Greenhouse Gas Assessment for the West Ontario Commerce Center

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1.0 EXISTING ENVIRONMENT

1.1 Introduction

This report analyzes the potential climate change impacts associated with development of the proposed West Ontario Commerce Center (WOCC). Background information on greenhouse gases (GHG) and the impacts of climate change are presented along with an assessment of the project's GHG impact.

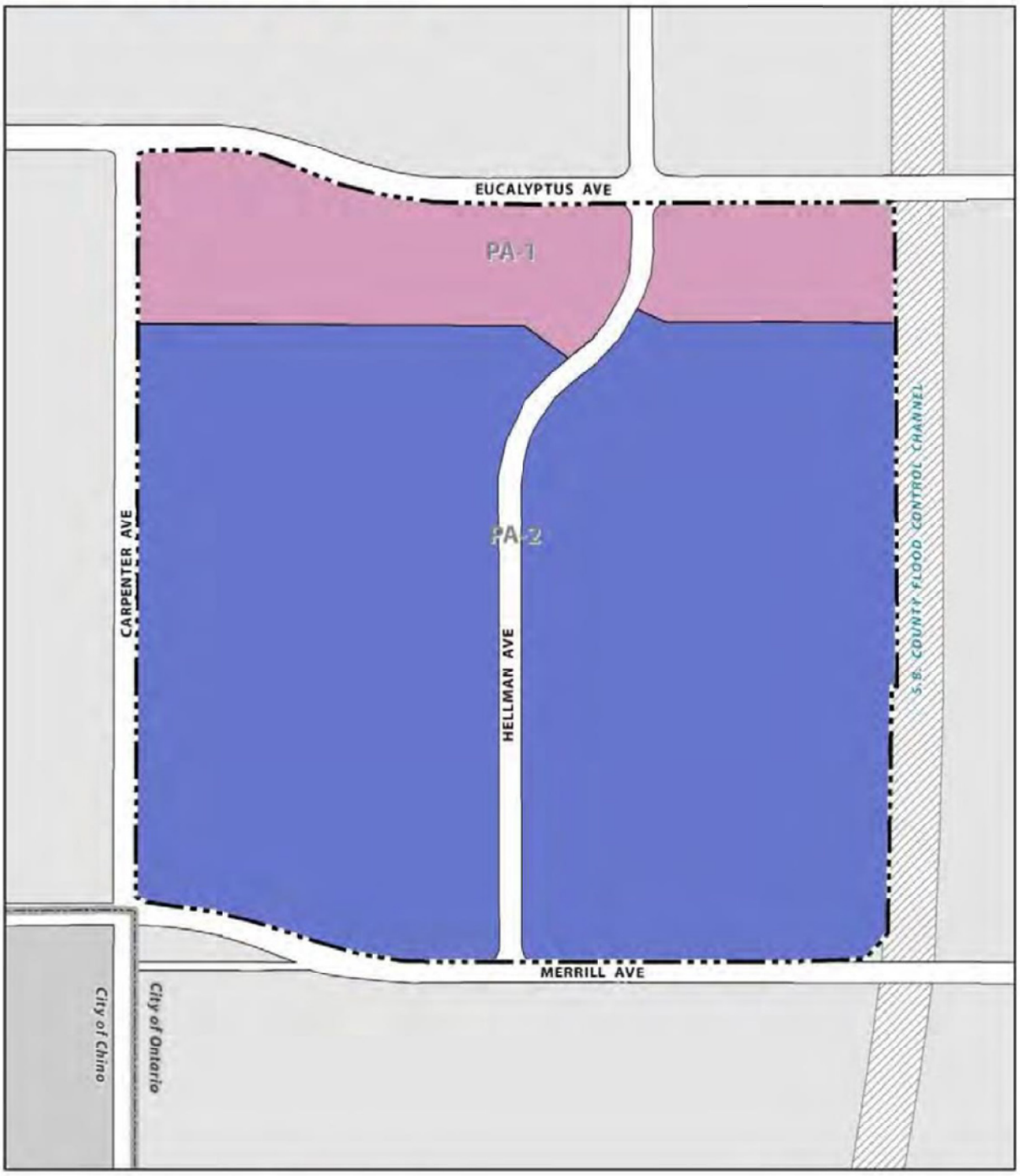
The City of Ontario has been very proactive in developing CEQA screening thresholds for new development projects. For new projects that emit more than 3,000 metric tons (MT) of equivalent carbon dioxide (CO2EQ) per year, the project must show that they will reduce their emissions by 25% in comparison to 2020 Business As Usual (BAU), and 40% by 2030. The City does not dictate how the reductions must be achieved but rather imposes a Performance Standard for New Developments (PS). Project applicants are encouraged to choose the most appropriate measures for achieving the percent reduction goal, while taking into consideration cost, environmental and economic benefits.

Appendix B of the "Ontario Community Climate Action Plan (CCAP)" provides guidance for CEQA. Appendix B provides a point mechanism to determine consistency with the City's CCAP. A project must garner at least 100 points to have a less than significant individual and cumulative impact for GHG emissions. Since the awarding of points requires specific commitments for window upgrades, thermal insulations, energy efficient appliances, etc., the developer, perhaps in conjunction with the GHG preparer, must determine which measures he is willing to commit to. Any Development Plan or Specific Plan application the developer (applicant) must submit a "Completed Greenhouse Gas Emissions CEQA Thresholds and Screening Tables" (City of Ontario Minimum Filing & Public Notice Requirements Checklist, updated January 5, 2015).

1.2 Project Description

The proposed West Ontario Commerce Center Specific Plan includes two (2) Planning Areas (PAs) totaling approximately 120 net acres and will allow a maximum development of 555,505 square feet of Business Park use and 2,350,005 square feet of Industrial use with a total development of 2,905,510 square feet (Exhibit 1). The proposed Business Park use will accommodate industrial-serving commercial and office uses, very light industrial uses, and allow multi-tenant buildings and single-tenant buildings. The proposed Industrial use will allow storage and warehousing use. The proposed Industrial use will also allow the development of e-commerce use, distribution, and a wide-range of manufacturing and assembly uses. Business Park uses are depicted as Future Development, on the northern portion of the site.

Exhibit 1 - Proposed Land Use Plan



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The project will be developed in two phases. The first phase of development includes the development of two industrial buildings (totaling up to 2,350,005 square feet) and surface parking for each building. The second phase of development includes the Business Park and commercial uses for the northern portion of the site along the south side of Eucalyptus Avenue with Business Park and commercial uses oriented towards Eucalyptus Avenue.

1.3 Greenhouse Gases and Climate Change

1.3.1 Impact of Climate Change

The Earth's climate has always been in the process of changing, due to many different natural factors. These factors have included changes in the Earth's orbit, volcanic eruptions, and varying amounts of energy released from the sun. Differences such as these have caused fluctuations in the temperature of the climate, ranging from ice ages to long periods of warmth. However, since the late 18th century, humans have had an increasing impact of the rate of climate change, beginning with the Industrial Revolution.

The International Panel on Climate Change's (IPCC) Fifth Assessment Report (AR5) affirms that the planet is warming and that human beings are "extremely likely" (indicating a 95 percent certainty) to be the primary cause. Since global warming and climate change emerged publically as an environmental issue in the 1980s, the scientific evidence has grown even stronger that the climate is changing, that the impacts are widespread, and are occurring now. This evidence includes rising temperatures, shifting snow and rainfall patterns, and increased incidents of extreme weather events.

This process of heating is often referred to as 'global warming,' although the National Academy of Sciences prefers the terms 'climate change' as an umbrella phrase which includes global warming as well as other environmental changes, in addition to the increasing temperatures. Some of these effects include changes to rainfall, wind, and current weather patterns, as well as snow and ice cover, and sea level.

Climate models generally predict that the average temperature at the Earth's surface could increase from 2.0°F to 4.7°F (1.1 °C to 2.6°C) above 1990 levels by the end of this century (for RCP4.5 per AR5). The change in global temperature has many significant consequences. There will be more frequent hot spells and fewer cold spells. Heat waves will occur with a higher frequency and longer duration. Significant changes in precipitation patterns with some areas getting much more rain with other areas getting substantially less precipitation. The oceans will become more acidic. The Arctic Ocean will become nearly ice-free during the summer season. The volume of glaciers is projected to decrease anywhere from 15 to 85%. Sea level rise is projected to be 0.8 to 2.7 feet (0.26 to 0.82 m) by the end of the century. A large fraction of species face increased extinction risk. Many plant species, most small mammals, freshwater mollusks, and coral reefs, to name a few, cannot adapt quick enough to survive the climate change. Food security in many parts of the world will be

threaten. Fisheries, wheat, rice, and maize production will be reduced in many areas. Renewable surface waters (e.g., lakes and streams) and groundwater resources will be diminished in many critical areas. In rural areas hit by climate change, the reduction in water and food resources will lead to poorer health. In urban areas climate change is projected to increase risks for people, assets, economies and ecosystems, including risks from heat stress, storms and extreme precipitation, inland and coastal flooding, landslides, air pollution, drought, water scarcity, sea level rise and storm surges.

Global GHG emissions are measured in million metric tons of carbon dioxide equivalent ("MMTCO2EQ") units. A metric ton is approximately 2,205 lbs. Some GHGs emitted into the atmosphere are naturally occurring, while others are caused solely by human activities. The principal GHGs that enter the atmosphere because of human activities are:

- **Carbon dioxide (CO_2)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), agriculture, irrigation, and deforestation, as well as the manufacturing of cement.

- **Methane (CH_4)** is emitted through the production and transportation of coal, natural gas, and oil, as well as from livestock. Other agricultural activities influence methane emissions as well as the decay of waste in landfills.

- **Nitrous oxide (N_2O)** is released most often during the burning of fuel at high temperatures. This greenhouse gas is caused mostly by motor vehicles, which also include non-road vehicles, such as those used for agriculture.

- **Fluorinated Gases** are emitted primarily from industrial sources, which often include hydrofluorocarbons (HRC), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6). Though they are often released in smaller quantities, they are referred to as High Global Warming Potential Gases because of their ability to cause global warming. Fluorinated gases are often used as substitutes for ozone depleting substances.

These gases have different potentials for trapping heat in the atmosphere, called global warming potential ("GWP"). For example, one pound of methane has 21 times more heat capturing potential than one pound of carbon dioxide. When dealing with an array of emissions, the gases are converted to carbon dioxide equivalents (CO2EQ) for comparison purposes. The GWPs for common greenhouse gases are shown in Table 1.

Table 1 Global Warming Potentials (GWP)

Gas	Global Warming Potential
Carbon Dioxide	1
Methane	25
Nitrous Oxide	198

Source: IPCC, "Fourth Assessment Report, Climate Change 2007, AR4".

1.3.2 Adaptation Impact

Adaptation refers to potential climate change impacts on the project. Global warming is already having a profound impact on water resources. Climate change already has altered the weather patterns and water supply in California leading to increased water shortages (i.e., a dwindling snowpack, bigger flood flows, rising sea levels, longer and harsher droughts). Water supplies are also at risk from rising sea levels. Risks may include degradation of California's estuaries, wetlands, and groundwater aquifers that would threaten the quality and reliability of the major California fresh water supply (Climate Change Adaptation Strategies for California's Water, State of California Department of Water Resources, October 2008).

Higher temperatures will also likely increase electricity demand due to higher air conditioning use. Even if the population remained unchanged, toward the end of the century annual electricity demand could increase by as much as 20 percent if temperatures rise into the higher warming range. (Implementing aggressive efficiency measures could lower this estimate).

Adaptation includes the responses to the changing climate and policies to minimize the predicted impacts (e.g., building better coastal defenses to sea level rise). Adaptation is not included in this report. It should be noted that adaptation is not mitigation. Mitigation includes intervention or policies to reduce GHG emissions or to enhance the sinks of GHGs.

1.3.3 Emission Inventories

In 2014, the top CO_2 emitters were China, the United States, the European Union, India and the Russian Federation. The estimate for CO_2 contribution by country is presented in Table 2.

Table 2 Top Ten CO2 Producing Nations in 2014

Country	Percent of Global
1. China	30%
2. United States	15%
3. European Union	9%
4. India	7%
5. Russia Federation	5%
6. Japan	4%
Remaining Countries	*30%*
Total Global	**100%**

Source: USEPA webpage 04/20/17
https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data

1.3.4 Sources of Greenhouse Gases in California

The California Air Resources Board categorizes GHG generation by source into seven broad categories. The categories are:

- **Transportation** includes the combustion of gasoline and diesel in automobiles and trucks. Transportation also includes jet fuel consumption and bunker fuel for ships.
- **Industrial** GHG emissions are produced from many industrial activities. Major contributors include oil and natural gas extraction; crude oil refining; food processing; stone, clay, glass, and cement manufacturing; chemical manufacturing; and cement production. Wastewater treatment plants are also significant contributors to this category.
- **Electric generation** includes both emissions from power plants in California as well as power plants located outside of the state that supply electricity to the state.
- **Commercial and residential** uses generate GHG emissions primarily from the combustion of natural gas for space and water heating.
- **Agriculture** GHG emissions are composed mostly of nitrous oxide from agricultural soil management, methane from enteric fermentation, and methane and nitrous oxide from manure management.

- **High (GWP)** emissions consist of ozone depleting substance substitutes and electricity grid SF6 losses.
- **Recycling and waste** includes primarily landfills.

The relative amount of GHGs released from each of these categories in California in 2014 is shown in Exhibit 2 (source: "California Greenhouse Gas Inventory for 2000-2014," California Air Resources Board, June 17, 2016).

Examination of Exhibit 2 indicates that most of California's GHGs are emitted by transportation sources, such as automobiles, trucks, and airplanes. Combustion of fossil fuels in the transportation sector contributed approximately 36% of the California GHG. This category was followed by the industrial sector (21%), and electric power sector (including both in-state and out-of-state sources) (20%). Residential and commercial activity accounted for approximately 9% of the emissions.

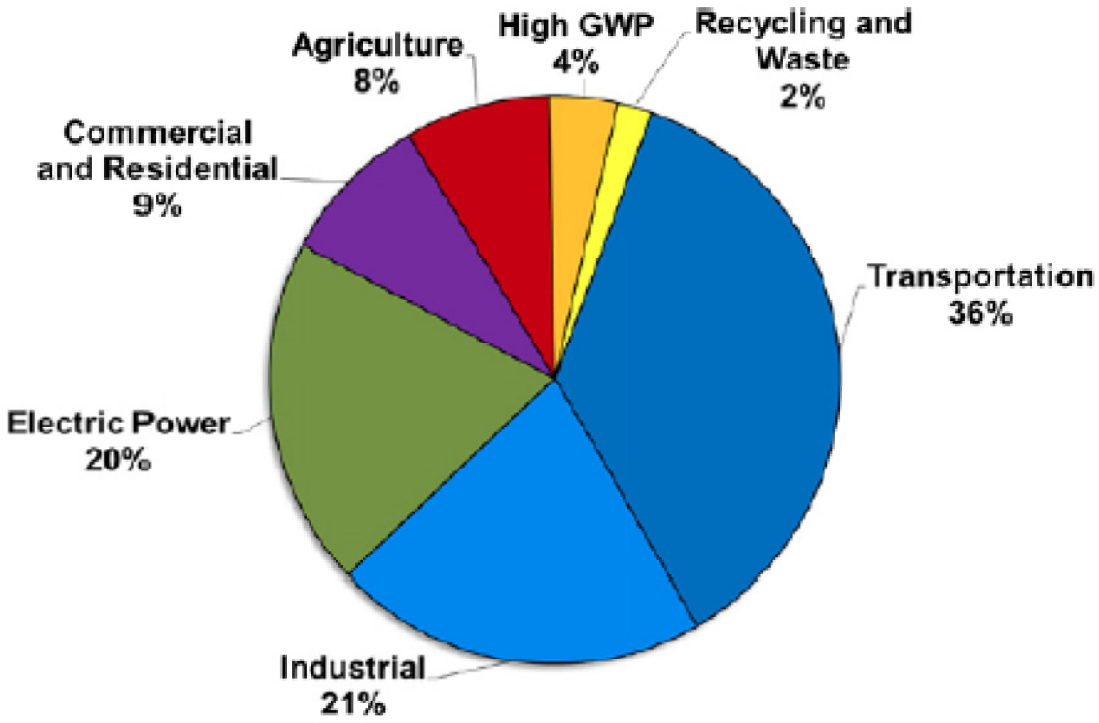
1.4 Regulatory Framework

1.4.5 Federal Plans, Policies, Regulations, and Laws

The federal government began studying the phenomenon of global warming as early as 1978 with the National Climate Protection Act, 92 Stat. 601, which required the President to establish a program to "assist the Nation and the world to understand and respond to natural and man-induced climate processes and their implications." The 1987 Global Climate Protection Act, Title XI of Pub. L. 100-204, directed the U.S. EPA to propose a "coordinated national policy on global climate change," and ordered the Secretary of State to work "through the channels of multilateral diplomacy" to coordinate efforts to address global warming.

The U.S. EPA has several regulatory initiatives to reduce greenhouse gas emissions. On May 13, 2010, EPA set greenhouse gas emissions thresholds to define when permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these Clean Air Act permitting programs to limit covered facilities to the nation's largest greenhouse gas emitters: refineries, and cement production facilities.

Exhibit 2 - California Greenhouse Emissions by Sector



Source: "California Greenhouse Gas Inventory for 2000-2014,"
California Air Resources Board, June 17, 2016

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EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles through reduced greenhouse gas emissions and improved fuel use. Together, the enacted and proposed standards are expected to save more than six billion barrels of oil through 2025 and reduce more than 3,100 million metric tons of carbon dioxide emissions. Additionally, EPA is also responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. By 2022, the Renewable Fuel Standard (RFS) program will reduce greenhouse gas emissions by 138 million metric tons, about the annual emissions of 27 million passenger vehicles, replacing about seven percent of expected annual diesel consumption and decreasing oil imports by $41.5 billion.

The U.S. EPA has issued two proposals to further reduce GHG emissions from municipal solid waste landfills. The EPA has proposed a suite of requirements that would reduce GHG emissions from the oil and natural gas industry. With the election of the Trump administration it is uncertain whether these initiatives will go forward.

1.4.1 California State Plans, Policies, Regulations, and Laws

In the past several years, California has distinguished itself as a national leader in efforts to address global climate change by enacting several major pieces of legislation, engaging in multi-national and multi-state collaborative efforts, and preparing a wealth of information on the impacts associated with global climate change.

The cornerstone of California's actions is Assembly Bill 32, the California Global Warming Solutions Act of 2006 (Health and Safety Code § 38500 et seq.). In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Global Warming Solutions Act of 2006. The law created a comprehensive, multi-year program to reduce greenhouse gas (GHG) emissions in California. AB 32 required the California Air Resources Board (ARB) to develop a Scoping Plan that describes the approach California will take to reduce GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by the Board in 2008 and must be updated every five years. The First Update to the Climate Change Scoping Plan was approved by the Board on May 22, 2014. In 2016, the Legislature passed SB 32, which codifies a 2030 GHG emissions reduction target of 40% below 1990 levels. With SB 32, the Legislature passed companion legislation AB 197, which provides additional direction for developing the Scoping Plan. ARB is moving forward with a second update to the Scoping Plan to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32.

Under the first scoping plan, California set in place a range of effective programs to slash greenhouse gases from cars, trucks, fuels, industry and electrical generation, and the State is well on its way to achieving the original goal of AB 32 – to reach 1990 levels of greenhouse gases by 2020.

The Second Scoping Plan, still in draft stage, draws on the successes and the lessons learned from the first chapter of California's efforts to fight climate change under AB 32. It proposes continuing the major programs. The key programs that the Proposed Plan builds on include the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and much cleaner cars, trucks and freight movement, powering our State off of cleaner renewable energy, and strategies to reduce methane emissions from agricultural and other wastes by using it to meet our energy needs. It also comprehensively addresses for the first time the greenhouse gas emissions from natural and working lands of California – including the agriculture and forestry sectors.

Executive Order S-13-08. In November 2008, the Governor issued Executive Order S-13-08 directing state agencies to plan for sea level rise and other climate change impacts. There are four key actions in the Executive Order: (1) initiation of a climate change adaptation strategy that will assess the state's expected climate change impacts where the state is most vulnerable, with recommendations by early 2009; (2) an expert panel on sea level rise will inform state planning and development efforts; (3) interim guidance to state agencies on planning for sea level rise in coastal and floodplain areas for new projects; and (4) initiation of a report on critical existing and planned infrastructure projects vulnerable to sea level rise.

Executive Order B-30-15. Governor Edmund G. Brown Jr. on April 29, 2015 issued an executive order to establish a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030. This is the most aggressive benchmark enacted by any government in North America to reduce dangerous carbon emissions over the next decade and a half. "With this order, California sets a very high bar for itself and other states and nations, but it's one that must be reached - for this generation and generations to come," said Governor Brown.

The executive action sets the stage for the important work being done on climate change by the Legislature. The Governor's executive order aligns California's greenhouse gas reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris to be convened in 2015. The 28-nation European Union, for instance, set the same target for 2030 just last October.

California is on track to meet or exceed the current target of reducing greenhouse gas emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent under 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius - the warming threshold at which scientists say there will likely be major climate disruptions such as super droughts and rising sea levels.

Senate Bill 97 (2007). By July 1, 2009, the Governor's Office of Planning and Research (OPR) is directed to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions, as required by the California Environmental Quality Act. The Resources Agency is required to certify and adopt these guidelines by January 1, 2010. OPR is required to periodically update these guidelines as CARB implements AB 32. In addition, SB 97 states that the failure to include a discussion of greenhouse gas emissions in any CEQA document for a project funded under the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, or projects funded under the Disaster Preparedness and Flood Prevention Bond Act of 2006 shall not be a cause of action under CEQA. This last provision will be repealed on January 1, 2010. In response to SB 97, the Office of Planning and Research ("OPR") issued a Technical Advisory on CEQA and Climate Change in June 2008. The Advisory provides an outline of what should be included in a GHG analysis under CEQA (http://www.opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf). In January 2009, OPR issued draft amendments to the CEQA Guidelines that address GHGs. Among the amendments are the following:

- Determining the Significance of Impacts from Greenhouse Gas Emissions (Guidelines § 15064.4);
- Thresholds of Significance (Guidelines ¤ 15064.7(c));
- Discussion of Cumulative Impacts (Guidelines ¤ 15130(a)(1)(B) and Guidelines § 15130(f));
- Tiering and Streamlining the Analysis of Greenhouse Gas Emissions (Guidelines § 15183.5).

California Air Resource Board Cap-and-Trade Regulation. The California Air Resource Board has implemented a cap-and-trade type program, pursuant to the AB-32 directed Scoping Plan, applicable to specific industries that emit more than 25,000 MTCO2e. The AB 32 Scoping Plan identifies a Cap-and-Trade program as one of the strategies California will employ to reduce the greenhouse gas (GHG) emissions that cause climate change. Under Cap-and-Trade, an overall limit on GHG emissions from capped sectors will be established by the Cap-and-Trade program and facilities subject to the cap will be able to trade permits (allowances) to emit GHGs. The program started on January 1, 2012, with an enforceable compliance obligation beginning with the 2013 GHG emissions for GHG emissions from stationary sources. The petroleum and natural gas systems sector is covered starting in 2013 for stationary and related combustion, process vents and flare emissions if the total emissions from these sources exceed 25,000 MTCO2e per year. Suppliers of natural gas and transportation fuels are covered beginning in 2015 for combustion emissions from the total volume of natural gas delivered to non-covered entity or for transportation fuels.

Cap-and-Trade is designed to reduce the emissions from a substantial percentage of GHG sources (about 80% of GHG emissions will come under the program) within California through a market trading system. The system would reduce GHG emissions by reducing the available GHG "allowances" over time up until the year 2020. The program beyond the year 2020 has not been designed yet, but the program is intended to extend beyond that timeframe. Facilities are required to obtain an "allowance," either through purchasing on auction or through freely allocated "industry assistance" allowances from CARB, for each MTCO2e of GHG they emit. CARB issues the "industry assistance" allocations for free for a number of industries. These are based, in part, on a pre-defined "benchmark" of GHG emissions per unit of production.

For the oil recovery production sector, allowances are provided as a function of the amount of crude oil produced, thereby establishing, in effect, a level of efficiency in regards to GHG emissions for that sector. Other sectors are also allocated allowances based on their own respective activities. If an operation within the sector operates less efficiently than the specified "benchmark," thereby receiving an insufficient number of "free" allowances to cover their emissions, they would be required to implement efficiency improvements or purchase additional allowances from the CARB auction. Some availability of "offsets" is also included in the program which can be obtained from specific, allowable offset programs, such as GHG reduction projects related to forestry, livestock and ozone depleting chemicals. Offsets outside of these three options are not allowed at this time. The first group of sectors began trading in allowances in 2012. That group includes the oil and gas sector as well as most stationary sources. A second group is planned to begin the program in 2015, which would include the transportation fuels sector. CARB auctioned about 23 million allowances in November 2012 to be used for the 2013 year.

For subsequent periods after the initial 2013 period, allowances are planned to be distributed freely through the "industry assistance" program or auctioned off. Industry assistance allowances would decrease each year as per a "cap adjustment factor." The cap adjustment factor would be about 2-3% annually through 2020. The total allowances allowed to be allocated each year (either freely allocated or auctioned) are limited by the defined allowance budget, which decreases each year through 2020 and is current set at about 163 million MTCO2e for the year 2013. An operator is required to participate in the Cap-and-Trade program if its facility emits more than 25,000 MTCO2e annually. Annual reporting of GHG emissions is required under the CARB Mandatory Reporting Rule.

1.4.2 SCAQMD Plans, Policies, Regulations and Laws

The SCAQMD has promoted a number of programs to combat climate change over the past 20 years. For instance, SCAQMD has promoted energy conservation, low-carbon fuel technologies (natural gas vehicles; electric-hybrids, hydraulic-hybrids, and battery-electric vehicles), renewable energy, vehicle miles traveled (VMT) reduction programs, and market incentive programs.

The South Coast Air Quality Management District ("SCAQMD") adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" in 1991. The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan. In 2011, SCAQMD adopted the Air Quality-Related Energy Policy, which integrates air quality, energy, and climate change issues in a coordinated and consolidated manner.

Rules and protocols that the SCAQMD have adopted regarding climate change include Regulation XXVII – Climate Change, Forest Sector Project Protocol (2009), Urban Forestry Project Protocol (2010), Manure Management Project Protocol (2009), and the Boiler and Process Heater Efficiency Project Protocol (2010). Regulation XXVII creates a Greenhouse Gas Reduction Program where the SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties. Reductions obtained by the program may be purchased by persons for a variety of uses.

1.4.3 City of Ontario Plans, Policies, Regulations, and Laws

The City of Ontario adopted a Municipal Climate Action Plan (MCAP) in July 2012. The purpose of the MCAP was to design a feasible strategy to reduce GHG emissions generated by the City's municipal operations (e.g.; City-owned facilities, vehicle fleets) in 2020 by 30%. The MCAP established a 2020 emissions reduction target of approximately 8,500 MTCO2EQ. When combined with State efforts, the reduction measures described in the MCAP would result in reducing municipal GHG emissions in 2020 by an estimated 10,000 MTCO2EQ.

In November 2014, the City of Ontario adopted a Community Climate Action Plan (CCAP) that presents a feasible strategy to reduce GHG emissions generated from community activities that is consistent with statewide Scoping Plan GHG reduction efforts. The CCAP provides measures to reduce GHG emissions in 2020 to 30% below business-as-usual conditions (i.e., what emissions would be in 2020 without any additional efficiency measures, e.g., Cal Greencode, Title 24 revisions, etc.). The plan is anticipated to reduce emissions in 2020 to approximately 13% below 2008 levels. While the Scoping Plan called for a reduction target of 15% below "current" (2005-2008) levels, recent CARB inventory data have indicated that the state would need to reduce emissions by 10 to 11% to meet 1990 levels, the reduction goal specified in AB32.

Approximately 64% of the reductions needed to achieve the CCAP's GHG reduction goal are achieved through state- and county-level programs, and 36% are achieved through City-level programs. Table 3 presents a summary of the City Level GHG Reduction Measures presented the CCAP. The measures are described in detail in the CCAP and, where appropriate, estimates of the reductions provided by the measures are provided. In some cases, the reductions are not quantifiable. This results in the actual anticipated reductions being greater than the quantified reductions presented in the Plan.

Table 3 CCAP Community GHG Reduction Measures Summary

Measure Name	Measure Description
Performance Standard for New Development	
PS-1	**Performance Standard for New Development:** New projects emitting more than 3,000 MT CO_2e per year need to reduce emissions by 25%.
BMP-1	**Performance Standard for New Development; Best Management Practices:** New projects emitting less than 3,000 MT CO_2e per year to exceed Title 24 Energy Efficiency Standards by at least 5%, or equivalent level of GHG emission reduction.
Building Energy	
Energy-1	**CAP Consistency:** Ensure that the City's local Climate Action, Land Use, Housing, and Transportation Plans are aligned with, support, and enhance any regional plans that have been developed consistent with state guidance to achieve reductions in GHG emissions.
Energy-2	**Regional Cooperation:** Coordinate with special districts, nonprofits, and other public organizations to share resources, achieve economies of scale, and develop green building policies and programs that are optimized on a regional scale
Energy-3	**Energy Efficiency Funding for Existing Low-Income Residents:** Partner with community services agencies to fund energy efficiency projects, including heating, ventilation, air conditioning, lighting, water heating equipment, insulation, and weatherization, for low income residents. Provide permitting-related and other incentives for energy efficient building project.
Energy-4	**Energy Efficiency Incentives and Programs to Promote Retrofits for Existing Residential Buildings:** Incentivize, or otherwise support, voluntary energy efficiency retrofits of existing residential buildings to achieve reductions in natural gas and electricity usage. Adopt standards and/or promote voluntary programs that retrofit indoor lights, electric clothes dryers, energy-star thermostats, window seals, duct sealing, air sealing, and attic insulation.
Energy-5	**Energy Efficiency Incentives and Programs to Promote Retrofits for Existing Non- Residential Buildings:** Voluntary programs for existing non-residential facilities improve building wide energy efficiency by 20% by 2020
Energy-6	**Streetlights:** Adopt outdoor lighting standards to reduce electricity consumption. Require 40% reduction in energy use from traffic signals and streetlights by 2020.
Renewable Energy	
Renewable Energy-1	**Solar Installation for Existing Non-Residential for Major Rehabilitations or Expansions:** Install solar photovoltaic panels on nonresidential buildings greater or equal to 25,000 square feet in size requiring discretionary permits for major rehabilitations or expansions (additions of 25,000 square feet of office/retail/commercial or 100,000 square feet of industrial/warehouse floor area)

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Table 3 (Continued)
CCAP Community GHG Reduction Measures Summary

Measure Name	Measure Description
Renewable Energy-2	**Solar Installation in Existing Single Family Housing:** Install solar panels on 22% of existing single-family homes by 2020.
Renewable Energy-3	**Solar Installation in Existing Nonresidential Buildings:** Install solar panels on 32% of existing nonresidential buildings by 2020.
Wastewater Treatment	
Wastewater-1	**Recycled Water:** Require 50% of all water used for non-potable sources to be recycled water by 2020. Require all new parks and schools to use 100% recycled water for non-potable outdoor uses, as feasible. Develop public educational materials that support and encourage the use of recycled water. Adopt a City Municipal facility goal of 50% use of recycled water for non-potable sources.
Wastewater-2	**Waste-to-energy/Methane Recovery:** Encourage Inland Empire Utilities Agency (IEUA) to implement waste-to-energy projects at the JEUA RP-1 wastewater treatment plant by 2020, and to utilize collected gas to fuel onsite stationary sources.
Solid Waste Management	
Waste-1	**Waste Diversion:** Divert 75% of city-generated waste from landfills.
Waste-2	**Construction and Demolition Waste Recovery Ordinance:** Implement an ordinance requiring building projects to recycle or reuse at least 50% of unused or leftover building materials.
On Road Transportation	
Trans-1	**Expand Public Transportation Infrastructure:** Work with appropriate agencies to create an interconnected transportation system that allows a shift in travel from private passenger vehicles to alternative modes, including public transit, ride sharing, car-sharing, bicycling, and walking
Trans-2	**Transit Frequency and Speed:** To the extent feasible, support shorter transit passenger travel time through reduced headways and increased speed. Support regional transit operator to reduce average fleet travel time by 5 minutes.
Trans-3	**"Smart Bus" Technology:** Collaborate with LA Metro, Metrolink, and Omnitrans to implement "Smart Bus" technology.
Trans-4	**Expand Public Transportation Participation:** Collaborate with regional transit operator on programs to increase use of the City's public transportation system.
Trans-5	**Low- and Zero- Emission Vehicles:** Support and promote the use of low- and zero- emission vehicles in the City.
Trans-6	**Vehicle Idling:** Prohibit idling of Heavy Duty Trucks (greater than 26,000 gross vehicle weight) for longer than 3 minutes.
Trans-7	**Parking Policy:** Adopt a comprehensive parking policy that encourages carpooling and the use of alternative transportation, including providing parking spaces for car-share vehicles at convenient locations accessible by public transportation. Consider requirements for the following to reduce vehicle miles traveled (VMT) within the City by 2%. Designate 5% of downtown parking spaces for ride-sharing vehicles.

(Table Continued on Next Page)

Table 3 (Continued)
CCAP Community GHG Reduction Measures Summary

Measure Name	Measure Description
Trans-8	**Event Parking:** Consider establishing policies and programs to reduce onsite parking demand and promote ride sharing during events at the Ontario Convention Center and other event venues. Consider a goal to reduce VMT at major events by 2%.
Trans-9	**Roadway Management:** Implement traffic and roadway management strategies to improve mobility and efficiency, and reduce associated emissions. Consider a goal to reduce community vehicle fuel consumption by 2%.
Trans-10	**Signal Synchronization:** Evaluate potential efficiency gains from further signal synchronization. Synchronize traffic signals throughout the City and with adjoining cities while allowing free flow of mass transit systems. Require continuous maintenance of the synchronization system. Consider a goal to reduce Citywide vehicle fuel consumption by 2%.
Trans-11	**School Transit Plan:** Encourage local school districts to develop school transit plans to substantially reduce automobile trips to, and congestion surrounding, schools. (According to some estimates, parents driving their children to school account for 20- 25% of the morning commute.) Plans may address, e.g., necessary infrastructure improvements and potential funding sources, replacing older diesel buses with low or zero-emission vehicles, mitigation fees to expand school bus service, Safe Routes to School programs, and other formal efforts to increase walking and biking by students. Although this measure is not within the City's authority, Ontario can work with local school districts to develop these plans.
Trans-12	**Ridesharing Programs:** Coordinate with local agencies to promote ride-sharing programs in Ontario (CAPCOA 2010). Although the City does not have the legal authority to impose trip demand management programs on project applicants or employers, Ontario can work with local agencies to develop these programs. Consider a goal to reduce City-wide VMT by 2% through mode-shifts from single-occupancy vehicles to carpools. Facilitate employment opportunities that minimize the need for private vehicle trips. The City could also work with the County to participate in their rideshare measure, which includes exploring financial programs for the purchase or lease of rideshare vehicles, encouraging community car sharing through city employers, and encouraging creation of community rideshare incentives (gas cards, commuter-tax benefits, guaranteed ride home programs, etc.).
Trans-13	**Bicycle and Pedestrian Infrastructure Plan:** Adopt a comprehensive bicycle and pedestrian infrastructure plan to expand the City's bicycle and pedestrian network. This plan would encourage residents and employees to use bicycles and walking as a method of transportation. Consider a goal to reduce City-wide VMT by 2% through mode-shifts from single-occupancy vehicles to bicycles.
Trans-14	**Development Standards for Bicycles:** Establish standards for new development and redevelopment projects to support bicycle use. Consider a goal to reduce VMT resulting from new development by 4% through mode-shifts from single-occupancy vehicles to bicycles.

(Table Continued on Next Page)

Table 3 (Continued)
CCAP Community GHG Reduction Measures Summary

Measure Name	Measure Description
Trans-15	**Smart Growth and Infill:** Encourage high-density, mixed-use, infill development and creative reuse of brownfield, under-utilized and/or defunct properties within the urban core. Consider a goal to reduce VMT resulting from new development by 5%.
Trans-16	**Transit-Oriented Development:** Identify transit centers appropriate for mixed-use development, and promote transit-oriented, mixed-use development within these targeted areas. Consider a goal to reduce VMT resulting from new development by 2%.
Off-Road Equipment	
OffRoad-1	**Idling Ordinance:** Prohibit idling of heavy-duty off-road construction vehicles to no more than 3 minutes.
OffRoad-2	**Landscaping Equipment:** Support landscape equipment replacement programs to replace 75% of all landscaping equipment with electric equipment (945 total pieces of landscaping equipment replaced).
Agriculture	
Agriculture-1	**Methane Emissions Reduction for Animal Operations:** Support dairies (and other animal operations) to consider existing and new technologies and methods to control emissions from enteric fermentation and manure management, and assess the feasibility and cost effectiveness of these technologies. Animal operations should strive to capture as much methane from manure management as feasible. Captured biogas can also be used in place of natural gas for heating, converted to vehicle fuel, used to replace gasoline and diesel, or combusted in a generator to produce renewable electricity.
Water Transport, Distribution, and Treatment	
Water-1	**Water Conservation for Existing Buildings:** Implement a program to renovate existing buildings to a higher level of water efficiency. Require 25% of existing buildings within the community to achieve a 25% reduction in water use. This measure will reduce both indoor and outdoor water use.
Water-2	**Irrigation Monitoring and Management System (Outdoor):** Install water monitoring and management systems (Smart controllers, etc.) across the community to reduce irrigation water needs and reduce the City's total community-wide water consumption by 10% in 2020. This measure will reduce outdoor water use.
Water-3	**Water System Efficiency:** Maximize efficiency at drinking water treatment, pumping, and distribution facilities, including development of off-peak demand schedules for heavy commercial and industrial users. Design and implement peak load management and demand response programs for water supply, treatment, and distribution, including interface with existing automated systems for building energy management and supervisory control and data acquisition (SCADA) systems.

(Table Continued on Next Page)

Table 3 (Continued)
CCAP Community GHG Reduction Measures Summary

Measure Name	Measure Description
Water-4	**SB X7:** Urban water agencies throughout California are required to increase water conservation to achieve a statewide goal of a 20% reduction in urban per capita use by 2020 per SB X7. The Ontario 2010 Urban Water Management Plan outlines the approaches to achieving that reduction.
Miscellaneous	
Misc-1	**Climate Change Awareness:** Utilize a variety of media outlets to promote climate change awareness and GHG reduction.
Misc-2	**Carbon Sequestration:** Establish a City-wide carbon sequestration project and sequestration goal of 1,000 metric tons of CO_2 per year.
Misc-3	**Shade Tree Planting:** Plant 1,000 trees per year from 2012-2020 for a total of 9,000 trees by 2020.
Misc-4	**Refrigeration and Air Conditioning Disposal:** Institute an ordinance requiring residences, businesses, and city facilities to practice responsible appliance disposal (RAD) for all decommissioned units, including refrigerators/freezers, window air conditioning units, and dehumidifiers.
Misc-5	**Pervious Paving:** Promote the use of pervious concrete for pavement projects. Explore grant funding opportunities for pervious concrete.
Misc-6	**Infiltration:** Promote onsite infiltration, as required by the National Pollutant Discharge Elimination System (NPDES) Permit. Promote the use of pervious concrete and asphalt for pavement and parking lot projects.

Table 4 presents the City of Ontario's 2020 GHG emissions under business-as-usual (BAU) conditions, the quantified emission reductions from the CCAP, and the anticipated emissions with the implementation of the CCAP. Emissions in the year 2008 were estimated to be 2,503,816 MTCO2EQ.

Table 4 City of Ontario 2020 Community GHG Emissions (MTCO2EQ)

Source	BAU	Reduction	%	With CCAP
Building Energy Use	1,237,006	433,069	35%	803,937
On-Road Transportation	1,219,767	365,212	30%	854,555
Off-Road Transportation	229,069	28,166	12%	200,903
Agriculture	323,390	80,352	25%	243,038
Solid Waste Management	64,326	26,265	41%	38,061
Wastewater Treatment	8,781	649	7%	8,132
Water Transport, Distribution, and Treatment	38,575	6,511	17%	32,064
SF6 from Electricity Consumption	7,072	1,678	24%	5,394
Total	**3,127,987**	**941,902**	**30%**	**2,186,076**

The environmental impacts of the CCAP were analyzed and potential significant impacts reduced to the extent feasible in compliance with the California Environmental Quality Act (CEQA). The environmental review of the CCAP was tiered from the previously adopted Final Environmental Impact Report (FEIR) for The Ontario Plan (TOP) (The City's most recent General Plan Update). The FEIR for the TOP included a programmatic analysis of GHG impacts with six GHG mitigation measures (Mitigation Measures 6-1 through 6-6). A review of potential secondary environmental impacts of implementation of the CCAP did not indicate that it would result in any new significant environmental impacts or substantial more severe environmental impacts than already disclosed in the TOP FEIR.

1.4.4 Relationship Between CCAP, SB 32, and the 2017 Scoping Plan

Senate Bill 32 (SB 32) was signed into law September 8, 2016. It established the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030. This is a greater GHG reduction than had been targeted by AB 32 of reaching 1990 levels by 2020 (see Section 1.4.1). The California Air Resources Board (CARB) was charged with revising the Climate Change Scoping Plan to achieve this goal.

The "Draft The 2017 Climate Change Scoping Plan, The Strategy for Achieving California's 2030 Greenhouse Gas Target," was released by the CARB on October 27, 2017. It lays out a general "Scoping Plan Scenario." The currently proposed Scoping Plan only contains one new measure beyond those already required. Specifically, the plan calls for extending the

Cap-and Trade Program beyond 2020. According to the Draft Scoping Plan, this additional measure will be sufficient to achieve the 2030 goal.

The City of Ontario "Community Climate Action Plan," (CCAP) was adopted by the City Council on December 16, 2014. The CCAP has a goal reducing GHG emissions to 30% below business-as-usual (BAU) 2020 levels. This goal was roughly equivalent to the 2008 Scoping Plan (adopted by the State of California) that recommends a target of 15% below 2005-2008 levels by the year 2020. The 2008 Scoping Plan was developed to implement Assembly Bill 32 (AB 32) which had a goal of reducing GHG emissions to the 1990 levels.

Future projects within the City must comply with CEQA. However, with the adopted CCAP, analysis of environmental impacts associated with GHG emissions must simply prove project compliance with the CCAP, rather than produce the traditional analysis of all GHG emissions associated with the proposed project and project compliance with all relevant policies and regulations. This approach is allowed per CEQA Guidelines Section 15183.5, which specifically sets forth the requirements for comprehensive GHG reduction plans and tiering of analysis for project CEQA compliance. Consistency with the CCAP is the approach taken for this project.

Therefore, the approach taken in this assessment is allowed under CEQA law. The project meets the AB 32 goal of reducing GHG emissions to 1990 levels by being consistent with the CCAP. Although SB 32 calls for further reductions in GHG emissions, the Draft 2017 Scoping Plan proposes to achieve those goals through the extension of the Cap-and-Trade Program. No other restrictions are imposed on new developments to meet the SB 32 goals. Therefore, the project will be consistent with the requirements of AB 32 and SB 32 as currently identified in the Draft 2017 Scoping Plan.

1.5 Existing Emissions

Currently the site contains approximately 1,400 cows. These cows generate methane gas which is a greenhouse gas. According to the "Guidelines for Calculating Emissions from Dairy and Poultry Operations," (SCAQMD, December 2016), VOC emissions from milking cows is 12.8 pounds per cow per year. This results in 49.10 lbs. of VOC per day. Most of the VOC emissions are in the form of methane which has a global warming potential of 25. Therefore, the cows on-site currently generate 203.2 metric tons of equivalent CO2 per year (MTCO2EQ/YR). (A calculation sheet is provided in the Appendix.)

2.0 POTENTIAL CLIMATE CHANGE IMPACTS

2.1 Significance Thresholds

CEQA Guidelines Section 15183.5 sets forth requirements for comprehensive greenhouse gas reduction plans and tiering of analysis for CEQA compliance of future projects. This

allows projects to demonstrate that they will not result in significant GHG impacts by demonstrating compliance with the City's Climate Action Plan, rather than having to produce the traditional analysis of all GHG emissions associated with the proposed project and demonstrating project compliance with all relevant policies and regulations.

Appendix B of the City of Ontario's CCAP, "Greenhouse Gas Emissions CEQA Thresholds and Screening Tables," provides two methodologies for a project, not otherwise exempt from CEQA, to demonstrate compliance with the CCAP and result in a less than significant individual and cumulative GHG impact. The first method is applicable to small projects with annual GHG emissions of less than 3,000 MTCO2EQ. These projects are considered less than significant if the energy efficiency of the project is at least five percent greater than Title 24 requirements, or other equivalent levels of GHG reductions, and water conservation levels match the California Green Building Code or equivalent levels of reductions.

Projects with emissions exceeding 3,000 MTCO2EQ may demonstrate compliance by implementing measures from the Screening Tables presented in Appendix B of the CCAP. One table is provided for residential projects and one table is provided for commercial projects. The purpose of the Screening Tables is to provide guidance in measuring the reduction of greenhouse gas emissions attributable to certain design and construction measures incorporated into development projects. The analysis methodology, and significance determination are based upon the CCAP, along with the Addendum prepared for the CAP. The methodology for the development and application of the Screening Tables are presented in Appendix D of the CCAP.

The Screening Tables assign points for each feature incorporated into a project as a project design feature or mitigation measure. The point values correspond to the minimum emissions reduction expected from each feature. Projects that garner at least 100 points are considered consistent with the reduction quantities anticipated in the City's CCAP. Such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions consistent with the CEQA Guidelines.

Table 1 of Appendix B of the CCAP presents the Screening Table for Residential Projects and Table 2 presents the Screening Table for Commercial Projects. The proposed WOCC proposes development of commercial/industrial uses, and therefore, only Table 2 of Appendix B of the CCAP is applicable to the Project. This table is presented later as Exhibit 3 along with the measures committed to by the project applicant.

2.2 Project Impacts

The proposed development of 555,505 square feet of Business Park and 2,350,005 square feet of industrial use is not a small project and will generate more than 3,000 MTCO2EQ (metric tons of equivalent carbon dioxide) per year. In fact, a preliminary analysis using

CalEEMod indicate that the operational emissions will be in excess of 20,000 MTCO2EQ per year (see Appendix). Even if the existing emissions of 203 MTCO2EQ per year were subtracted from the projected operational emissions the emissions would be close to 20,000 MTCO2EQ per year and well above the threshold of 3,000 MTCO2EQ per year. (CalEEMod is a computer program developed by the SCAQMD in conjunction with the California Air Resources Board.) Therefore, the project is subject to the requirements contained in Appendix B of the Ontario Climate Action Plan.

Per Appendix B of the City of Ontario Community Climate Action Plan (CCAP), the project will not result in a significant individual or cumulative impact if it implements 100 points worth of GHG reduction measures from Table 2 of Appendix B. Exhibit 3 presents the Appendix B GHG reduction measures with the project applicant's mitigation commitments and the points value for each measure. The total points from all measures incorporated is 123. Therefore, the project will not result in a significant individual or cumulative impact. In order to ensure that these measures are incorporated into the final products of the project, their implementation should be specified as a mitigation measure as discussed in Section 3.0.

Exhibit 3A - Applicant's GHG Commitments

Table 2: Screening Table for Implementation of GHG Reduction Measures for Commercial/Industrial Development

Feature	Description	Assigned Point Values	Project Points
Reduction Measure PS E3: Commercial/Industrial Energy Efficiency Development			
Building Envelope			
Insulation	2008 baseline (walls R-13; roof/attic R-30)	0 points	18
	Modestly Enhanced Insulation (walls R-13, roof/attic R-38))	15 points	
	Enhanced Insulation (rigid wall insulation R-13, roof/attic R-38)	18 points	
	Greatly Enhanced Insulation (spray foam insulated walls R-15 or higher, roof/attic R-38 or higher) *(Applies to the conditioned space, defined as those areas within the building that have air conditioning and heating.)*	20 points	
Windows	2008 Baseline Windows (0.57 U-factor, 0.4 solar heat gain coefficient [SHGC])	0 points	8
	Modestly Enhanced Window Insulation (0.4 U-factor, 0.32 SHGC)	7 points	
	Enhanced Window Insulation (0.32 U-factor, 0.25 SHGC)	8 points	
	Greatly Enhanced Window Insulation (0.28 or less U-factor, 0.22 or less SHGC) *(Applies to the conditioned space, defined as those areas within the building that have air conditioning and heating.)*	12 points	
Cool Roof	Modest Cool Roof (CRRC Rated 0.15 aged solar reflectance, 0.75 thermal emittance)	12 points	12
	Enhanced Cool Roof (CRRC Rated 0.2 aged solar reflectance, 0.75 thermal emittance)	[illegible] points	
	Greatly Enhanced Cool Roof (CRRC Rated 0.35 aged solar reflectance, 0.75 thermal emittance)	16 points	
Air Infiltration	Minimizing leaks in the building envelope is as important as the insulation properties of the building. Insulation does not work effectively if there is excess air leakage.		12
	Air barrier applied to exterior walls, calking, and visual inspection such as the HERS Verified Quality Insulation Installation (QII or equivalent)	12 points	
	Blower Door HERS Verified Envelope Leakage or equivalent *(Applies to the conditioned space, defined as those areas within the building that have air conditioning and heating.)*	10 points	
Thermal Storage of Building	Thermal storage is a design characteristic that helps keep a constant temperature in the building. Common thermal storage devices include strategically placed water filled columns, water storage tanks, and thick masonry walls.		

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Exhibit 3B - Applicant's GHG Commitments

Feature	Description	Assigned Point Values	Project Points
	Modest Thermal Mass (10% of floor or 10% of walls 12" or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	4 points	
	Enhanced Thermal Mass (20% of floor or 20% of walls 12" or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	6 points	
	Enhanced Thermal Mass (80% of floor or 80% of walls 12" or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	24 points	
Indoor Space Efficiencies			
Heating/ Cooling Distribution System	Minimum Duct Insulation (R-4.2 required)	0 points	8
	Modest Duct insulation (R-6)	8 points	
	Enhanced Duct Insulation (R-8)	10 points	
	Distribution loss reduction with inspection (HERS Verified Duct Leakage or equivalent)	14 points	
	(Applies to the conditioned space, defined as those areas within the building that have air conditioning and heating.)		
Space Heating/ Cooling Equipment	2008 Minimum HVAC Efficiency (EER 13/60% AFUE or 7.7 HSPF)	0 points	8
	Improved Efficiency HVAC (EER 14/65% AFUE or 8 HSPF)	7 points	
	High Efficiency HVAC (EER 15/72% AFUE or 8.5 HSPF)	8 points	
	Very High Efficiency HVAC (EER 16/80% AFUE or 9 HSPF)	12 points	
	(Applies to the conditioned space, defined as those areas within the building that have air conditioning and heating.)		
Commercial Heat Recovery Systems	Heat recovery strategies employed with commercial laundry, cooking equipment, and other commercial heat sources for reuse in HVAC air intake or other appropriate heat recovery technology. Point values for these types of systems will be determined based upon design and engineering data documenting the energy savings.	TBD	
Water Heaters	2008 Minimum Efficiency (0.57 Energy Factor)	0 points	16
	Improved Efficiency Water Heater (0.675 Energy Factor)	14 points	
	High Efficiency Water Heater (0.72 Energy Factor)	16 points	
	Very High Efficiency Water Heater (0.92 Energy Factor)	19 points	
	Solar Pre-heat System (0.2 Net Solar Fraction)	4 points	
	Enhanced Solar Pre-heat System (0.35 Net Solar Fraction)	8 points	
Daylighting	Daylighting is the ability of each room within the building to provide outside light during the day reducing the need for artificial lighting during daylight hours.		

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Exhibit 3C - Applicant's GHG Commitments

Feature	Description	Assigned Point Values	Project Points
	All peripheral rooms within building have at least one window or skylight	1 points	1
	All rooms within building have daylight (through use of windows, solar tubes, skylights, etc.)	5 points	
	All rooms daylighted	7 points	
Artificial Lighting	2008 Minimum (required)	0 points	14
	Efficient Lights (25% of in-unit fixtures considered high efficacy. High efficacy is defined as 40 lumens/watt for 15 watt or less fixtures; 50 lumens/watt for 15-40 watt fixtures, 60 lumens/watt for fixtures >40watt)	9 points	
	High Efficiency Lights (50% of in-unit fixtures are high efficacy)	12 points	
	Very High Efficiency Lights (100% of in-unit fixtures are high efficacy)	14 points	
Appliances	Energy Star Commercial Refrigerator (new)	4 points	
	Energy Star Commercial Dish Washer (new)	4 points	
	Energy Star Commercial Cloths Washing	4 points	
Miscellaneous Commercial/Industrial Building Efficiencies			
Building Placement	North/South alignment of building or other building placement such that the orientation of the buildings optimizes conditions for natural heating, cooling, and lighting.	6 point	
Shading	At least 90% of south-facing glazing will be shaded by vegetation or overhangs at noon on June 21st.	6 Points	
Other	This allows innovation by the applicant to provide design features that increases the energy efficiency of the project not provided in the table. Note that engineering data will be required documenting the energy efficiency of innovative designs and point values given based upon the proven efficiency beyond Title 24 Energy Efficiency Standards.	TBD	
Existing Commercial building Retrofits	The applicant may wish to provide energy efficiency retrofit projects to existing commercial buildings to further the point value of their project. Retrofitting existing commercial buildings within the City is a key reduction measure that is needed to reach the reduction goal. The potential for an applicant to take advantage of this program will be decided on a case by case basis and must have the approval of the Ontario Planning Department. The decision to allow applicants the ability to participate in this program will be evaluated based upon, but not limited to the following:	TBD	

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Exhibit 3D - Applicant's GHG Commitments

Feature	Description	Assigned Point Values	Project Points
	Will the energy efficiency retrofit project benefit low income or disadvantaged communities? Does the energy efficiency retrofit project fit within the overall assumptions in the reduction measure associated with commercial building energy efficiency retrofits? Does the energy efficiency retrofit project provide co-benefits important to the City? Point value will be determined based upon engineering and design criteria of the energy efficiency retrofit project.		
Reduction Measure PS E4: Commercial/Industrial Renewable Energy			
Photovoltaic	Solar Photovoltaic panels installed on commercial buildings or in collective arrangements within a commercial development such that the total power provided augments:		
	Solar Ready Roofs (sturdy roof and electric hookups)	2 points	
	10 percent of the power needs of the project	8 points	
	20 percent of the power needs of the project	14 points	
	30 percent of the power needs of the project	20 points	
	40 percent of the power needs of the project	26 points	
	50 percent of the power needs of the project	32 points	
	60 percent of the power needs of the project	38 points	
	70 percent of the power needs of the project	44 points	
	80 percent of the power needs of the project	50 points	
	90 percent of the power needs of the project	56 points	
	100 percent of the power needs of the project	60 points	
Wind turbines	Some areas of the City lend themselves to wind turbine applications. Analysis of the areas capability to support wind turbines should be evaluated prior to choosing this feature. Wind turbines as part of the commercial development such that the total power provided augments:		
	10 percent of the power needs of the project	8 points	
	20 percent of the power needs of the project	14 points	
	30 percent of the power needs of the project	20 points	
	40 percent of the power needs of the project	26 points	
	50 percent of the power needs of the project	32 points	
	60 percent of the power needs of the project	38 points	
	70 percent of the power needs of the project	44 points	

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Exhibit 3E - Applicant's GHG Commitments

Feature	Description	Assigned Point Values	Project Points
	80 percent of the power needs of the project 90 percent of the power needs of the project 100 percent of the power needs of the project	50 points 56 points 60 points	
Off-site renewable energy project	The applicant may submit a proposal to supply an off-site renewable energy project such as renewable energy retrofits of existing commercial/industrial that will help implement reduction measures associated with existing buildings. These off-site renewable energy retrofit project proposals will be determined on a case by case basis accompanied by a detailed plan documenting the quantity of renewable energy the proposal will generate. Point values will be based upon the energy generated by the proposal.	TBD	
Other Renewable Energy Generation	The applicant may have innovative designs or unique site circumstances (such as geothermal) that allow the project to generate electricity from renewable energy not provided in the table. The ability to supply other renewable energy and the point values allowed will be decided based upon engineering data documenting the ability to generate electricity.	TBD	
Reduction Measure PS W2: Commercial/Industrial Water Conservation			
Irrigation and Landscaping			
Water Efficient Landscaping	Eliminate conventional turf from landscaping Only moderate water using plants Only low water using plants Only California Native landscape that requires no or only supplemental irrigation	0 points 3 points 4 points 8 points	4
Trees	Increase tree planting in parking areas 50% beyond City Code requirements	TBD	
Water Efficient irrigation systems	Low precipitation spray heads< .75"/hr or drip irrigation Weather based irrigation control systems combined with drip irrigation (demonstrate 20 reduced water use)	1 point 5 points	1 5
Recycled Water	Recycled water connection (purple pipe)to irrigation system on site	5 points	
Storm water Reuse Systems	Innovative on-site stormwater collection, filtration and reuse systems are being developed that provide supplemental irrigation water and provide vector control. These systems can greatly reduce the irrigation needs of a project. Point values for these types of systems will be determined based upon design and engineering data documenting the water savings.	TBD	

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Exhibit 3F - Applicant's GHG Commitments

Feature	Description	Assigned Point Values	Project Points
Potable Water			
Showers	Water Efficient Showerheads (2.0 gpm)	3 points	
Toilets	Water Efficient Toilets/Urinals (1.5gpm) Waterless Urinals (note that commercial buildings having both waterless urinals and high efficiency toilets will have a combined point value of 6 points)	3 points 4 points	3
Faucets	Water Efficient faucets (1.28gpm)	3 points	3
Commercial Dishwashers	Water Efficient dishwashers (20% water savings)	4 points	
Commercial Laundry Washers	Water Efficient laundry (15% water savings) High Efficiency laundry Equipment that captures and reuses rinse water (30% water savings)	3 points 6 points	
Commercial Water Operations Program	Establish an operational program to reduce water loss from pools, water features, etc., by covering pools, adjusting fountain operational hours, and using water treatment to reduce draw down and replacement of water. Point values for these types of plans will be determined based upon design and engineering data documenting the water savings	TBD	
Reduction Measure PS T1: Land Use Based Trips and VMT Reduction			
Mixed Use	Mixes of land uses that complement one another in a way that reduces the need for vehicle trips can greatly reduce GHG emissions. The point value of mixed use projects will be determined based upon traffic studies that demonstrate trip reductions and/or reductions in vehicle miles traveled	TBD	
Local Retail Near Residential (Commercial only Projects)	Having residential developments within walking and biking distance of local retail helps to reduce vehicle trips and/or vehicle miles traveled. The point value of residential projects in close proximity to local retail will be determined based upon traffic studies that demonstrate trip reductions and/or reductions in vehicle miles traveled	TBD	
Reduction Measure PS T2: Bicycle Master Plan			
Bicycle Infrastructure	Ontario's Bicycle Master Plan is extensive and describes the construction on 11.5 miles of Class I bike paths and 23 miles of Class II and Class III bikeways to build upon the current 8 miles of bikeways. Provide bicycle paths within project boundaries. Provide bicycle path linkages between project site and other land uses. Provide bicycle path linkages between project site and transit.	TBD TBD 2 points 5 points	

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Exhibit 3G - Applicant's GHG Commitments

Feature	Description	Assigned Point Values	Project Points
Reduction Measure PS T3: Electric Vehicle Infrastructure			
Electric Vehicles	Provide public charging station for use by an electric vehicle. *(ten points for each charging station within the facility)*	10 points	10
Reduction Measure PS T4: Employee Based Trip &VMT Reduction Policy			
Compressed Work Week	Reduce the number of days per week that employees need to be on site will reduce the number of vehicle trips associated with commercial/industrial development. Compressed work week such that full time employees are on site: 5 days per week 4 days per week on site 3 days per week on site	TBD	
Car/Vanpools	Car/vanpool program Car/vanpool program with preferred parking Car/vanpool with guaranteed ride home program Subsidized employee incentive car/vanpool program Combination of all the above	TBD	
Employee Bicycle/ Pedestrian Programs	Complete sidewalk to residential within ½ mile Complete bike path to residential within 3 miles Bike lockers and secure racks Showers and changing facilities Subsidized employee walk/bike program (Note combine all applicable points for total value)	TBD	
Shuttle/Transit Programs	Local transit within ¼ mile Light rail transit within ½ mile Shuttle service to light rail transit station Guaranteed ride home program Subsidized Transit passes Note combine all applicable points for total value	TBD	
CRT	Employer based Commute Trip Reduction (CRT). CRTs apply to commercial, offices, or industrial projects that include a reduction of vehicle trip or VMT goal using a variety of employee commutes trip reduction methods. The point value will be determined based upon a TIA that demonstrates the trip/VMT reductions. Suggested point ranges: Incentive based CRT Programs (1-8 points) Mandatory CRT programs (5-20 points)	TBD	
Other Trip Reductions	Other trip or VMT reduction measures not listed above with TIA and/or other traffic data supporting the trip and/or VMT for the project.	TBD	
Total Points from Commercial/Industrial Project:			123

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3.0 MITIGATION MEASURES

The analysis of project impacts presented in Section 2.2 discussed how the project would not result in a significant individual or cumulative GHG impact with the implementation of the GHG reduction measures specified in Exhibit 3 above. In order to ensure that all of the measures are implemented by the final product, they should be specified as a mitigation measure.

> **Mitigation Measure GHG-1:** All GHG reduction measures identified in Exhibit 3 above shall be incorporated into the project. Approval of Tentative Tract Maps, Grading Plans, and Tract Maps shall be contingent on incorporation of the Recycled Water and Bicycle Infrastructure measures. Approval of Building Permits and Certificates of Occupancy shall be contingent on incorporation of all other measures shown in the table. At the City's discretion, alternative reduction measures from the list presented above in Exhibit 3 may be substituted for any of the measures shown in Exhibit 3, or any future measures approved by the City, with the same or greater points value.

Specifically, the applicant has committed to the following measures that have a total of 123 points:

Building Envelope

- Insulation: Greatly enhanced insulation (spray foam insulated walls R-15 or higher, roof/attic R-38 or higher) (18)
- Windows: Enhanced window insulation (0.32 U-factor, 0.25 SHGC) (8)
- Cool Roof: Modest cool roof (CRRC Rated 0.15 aged solar reflectance, 0.75 thermal emittance) (12)
- Air Infiltration: Air barrier applied to exterior walls, calking, and visual inspection such as the HERS Verified Quality Insulation Installation (QII or equivalent) (12)

Indoor Space Efficiencies

- Heating/Cooling Distribution System: Modest duct insulation (R-6) (8)
- Space Heating/Cooling Equipment: High Efficiency HVAC (EE16/80% AFUE or 9 HSPF) (8)
- Water Heaters: High efficiency water heater (0.92 Energy Factor) (16)
- Daylighting: All peripheral rooms within building have at least one window or skylight (1)
- Artificial Lighting: Very high efficiency lights (100% of in-unit fixtures are high efficacy) (14)

Irrigation and Landscaping

- Water Efficient Landscaping: Only low water using plants (4)
- Water Efficient Irrigation Systems: Low precipitation spray heads <0.75"/hr or drip irrigation (1)
- Water Efficient Irrigation Systems: Weather based irrigation control systems combined with drip irrigation (demonstrate 20% reduced water use) (5)

Potable Water

- Toilets: Water efficient toilets/urinals (1.5 gpf) (3)
- Faucets: Water efficient faucets (1.28 gpm) (3)

Electric Vehicle Infrastructure

- Electric Vehicles: Provide one public charging station for use by an electric vehicle (10)

4.0 UNAVOIDABLE SIGNIFICANT IMPACTS

With the mitigation measures described in Section 3.0, all significant impacts will be reduced to a level of insignificance and the project will not result in any unavoidable significant impacts.

5.0 REFERENCES

California Air Resource Board, "Climate Change Proposed Scoping Plan," October 2008.

California Air Resource Board, "Staff Proposal-Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the CEQA," December 2008.

California Air Resource Board, "Preliminary Draft Staff Proposal- Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the CEQA," October 24,2008.

California Energy Commission, "Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004," December 2006.

California Environmental Protection Agency, "California Greenhouse Gas Inventory for 2000-2009 by Category as Defined in the Scoping Plan," October 26, 2011.

California Environmental Protection Agency, Air Resources Board, "2016 Edition, California GHG Emission Inventory," June 17, 2016.

Citizens and the Environmental Committee of Laguna Beach, "City of Laguna Beach Climate Protection Action Plan," April 2009.

Edmund G. Brown, Jr., Attorney General, State of California, "Comments on Draft Environmental Impact Report for Coyote Canyon Specific Plan," June 19, 2007.

IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)].

IPCC, 2014: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)].

State of California, "Climate Change Portal," http://www.climatechange.ca.gov/index.html.

State of California Department of Water Resources (DWR), Climate Change Adaptation Strategies for California's Water, October 2008.

SCAQMD, Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, December 5, 2008.

SCAQMD, Guidelines for Calculating Emissions from Dairy and Poultry Operations, December 2016.

United Nations Statistics Division, "Environment Indicators: Greenhouse Gas Emissions," http://unstats.un.org/unsd/ENVIRONMENT/air_greenhouse_emissions.htm.

United Nations Framework Convention on Climate Change, "National Greenhouse Gas Inventory Data for the Period 1990–2006 and Status of Reporting," November 17, 2008.

United Nations Framework Convention on Climate Change, "Sixth compilation and synthesis of initial national communications from Parties not included in Annex I to the Convention," October 25, 2005.

U.S. Environmental Protection Agency, "The U.S. Inventory of Greenhouse Gas Emissions and Sinks: Fast Facts," April 2007.

U.S. Environmental Protection Agency, "Climate Change," http://epa.gov/climatechange/index.html.

U.S. Environmental Protection Agency, "AP 42, Fifth Edition Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources," http://www.epa.gov/ttn/chief/ap42/.

U.S. Environmental Protection Agency, "Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 – 2005," April 15, 2007.

APPENDIX

Air Pollutant Emissions from Dairy Operations				
Project:	**WOCC**			
Data and Assumptions				
Number of cows:	1,400			
Type of cows:	Milking cows			
Type of disposal:	None			
	VOC	PM	NH3	Units
Emission Factors	12.8	3.56	74.0	lbs/head/year
Emissions	17,920	4,984	103,600	lbs/year
Emissions	49.1	13.7	283.8	lbs/day
Emissions	8.13	--	--	MT/YR
GWP	25	0	0	
GHG Emissions	203.2	0	0	MTCO2EQ/YR

WOCC-Phase 1 2023 With Refrig-Operation Only

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	100.00	1000sqft	2.30	100,000.00	0
Unrefrigerated Warehouse-No Rail	2,115.60	1000sqft	66.60	2,115,600.00	0
Parking Lot	1,963.50	1000sqft	45.08	1,963,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Acreage assigned to warehousing

Construction Phase - Construction data is just placeholder. See other runs for construction emissions.

Off-road Equipment -

Vehicle Trips - Trip generation based on traffic study.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating -

Fleet Mix - Fleet mix adjusted to match traffic study.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	50.00	100.00
tblAreaCoating	ReapplicationRatePercent	10	3.33
tblConstructionPhase	NumDays	220.00	100.00
tblConstructionPhase	NumDays	3,100.00	100.00
tblConstructionPhase	NumDays	200.00	100.00
tblConstructionPhase	NumDays	310.00	100.00
tblConstructionPhase	NumDays	220.00	100.00
tblConstructionPhase	NumDays	120.00	100.00
tblFleetMix	HHD	0.03	0.12
tblFleetMix	HHD	0.03	0.12
tblFleetMix	HHD	0.03	0.12
tblFleetMix	LDA	0.55	0.80
tblFleetMix	LDA	0.55	0.80
tblFleetMix	LDA	0.55	0.80
tblFleetMix	LDT1	0.04	3.9000e-003
tblFleetMix	LDT1	0.04	3.9000e-003
tblFleetMix	LDT1	0.04	3.9000e-003
tblFleetMix	LDT2	0.20	0.02
tblFleetMix	LDT2	0.20	0.02
tblFleetMix	LDT2	0.20	0.02

tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.8250e-003	5.2000e-004
tblFleetMix	LHD2	5.8250e-003	5.2000e-004
tblFleetMix	LHD2	5.8250e-003	5.2000e-004
tblFleetMix	MCY	4.8760e-003	0.00
tblFleetMix	MCY	4.8760e-003	0.00
tblFleetMix	MCY	4.8760e-003	0.00
tblFleetMix	MDV	0.12	0.01
tblFleetMix	MDV	0.12	0.01
tblFleetMix	MDV	0.12	0.01
tblFleetMix	MH	8.6800e-004	0.00
tblFleetMix	MH	8.6800e-004	0.00
tblFleetMix	MH	8.6800e-004	0.00
tblFleetMix	MHD	0.02	0.05
tblFleetMix	MHD	0.02	0.05
tblFleetMix	MHD	0.02	0.05
tblFleetMix	OBUS	2.1230e-003	0.00
tblFleetMix	OBUS	2.1230e-003	0.00
tblFleetMix	OBUS	2.1230e-003	0.00
tblFleetMix	SBUS	7.1000e-004	0.00
tblFleetMix	SBUS	7.1000e-004	0.00
tblFleetMix	SBUS	7.1000e-004	0.00
tblFleetMix	UBUS	1.7800e-003	0.00
tblFleetMix	UBUS	1.7800e-003	0.00
tblFleetMix	UBUS	1.7800e-003	0.00
tblGrading	AcresOfGrading	250.00	775.00

tblLandUse	LotAcreage	48.57	66.60
tblProjectCharacteristics	OperationalYear	2018	2023
tblSolidWaste	SolidWasteGenerationRate	94.00	47.00
tblSolidWaste	SolidWasteGenerationRate	1,988.66	2,082.66
tblVehicleTrips	ST_TR	1.68	3.52
tblVehicleTrips	ST_TR	1.68	3.52
tblVehicleTrips	SU_TR	1.68	3.52
tblVehicleTrips	SU_TR	1.68	3.52
tblVehicleTrips	WD_TR	1.68	3.52
tblVehicleTrips	WD_TR	1.68	3.52
tblWater	IndoorWaterUseRate	23,125,000.00	11,562,500.00
tblWater	IndoorWaterUseRate	489,232,500.00	512,357,500.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.3465	3.5550	1.8497	3.1200e-003	0.9169	0.1875	1.1044	0.5001	0.1737	0.6739	0.0000	286.7897	286.7897	0.0784	0.0000	288.7498
2018	1.1375	10.0083	8.5191	0.0248	2.8107	0.3116	3.1223	1.0288	0.2893	1.3181	0.0000	2,292.8297	2,292.8297	0.2400	0.0000	2,298.8299
2019	26.1595	0.8094	1.4736	3.1700e-003	0.1995	0.0431	0.2426	0.0530	0.0401	0.0931	0.0000	285.1695	285.1695	0.0344	0.0000	286.0297
Maximum	**26.1595**	**10.0083**	**8.5191**	**0.0248**	**2.8107**	**0.3116**	**3.1223**	**1.0288**	**0.2893**	**1.3181**	**0.0000**	**2,292.8297**	**2,292.8297**	**0.2400**	**0.0000**	**2,298.8299**

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					
2017	0.3465	3.5550	1.8497	3.1200e-003	0.9169	0.1875	1.1044	0.5001	0.1737	0.6739	0.0000	286.7894	286.7894	0.0784	0.0000	288.7495
2018	1.1375	10.0083	8.5191	0.0248	2.8107	0.3116	3.1223	1.0288	0.2893	1.3181	0.0000	2,292.8292	2,292.8292	0.2400	0.0000	2,298.8293
2019	26.1595	0.8094	1.4736	3.1700e-003	0.1995	0.0431	0.2426	0.0530	0.0401	0.0931	0.0000	285.1694	285.1694	0.0344	0.0000	286.0295
Maximum	**26.1595**	**10.0083**	**8.5191**	**0.0248**	**2.8107**	**0.3116**	**3.1223**	**1.0288**	**0.2893**	**1.3181**	**0.0000**	**2,292.8292**	**2,292.8292**	**0.2400**	**0.0000**	**2,298.8293**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**5-30-2017**	**8-29-2017**	1.5445	1.5445
2	**8-30-2017**	**11-29-2017**	1.7086	1.7086
3	**11-30-2017**	**2-27-2018**	1.7532	1.7532
4	**2-28-2018**	**5-29-2018**	2.0807	2.0807
5	**5-30-2018**	**8-29-2018**	2.9673	2.9673
6	**8-30-2018**	**11-29-2018**	4.2506	4.2506
7	**11-30-2018**	**2-27-2019**	1.0375	1.0375
8	**2-28-2019**	**5-29-2019**	6.0060	6.0060
9	**5-30-2019**	**8-29-2019**	17.2153	17.2153
10	**8-30-2019**	**9-30-2019**	3.3682	3.3682
		Highest	17.2153	17.2153

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	8.4890	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	0.1037	0.1037	2.7000e-004	0.0000	0.1105
Energy	0.0513	0.4664	0.3918	2.8000e-003		0.0355	0.0355		0.0355	0.0355	0.0000	3,959.2145	3,959.2145	0.1522	0.0388	3,974.5795
Mobile	1.7643	26.3544	28.2026	0.1832	12.9092	0.1067	13.0158	3.4755	0.0997	3.5752	0.0000	17,310.9295	17,310.9295	0.7142	0.0000	17,328.7836
Waste						0.0000	0.0000		0.0000	0.0000	432.3017	0.0000	432.3017	25.5483	0.0000	1,071.0093
Water						0.0000	0.0000		0.0000	0.0000	166.2157	2,173.6234	2,339.8390	17.1617	0.4217	2,894.5392
Total	**10.3046**	**26.8213**	**28.6477**	**0.1860**	**12.9092**	**0.1423**	**13.0515**	**3.4755**	**0.1354**	**3.6109**	**598.5174**	**23,443.8711**	**24,042.3884**	**43.5766**	**0.4605**	**25,269.0221**

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	8.4890	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	0.1037	0.1037	2.7000e-004	0.0000	0.1105
Energy	0.0513	0.4664	0.3918	2.8000e-003		0.0355	0.0355		0.0355	0.0355	0.0000	3,959.2145	3,959.2145	0.1522	0.0388	3,974.5795
Mobile	1.7643	26.3544	28.2026	0.1832	12.9092	0.1067	13.0158	3.4755	0.0997	3.5752	0.0000	17,310.9295	17,310.9295	0.7142	0.0000	17,328.7836

Waste						0.0000	0.0000		0.0000	0.0000	432.3017	0.0000	432.3017	25.5483	0.0000	1,071.0093
Water						0.0000	0.0000		0.0000	0.0000	166.2157	2,173.6234	2,339.8390	17.1617	0.4217	2,894.5392
Total	**10.3046**	**26.8213**	**28.6477**	**0.1860**	**12.9092**	**0.1423**	**13.0515**	**3.4755**	**0.1354**	**3.6109**	**598.5174**	**23,443.8711**	**24,042.3884**	**43.5766**	**0.4605**	**25,269.0221**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/30/2017	10/16/2017	5	100	
2	Site Preparation	Site Preparation	10/17/2017	3/5/2018	5	100	
3	Grading	Grading	3/6/2018	7/23/2018	5	100	
4	Building Construction	Building Construction	7/24/2018	12/10/2018	5	100	
5	Paving	Paving	12/11/2018	4/29/2019	5	100	
6	Architectural Coating	Architectural Coating	4/30/2019	9/16/2019	5	100	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 775

Acres of Paving: 45.08

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,323,400; Non-Residential Outdoor: 1,107,800; Striped Parking Area: 117,810

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38

Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,755.00	685.00	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	351.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 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	0.2052	2.1374	1.1506	1.9400e-003		0.1097	0.1097		0.1021	0.1021	0.0000	178.0025	178.0025	0.0487	0.0000	179.2192
Total	**0.2052**	**2.1374**	**1.1506**	**1.9400e-003**		**0.1097**	**0.1097**		**0.1021**	**0.1021**	**0.0000**	**178.0025**	**178.0025**	**0.0487**	**0.0000**	**179.2192**

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	4.4900e-003	3.7400e-003	0.0399	9.0000e-005	8.2300e-003	7.0000e-005	8.3000e-003	2.1900e-003	6.0000e-005	2.2500e-003	0.0000	8.1216	8.1216	3.1000e-004	0.0000	8.1292
Total	**4.4900e-003**	**3.7400e-003**	**0.0399**	**9.0000e-005**	**8.2300e-003**	**7.0000e-005**	**8.3000e-003**	**2.1900e-003**	**6.0000e-005**	**2.2500e-003**	**0.0000**	**8.1216**	**8.1216**	**3.1000e-004**	**0.0000**	**8.1292**

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	0.2052	2.1374	1.1506	1.9400e-003		0.1097	0.1097		0.1021	0.1021	0.0000	178.0023	178.0023	0.0487	0.0000	179.2190
Total	**0.2052**	**2.1374**	**1.1506**	**1.9400e-003**		**0.1097**	**0.1097**		**0.1021**	**0.1021**	**0.0000**	**178.0023**	**178.0023**	**0.0487**	**0.0000**	**179.2190**

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	4.4900e-003	3.7400e-003	0.0399	9.0000e-005	8.2300e-003	7.0000e-005	8.3000e-003	2.1900e-003	6.0000e-005	2.2500e-003	0.0000	8.1216	8.1216	3.1000e-004	0.0000	8.1292
Total	**4.4900e-003**	**3.7400e-003**	**0.0399**	**9.0000e-005**	**8.2300e-003**	**7.0000e-005**	**8.3000e-003**	**2.1900e-003**	**6.0000e-005**	**2.2500e-003**	**0.0000**	**8.1216**	**8.1216**	**3.1000e-004**	**0.0000**	**8.1292**

3.3 Site Preparation - 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					
Fugitive Dust					0.9033	0.0000	0.9033	0.4965	0.0000	0.4965	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1339	1.4114	0.6333	1.0300e-003		0.0777	0.0777		0.0715	0.0715	0.0000	95.4029	95.4029	0.0292	0.0000	96.1336
Total	**0.1339**	**1.4114**	**0.6333**	**1.0300e-003**	**0.9033**	**0.0777**	**0.9810**	**0.4965**	**0.0715**	**0.5680**	**0.0000**	**95.4029**	**95.4029**	**0.0292**	**0.0000**	**96.1336**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9100e-003	2.4300e-003	0.0259	6.0000e-005	5.3300e-003	4.0000e-005	5.3800e-003	1.4200e-003	4.0000e-005	1.4600e-003	0.0000	5.2628	5.2628	2.0000e-004	0.0000	5.2677
Total	**2.9100e-003**	**2.4300e-003**	**0.0259**	**6.0000e-005**	**5.3300e-003**	**4.0000e-005**	**5.3800e-003**	**1.4200e-003**	**4.0000e-005**	**1.4600e-003**	**0.0000**	**5.2628**	**5.2628**	**2.0000e-004**	**0.0000**	**5.2677**

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					0.9033	0.0000	0.9033	0.4965	0.0000	0.4965	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1339	1.4114	0.6333	1.0300e-003		0.0777	0.0777		0.0715	0.0715	0.0000	95.4028	95.4028	0.0292	0.0000	96.1335
Total	**0.1339**	**1.4114**	**0.6333**	**1.0300e-003**	**0.9033**	**0.0777**	**0.9810**	**0.4965**	**0.0715**	**0.5680**	**0.0000**	**95.4028**	**95.4028**	**0.0292**	**0.0000**	**96.1335**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9100e-003	2.4300e-003	0.0259	6.0000e-005	5.3300e-003	4.0000e-005	5.3800e-003	1.4200e-003	4.0000e-005	1.4600e-003	0.0000	5.2628	5.2628	2.0000e-004	0.0000	5.2677
Total	**2.9100e-003**	**2.4300e-003**	**0.0259**	**6.0000e-005**	**5.3300e-003**	**4.0000e-005**	**5.3800e-003**	**1.4200e-003**	**4.0000e-005**	**1.4600e-003**	**0.0000**	**5.2628**	**5.2628**	**2.0000e-004**	**0.0000**	**5.2677**

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9033	0.0000	0.9033	0.4965	0.0000	0.4965	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1049	1.1086	0.5170	8.7000e-004		0.0593	0.0593		0.0545	0.0545	0.0000	79.9478	79.9478	0.0249	0.0000	80.5700

Total	**0.1049**	**1.1086**	**0.5170**	**8.7000e-004**	**0.9033**	**0.0593**	**0.9626**	**0.4965**	**0.0545**	**0.5511**	**0.0000**	**79.9478**	**79.9478**	**0.0249**	**0.0000**	**80.5700**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-003	1.8000e-003	0.0193	5.0000e-005	4.5400e-003	4.0000e-005	4.5800e-003	1.2100e-003	3.0000e-005	1.2400e-003	0.0000	4.3574	4.3574	1.5000e-004	0.0000	4.3611
Total	**2.2000e-003**	**1.8000e-003**	**0.0193**	**5.0000e-005**	**4.5400e-003**	**4.0000e-005**	**4.5800e-003**	**1.2100e-003**	**3.0000e-005**	**1.2400e-003**	**0.0000**	**4.3574**	**4.3574**	**1.5000e-004**	**0.0000**	**4.3611**

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					0.9033	0.0000	0.9033	0.4965	0.0000	0.4965	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1049	1.1086	0.5170	8.7000e-004		0.0593	0.0593		0.0545	0.0545	0.0000	79.9477	79.9477	0.0249	0.0000	80.5699
Total	**0.1049**	**1.1086**	**0.5170**	**8.7000e-004**	**0.9033**	**0.0593**	**0.9626**	**0.4965**	**0.0545**	**0.5511**	**0.0000**	**79.9477**	**79.9477**	**0.0249**	**0.0000**	**80.5699**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-003	1.8000e-003	0.0193	5.0000e-005	4.5400e-003	4.0000e-005	4.5800e-003	1.2100e-003	3.0000e-005	1.2400e-003	0.0000	4.3574	4.3574	1.5000e-004	0.0000	4.3611
Total	**2.2000e-003**	**1.8000e-003**	**0.0193**	**5.0000e-005**	**4.5400e-003**	**4.0000e-005**	**4.5800e-003**	**1.2100e-003**	**3.0000e-005**	**1.2400e-003**	**0.0000**	**4.3574**	**4.3574**	**1.5000e-004**	**0.0000**	**4.3611**

3.4 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7121	0.0000	0.7121	0.2099	0.0000	0.2099	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2545	2.9761	1.7545	3.1000e-003		0.1317	0.1317		0.1212	0.1212	0.0000	283.2425	283.2425	0.0882	0.0000	285.4469
Total	**0.2545**	**2.9761**	**1.7545**	**3.1000e-003**	**0.7121**	**0.1317**	**0.8437**	**0.2099**	**0.1212**	**0.3310**	**0.0000**	**283.2425**	**283.2425**	**0.0882**	**0.0000**	**285.4469**

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	5.3100e-003	4.3500e-003	0.0467	1.2000e-004	0.0110	9.0000e-005	0.0111	2.9100e-003	8.0000e-005	3.0000e-003	0.0000	10.5250	10.5250	3.6000e-004	0.0000	10.5340
Total	**5.3100e-003**	**4.3500e-003**	**0.0467**	**1.2000e-004**	**0.0110**	**9.0000e-005**	**0.0111**	**2.9100e-003**	**8.0000e-005**	**3.0000e-003**	**0.0000**	**10.5250**	**10.5250**	**3.6000e-004**	**0.0000**	**10.5340**

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					0.7121	0.0000	0.7121	0.2099	0.0000	0.2099	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2545	2.9761	1.7545	3.1000e-003		0.1317	0.1317		0.1212	0.1212	0.0000	283.2422	283.2422	0.0882	0.0000	285.4466
Total	**0.2545**	**2.9761**	**1.7545**	**3.1000e-003**	**0.7121**	**0.1317**	**0.8437**	**0.2099**	**0.1212**	**0.3310**	**0.0000**	**283.2422**	**283.2422**	**0.0882**	**0.0000**	**285.4466**

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	5.3100e-003	4.3500e-003	0.0467	1.2000e-004	0.0110	9.0000e-005	0.0111	2.9100e-003	8.0000e-005	3.0000e-003	0.0000	10.5250	10.5250	3.6000e-004	0.0000	10.5340
Total	**5.3100e-003**	**4.3500e-003**	**0.0467**	**1.2000e-004**	**0.0110**	**9.0000e-005**	**0.0111**	**2.9100e-003**	**8.0000e-005**	**3.0000e-003**	**0.0000**	**10.5250**	**10.5250**	**3.6000e-004**	**0.0000**	**10.5340**

3.5 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	0.1340	1.1695	0.8790	1.3500e-003		0.0750	0.0750		0.0705	0.0705	0.0000	118.8836	118.8836	0.0291	0.0000	119.6118
Total	**0.1340**	**1.1695**	**0.8790**	**1.3500e-003**		**0.0750**	**0.0750**		**0.0705**	**0.0705**	**0.0000**	**118.8836**	**118.8836**	**0.0291**	**0.0000**	**119.6118**

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	0.1484	4.2345	1.0910	8.8600e-003	0.2159	0.0305	0.2464	0.0623	0.0292	0.0915	0.0000	855.5093	855.5093	0.0609	0.0000	857.0316

Worker	0.4664	0.3816	4.0954	0.0102	0.9627	7.8200e-003	0.9706	0.2557	7.2100e-003	0.2629	0.0000	923.5714	923.5714	0.0315	0.0000	924.3592
Total	**0.6148**	**4.6161**	**5.1864**	**0.0191**	**1.1786**	**0.0383**	**1.2170**	**0.3180**	**0.0364**	**0.3544**	**0.0000**	**1,779.0807**	**1,779.0807**	**0.0924**	**0.0000**	**1,781.3908**

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	0.1340	1.1695	0.8790	1.3500e-003		0.0750	0.0750		0.0705	0.0705	0.0000	118.8835	118.8835	0.0291	0.0000	119.6116
Total	**0.1340**	**1.1695**	**0.8790**	**1.3500e-003**		**0.0750**	**0.0750**		**0.0705**	**0.0705**	**0.0000**	**118.8835**	**118.8835**	**0.0291**	**0.0000**	**119.6116**

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	0.1484	4.2345	1.0910	8.8600e-003	0.2159	0.0305	0.2464	0.0623	0.0292	0.0915	0.0000	855.5093	855.5093	0.0609	0.0000	857.0316
Worker	0.4664	0.3816	4.0954	0.0102	0.9627	7.8200e-003	0.9706	0.2557	7.2100e-003	0.2629	0.0000	923.5714	923.5714	0.0315	0.0000	924.3592
Total	**0.6148**	**4.6161**	**5.1864**	**0.0191**	**1.1786**	**0.0383**	**1.2170**	**0.3180**	**0.0364**	**0.3544**	**0.0000**	**1,779.0807**	**1,779.0807**	**0.0924**	**0.0000**	**1,781.3908**

3.6 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	0.0123	0.1314	0.1110	1.7000e-004		7.1700e-003	7.1700e-003		6.6000e-003	6.6000e-003	0.0000	15.6087	15.6087	4.8600e-003	0.0000	15.7302
Paving	8.8600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0212**	**0.1314**	**0.1110**	**1.7000e-004**		**7.1700e-003**	**7.1700e-003**		**6.6000e-003**	**6.6000e-003**	**0.0000**	**15.6087**	**15.6087**	**4.8600e-003**	**0.0000**	**15.7302**

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	6.0000e-004	4.9000e-004	5.2500e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1841	1.1841	4.0000e-005	0.0000	1.1851
Total	**6.0000e-004**	**4.9000e-004**	**5.2500e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.1841**	**1.1841**	**4.0000e-005**	**0.0000**	**1.1851**

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	0.0123	0.1314	0.1110	1.7000e-004		7.1700e-003	7.1700e-003		6.6000e-003	6.6000e-003	0.0000	15.6087	15.6087	4.8600e-003	0.0000	15.7302
Paving	8.8600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0212**	**0.1314**	**0.1110**	**1.7000e-004**		**7.1700e-003**	**7.1700e-003**		**6.6000e-003**	**6.6000e-003**	**0.0000**	**15.6087**	**15.6087**	**4.8600e-003**	**0.0000**	**15.7302**

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	6.0000e-004	4.9000e-004	5.2500e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1841	1.1841	4.0000e-005	0.0000	1.1851
Total	**6.0000e-004**	**4.9000e-004**	**5.2500e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.1841**	**1.1841**	**4.0000e-005**	**0.0000**	**1.1851**

3.6 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	0.0618	0.6479	0.6233	9.7000e-004		0.0350	0.0350		0.0322	0.0322	0.0000	87.0195	87.0195	0.0275	0.0000	87.7078
Paving	0.0502					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1120**	**0.6479**	**0.6233**	**9.7000e-004**		**0.0350**	**0.0350**		**0.0322**	**0.0322**	**0.0000**	**87.0195**	**87.0195**	**0.0275**	**0.0000**	**87.7078**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0800e-003	2.4500e-003	0.0266	7.0000e-005	6.9900e-003	6.0000e-005	7.0500e-003	1.8600e-003	5.0000e-005	1.9100e-003	0.0000	6.4980	6.4980	2.0000e-004	0.0000	6.5031
Total	**3.0800e-003**	**2.4500e-003**	**0.0266**	**7.0000e-005**	**6.9900e-003**	**6.0000e-005**	**7.0500e-003**	**1.8600e-003**	**5.0000e-005**	**1.9100e-003**	**0.0000**	**6.4980**	**6.4980**	**2.0000e-004**	**0.0000**	**6.5031**

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	0.0618	0.6479	0.6233	9.7000e-004		0.0350	0.0350		0.0322	0.0322	0.0000	87.0194	87.0194	0.0275	0.0000	87.7077

Paving	0.0502					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1120**	**0.6479**	**0.6233**	**9.7000e-004**		**0.0350**	**0.0350**		**0.0322**	**0.0322**	**0.0000**	**87.0194**	**87.0194**	**0.0275**	**0.0000**	**87.7077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0800e-003	2.4500e-003	0.0266	7.0000e-005	6.9900e-003	6.0000e-005	7.0500e-003	1.8600e-003	5.0000e-005	1.9100e-003	0.0000	6.4980	6.4980	2.0000e-004	0.0000	6.5031
Total	**3.0800e-003**	**2.4500e-003**	**0.0266**	**7.0000e-005**	**6.9900e-003**	**6.0000e-005**	**7.0500e-003**	**1.8600e-003**	**5.0000e-005**	**1.9100e-003**	**0.0000**	**6.4980**	**6.4980**	**2.0000e-004**	**0.0000**	**6.5031**

3.7 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	25.9463					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.0918	0.0921	1.5000e-004		6.4400e-003	6.4400e-003		6.4400e-003	6.4400e-003	0.0000	12.7663	12.7663	1.0800e-003	0.0000	12.7932
Total	**25.9596**	**0.0918**	**0.0921**	**1.5000e-004**		**6.4400e-003**	**6.4400e-003**		**6.4400e-003**	**6.4400e-003**	**0.0000**	**12.7663**	**12.7663**	**1.0800e-003**	**0.0000**	**12.7932**

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	0.0848	0.0673	0.7317	1.9800e-003	0.1926	1.5300e-003	0.1941	0.0511	1.4100e-003	0.0525	0.0000	178.8858	178.8858	5.5900e-003	0.0000	179.0255
Total	**0.0848**	**0.0673**	**0.7317**	**1.9800e-003**	**0.1926**	**1.5300e-003**	**0.1941**	**0.0511**	**1.4100e-003**	**0.0525**	**0.0000**	**178.8858**	**178.8858**	**5.5900e-003**	**0.0000**	**179.0255**

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	25.9463					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.0918	0.0921	1.5000e-004		6.4400e-003	6.4400e-003		6.4400e-003	6.4400e-003	0.0000	12.7663	12.7663	1.0800e-003	0.0000	12.7932
Total	**25.9596**	**0.0918**	**0.0921**	**1.5000e-004**		**6.4400e-003**	**6.4400e-003**		**6.4400e-003**	**6.4400e-003**	**0.0000**	**12.7663**	**12.7663**	**1.0800e-003**	**0.0000**	**12.7932**

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	0.0848	0.0673	0.7317	1.9800e-003	0.1926	1.5300e-003	0.1941	0.0511	1.4100e-003	0.0525	0.0000	178.8858	178.8858	5.5900e-003	0.0000	179.0255
Total	**0.0848**	**0.0673**	**0.7317**	**1.9800e-003**	**0.1926**	**1.5300e-003**	**0.1941**	**0.0511**	**1.4100e-003**	**0.0525**	**0.0000**	**178.8858**	**178.8858**	**5.5900e-003**	**0.0000**	**179.0255**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.7643	26.3544	28.2026	0.1832	12.9092	0.1067	13.0158	3.4755	0.0997	3.5752	0.0000	17,310.9295	17,310.9295	0.7142	0.0000	17,328.7836
Unmitigated	1.7643	26.3544	28.2026	0.1832	12.9092	0.1067	13.0158	3.4755	0.0997	3.5752	0.0000	17,310.9295	17,310.9295	0.7142	0.0000	17,328.7836

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	352.00	352.00	352.00	1,508,572	1,508,572
Unrefrigerated Warehouse-No Rail	7,446.91	7,446.91	7446.91	31,915,357	31,915,357
Total	7,798.91	7,798.91	7,798.91	33,423,929	33,423,929

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
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Refrigerated Warehouse-No Rail	0.795700	0.003900	0.017620	0.011010	0.015500	0.000520	0.046400	0.123300	0.000000	0.000000	0.000000	0.000000	0.000000
Unrefrigerated Warehouse-No Rail	0.795700	0.003900	0.017620	0.011010	0.015500	0.000520	0.046400	0.123300	0.000000	0.000000	0.000000	0.000000	0.000000
Parking Lot	0.795700	0.003900	0.017620	0.011010	0.015500	0.000520	0.046400	0.123300	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,451.4589	3,451.4589	0.1425	0.0295	3,463.8066
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,451.4589	3,451.4589	0.1425	0.0295	3,463.8066
NaturalGas Mitigated	0.0513	0.4664	0.3918	2.8000e-003		0.0355	0.0355		0.0355	0.0355	0.0000	507.7556	507.7556	9.7300e-003	9.3100e-003	510.7729
NaturalGas Unmitigated	0.0513	0.4664	0.3918	2.8000e-003		0.0355	0.0355		0.0355	0.0355	0.0000	507.7556	507.7556	9.7300e-003	9.3100e-003	510.7729

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	5.178e+006	0.0279	0.2538	0.2132	1.5200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	276.3178	276.3178	5.3000e-003	5.0700e-003	277.9598
Unrefrigerated Warehouse-No Rail	4.33698e+006	0.0234	0.2126	0.1786	1.2800e-003		0.0162	0.0162		0.0162	0.0162	0.0000	231.4378	231.4378	4.4400e-003	4.2400e-003	232.8131
Total		**0.0513**	**0.4664**	**0.3918**	**2.8000e-003**		**0.0355**	**0.0355**		**0.0355**	**0.0355**	**0.0000**	**507.7556**	**507.7556**	**9.7400e-003**	**9.3100e-003**	**510.7729**

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					

Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	5.178e+006	0.0279	0.2538	0.2132	1.5200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	276.3178	276.3178	5.3000e-003	5.0700e-003	277.9598
Unrefrigerated Warehouse-No Rail	4.33698e+006	0.0234	0.2126	0.1786	1.2800e-003		0.0162	0.0162		0.0162	0.0162	0.0000	231.4378	231.4378	4.4400e-003	4.2400e-003	232.8131
Total		**0.0513**	**0.4664**	**0.3918**	**2.8000e-003**		**0.0355**	**0.0355**		**0.0355**	**0.0355**	**0.0000**	**507.7556**	**507.7556**	**9.7400e-003**	**9.3100e-003**	**510.7729**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	1.72788e+006	550.5396	0.0227	4.7000e-003	552.5092
Refrigerated Warehouse-No Rail	4.006e+006	1,276.3974	0.0527	0.0109	1,280.9638
Unrefrigerated Warehouse-No Rail	5.0986e+006	1,624.5219	0.0671	0.0139	1,630.3337
Total		**3,451.4589**	**0.1425**	**0.0295**	**3,463.8066**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	1.72788e+006	550.5396	0.0227	4.7000e-003	552.5092

Refrigerated Warehouse-No Rail	4.006e+006	1,276.3974	0.0527	0.0109	1,280.9638
Unrefrigerated Warehouse-No Rail	5.0986e+006	1,624.5219	0.0671	0.0139	1,630.3337
Total		**3,451.4589**	**0.1425**	**0.0295**	**3,463.8066**

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	8.4890	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	0.1037	0.1037	2.7000e-004	0.0000	0.1105
Unmitigated	8.4890	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	0.1037	0.1037	2.7000e-004	0.0000	0.1105

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	0.3511					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Consumer Products	8.1330					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.9400e-003	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	0.1037	0.1037	2.7000e-004	0.0000	0.1105
Total	**8.4890**	**4.9000e-004**	**0.0533**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**	**0.0000**	**0.1037**	**0.1037**	**2.7000e-004**	**0.0000**	**0.1105**

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	0.3511					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	8.1330					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.9400e-003	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	0.1037	0.1037	2.7000e-004	0.0000	0.1105
Total	**8.4890**	**4.9000e-004**	**0.0533**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**	**0.0000**	**0.1037**	**0.1037**	**2.7000e-004**	**0.0000**	**0.1105**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			

Mitigated	2,339.8390	17.1617	0.4217	2,894.5392
Unmitigated	2,339.8390	17.1617	0.4217	2,894.5392

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	11.5625 / 0	51.6384	0.3787	9.3100e-003	63.8802
Unrefrigerated Warehouse-No Rail	512.357 / 0	2,288.2006	16.7829	0.4124	2,830.6590
Total		**2,339.8390**	**17.1617**	**0.4217**	**2,894.5392**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	11.5625 / 0	51.6384	0.3787	9.3100e-003	63.8802

Unrefrigerated Warehouse-No Rail	512.357 / 0	2,288.2006	16.7829	0.4124	2,830.6590
Total		**2,339.8390**	**17.1617**	**0.4217**	**2,894.5392**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	432.3017	25.5483	0.0000	1,071.0093
Unmitigated	432.3017	25.5483	0.0000	1,071.0093

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	47	9.5406	0.5638	0.0000	23.6364

Unrefrigerated Warehouse-No Rail	2082.66	422.7612	24.9845	0.0000	1,047.3729
Total		**432.3017**	**25.5483**	**0.0000**	**1,071.0093**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	47	9.5406	0.5638	0.0000	23.6364
Unrefrigerated Warehouse-No Rail	2082.66	422.7612	24.9845	0.0000	1,047.3729
Total		**432.3017**	**25.5483**	**0.0000**	**1,071.0093**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

WOCC-Phase 2 2023 Year-Operation Only

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	555.05	1000sqft	12.74	555,050.00	0
Parking Lot	2,404.00	Space	10.26	961,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Acreage assigned to Business Park

Construction Phase - Construction data is just placeholder. See other runs for construction emissions.

Off-road Equipment -

Vehicle Trips - Trip generation based on traffic study.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating -

Fleet Mix - Fleet mix adjusted to match traffic study.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	50.00	100.00
tblLandUse	LotAcreage	21.64	10.26
tblProjectCharacteristics	OperationalYear	2018	2023
tblVehicleTrips	ST_TR	1.64	1.71
tblVehicleTrips	SU_TR	0.76	0.79
tblVehicleTrips	WD_TR	11.42	11.92

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					
2017	0.5178	4.6528	3.6342	8.9100e-003	0.6021	0.1845	0.7866	0.2098	0.1720	0.3818	0.0000	825.0210	825.0210	0.1040	0.0000	827.6207
2018	0.8935	7.3996	6.8680	0.0208	1.0367	0.2315	1.2681	0.2800	0.2179	0.4980	0.0000	1,919.9590	1,919.9590	0.1610	0.0000	1,923.9845
2019	6.6638	0.6992	0.7064	1.9700e-003	0.0938	0.0250	0.1188	0.0253	0.0234	0.0487	0.0000	180.7576	180.7576	0.0190	0.0000	181.2315
Maximum	**6.6638**	**7.3996**	**6.8680**	**0.0208**	**1.0367**	**0.2315**	**1.2681**	**0.2800**	**0.2179**	**0.4980**	**0.0000**	**1,919.9590**	**1,919.9590**	**0.1610**	**0.0000**	**1,923.9845**

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					
2017	0.5178	4.6528	3.6342	8.9100e-003	0.6021	0.1845	0.7866	0.2098	0.1720	0.3818	0.0000	825.0207	825.0207	0.1040	0.0000	827.6203
2018	0.8935	7.3996	6.8680	0.0208	1.0367	0.2314	1.2681	0.2800	0.2179	0.4979	0.0000	1,919.9587	1,919.9587	0.1610	0.0000	1,923.9842
2019	6.6638	0.6992	0.7064	1.9700e-003	0.0938	0.0250	0.1188	0.0253	0.0234	0.0487	0.0000	180.7576	180.7576	0.0190	0.0000	181.2315
Maximum	**6.6638**	**7.3996**	**6.8680**	**0.0208**	**1.0367**	**0.2314**	**1.2681**	**0.2800**	**0.2179**	**0.4979**	**0.0000**	**1,919.9587**	**1,919.9587**	**0.1610**	**0.0000**	**1,923.9842**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**5-30-2017**	**8-29-2017**	2.0751	2.0751
2	**8-30-2017**	**11-29-2017**	2.2857	2.2857
3	**11-30-2017**	**2-27-2018**	2.1083	2.1083
4	**2-28-2018**	**5-29-2018**	2.0437	2.0437
5	**5-30-2018**	**8-29-2018**	2.0595	2.0595
6	**8-30-2018**	**11-29-2018**	2.0720	2.0720
7	**11-30-2018**	**2-27-2019**	1.9582	1.9582
8	**2-28-2019**	**5-29-2019**	6.1257	6.1257
		Highest	6.1257	6.1257

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3420	3.4000e-004	0.0378	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0734	0.0734	1.9000e-004	0.0000	0.0783
Energy	8.7700e-003	0.0797	0.0670	4.8000e-004		6.0600e-003	6.0600e-003		6.0600e-003	6.0600e-003	0.0000	2,154.9782	2,154.9782	0.0871	0.0193	2,162.8930
Mobile	1.3175	6.4407	18.1994	0.0728	6.3216	0.0516	6.3732	1.6939	0.0479	1.7419	0.0000	6,734.5588	6,734.5588	0.3033	0.0000	6,742.1407
Waste						0.0000	0.0000		0.0000	0.0000	104.7839	0.0000	104.7839	6.1926	0.0000	259.5978
Water						0.0000	0.0000		0.0000	0.0000	31.2975	623.3148	654.6123	3.2403	0.0812	759.8248
Total	**3.6683**	**6.5208**	**18.3041**	**0.0733**	**6.3216**	**0.0577**	**6.3794**	**1.6939**	**0.0541**	**1.7481**	**136.0814**	**9,512.9253**	**9,649.0067**	**9.8234**	**0.1005**	**9,924.5345**

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	2.3420	3.4000e-004	0.0378	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0734	0.0734	1.9000e-004	0.0000	0.0783
Energy	8.7700e-003	0.0797	0.0670	4.8000e-004		6.0600e-003	6.0600e-003		6.0600e-003	6.0600e-003	0.0000	2,154.9782	2,154.9782	0.0871	0.0193	2,162.8930
Mobile	1.3175	6.4407	18.1994	0.0728	6.3216	0.0516	6.3732	1.6939	0.0479	1.7419	0.0000	6,734.5588	6,734.5588	0.3033	0.0000	6,742.1407
Waste						0.0000	0.0000		0.0000	0.0000	104.7839	0.0000	104.7839	6.1926	0.0000	259.5978
Water						0.0000	0.0000		0.0000	0.0000	31.2975	623.3148	654.6123	3.2403	0.0812	759.8248

Total	3.6683	6.5208	18.3041	0.0733	6.3216	0.0577	6.3794	1.6939	0.0541	1.7481	136.0814	9,512.9253	9,649.0067	9.8234	0.1005	9,924.5345

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/30/2017	6/26/2017	5	20	
2	Site Preparation	Site Preparation	6/27/2017	7/10/2017	5	10	
3	Grading	Grading	7/11/2017	8/28/2017	5	35	
4	Building Construction	Building Construction	8/29/2017	1/28/2019	5	370	
5	Paving	Paving	1/29/2019	2/25/2019	5	20	
6	Architectural Coating	Architectural Coating	2/26/2019	3/25/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 10.26

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 832,575; Non-Residential Outdoor: 277,525; Striped Parking Area: 57,696

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40

Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	581.00	249.00	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	116.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 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	0.0410	0.4275	0.2301	3.9000e-004		0.0219	0.0219		0.0204	0.0204	0.0000	35.6005	35.6005	9.7300e-003	0.0000	35.8438
Total	**0.0410**	**0.4275**	**0.2301**	**3.9000e-004**		**0.0219**	**0.0219**		**0.0204**	**0.0204**	**0.0000**	**35.6005**	**35.6005**	**9.7300e-003**	**0.0000**	**35.8438**

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	9.0000e-004	7.5000e-004	7.9800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.6243	1.6243	6.0000e-005	0.0000	1.6259
Total	**9.0000e-004**	**7.5000e-004**	**7.9800e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.6243**	**1.6243**	**6.0000e-005**	**0.0000**	**1.6259**

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	0.0410	0.4275	0.2301	3.9000e-004		0.0219	0.0219		0.0204	0.0204	0.0000	35.6005	35.6005	9.7300e-003	0.0000	35.8438
Total	**0.0410**	**0.4275**	**0.2301**	**3.9000e-004**		**0.0219**	**0.0219**		**0.0204**	**0.0204**	**0.0000**	**35.6005**	**35.6005**	**9.7300e-003**	**0.0000**	**35.8438**

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	9.0000e-004	7.5000e-004	7.9800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.6243	1.6243	6.0000e-005	0.0000	1.6259
Total	**9.0000e-004**	**7.5000e-004**	**7.9800e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.6243**	**1.6243**	**6.0000e-005**	**0.0000**	**1.6259**

3.3 Site Preparation - 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					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.2614	0.1173	1.9000e-004		0.0144	0.0144		0.0132	0.0132	0.0000	17.6672	17.6672	5.4100e-003	0.0000	17.8025
Total	**0.0248**	**0.2614**	**0.1173**	**1.9000e-004**	**0.0903**	**0.0144**	**0.1047**	**0.0497**	**0.0132**	**0.0629**	**0.0000**	**17.6672**	**17.6672**	**5.4100e-003**	**0.0000**	**17.8025**

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	5.4000e-004	4.5000e-004	4.7900e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9746	0.9746	4.0000e-005	0.0000	0.9755
Total	**5.4000e-004**	**4.5000e-004**	**4.7900e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.9746**	**0.9746**	**4.0000e-005**	**0.0000**	**0.9755**

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0248	0.2614	0.1173	1.9000e-004		0.0144	0.0144		0.0132	0.0132	0.0000	17.6672	17.6672	5.4100e-003	0.0000	17.8025
Total	**0.0248**	**0.2614**	**0.1173**	**1.9000e-004**	**0.0903**	**0.0144**	**0.1047**	**0.0497**	**0.0132**	**0.0629**	**0.0000**	**17.6672**	**17.6672**	**5.4100e-003**	**0.0000**	**17.8025**

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	5.4000e-004	4.5000e-004	4.7900e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9746	0.9746	4.0000e-005	0.0000	0.9755
Total	**5.4000e-004**	**4.5000e-004**	**4.7900e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.9746**	**0.9746**	**4.0000e-005**	**0.0000**	**0.9755**

3.4 Grading - 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					
Fugitive Dust					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1006	1.1889	0.6787	1.0900e-003		0.0538	0.0538		0.0495	0.0495	0.0000	100.7297	100.7297	0.0309	0.0000	101.5013
Total	**0.1006**	**1.1889**	**0.6787**	**1.0900e-003**	**0.1518**	**0.0538**	**0.2056**	**0.0629**	**0.0495**	**0.1124**	**0.0000**	**100.7297**	**100.7297**	**0.0309**	**0.0000**	**101.5013**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0900e-003	1.7500e-003	0.0186	4.0000e-005	3.8400e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003	0.0000	3.7901	3.7901	1.4000e-004	0.0000	3.7936
Total	**2.0900e-003**	**1.7500e-003**	**0.0186**	**4.0000e-005**	**3.8400e-003**	**3.0000e-005**	**3.8700e-003**	**1.0200e-003**	**3.0000e-005**	**1.0500e-003**	**0.0000**	**3.7901**	**3.7901**	**1.4000e-004**	**0.0000**	**3.7936**

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					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1006	1.1889	0.6787	1.0900e-003		0.0538	0.0538		0.0495	0.0495	0.0000	100.7296	100.7296	0.0309	0.0000	101.5012
Total	**0.1006**	**1.1889**	**0.6787**	**1.0900e-003**	**0.1518**	**0.0538**	**0.2056**	**0.0629**	**0.0495**	**0.1124**	**0.0000**	**100.7296**	**100.7296**	**0.0309**	**0.0000**	**101.5012**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0900e-003	1.7500e-003	0.0186	4.0000e-005	3.8400e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003	0.0000	3.7901	3.7901	1.4000e-004	0.0000	3.7936
Total	**2.0900e-003**	**1.7500e-003**	**0.0186**	**4.0000e-005**	**3.8400e-003**	**3.0000e-005**	**3.8700e-003**	**1.0200e-003**	**3.0000e-005**	**1.0500e-003**	**0.0000**	**3.7901**	**3.7901**	**1.4000e-004**	**0.0000**	**3.7936**

3.5 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	0.1386	1.1817	0.8091	1.2000e-003		0.0796	0.0796		0.0747	0.0747	0.0000	107.0193	107.0193	0.0264	0.0000	107.6785
Total	**0.1386**	**1.1817**	**0.8091**	**1.2000e-003**		**0.0796**	**0.0796**		**0.0747**	**0.0747**	**0.0000**	**107.0193**	**107.0193**	**0.0264**	**0.0000**	**107.6785**

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	0.0546	1.4613	0.3916	2.8800e-003	0.0699	0.0124	0.0823	0.0202	0.0119	0.0321	0.0000	277.6436	277.6436	0.0208	0.0000	278.1633
Worker	0.1546	0.1291	1.3760	3.1000e-003	0.2837	2.3800e-003	0.2860	0.0753	2.2000e-003	0.0775	0.0000	279.9718	279.9718	0.0106	0.0000	280.2363
Total	**0.2092**	**1.5904**	**1.7676**	**5.9800e-003**	**0.3535**	**0.0148**	**0.3683**	**0.0955**	**0.0141**	**0.1096**	**0.0000**	**557.6153**	**557.6153**	**0.0314**	**0.0000**	**558.3995**

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	0.1386	1.1817	0.8091	1.2000e-003		0.0796	0.0796		0.0747	0.0747	0.0000	107.0192	107.0192	0.0264	0.0000	107.6783
Total	**0.1386**	**1.1817**	**0.8091**	**1.2000e-003**		**0.0796**	**0.0796**		**0.0747**	**0.0747**	**0.0000**	**107.0192**	**107.0192**	**0.0264**	**0.0000**	**107.6783**

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	0.0546	1.4613	0.3916	2.8800e-003	0.0699	0.0124	0.0823	0.0202	0.0119	0.0321	0.0000	277.6436	277.6436	0.0208	0.0000	278.1633
Worker	0.1546	0.1291	1.3760	3.1000e-003	0.2837	2.3800e-003	0.2860	0.0753	2.2000e-003	0.0775	0.0000	279.9718	279.9718	0.0106	0.0000	280.2363
Total	**0.2092**	**1.5904**	**1.7676**	**5.9800e-003**	**0.3535**	**0.0148**	**0.3683**	**0.0955**	**0.0141**	**0.1096**	**0.0000**	**557.6153**	**557.6153**	**0.0314**	**0.0000**	**558.3995**

3.5 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	0.3497	3.0524	2.2943	3.5100e-003		0.1957	0.1957		0.1840	0.1840	0.0000	310.2862	310.2862	0.0760	0.0000	312.1867
Total	**0.3497**	**3.0524**	**2.2943**	**3.5100e-003**		**0.1957**	**0.1957**		**0.1840**	**0.1840**	**0.0000**	**310.2862**	**310.2862**	**0.0760**	**0.0000**	**312.1867**

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	0.1408	4.0175	1.0351	8.4100e-003	0.2048	0.0290	0.2338	0.0591	0.0277	0.0868	0.0000	811.6598	811.6598	0.0578	0.0000	813.1040
Worker	0.4030	0.3297	3.5386	8.8400e-003	0.8319	6.7600e-003	0.8386	0.2209	6.2300e-003	0.2272	0.0000	798.0130	798.0130	0.0272	0.0000	798.6938

Total	**0.5438**	**4.3472**	**4.5737**	**0.0173**	**1.0367**	**0.0357**	**1.0724**	**0.2800**	**0.0339**	**0.3140**	**0.0000**	**1,609.6728**	**1,609.6728**	**0.0850**	**0.0000**	**1,611.7978**

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	0.3497	3.0524	2.2942	3.5100e-003		0.1957	0.1957		0.1840	0.1840	0.0000	310.2859	310.2859	0.0760	0.0000	312.1864
Total	**0.3497**	**3.0524**	**2.2942**	**3.5100e-003**		**0.1957**	**0.1957**		**0.1840**	**0.1840**	**0.0000**	**310.2859**	**310.2859**	**0.0760**	**0.0000**	**312.1864**

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	0.1408	4.0175	1.0351	8.4100e-003	0.2048	0.0290	0.2338	0.0591	0.0277	0.0868	0.0000	811.6598	811.6598	0.0578	0.0000	813.1040
Worker	0.4030	0.3297	3.5386	8.8400e-003	0.8319	6.7600e-003	0.8386	0.2209	6.2300e-003	0.2272	0.0000	798.0130	798.0130	0.0272	0.0000	798.6938
Total	**0.5438**	**4.3472**	**4.5737**	**0.0173**	**1.0367**	**0.0357**	**1.0724**	**0.2800**	**0.0339**	**0.3140**	**0.0000**	**1,609.6728**	**1,609.6728**	**0.0850**	**0.0000**	**1,611.7978**

3.5 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	0.0236	0.2108	0.1716	2.7000e-004		0.0129	0.0129		0.0121	0.0121	0.0000	23.5104	23.5104	5.7300e-003	0.0000	23.6536
Total	**0.0236**	**0.2108**	**0.1716**	**2.7000e-004**		**0.0129**	**0.0129**		**0.0121**	**0.0121**	**0.0000**	**23.5104**	**23.5104**	**5.7300e-003**	**0.0000**	**23.6536**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.7800e-003	0.2903	0.0728	6.4000e-004	0.0157	1.9000e-003	0.0176	4.5300e-003	1.8200e-003	6.3500e-003	0.0000	61.6452	61.6452	4.2700e-003	0.0000	61.7518
Worker	0.0281	0.0223	0.2422	6.6000e-004	0.0637	5.1000e-004	0.0643	0.0169	4.7000e-004	0.0174	0.0000	59.2209	59.2209	1.8500e-003	0.0000	59.2671
Total	**0.0378**	**0.3126**	**0.3151**	**1.3000e-003**	**0.0794**	**2.4100e-003**	**0.0819**	**0.0215**	**2.2900e-003**	**0.0237**	**0.0000**	**120.8661**	**120.8661**	**6.1200e-003**	**0.0000**	**121.0190**

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	0.0236	0.2108	0.1716	2.7000e-004		0.0129	0.0129		0.0121	0.0121	0.0000	23.5104	23.5104	5.7300e-003	0.0000	23.6536
Total	**0.0236**	**0.2108**	**0.1716**	**2.7000e-004**		**0.0129**	**0.0129**		**0.0121**	**0.0121**	**0.0000**	**23.5104**	**23.5104**	**5.7300e-003**	**0.0000**	**23.6536**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.7800e-003	0.2903	0.0728	6.4000e-004	0.0157	1.9000e-003	0.0176	4.5300e-003	1.8200e-003	6.3500e-003	0.0000	61.6452	61.6452	4.2700e-003	0.0000	61.7518
Worker	0.0281	0.0223	0.2422	6.6000e-004	0.0637	5.1000e-004	0.0643	0.0169	4.7000e-004	0.0174	0.0000	59.2209	59.2209	1.8500e-003	0.0000	59.2671
Total	**0.0378**	**0.3126**	**0.3151**	**1.3000e-003**	**0.0794**	**2.4100e-003**	**0.0819**	**0.0215**	**2.2900e-003**	**0.0237**	**0.0000**	**120.8661**	**120.8661**	**6.1200e-003**	**0.0000**	**121.0190**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	0.0134					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0280**	**0.1524**	**0.1467**	**2.3000e-004**		**8.2500e-003**	**8.2500e-003**		**7.5900e-003**	**7.5900e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.8000e-004	6.2500e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5289	1.5289	5.0000e-005	0.0000	1.5301
Total	**7.2000e-004**	**5.8000e-004**	**6.2500e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.5289**	**1.5289**	**5.0000e-005**	**0.0000**	**1.5301**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	0.0134					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**0.0280**	**0.1524**	**0.1467**	**2.3000e-004**		**8.2500e-003**	**8.2500e-003**		**7.5900e-003**	**7.5900e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.8000e-004	6.2500e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5289	1.5289	5.0000e-005	0.0000	1.5301
Total	**7.2000e-004**	**5.8000e-004**	**6.2500e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.5289**	**1.5289**	**5.0000e-005**	**0.0000**	**1.5301**

3.7 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	6.5654					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5587
Total	**6.5680**	**0.0184**	**0.0184**	**3.0000e-005**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**2.5533**	**2.5533**	**2.2000e-004**	**0.0000**	**2.5587**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-003	4.4500e-003	0.0484	1.3000e-004	0.0127	1.0000e-004	0.0128	3.3800e-003	9.0000e-005	3.4700e-003	0.0000	11.8238	11.8238	3.7000e-004	0.0000	11.8330
Total	**5.6000e-003**	**4.4500e-003**	**0.0484**	**1.3000e-004**	**0.0127**	**1.0000e-004**	**0.0128**	**3.3800e-003**	**9.0000e-005**	**3.4700e-003**	**0.0000**	**11.8238**	**11.8238**	**3.7000e-004**	**0.0000**	**11.8330**

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	6.5654					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5586
Total	**6.5680**	**0.0184**	**0.0184**	**3.0000e-005**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**2.5533**	**2.5533**	**2.2000e-004**	**0.0000**	**2.5586**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-003	4.4500e-003	0.0484	1.3000e-004	0.0127	1.0000e-004	0.0128	3.3800e-003	9.0000e-005	3.4700e-003	0.0000	11.8238	11.8238	3.7000e-004	0.0000	11.8330
Total	**5.6000e-003**	**4.4500e-003**	**0.0484**	**1.3000e-004**	**0.0127**	**1.0000e-004**	**0.0128**	**3.3800e-003**	**9.0000e-005**	**3.4700e-003**	**0.0000**	**11.8238**	**11.8238**	**3.7000e-004**	**0.0000**	**11.8330**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.3175	6.4407	18.1994	0.0728	6.3216	0.0516	6.3732	1.6939	0.0479	1.7419	0.0000	6,734.5588	6,734.5588	0.3033	0.0000	6,742.1407
Unmitigated	1.3175	6.4407	18.1994	0.0728	6.3216	0.0516	6.3732	1.6939	0.0479	1.7419	0.0000	6,734.5588	6,734.5588	0.3033	0.0000	6,742.1407

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Office Park	6,616.20	949.14	438.49	16,636,768	16,636,768
Parking Lot	0.00	0.00	0.00		
Total	6,616.20	949.14	438.49	16,636,768	16,636,768

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
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Office Park	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Parking Lot	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,068.1929	2,068.1929	0.0854	0.0177	2,075.5919
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,068.1929	2,068.1929	0.0854	0.0177	2,075.5919

NaturalGas Mitigated	8.7700e-003	0.0797	0.0670	4.8000e-004		6.0600e-003	6.0600e-003		6.0600e-003	6.0600e-003	0.0000	86.7854	86.7854	1.6600e-003	1.5900e-003	87.3011
NaturalGas Unmitigated	8.7700e-003	0.0797	0.0670	4.8000e-004		6.0600e-003	6.0600e-003		6.0600e-003	6.0600e-003	0.0000	86.7854	86.7854	1.6600e-003	1.5900e-003	87.3011

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	1.6263e+006	8.7700e-003	0.0797	0.0670	4.8000e-004		6.0600e-003	6.0600e-003		6.0600e-003	6.0600e-003	0.0000	86.7854	86.7854	1.6600e-003	1.5900e-003	87.3011
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.7700e-003**	**0.0797**	**0.0670**	**4.8000e-004**		**6.0600e-003**	**6.0600e-003**		**6.0600e-003**	**6.0600e-003**	**0.0000**	**86.7854**	**86.7854**	**1.6600e-003**	**1.5900e-003**	**87.3011**

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	1.6263e+006	8.7700e-003	0.0797	0.0670	4.8000e-004		6.0600e-003	6.0600e-003		6.0600e-003	6.0600e-003	0.0000	86.7854	86.7854	1.6600e-003	1.5900e-003	87.3011
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.7700e-003**	**0.0797**	**0.0670**	**4.8000e-004**		**6.0600e-003**	**6.0600e-003**		**6.0600e-003**	**6.0600e-003**	**0.0000**	**86.7854**	**86.7854**	**1.6600e-003**	**1.5900e-003**	**87.3011**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Office Park	5.64486e+006	1,798.5729	0.0743	0.0154	1,805.0073
Parking Lot	846208	269.6200	0.0111	2.3000e-003	270.5846
Total		**2,068.1929**	**0.0854**	**0.0177**	**2,075.5919**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Office Park	5.64486e+006	1,798.5729	0.0743	0.0154	1,805.0073
Parking Lot	846208	269.6200	0.0111	2.3000e-003	270.5846
Total		**2,068.1929**	**0.0854**	**0.0177**	**2,075.5919**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.3420	3.4000e-004	0.0378	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0734	0.0734	1.9000e-004	0.0000	0.0783
Unmitigated	2.3420	3.4000e-004	0.0378	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0734	0.0734	1.9000e-004	0.0000	0.0783

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	0.2706					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.0678					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.5000e-003	3.4000e-004	0.0378	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0734	0.0734	1.9000e-004	0.0000	0.0783
Total	**2.3420**	**3.4000e-004**	**0.0378**	**0.0000**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**	**0.0000**	**0.0734**	**0.0734**	**1.9000e-004**	**0.0000**	**0.0783**

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	0.2706					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.0678					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.5000e-003	3.4000e-004	0.0378	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0734	0.0734	1.9000e-004	0.0000	0.0783
Total	**2.3420**	**3.4000e-004**	**0.0378**	**0.0000**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**	**0.0000**	**0.0734**	**0.0734**	**1.9000e-004**	**0.0000**	**0.0783**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	654.6123	3.2403	0.0812	759.8248
Unmitigated	654.6123	3.2403	0.0812	759.8248

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	98.6511 / 60.4636	654.6123	3.2403	0.0812	759.8248
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**654.6123**	**3.2403**	**0.0812**	**759.8248**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	98.6511 / 60.4636	654.6123	3.2403	0.0812	759.8248
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**654.6123**	**3.2403**	**0.0812**	**759.8248**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	104.7839	6.1926	0.0000	259.5978
Unmitigated	104.7839	6.1926	0.0000	259.5978

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Office Park	516.2	104.7839	6.1926	0.0000	259.5978
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**104.7839**	**6.1926**	**0.0000**	**259.5978**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Office Park	516.2	104.7839	6.1926	0.0000	259.5978
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**104.7839**	**6.1926**	**0.0000**	**259.5978**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation