.0000e-005	4.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6400e-003	8.6400e-003	2.0000e-005	0.0000	9.1300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3228					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2582					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6400e-003	8.6400e-003	2.0000e-005	0.0000	9.1300e-003
Total	**1.5814**	**4.0000e-005**	**4.4700e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.6400e-003**	**8.6400e-003**	**2.0000e-005**	**0.0000**	**9.1300e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	8.0700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2582					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6400e-003	8.6400e-003	2.0000e-005	0.0000	9.1300e-003
Total	**1.2667**	**4.0000e-005**	**4.4700e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.6400e-003**	**8.6400e-003**	**2.0000e-005**	**0.0000**	**9.1300e-003**

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

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	390.8050	1.3017	0.0327	428.2789
Unmitigated	461.8864	1.6267	0.0408	508.6882

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	40.6921 / 24.9403	379.5060	1.3366	0.0335	417.9605
Regional Shopping Center	8.83315 / 5.41387	82.3804	0.2901	7.2700e-003	90.7278
Total		**461.8864**	**1.6267**	**0.0408**	**508.6882**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	32.5537 / 23.419	321.1024	1.0696	0.0269	351.8926
Regional Shopping Center	7.06652 / 5.08362	69.7025	0.2322	5.8300e-003	76.3862
Total		**390.8050**	**1.3017**	**0.0327**	**428.2789**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	34.3187	2.0282	0.0000	76.9103
Unmitigated	68.6373	4.0564	0.0000	153.8207

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	212.92	43.2208	2.5543	0.0000	96.8607
Regional Shopping Center	125.21	25.4165	1.5021	0.0000	56.9600
Total		**68.6373**	**4.0564**	**0.0000**	**153.8207**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	106.46	21.6104	1.2771	0.0000	48.4303
Regional Shopping Center	62.605	12.7083	0.7510	0.0000	28.4800
Total		**34.3187**	**2.0282**	**0.0000**	**76.9104**

9.0 Operational Offroad

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

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	0.0000	0.0000	0.0000	0.0000

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Colton Hub City Center 2020 - 1

San Bernardino-South Coast County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.28	0.00	0.00	0.66	0.68	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.07	0.10	0.00	0.00	0.34	0.34	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.88	0.97	0.31	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.67	0.95	-0.15	0.00	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	Tier 4 Final	1	1	Level 3	25.00
Cranes	Diesel	Tier 4 Final	1	1	Level 3	25.00
Excavators	Diesel	Tier 4 Final	2	2	Level 3	25.00
Forklifts	Diesel	Tier 4 Final	3	3	Level 3	25.00
Generator Sets	Diesel	Tier 4 Final	1	1	Level 3	25.00
Graders	Diesel	Tier 4 Final	1	1	Level 3	25.00
Pavers	Diesel	Tier 4 Final	2	2	Level 3	25.00
Paving Equipment	Diesel	Tier 4 Final	2	2	Level 3	25.00
Rollers	Diesel	Tier 4 Final	2	2	Level 3	25.00
Rubber Tired Dozers	Diesel	Tier 4 Final	1	1	Level 3	25.00
Scrapers	Diesel	Tier 4 Final	2	2	Level 3	25.00
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	5	5	Level 3	25.00
Welders	Diesel	Tier 4 Final	1	1	Level 3	25.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	1.45130E-001	9.66800E-001	8.69240E-001	1.39000E-003	7.40300E-002	7.40300E-002	0.00000E+000	1.19365E+002	1.19365E+002	1.17900E-002	0.00000E+000	1.19612E+002
Cranes	2.75990E-001	3.28234E+000	1.19226E+000	2.57000E-003	1.44640E-001	1.33070E-001	0.00000E+000	2.37026E+002	2.37026E+002	7.32000E-002	0.00000E+000	2.38564E+002
Excavators	1.08720E-001	1.26972E+000	8.97630E-001	1.38000E-003	6.26700E-002	5.76600E-002	0.00000E+000	1.31542E+002	1.31542E+002	3.92700E-002	0.00000E+000	1.32366E+002
Forklifts	3.03470E-001	2.65261E+000	1.92334E+000	2.39000E-003	2.15220E-001	1.98000E-001	0.00000E+000	2.20018E+002	2.20018E+002	6.79500E-002	0.00000E+000	2.21445E+002
Generator Sets	2.81420E-001	2.24109E+000	1.96174E+000	3.43000E-003	1.46920E-001	1.46920E-001	0.00000E+000	2.94756E+002	2.94756E+002	2.26900E-002	0.00000E+000	2.95232E+002
Graders	1.38570E-001	1.41825E+000	6.49980E-001	8.20000E-004	7.97400E-002	7.33700E-002	0.00000E+000	7.77885E+001	7.77885E+001	2.32200E-002	0.00000E+000	7.82762E+001
Pavers	3.09070E-001	3.42823E+000	2.63641E+000	4.23000E-003	1.68530E-001	1.55050E-001	0.00000E+000	3.87772E+002	3.87772E+002	1.20090E-001	0.00000E+000	3.90294E+002
Paving Equipment	2.36310E-001	2.64535E+000	2.34919E+000	3.75000E-003	1.31090E-001	1.20600E-001	0.00000E+000	3.44281E+002	3.44281E+002	1.06620E-001	0.00000E+000	3.46520E+002
Rollers	2.58810E-001	2.46628E+000	1.82864E+000	2.45000E-003	1.72960E-001	1.59120E-001	0.00000E+000	2.25044E+002	2.25044E+002	6.96900E-002	0.00000E+000	2.26508E+002
Rubber Tired Dozers	1.66150E-001	1.87751E+000	1.43243E+000	1.16000E-003	8.76000E-002	8.05900E-002	0.00000E+000	1.10566E+002	1.10566E+002	3.30100E-002	0.00000E+000	1.11259E+002
Scrapers	3.76660E-001	4.85432E+000	3.02150E+000	3.89000E-003	1.96060E-001	1.80370E-001	0.00000E+000	3.70454E+002	3.70454E+002	1.10600E-001	0.00000E+000	3.72776E+002
Tractors/Loaders/ Backhoes	4.89740E-001	4.75111E+000	3.86574E+000	5.07000E-003	3.51360E-001	3.23250E-001	0.00000E+000	4.69431E+002	4.69431E+002	1.44180E-001	0.00000E+000	4.72459E+002
Welders	2.46400E-001	8.92920E-001	9.84120E-001	1.33000E-003	6.29700E-002	6.29700E-002	0.00000E+000	9.81571E+001	9.81571E+001	2.00800E-002	0.00000E+000	9.85787E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	1.38900E-002	4.51500E-002	8.56650E-001	1.39000E-003	2.80000E-004	2.80000E-004	0.00000E+000	1.19365E+002	1.19365E+002	1.17900E-002	0.00000E+000	1.19612E+002
Cranes	3.16500E-002	1.02860E-001	1.16042E+000	2.57000E-003	6.30000E-004	6.30000E-004	0.00000E+000	2.37026E+002	2.37026E+002	7.32000E-002	0.00000E+000	2.38563E+002
Excavators	1.70000E-002	5.52600E-002	1.04849E+000	1.38000E-003	3.40000E-004	3.40000E-004	0.00000E+000	1.31542E+002	1.31542E+002	3.92700E-002	0.00000E+000	1.32366E+002
Forklifts	2.94700E-002	9.57800E-002	1.81728E+000	2.39000E-003	5.90000E-004	5.90000E-004	0.00000E+000	2.20018E+002	2.20018E+002	6.79500E-002	0.00000E+000	2.21445E+002
Generator Sets	3.43000E-002	1.11490E-001	2.11539E+000	3.43000E-003	6.90000E-004	6.90000E-004	0.00000E+000	2.94755E+002	2.94755E+002	2.26900E-002	0.00000E+000	2.95232E+002
Graders	9.85000E-003	3.20200E-002	6.07530E-001	8.20000E-004	2.00000E-004	2.00000E-004	0.00000E+000	7.77884E+001	7.77884E+001	2.32200E-002	0.00000E+000	7.82761E+001
Pavers	5.19500E-002	1.68820E-001	3.20329E+000	4.23000E-003	1.04000E-003	1.04000E-003	0.00000E+000	3.87771E+002	3.87771E+002	1.20090E-001	0.00000E+000	3.90293E+002
Paving Equipment	4.63100E-002	1.50490E-001	2.85550E+000	3.75000E-003	9.30000E-004	9.30000E-004	0.00000E+000	3.44281E+002	3.44281E+002	1.06620E-001	0.00000E+000	3.46520E+002
Rollers	3.00800E-002	9.77600E-002	1.85486E+000	2.45000E-003	6.00000E-004	6.00000E-004	0.00000E+000	2.25044E+002	2.25044E+002	6.96900E-002	0.00000E+000	2.26508E+002
Rubber Tired Dozers	1.40900E-002	4.57800E-002	5.16480E-001	1.16000E-003	2.80000E-004	2.80000E-004	0.00000E+000	1.10566E+002	1.10566E+002	3.30100E-002	0.00000E+000	1.11259E+002
Scrapers	4.78600E-002	1.55540E-001	1.75483E+000	3.89000E-003	9.60000E-004	9.60000E-004	0.00000E+000	3.70453E+002	3.70453E+002	1.10600E-001	0.00000E+000	3.72776E+002
Tractors/Loaders/Backhoes	6.19000E-002	2.01190E-001	3.81742E+000	5.07000E-003	1.24000E-003	1.24000E-003	0.00000E+000	4.69431E+002	4.69431E+002	1.44180E-001	0.00000E+000	4.72459E+002
Welders	2.28500E-002	3.92680E-001	7.80610E-001	1.33000E-003	2.30000E-004	2.30000E-004	0.00000E+000	9.81569E+001	9.81569E+001	2.00800E-002	0.00000E+000	9.85786E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	9.04293E-001	9.53300E-001	1.44839E-002	0.00000E+000	9.96218E-001	9.96218E-001	0.00000E+000	1.17288E-006	1.17288E-006	0.00000E+000	0.00000E+000	1.17045E-006
Cranes	8.85322E-001	9.68663E-001	2.67056E-002	0.00000E+000	9.95644E-001	9.95266E-001	0.00000E+000	1.18130E-006	1.18130E-006	0.00000E+000	0.00000E+000	1.17369E-006
Excavators	8.43635E-001	9.56479E-001	-1.68065E-001	0.00000E+000	9.94575E-001	9.94103E-001	0.00000E+000	1.14032E-006	1.14032E-006	0.00000E+000	0.00000E+000	1.20877E-006
Forklifts	9.02890E-001	9.63892E-001	5.51437E-002	0.00000E+000	9.97259E-001	9.97020E-001	0.00000E+000	1.18172E-006	1.18172E-006	0.00000E+000	0.00000E+000	1.17410E-006
Generator Sets	8.78118E-001	9.50252E-001	-7.83233E-002	0.00000E+000	9.95304E-001	9.95304E-001	0.00000E+000	1.18742E-006	1.18742E-006	0.00000E+000	0.00000E+000	1.21938E-006
Graders	9.28917E-001	9.77423E-001	6.53097E-002	0.00000E+000	9.97492E-001	9.97274E-001	0.00000E+000	1.15698E-006	1.15698E-006	0.00000E+000	0.00000E+000	1.14977E-006
Pavers	8.31915E-001	9.50756E-001	-2.15020E-001	0.00000E+000	9.93829E-001	9.93292E-001	0.00000E+000	1.18627E-006	1.18627E-006	0.00000E+000	0.00000E+000	1.20422E-006
Paving Equipment	8.04029E-001	9.43111E-001	-2.15525E-001	0.00000E+000	9.92906E-001	9.92289E-001	0.00000E+000	1.19089E-006	1.19089E-006	0.00000E+000	0.00000E+000	1.18319E-006
Rollers	8.83776E-001	9.60361E-001	-1.43385E-002	0.00000E+000	9.96531E-001	9.96229E-001	0.00000E+000	1.19976E-006	1.19976E-006	0.00000E+000	0.00000E+000	1.19201E-006
Rubber Tired Dozers	9.15197E-001	9.75617E-001	6.39438E-001	0.00000E+000	9.96804E-001	9.96526E-001	0.00000E+000	1.17577E-006	1.17577E-006	0.00000E+000	0.00000E+000	1.16844E-006
Scrapers	8.72936E-001	9.67958E-001	4.19219E-001	0.00000E+000	9.95104E-001	9.94678E-001	0.00000E+000	1.18773E-006	1.18773E-006	0.00000E+000	0.00000E+000	1.18033E-006
Tractors/Loaders/Backhoes	8.73606E-001	9.57654E-001	1.24995E-002	0.00000E+000	9.96471E-001	9.96164E-001	0.00000E+000	1.19293E-006	1.19293E-006	0.00000E+000	0.00000E+000	1.18529E-006
Welders	9.07265E-001	5.60229E-001	2.06794E-001	0.00000E+000	9.96347E-001	9.96347E-001	0.00000E+000	1.22253E-006	1.22253E-006	0.00000E+000	0.00000E+000	1.21730E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	61.00	PM2.5 Reduction	61.00	Frequency (per day)	3.00

No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	15.00		
Yes	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	5.26	1.40	5.26	1.40	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	36.36	9.80	36.36	9.80	0.00	0.00
Grading	Fugitive Dust	0.98	0.45	0.38	0.18	0.61	0.61
Grading	Roads	0.03	0.01	0.03	0.01	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.08	0.02	0.08	0.02	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	97.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.20	14.20	14.20	14.20	14.20
Hearth	99.33	100.00	99.98	100.00	98.42	98.43	100.00	-5.88	30.36	98.69	44.95	31.88
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	14.32	36.31	29.48	41.49	40.25	40.24	0.00	41.51	41.51	39.12	0.00	41.51
Natural Gas	27.82	27.90	28.67	27.79	27.84	27.84	0.00	27.83	27.83	27.83	27.81	27.83
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	15.19	15.35	19.98	19.80	15.77
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Urban

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
Yes	Land Use	Increase Density	0.19	6.53	74.98	
Yes	Land Use	Increase Diversity	0.14	0.38		
Yes	Land Use	Improve Walkability Design	-0.04	24.00		
Yes	Land Use	Improve Destination Accessibility	0.18	1.21		
Yes	Land Use	Increase Transit Accessibility	0.21	0.10		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.32			

Yes	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site		
No	Neighborhood Enhancements	Provide Traffic Calming Measures	0.00			
No	Neighborhood Enhancements	Implement NEV Network	0.01			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.02			
Yes	Parking Policy Pricing	Limit Parking Supply	0.00	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00	0.00		
No	Transit Improvements	Expand Transit Network	0.00	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		0.00	
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.34			
No	Commute	Implement Trip Reduction Program		0.00		
No	Commute	Transit Subsidy		0.00		
No	Commute	Implement Employee Parking "Cash Out"	7.70	0.00		
No	Commute	Workplace Parking Charge		0.00		
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00	0.00		
Yes	Commute	Employee Vanpool/Shuttle	0.00	19.00	2.00	
Yes	Commute	Provide Ride Sharing Program	15.00	19.00		
	Commute	Commute Subtotal	0.15			

Yes	School Trip	Implement School Bus Program	0.38	50.00		
		Total VMT Reduction	0.65			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
Yes	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
Yes	Use Low VOC Paint (Residential Interior)	5.00
Yes	Use Low VOC Paint (Residential Exterior)	5.00
Yes	Use Low VOC Paint (Non-residential Interior)	5.00
Yes	Use Low VOC Paint (Non-residential Exterior)	5.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	30.00	
Yes	Install High Efficiency Lighting	10.00	
No	On-site Renewable	0.00	0.00

Appliance Type	Land Use Subtype	% Improvement
ClothWasher	Single Family Housing	30.00

DishWasher	Single Family Housing	15.00
Fan	Single Family Housing	50.00
Refrigerator	Single Family Housing	15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
Yes	Install low-flow bathroom faucet	32.00	
Yes	Install low-flow Kitchen faucet	18.00	
Yes	Install low-flow Toilet	20.00	
Yes	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
Yes	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	50.00

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