HELIX Environmental Planning

Escondido Centre City Parkway Condominium Project

Greenhouse Gas Emissions Technical Report

February 2021 | WRS-06

Prepared for:

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Costa Mesa, CA 92626

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ADT	average daily trips
APN	Assessor's Parcel Number
APS	Alternative Planning Strategy
C_2F_6	hexafluoroethane
CAA	Clean Air Act
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
CARB	California Air Resources Board
CBSC	California Building Standards Code
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CH_4	methane
City	City of Escondido
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CY	cubic yards
E-CAP	City of Escondido Climate Action Plan
EO	Executive Order
GHG	greenhouse gas
GWP	global warming potential
HFC	hydrofluorocarbon
HVAC	heating, ventilation, and air conditioning
IPCC	Intergovernmental Panel on Climate Change
LCFS	Low Carbon Fuel Standard
LLG	Linscott, Law & Greenspan Engineers
LOS	level of service
MMT	million metric tons
MPO	metropolitan planning organization
MT	metric ton
N_2O	nitrous oxide
NASA	National Aeronautics and Space Administration
NHTSA	National Highway Traffic Safety Administration
NOAA	National Oceanic and Atmospheric Administration

ACRONYMS AND ABBREVIATIONS (cont.)

NO_x	nitrogen oxides
PFC	perfluorocarbon
PM_{10}	particulate matter less than 10 microns
$PM_{2.5}$	particulate matter less than 2.5 microns
ppm	parts per million
project	Escondido Centre City Parkway Condominium Project
RTP	Regional Transportation Plan
SAFE	Safer Affordable Fuel-Efficient
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SDG&E	San Diego Gas & Electric
SF_6	hexafluoride
SO_2	sulfur dioxide
USEPA	U.S. Environmental Protection Agency
VMT	vehicle miles traveled
VOC	volatile organic compound
ZEV	zero emissions vehicle

EXECUTIVE SUMMARY

This report presents an assessment of greenhouse gas (GHG) emissions impacts during construction and operation of the proposed Escondido Centre City Parkway Condominium Project (project), located at the southeast corner of the intersection of South Escondido Boulevard and Sherman Way in the City of Escondido, California.

The project would result in emissions of GHGs during construction and operation. Construction sources of GHG emissions include off-road heavy construction equipment and on-road vehicles, including worker commuter vehicles, vendor vehicles, and haul trucks. Operational sources of GHG emissions include area, energy, transportation, water use, and solid waste. The project would be designed to meet the requirements of the 2019 California Building Energy Efficiency Standards (California Code of Regulations [CCR] Title 24, Part 6) and would include a solar photovoltaic system that provides annual electrical output equal to or greater than the project's annual electrical usage.

The project-related construction activities are estimated to generate 995 metric tons (MT) of carbon dioxide equivalent (CO_2e). Construction emissions are amortized over 30 years, such that the proposed construction activities would contribute an average of 33 MT per year of CO_2e emissions. The annual project-related operational and amortized construction GHG emissions are estimated to be 631 MT CO_2e. Project emissions would therefore not exceed the GHG screening threshold of 2,500 MT CO_2e established by the City of Escondido Climate Action Plan (E-CAP), and project impacts related to GHG emissions would be less than significant.

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1.0 INTRODUCTION

This report presents an assessment of greenhouse gas (GHG) emissions impacts during construction and operation of the proposed Escondido Centre City Parkway Condominium Project (project), located at the southeast corner of the intersection of South Escondido Boulevard and Sherman Way in the City of Escondido, California. The report also includes a discussion of the project's potential energy use impacts. Analysis within this report addresses the relevant issues listed in Appendix G of the California Environmental Quality Act (CEQA) Guidelines and addresses compliance with City of Escondido (City) regulations.

1.1 PROJECT LOCATION

The project is located within a 3.47-gross-acre site comprised of five parcels (Assessor's Parcel Numbers [APNs] 236-390-02, -03, -52, -53, and -54). The site reference address is 2200 South Escondido Boulevard, Escondido, CA 92025, which is bounded by Sherman Way and a mobile home park on the north; a tire shop, commercial center, and multi-family residences to the south, single-family residences to the east, and South Escondido Boulevard to the west (see Figure 1, *Regional Location,* and Figure 2, *Aerial Photograph*). The western portion of the site, totaling 2.39 acres, is within the Centre City Specific Plan and is designated as S-P (Specific Plan) and zoned as Specific Plan Area SPA-15 (Specific Plan Area). The eastern portion of the site, totaling 1.08 acres, is designated as Urban-1 (Residential, 5.5 DU/acre) and zoned as R-1-10 (Single Family Residential, 10,000 square feet lot, minimum).

1.2 PROJECT DESCRIPTION

The project proposes to demolish the existing on-site uses and construct 62 condominium units within ten three-story buildings (see Figure 3, *Site Plan*). The unit mix is proposed to include 16 two-bedroom units, 38 three-bedroom units, and 8 four-bedroom units. Each unit would provide garage parking for two vehicles and an additional 16 guest parking spaces and 17 unit-specific driveway spaces would be provided, for a total of 157 parking spaces. In addition, 16 dedicated bike parking spaces would be provided.

The project would provide approximately 30,000 square feet of useable/active shared open space. An additional 21,000 square feet of open space would be divided among private patios and decks and landscaped slopes. Buildings 2 through 9 are designed to have entrances facing landscaped courtyards, while entrances to building 1 and 10 are landscaped along the project's proposed South Escondido Boulevard frontage. Common open space would include group gathering areas with tables and chairs situated under a shade trellis as well as two barbeques and an activity lawn for communal use. Beyond providing outdoor amenities for the project site residents, the common open space also acts as a visual buffer between the site structures and the existing residential neighborhood to the east of Cranston Drive. Landscaping would include nearly 100 low branching mature trees that would be planted throughout the site, providing both shade and visual interest.

Construction of the project is expected to occur over a period of approximately two and a half years. Construction would begin in winter 2021 with site preparation and demolition of the existing on-site uses, and is expected to be completed in summer 2023. Remedial grading is anticipated to require approximately 31,400 cubic yards (CY) of cut and 35,990 CY of fill for a net import of 4,590 CY during

construction. Existing materials such as demolished building materials, concrete, asphalt, and vegetative material would be exported off site.

1.3 PROJECT DESIGN FEATURES

The project would be designed to meet the requirements of the 2019 California Building Energy Efficiency Standards (California Code of Regulations [CCR] Title 24, Part 6). In accordance with the requirements, the project would:

- Include a solar photovoltaic system that provides annual electrical output equal to or greater than the project's annual electrical usage;
- Install ceiling, attic, and wall insulation;
- Install window glazing;
- Have the installation of all heating, ventilation, and air conditioning (HVAC) units verified by a third party.

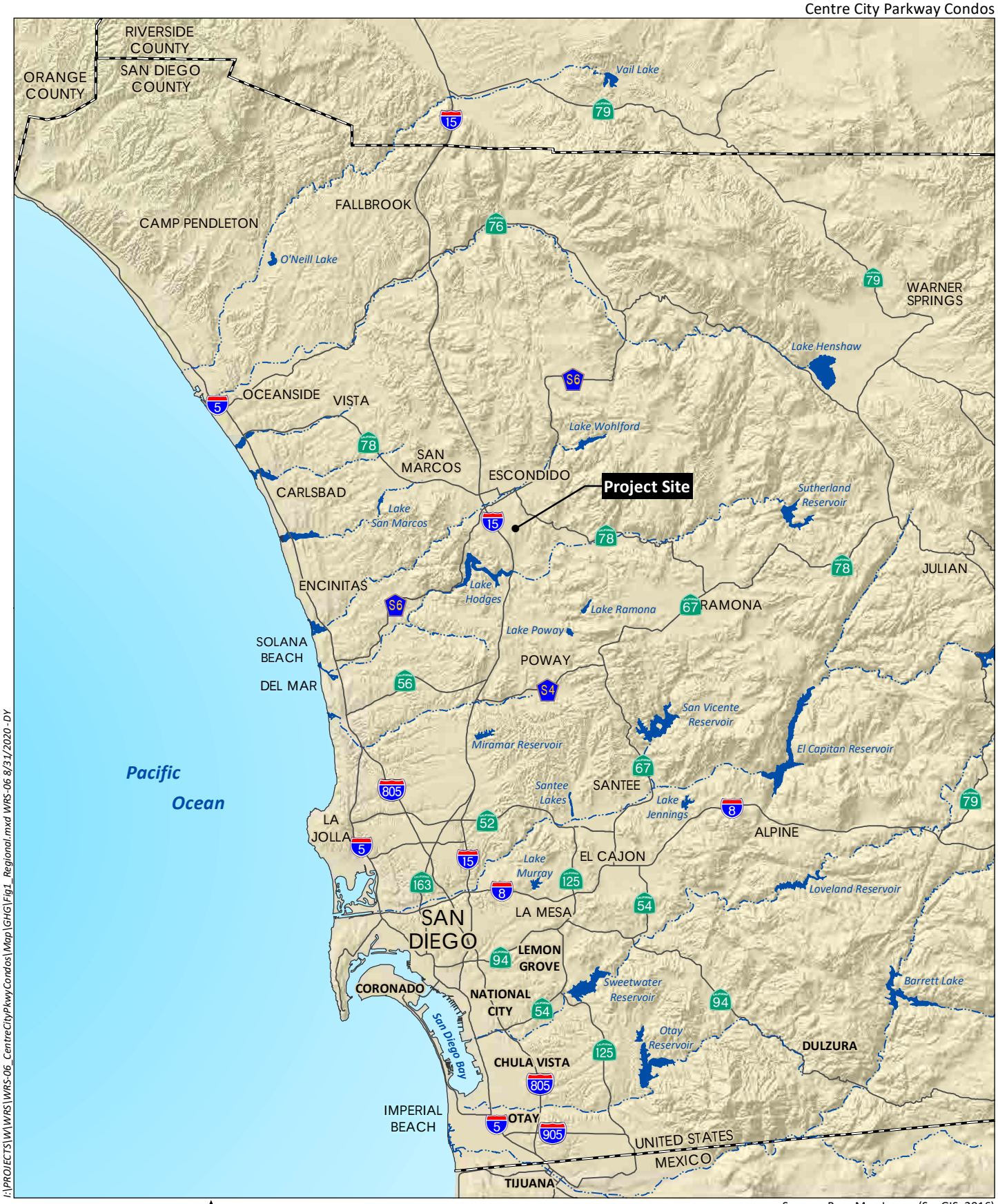
2.0 REGULATORY SETTING

2.1 CLIMATE CHANGE OVERVIEW

Global climate change refers to changes in average climatic conditions on Earth including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by atmospheric gases. These gases are commonly referred to as GHGs because they function like a greenhouse by letting sunlight in but preventing heat from escaping, thus warming the Earth's atmosphere.

GHGs are emitted by natural processes and human (anthropogenic) activities. Anthropogenic GHG emissions are primarily associated with: (1) the burning of fossil fuels during motorized transport, electricity generation, natural gas consumption, industrial activity, manufacturing, and other activities; (2) deforestation; (3) agricultural activity; and (4) solid waste decomposition.

The temperature record shows a decades-long trend of warming, with 2016 global surface temperatures ranking as the warmest year on record since 1880 (National Aeronautics and Space Administration [NASA] 2018). The newest release in long-term warming trends announced 2017 ranked as the second warmest year with an increase of 1.62 degrees Fahrenheit compared to the 1951-1980 average (NASA 2018). GHG emissions from human activities are the most significant driver of observed climate change since the mid-20th century (United Nations Intergovernmental Panel on Climate Change [IPCC] 2013). The IPCC constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The statistical models show a "high confidence" that temperature increase caused by anthropogenic GHG emissions could be kept to less than two degrees Celsius relative to pre-industrial levels if atmospheric concentrations are stabilized at about 450 parts per million (ppm) carbon dioxide equivalent (CO_2e) by the year 2100 (IPCC 2014).



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0 8 Miles

Source: Base Map Layers (SanGIS, 2016)

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Regional Location

Figure 1

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Source: Aerial (SanGIS, 2017)

Aerial Photograph

Figure 2

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0 100 Feet

Source: Aerial (SanGIS, 2017)

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Site Plan

Figure 3

2.2 GREENHOUSE GASES

The GHGs defined under California's AB 32 include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

Carbon dioxide. CO_2 is the most important and common GHG associated with human activity. CO_2 is an odorless, colorless GHG. Natural sources include the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungi; evaporation from oceans; and volcanic outgassing. Anthropogenic sources of CO_2 include burning fuels, such as coal, oil, natural gas, and wood. Data from ice cores indicate that CO_2 concentrations remained steady prior to the current period for approximately 10,000 years. The atmospheric CO_2 concentration in 2010 was 390 ppm, 39 percent above the concentration at the start of the Industrial Revolution (approximately 280 ppm in 1750). In July 2020, the CO_2 concentration was 414 ppm, a 48 percent increase since 1750 (National Oceanic and Atmospheric Administration [NOAA] 2020).

Methane. CH_4 is the main component of natural gas used in homes. A natural source of methane is from the decay of organic matter. Geological deposits known as natural gas fields contain methane, which is extracted for fuel. Other sources are from decay of organic material in landfills, fermentation of manure, and cattle digestion.

Nitrous oxide. N_2O is produced by both natural and human-related sources. N_2O is emitted during agricultural and industrial activities, as well as during the combustion of fossil fuels and solid waste. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic (fatty) acid production, and nitric acid production.

Hydrofluorocarbons. Fluorocarbons are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. Chlorofluorocarbons are nontoxic, nonflammable, insoluble, and chemically nonreactive in the troposphere (the level of air at Earth's surface). Chlorofluorocarbons were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone; therefore, their production was stopped as required by the 1989 Montreal Protocol.

Sulfur hexafluoride. SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.

GHGs have long atmospheric lifetimes that range from one year to several thousand years. Long atmospheric lifetimes allow for GHG emissions to disperse around the globe. Because GHG emissions vary widely in the power of their climatic effects, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO_2. For example, because methane and N_2O are approximately 25 and 298 times more powerful than CO_2, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 25 and 298, respectively (CO_2 has a GWP of 1). Estimates of GHG emissions are often presented in CO_2e, which weigh each gas by its GWP. Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted. Emissions of CO_2e are commonly presented in metric tons (MT; 1 MT equals approximately 2,205 pounds). The atmospheric lifetime and GWP of selected

GHGs are summarized in Table 1, *Global Warming Potentials and Atmospheric Lifetimes*. As shown in the table, the GWP for common GHGs ranges from 1 (CO_2) to 22,800 (SF_6).

Table 1
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES

Greenhouse Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO_2)	50-200	1
Methane (CH_4)	12	25
Nitrous Oxide (N_2O)	114	298
HFC-134a	14	1,430
PFC: Tetrafluoromethane (CF_4)	50,000	7,390
PFC: Hexafluoroethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

Source: IPCC 2007
HFC: hydrofluorocarbon; PFC: perfluorocarbon

2.3 REGULATORY FRAMEWORK

2.3.1 Federal Greenhouse Gas Regulations

2.3.1.1 Federal Clean Air Act

The U.S. Supreme Court ruled on April 2, 2007, in *Massachusetts v. U.S. Environmental Protection Agency* (USEPA*)* that CO_2 is an air pollutant, as defined under the Clean Air Act (CAA), and that the USEPA has the authority to regulate emissions of GHGs. The USEPA announced that GHGs (including CO_2, CH_4, N_2O, HFC, PFC, and SF_6) threaten the public health and welfare of the American people.

2.3.1.2 Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards

The USEPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) worked together on developing a national program of regulations to reduce GHG emissions and to improve fuel economy of light-duty vehicles. On April 1, 2010, the USEPA and NHTSA announced a joint Final Rulemaking establishing standards for 2012 through 2016 model year vehicles. This was followed up on October 15, 2012, when the agencies issued a Final Rulemaking with standards for model years 2017 through 2025. On August 2, 2018, the agencies released a notice of proposed rulemaking—the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks. The purpose of the SAFE Vehicles Rule is "to correct the national automobile fuel economy and GHG emissions standards to give the American people greater access to safer, more affordable vehicles that are cleaner for the environment." The direct effect of the rule is to eliminate the standards that were put in place to gradually raise average fuel economy for passenger cars and light trucks under test conditions from 37 miles per gallon in 2020 to 50 miles per gallon in 2025. By contrast, the new SAFE Vehicles Rule freezes the average fuel economy level standards indefinitely at the 2020 levels. The new SAFE Vehicles Rule also results in the withdraw of the waiver previously provided to California for that State's GHG and zero emissions vehicle (ZEV) programs under section 209 of the CAA. The combined USEPA GHG emission standards and NHTSA Corporate Average Fuel Economy (CAFE) standards resolve previously conflicting requirements under both federal

programs and the standards of the State of California and other states that have adopted the California standards (USEPA and NHTSA 2018 and 2012).

2.3.2 California Greenhouse Gas Regulations

There are numerous State plans, policies, regulations, and laws related to GHG emissions and global climate change. Following is a discussion of some of these plans, policies, and regulations that (1) establish overall State policies and GHG emission reduction targets; (2) require State or local actions that result in direct or indirect GHG emission reductions for the proposed project; and (3) require CEQA analysis of GHG emissions.

2.3.2.1 California Code of Regulations, Title 24, Part 6

CCR Title 24 Part 6: California's Building Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Energy-efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for water heating) results in GHG emissions.

The Title 24 standards are updated approximately every three years to allow consideration and possible incorporation of new energy efficiency technologies and methods. The latest update to the Title 24 standards occurred in 2019 and went into effect on January 1, 2020. The Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The standards are divided into three basic sets. First, there is a set of mandatory requirements that apply to all buildings. Second, there is a set of performance standards—the energy budgets—that vary by climate zone (of which there are 16 in California) and building type; thus, the standards are tailored to local conditions. Finally, the third set constitutes an alternative to the performance standards, which is a set of prescriptive packages that are basically a recipe or a checklist compliance approach.

2.3.2.2 California Green Building Standards Code

The California Green Building Standards Code (CALGreen; CCR Title 24, Part 11) is a code with mandatory requirements for new residential and nonresidential buildings (including industrial buildings) throughout California. The code is Part 11 of the California Building Standards Code (CBSC) in Title 24 of the CCR. The current 2019 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings went into effect on January 1, 2020.

The development of CALGreen is intended to (1) cause a reduction in GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. In short, the code is established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impact during and after construction.

CALGreen contains requirements for storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building

commissioning, which is a process for the verification that all building systems, like heating and cooling equipment and lighting systems, are functioning at their maximum efficiency.

2.3.2.3 Executive Order S-3-05

On June 1, 2005, Executive Order (EO) S-3-05 proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To avoid or reduce climate change impacts, EO S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. EOs are not laws and can only provide the governor's direction to state agencies to act within their authority. Legislation is required to enact the goals of EO S-3-05 and establish a framework for statewide implementation. Assembly Bill (AB) 32, described below, mandates the 2020 GHG reduction goals of EO S-3-05.

2.3.2.4 Executive Order B-30-15

On April 29, 2015, EO B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of leading international governments, including the 28-nation European Union. California is on track to meet or exceed the target of reducing greenhouse gas emissions to 1990 levels by 2020, as established in AB 32. California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the goal established by EO S-3-05 of reducing emissions 80 percent under 1990 levels by 2050. Senate Bill (SB) 32, described below, mandates the 2030 GHG reduction goals of EO B-30-15.

2.3.2.5 Assembly Bill 32 – Global Warming Solution Act of 2006

The California Global Warming Solutions Act of 2006, widely known as AB 32, requires that the California Air Resources Board (CARB) develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 enacted the goals of EO S-3-05.

2.3.2.6 Senate Bill 32

SB 32 (Amendments to the California Global Warming Solutions Action of 2006) extends California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EO B-30-15 of 80 percent below 1990 emissions levels by 2050.

2.3.2.7 Assembly Bill 197

A condition of approval for SB 32 was the passage of AB 197. AB 197 requires that CARB consider the social costs of GHG emissions and prioritize direct reductions in GHG emissions at mobile sources and large stationary sources. AB 197 also gives the California legislature more oversight over CARB through

the addition of two legislatively appointed members to the CARB Board and the establishment a legislative committee to make recommendations about CARB programs to the legislature.

2.3.2.8 Senate Bill 375

SB 375, the Sustainable Communities and Climate Protection Act of 2008, supports the State's climate action goals to reduce GHG emissions through coordinated transportation and land use planning with the goal of more sustainable communities.

Under the Sustainable Communities Act, CARB sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established these targets for 2020 and 2035 for each region covered by one of the State's metropolitan planning organizations (MPO). CARB periodically reviews and updates the targets, as needed.

Each of California's MPOs must prepare a Sustainable Communities Strategy (SCS) as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. CARB must review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional GHG targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate alternative planning strategy (APS) to meet the targets. The APS is not a part of the RTP. Qualified projects consistent with an approved SCS or Alternative Planning Strategy categorized as "transit priority projects" would receive incentives to streamline CEQA processing.

2.3.2.9 Senate Bill 743

On September 27, 2013, California Governor Jerry Brown signed SB 743 into law and started a process that changes transportation impact analysis as part of CEQA compliance. These changes include the elimination of auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts for land use projects and plans in California. Further, parking impacts will not be considered significant impacts on the environment for select development projects within infill areas with nearby frequent transit service. According to the legislative intent contained in SB 743, these changes to current practice were necessary to more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHG emissions.

2.3.2.10 Senate Bill 97

SB 97 required the Governor's Office of Planning and Research to develop recommended amendments to the State CEQA Guidelines for addressing GHG emissions, including the effects associated with transportation and energy consumption. The amendments became effective on March 18, 2010. The OPR guidance states that the lead agency can rely on qualitative or other performance-based standards for estimating the significance of GHG emissions, although the new CEQA Guidelines did not establish a threshold of significance.

2.3.2.11 Assembly Bill 1493 – Vehicular Emissions of Greenhouse Gases

AB 1493 (Pavley) requires that CARB develop and adopt regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State." On September 24, 2009, CARB adopted amendments to the Pavley regulations that intend to reduce GHG emissions in new passenger vehicles from 2009 through 2016. The amendments bind California's enforcement of AB 1493 (starting in 2009), while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to merge its rules with the federal CAFE rules for passenger vehicles. In January 2012, CARB approved a new emissions-control program for model years 2017 through 2025. However, as described previously, the adoption of the new SAFE Vehicles Rule results in the withdrawal of the waiver previously provided to California for that State's GHG and ZEV programs, freezing the average fuel economy level standards indefinitely at the 2020 levels.

2.3.2.12 Assembly Bill 341

The state legislature enacted AB 341 (California Public Resource Code Section 42649.2), increasing the diversion target to 75 percent statewide. AB 341 requires all businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place. The final regulation was approved by the Office of Administrative Law on May 7, 2012 and went into effect on July 1, 2012.

2.3.2.13 Executive Order S-01-07 – Low Carbon Fuel Standard

This EO, signed by Governor Schwarzenegger on January 18, 2007, directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by the year 2020. It orders that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California and directs CARB to determine whether a LCFS can be adopted as a discrete early action measure pursuant to AB 32. CARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in April 2010. Although challenged in 2011, the Ninth Circuit reversed the District Court's opinion and rejected arguments that implementing LCFS violates the interstate commerce clause in September 2013. CARB is therefore continuing to implement the LCFS statewide.

2.3.2.14 Senate Bill 350

Approved by Governor Brown on October 7, 2015, SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This will increase the use of Renewables Portfolio Standard eligible resources, including solar, wind, biomass, and geothermal. In addition, large utilities are required to develop and submit Integrated Resource Plans to detail how each entity will meet their customers resource needs, reduce greenhouse gas emissions, and increase the use of clean energy.

2.3.2.15 California Air Resources Board: Climate Change Scoping Plan

On December 11, 2008, CARB adopted the Scoping Plan (CARB 2008) as directed by AB 32. The Scoping Plan proposes a set of actions designed to reduce overall GHG emissions in California to the levels required by AB 32. Measures applicable to development projects include those related to energy-efficiency building and appliance standards, the use of renewable sources for electricity generation, regional transportation targets, and green building strategy. Relative to transportation, the Scoping Plan includes nine measures or recommended actions related to reducing vehicle miles traveled (VMT) and

vehicle GHG emissions through fuel and efficiency measures. These measures would be implemented statewide rather than on a project by project basis.

CARB released the First Update to the Climate Change Scoping Plan in May 2014 to provide information on the development of measure-specific regulations and to adjust projections in consideration of the economic recession (CARB 2014). To determine the amount of GHG emission reductions needed to achieve the goal of AB 32 (i.e., 1990 levels by 2020) CARB developed a forecast of the AB 32 Baseline 2020 emissions, which is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. CARB estimated the AB 32 Baseline 2020 to be 509 million metric tons (MMT) of CO_2e. The Scoping Plan's current estimate of the necessary GHG emission reductions is 78 MMT CO_2e (CARB 2014). This represents an approximately 15 percent reduction. CARB is forecasting that this would be achieved through the following reductions by sector: 25 MMT CO_2e for energy, 23 MMT CO_2e for transportation, 5 MMT CO_2e for high-GWP GHGs, and 2 MMT CO_2e for waste. The remaining 23 MMT CO_2e would be achieved through Cap-and-Trade Program reductions. This reduction is flexible—if CARB receives new information and changes the other sectors' reductions to be less than expected, the agency can increase the Cap-and-Trade reduction (and vice versa).

In response to EO B-30-15 and SB 32, all state agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. CARB was directed to update the Scoping Plan to reflect the 2030 target. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue driving down emissions. In December 2017, CARB adopted the 2017 Climate Change Scoping Plan Update, Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target, to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. The Scoping Plan Update establishes a proposed framework for California to meet a 40 percent reduction in GHGs by 2030 compared to 1990 levels (CARB 2017).

2.3.3 Local

2.3.3.1 City of Escondido Climate Action Plan

The City of Escondido Climate Action Plan (E-CAP) that was adopted in December 2013 (City 2013a). A lead agency may conclude that a project's GHG impact is not cumulatively significant if the project demonstrates consistency with the E-CAP, which is a qualified GHG reduction plan under CEQA (CEQA Guidelines Section 15183.5[h][3]).

Through the E-CAP, the City of Escondido has established goals and policies that incorporate environmental responsibility into its daily management of residential, commercial, and industrial growth, education, energy and water use, air quality, transportation, waste reduction, economic development and open space and natural habitats to further their commitment. Following the state's adopted AB 32 GHG reduction target, the City has set a goal to reduce emissions back to 1990 levels by the year 2020. This target was calculated as a 15 percent decrease from 2005 levels, as recommended in the AB 32 Scoping Plan. The estimated community-wide emissions for the year 2020, based on population and housing growth projections associated with the assumptions used in the proposed General Plan Update, are 992,583 MT CO_2e. To reach the reduction target, the City of Escondido must offset this growth in emissions and reduce community-wide emissions to 788,176 MT CO_2e by the year 2020. The development of the E-CAP coincided with the City of Escondido's General Plan Update. A

community-wide emissions inventory was also calculated for the horizon year of 2035. The residential and commercial growth rates from the General Plan Update were used to estimate the 2035 emissions.

To reach the reduction target, the City has included additional local reduction measures in the E-CAP which encourage energy efficiency and renewable energy in buildings, transit-oriented planning, water conservation, and increased waste diversion. For development projects, the E-CAP established a 2,500 MT CO_2e per year screening level threshold. Annual project CO_2e emissions less than the threshold would be considered to have less than significant impact. For projects that exceed the screening threshold, a less than significant impact can be determined through the completion of an additional screening table. The purpose of the screening table is to provide guidance in measuring the reduction of GHG emissions attributable to design and construction measures incorporated into the project.

2.3.3.2 City of Escondido Municipal Code Chapter 33, Article 47, Environmental Quality Regulations

The Environmental Quality Regulations implement CEQA and the CEQA Guidelines by applying provisions contained in CEQA to development projects proposed within the City. Section 33-924(a)(7)(A), (B), and (C) pertain to GHG emission impacts. In situations where a negative declaration is otherwise appropriate, the following incremental GHG emissions are generally not considered significant:

a. Projects that do not generate more than 2,500 MT CO_2e GHG emissions;

b. Projects generating more than 2,500 MT CO_2e that have achieved 100 points implementing reduction measures outlined in the E-CAP screening tables, adopted by separate resolution; or

c. Project generating more than 2,500 MT CO_2e that demonstrate through a project-specific analysis quantifying GHG emissions that through mitigation and design features, the project reduces GHG emissions consistent with the E-CAP.

3.0 EXISTING CONDITIONS

For 2016, total GHG emissions worldwide were estimated at 49,358 MMT CO_2e (World Resources Institute 2020). The U.S. contributed the second largest portion of GHG emissions (behind China) at 12 percent of global emissions, with 5,833 MMT CO_2e in 2016. On a national level in 2014, approximately 27 percent of GHG emissions are associated with transportation and about 38 percent are associated with electricity generation (World Resources Institute 2020).

CARB performs statewide GHG inventories. The inventory is divided into six broad sectors; agriculture and forestry, commercial, electricity generation, industrial, residential, and transportation. Emissions are quantified in MMT CO_2e. Table 2, *California Greenhouse Gas Emissions by Sector*, shows the estimated statewide GHG emissions for the years 1990, 2000, 2010, and 2017.

Table 2
CALIFORNIA GREENHOUSE GAS EMISSIONS BY SECTOR
(MMT CO_2e)

Sector	1990	2000	2010	2017
Agriculture and Forestry	23.4 (5%)	31.0 (7%)	33.7 (8%)	32.4 (8%)
Commercial	14.4 (3%)	14.1 (3%)	20.1 (4%)	23.3 (5%)
Electricity Generation	110.6 (26%)	105.3 (22%)	90.6 (20%)	62.6 (15%)
Industrial	103.0 (24%)	105.8 (22%)	101.8 (23%)	101.1 (24%)
Residential	29.7 (7%)	31.7 (7%)	32.1 (7%)	30.4 (7%)
Transportation	150.7 (35%)	183.2 (39%)	170.2 (38%)	174.3 (41%)
TOTAL	**433.3**	**471.7**	**448.5**	**424.1**

Source: CARB 2007 and CARB 2019
MMT = million metric tons; CO_2e = carbon dioxide equivalent

As shown in Table 2, statewide GHG emissions totaled 433 MMT CO_2e in 1990, 472 MMT CO_2e in 2000, 448 MMT CO_2e in 2010, and 424 MMT CO_2e in 2017. Transportation-related emissions consistently contribute the most GHG emissions, followed by industrial emissions and electricity generation.

A City of Escondido regional emissions inventory was prepared as part of their E-CAP. The 2010 emissions inventory for the City of Escondido is duplicated below in Table 3, *City of Escondido Greenhouse Gas Emissions by Sector*. The sectors included in this inventory are somewhat different from those in the statewide inventory.

Table 3
CITY OF ESCONDIDO GREENHOUSE GAS EMISSIONS BY SECTOR
(MT CO_2e)

Sector	2010
Transportation	368,622
Energy	395,565
Area Sources	52,559
Water and Wastewater	25,360
Solid Waste	41,724
Construction	2,288
TOTAL	**886,118**

Source: City of Escondido 2013a

Unlike statewide emissions, energy-related GHG emissions contributed the most citywide.

4.0 METHODOLOGY AND SIGNIFICANCE CRITERIA

4.1 METHODOLOGY

Criteria pollutant and GHG emissions were calculated using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2. CalEEMod is a computer model used to estimate criteria air pollutant and GHG emissions resulting from construction and operation of land development projects throughout the

state of California. CalEEMod was developed by the South Coast Air Quality Management District (SCAQMD) with the input of several air quality management and pollution control districts. The model calculates emissions of carbon monoxide (CO), particulate matter less than 10 microns (PM_{10}), particulate matter less than 2.5 microns ($PM_{2.5}$), sulfur dioxide (SO_2), the ozone precursors volatile organic compounds (VOC) and nitrogen oxides (NO_X), and the GHG emissions for CO_2, CH_4, and N_2O. The input data and subsequent construction and operation emission estimates for the proposed project are discussed below. CalEEMod output files are included in Appendix A.

4.2 ASSUMPTIONS

4.2.1 Construction Emissions

As described above, construction emissions are assessed using CalEEMod. CalEEMod contains OFFROAD2011 emission factors and EMFAC2014 emission factors from CARB's models for off-road equipment and on-road vehicles, respectively. The construction analysis included modeling of the projected construction equipment that would be used during each construction activity and quantities of earth and debris to be moved. The model calculates emissions of CH_4, N_2O, and CO_2 and reports them as CO_2e.

Construction input data for CalEEMod include, but are not limited to, (1) the anticipated start and finish dates of construction activity; (2) inventories of construction equipment to be used; (3) areas to be excavated and graded; and (4) volumes of materials to be exported from and imported to the project area. The analysis assessed maximum daily emissions from individual construction activities, including demolition, site preparation, grading, soil hauling, underground utilities/infrastructure installation, building construction, paving, and architectural coating. Off-road heavy equipment would be required during each of these construction phases, except for the soil hauling phase, which would involve on-road haul trucks. Construction equipment estimates are based on model defaults. Table 4, *Construction Equipment Assumptions*, presents a summary of the assumed equipment that would be involved in various phases of construction.

Table 4
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Phase	Equipment	Number
Demolition	Concrete/Industrial Saw	1
	Excavator	3
	Rubber Tired Dozer	2
Site Preparation	Rubber Tired Dozer	3
	Tractor/Loader/Backhoe	4
Grading	Excavator	1
	Grader	1
	Rubber Tired Dozer	1
	Tractor/Loader/Backhoe	3
Underground Utilities/Infrastructure	Excavator	1
	Tractor/Loader/Backhoe	2
Building Construction	Crane	1
	Forklift	3
	Generator Set	1
	Tractor/Loader/Backhoe	3

Table 4
CONSTRUCTION EQUIPMENT ASSUMPTIONS (CONTINUED)

Construction Phase	Equipment	Number
Building Construction	Welder	1
Paving	Cement and Mortar Mixers	1
	Pavers	1
	Paving Equipment	1
	Roller	2
	Tractor/Loader/Backhoe	1
Architectural Coating	Air Compressor	1

Source: CalEEMod (output data, including equipment horsepower, is provided in Appendix A)

The construction schedule was determined by input from the Project Applicant. As shown in Table 5, *Anticipated Construction Schedule*, for modeling purposes construction is assumed to start in February 2021 and is projected to end August 2023. In actuality, construction would start at a later date than assumed herein, and the analysis presented is therefore conservative for reasons described below.

Table 5
ANTICIPATED CONSTRUCTION SCHEDULE

Construction Activity	Construction Period		
	Start	End	Number of Working Days
Demolition	2/1/2021	2/26/2021	20
Site Preparation	2/1/2021	2/26/2021	20
Grading	4/1/2021	7/30/2021	87
Soil Hauling	7/27/2021	7/30/2021	4
Underground Utilities/Infrastructure	8/2/2021	11/30/2021	87
Building Construction	12/1/2021	7/31/2023	434
Paving	8/1/2023	8/24/2023	18
Architectural Coating	8/1/2023	8/24/2023	18

Source: Input from Project Applicant

Grading of the site would require approximately 4,590 CY of import. It was indicated by the Project Applicant that this import would occur via 328 haul trucks loads over four working days. Demolition would be required for existing on-site structures and pavements.

The quantity, duration, and the intensity of construction activity influence the amount of construction emissions and their related pollutant concentrations that occur at any one time. As such, the emission forecasts provided herein reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction is occurring in a relatively intensive manner. Because of this conservative assumption, actual emissions could be less than those forecasted. If construction is delayed or occurs over a longer time period, emissions could be reduced because of (1) a more modern and cleaner-burning construction equipment fleet mix than incorporated in the CalEEMod, and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval). A complete listing of the assumptions used in the analysis and model output is provided in Appendix A of this report.

CalEEMod estimates construction emissions for each year of construction activity based on the annual construction equipment profile and other factors determined as needed to complete all phases of construction by the target completion year. As such, each year of construction activity has varying quantities of GHG emissions. Per City guidance, total construction GHG emissions resulting from the project are amortized over 30 years and added to operational GHG emissions.

4.2.2 Operation Emissions

Operational impacts were estimated using CalEEMod. Operational sources of emissions include area, energy, transportation, water use, and solid waste.

4.2.2.1 Area Sources

Project area sources include emissions from landscaping equipment. GHG emissions associated with area sources were estimated using the CalEEMod default values for the project.

4.2.2.2 Energy

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage (non-hearth). The project would use electricity for lighting, heating, and cooling. Electricity generation typically entails the combustion of fossil fuels, including natural gas and coal, which are then stored and transported to end users. A building's electricity use is thus associated with the off-site or indirect emission of GHGs at the source of electricity generation (power plant). The electricity and natural gas use associated with the project was estimated assuming CalEEMod default consumption rates and emission factors for San Diego Gas & Electric (SDG&E), which would be the energy source provider to the site.

The project would be subject to the 2019 Title 24 Building Energy Efficiency Standards, which require new residential developments three stories or less to include a solar photovoltaic system that provides annual electrical output equal to or greater than the project's annual electrical usage. It was therefore assumed that 100 percent of the project's electrical usage would be provided by a solar photovoltaic system.

4.2.2.3 Vehicular (Mobile) Sources

Operational emissions from mobile source emissions are associated with project-related vehicle trip generation. Operational emissions from mobile source emissions are associated with project-related vehicle trip generation. According to the Transportation Impact Analysis prepared for the project by Linscott, Law and Greenspan, Engineers (LLG; 2021), the project would generate 496 average daily trips (ADT). CalEEMod default vehicle speeds, trip purpose, and trip distances were applied to the trips.

4.2.2.4 Solid Waste

Solid waste generated by the project would also contribute to GHG emissions. Treatment and disposal of solid waste produces emissions of methane. Emissions were estimated using CalEEMod defaults and a 75 percent operational solid waste diversion rate in accordance AB 341 standards.

4.2.2.5 Water Sources

Water-related GHG emissions are from the conveyance and treatment of water. The California Energy Commission's 2006 Refining Estimates of Water-Related Energy Use in California defines average energy values for water in southern California. These values are used in CalEEMod to establish default water-related emission factors. Emissions were estimated using these defaults and a 20 percent reduction in potable water use and wastewater generation in accordance with CALGreen requirements.

4.3 SIGNIFICANCE CRITERIA

4.3.1 Greenhouse Gas Emissions

Given the relatively small levels of emissions generated by a typical development in relationship to the total amount of GHG emissions generated on a national or global basis, individual development projects are not expected to result in significant, direct impacts with respect to climate change. However, given the magnitude of the impact of GHG emissions on the global climate, GHG emissions from new development could result in significant, cumulative impacts with respect to climate change. Thus, the potential for a significant GHG impact is limited to cumulative impacts.

According to Appendix G of the CEQA Guidelines, a project would have a significant environmental impact if it would:

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

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

The E-CAP establishes a screening level threshold of 2,500 MT CO_2e per year (City 2013b). City guidance also recommends including construction emissions (amortized over a typical duration of 30 years) in the comparison to the screening threshold. For projects that exceed this screening level, compliance with the E-CAP Screening Tables or a reduction of 20.6 percent over the unmitigated emissions conditions must be demonstrated.

4.3.2 Energy Use

According to Appendix G of the CEQA Guidelines, a project would have a significant environmental impact if it would:

1. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or

2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

5.0 IMPACT ANALYSIS

5.1 GREENHOUSE GAS EMISSIONS

This section evaluates potential impacts of the proposed project related to the generation of GHG emissions.

5.1.1 Project Emissions Generation

5.1.1.1 Construction

Project construction GHG emissions were estimated using CalEEMod as described in Section 4.1. Project-specific input was based on general information provided in Section 1.0 and default model settings to estimate reasonably conservative conditions. Additional details of phasing, selection of construction equipment, and other input parameters, including CalEEMod data, are included in Appendix A.

Emissions of GHGs related to the construction of the project would be temporary. As shown in Table 6, *Estimated Construction GHG Emissions*, total GHG emissions associated with construction of the project are estimated at 995 MT CO_2e. For construction emissions, City guidance recommends that the emissions be amortized (i.e., averaged) over 30 years and added to operational emissions. Averaged over 30 years, the proposed construction activities would contribute approximately 33 MT CO_2e emissions per year.

Table 6
ESTIMATED CONSTRUCTION GHG EMISSIONS

Phase	Emissions (MT CO_2e)
Demolition	37
Site Preparation	35
Grading	119
Soil Hauling	25
Underground Utilities/Infrastructure	46
Building Construction	714
Paving	16
Architectural Coating	3
TOTAL[1]	**995**
Amortized Construction Emissions[2]	33

Source: CalEEMod (output data is provided in Appendix A)
[1] The total presented is the sum of the unrounded values.
[2] Construction emissions are amortized over 30 years in accordance with City guidance.
MT = metric ton; CO_2e = carbon dioxide equivalent

5.1.1.2 Operations

Operational sources of GHG emissions include: (1) area sources (landscaping equipment); (2) energy use; (3) vehicle use; (4) solid waste generation; and (5) water conveyance and treatment. Project operational GHG emissions were estimated using CalEEMod as described in Section 4.1. Additional details, including CalEEMod data, are included in Appendix A.

Table 7, *Total Estimated Operational GHG Emissions*, includes the total annual emissions for the project. The emissions include the amortized annual construction emissions anticipated for the project. Appendix A contains the CalEEMod output files for the project. As shown in Table 7, the project would result in annual GHG emissions of 634 MT CO_2e. This value is less than the City CAP's 2,500 MT CO_2e per year screening threshold.

Table 7
TOTAL ESTIMATED OPERATIONAL GHG EMISSIONS

Emission Sources	Emissions (MT CO_2e per year)
Area Sources	1
Energy Sources	25
Vehicular (Mobile) Sources	537
Solid Waste Sources	11
Water Sources	28
Operational Subtotal	601
Construction (Annualized over 30 years)	30
TOTAL OPERATIONAL EMISSIONS	**634**

Source: CalEEMod output data is provided in Appendix A
MT = metric ton; CO_2e = carbon dioxide equivalent

For projects that exceed the screening threshold, a less than significant impact can be determined through the completion of an additional screening table; however, as shown in Table 7, this project is below the screening threshold of 2,500 MT CO_2e and additional analysis is not necessary. The increase in GHG emissions would therefore not be cumulatively considerable, and the impact would be less than significant.

5.1.2 Consistency with Local Plans Adopted for the Purpose of Reducing GHG Emissions

There are numerous State plans, policies and regulations adopted for the purpose of reducing GHG emissions. The principal overall State plan and policy is AB 32, the California Global Warming Solutions Act of 2006. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020. SB 32 requires further reductions of 40 percent below 1990 levels by 2030. Statewide plans and regulations such as GHG emissions standards for vehicles (AB 1493), the LCFS, and regulations requiring an increasing fraction of electricity to be generated from renewable sources are being implemented at the statewide level; as such, compliance at the project level is not addressed. Therefore, the proposed Project does not conflict with those plans and regulations.

As previously discussed, the E-CAP applies a screening threshold of 2,500 MT CO_2e per year to comply with the reduction goals of AB 32. AB 32 sets goals only through 2020 and the project would not be operational until 2023; therefore, SB 32 would be the state-wide policy relevant to the project. However, until the E-CAP is updated to reflect the reduction goals of SB 32, the current E-CAP is the relevant plan for the project to comply with. Because the proposed project's increase in GHG emissions would be less than the City's screening threshold, it would be consistent with the City's CAP. Implementation of the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. This would represent a less than significant impact.

5.2 ENERGY USE

This section evaluates potential impacts of the proposed project related to energy use.

5.2.1 Project Energy Consumption

5.2.1.1 Construction

Project construction would require the use of heavy off-road construction equipment for the various construction phases, as shown in Table 4. Construction would also involve construction workers commuting to and from the project site, and vendor vehicles and haul trucks delivering materials to and from the site. Construction equipment and vehicles would require gasoline, diesel, and potentially other fuel sources to operate. Construction activities would implement standard industry BMPs, such as those related to using appropriately sized equipment to accomplish the construction tasks and limiting idling, which would reduce the amount of fuel consumed by equipment. The project's short-term construction energy use would be limited to that which is necessary to achieve successful completion of project construction; therefore, project construction would not use energy in a wasteful, inefficient, or unnecessary manner.

In addition, construction is an ongoing activity in the City, the County, and the State. If these pieces of equipment weren't being used for construction of the proposed project, they would likely be used elsewhere. As such, project construction would not result in a substantial increase in energy usage over what would occur if the project did not get constructed.

5.2.1.2 Operation

Operation of the project would require electricity and natural gas for multiple purposes including, but not limited to, building heating and cooling, lighting, appliances, and electronics. In accordance with the requirements of the 2019 California Building Energy Efficiency Standards (CCR Title 24, Part 6), the project would include a solar photovoltaic system that provides annual electrical output equal to or greater than the project's annual electrical usage. Through the incorporation of renewable energy sources, operation of the project would not consume energy in a wasteful, inefficient, or unnecessary manner.

During operations, the majority of fuel consumption resulting from the project would involve the use of motor vehicles traveling to and from the project site. The project's location in proximity to existing commercial uses, however, would result in relatively low VMT and therefore relatively low automotive energy consumption. When viewed on a regional scale, the proposed project is an urban infill project that would generally involve fewer VMT compared with new development projects sited on previously undeveloped land and away from population centers. In addition, over the lifetime of the project the fuel efficiency of vehicles is expected to increase, resulting in a decrease in fuel consumption over time. Based on these considerations, petroleum consumption associated with the proposed project would not be considered inefficient or wasteful, and impacts would be less than significant.

5.2.2 Conflict with Energy Plans

Energy consumption is a significant source of GHG emissions. As such, the federal, state, and local regulations included above in Section 2.3 that have been adopted for the purpose of reducing GHG

emissions inherently include policies and goals related to energy consumption. As discussed above in Section 5.1.2, a number of plans and regulations related to GHG emissions and energy use, such as AB 1493 and the LCFS, are being implemented at the statewide level, and compliance at the project level is not addressed.

The project would be subject to and would comply with the 2019 California Building Energy Efficiency Standards (CCR Title 24, Part 6), which establishes energy efficiency standards for residential and non-residential building constructed in California. In accordance with the requirements, the project would include a solar photovoltaic system that provides annual electrical output equal to or greater than the project's annual electrical usage. As such, the project would not conflict with or obstruct a plan for renewable energy or energy efficiency.

6.0 LIST OF PREPARERS

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Appendix A

CalEEMod Output

Escondido Centre City Parkway Condominium Project

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	39.73	1000sqft	0.91	39,730.00	0
City Park	0.71	Acre	0.71	30,709.80	0
Apartments Mid Rise	62.00	Dwelling Unit	1.86	99,506.00	177

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Escondido Centre City Parkway Condominium Project - San Diego County, Annual

Project Characteristics -

Land Use - The apartment use has a floor area of 99,506 gross square feet. The other asphalt surfaces land use subtype incldues the project's alleys.

Construction Phase - Project schedule provided by Project Applicant.

Off-road Equipment - For modeling and emissions estimate purposes, the soil hauling phase only includes on-site haul trucks.

Off-road Equipment -

Trips and VMT - As indicated by the Project Applicant, soil hauling would take place over four days and would involve 328 truck loads (4,590 cubic yards imported using 14-cubic yard trucks), resulting in 656 trips.

Demolition - Demolition amount provided by Project Applicant. Includes 8,628 sqaure feet of structures and 3,765 square feet of pavement.

Grading - The project involves 31,400 cubic yards of cut and 35,990 cubic yards of fill for a net import of 4,590 cubic yards. Model-calculated default input for total acres graded.

Architectural Coating - Low VOC coating assumed.

Vehicle Trips - Project trip generation provided by LLG.

Woodstoves - No woodstoves or fireplaces.

Area Coating - Low VOC coatings assumed.

Construction Off-road Equipment Mitigation -

Energy Mitigation - Solar provided per 2019 Title 24.

Water Mitigation - Water use reduction per CALGreen.

Waste Mitigation - Solid waste reduction per AB 341.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Parking	250	50
tblAreaCoating	Area_EF_Residential_Exterior	250	50
tblAreaCoating	Area_EF_Residential_Interior	250	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15

tblConstructionPhase	NumDays	230.00	434.00
tblConstructionPhase	NumDays	8.00	87.00
tblConstructionPhase	NumDays	8.00	4.00
tblConstructionPhase	NumDays	5.00	20.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	34.10	0.00
tblFireplaces	NumberNoFireplace	6.20	62.00
tblFireplaces	NumberWood	21.70	0.00
tblGrading	MaterialImported	0.00	4,590.00
tblLandUse	LandUseSquareFeet	30,927.60	30,709.80
tblLandUse	LandUseSquareFeet	62,000.00	99,506.00
tblLandUse	LotAcreage	1.63	1.86
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblTripsAndVMT	HaulingTripNumber	574.00	656.00
tblVehicleTrips	ST_TR	6.39	8.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	5.86	8.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	6.65	8.00
tblVehicleTrips	WD_TR	1.89	0.00
tblWoodstoves	NumberCatalytic	3.10	0.00
tblWoodstoves	NumberNoncatalytic	3.10	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2292	2.3742	1.7297	3.3600e-003	0.4972	0.1122	0.6093	0.2535	0.1036	0.3571	0.0000	298.7032	298.7032	0.0808	0.0000	300.7236
2022	0.2602	2.2789	2.4111	4.8400e-003	0.0927	0.1061	0.1988	0.0250	0.0999	0.1248	0.0000	426.7603	426.7603	0.0783	0.0000	428.7188
2023	0.4654	1.2927	1.5115	3.0100e-003	0.0564	0.0578	0.1142	0.0152	0.0544	0.0696	0.0000	264.6664	264.6664	0.0497	0.0000	265.9096
Maximum	**0.4654**	**2.3742**	**2.4111**	**4.8400e-003**	**0.4972**	**0.1122**	**0.6093**	**0.2535**	**0.1036**	**0.3571**	**0.0000**	**426.7603**	**426.7603**	**0.0808**	**0.0000**	**428.7188**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2292	2.3742	1.7297	3.3600e-003	0.2374	0.1122	0.3496	0.1178	0.1036	0.2213	0.0000	298.7029	298.7029	0.0808	0.0000	300.7233
2022	0.2602	2.2789	2.4111	4.8400e-003	0.0927	0.1061	0.1988	0.0250	0.0999	0.1248	0.0000	426.7600	426.7600	0.0783	0.0000	428.7184
2023	0.4654	1.2927	1.5115	3.0100e-003	0.0564	0.0578	0.1142	0.0152	0.0544	0.0696	0.0000	264.6661	264.6661	0.0497	0.0000	265.9093
Maximum	**0.4654**	**2.3742**	**2.4111**	**4.8400e-003**	**0.2374**	**0.1122**	**0.3496**	**0.1178**	**0.1036**	**0.2213**	**0.0000**	**426.7600**	**426.7600**	**0.0808**	**0.0000**	**428.7184**

Escondido Centre City Parkway Condominium Project - San Diego County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**40.19**	**0.00**	**28.16**	**46.22**	**0.00**	**24.61**	**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	**2-1-2021**	**4-30-2021**	1.0329	1.0329
2	**5-1-2021**	**7-31-2021**	0.9430	0.9430
3	**8-1-2021**	**10-31-2021**	0.2144	0.2144
4	**11-1-2021**	**1-31-2022**	0.5273	0.5273
5	**2-1-2022**	**4-30-2022**	0.6208	0.6208
6	**5-1-2022**	**7-31-2022**	0.6407	0.6407
7	**8-1-2022**	**10-31-2022**	0.6412	0.6412
8	**11-1-2022**	**1-31-2023**	0.6226	0.6226
9	**2-1-2023**	**4-30-2023**	0.5644	0.5644
10	**5-1-2023**	**7-31-2023**	0.5825	0.5825
11	**8-1-2023**	**9-30-2023**	0.3978	0.3978
		Highest	1.0329	1.0329

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4368	5.3100e-003	0.4608	2.0000e-005		2.5500e-003	2.5500e-003		2.5500e-003	2.5500e-003	0.0000	0.7527	0.7527	7.3000e-004	0.0000	0.7708
Energy	2.4800e-003	0.0212	9.0300e-003	1.4000e-004		1.7200e-003	1.7200e-003		1.7200e-003	1.7200e-003	0.0000	105.7269	105.7269	3.7400e-003	1.1300e-003	106.1560
Mobile	0.1308	0.5248	1.5972	5.8000e-003	0.5337	4.4900e-003	0.5382	0.1429	4.1800e-003	0.1471	0.0000	536.2065	536.2065	0.0269	0.0000	536.8784
Waste						0.0000	0.0000		0.0000	0.0000	5.8015	0.0000	5.8015	0.3429	0.0000	14.3729
Water						0.0000	0.0000		0.0000	0.0000	1.2816	29.5079	30.7895	0.1328	3.3500e-003	35.1093
Total	**0.5701**	**0.5513**	**2.0670**	**5.9600e-003**	**0.5337**	**8.7600e-003**	**0.5424**	**0.1429**	**8.4500e-003**	**0.1514**	**7.0830**	**672.1940**	**679.2770**	**0.5070**	**4.4800e-003**	**693.2875**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4368	5.3100e-003	0.4608	2.0000e-005		2.5500e-003	2.5500e-003		2.5500e-003	2.5500e-003	0.0000	0.7527	0.7527	7.3000e-004	0.0000	0.7708
Energy	2.4800e-003	0.0212	9.0300e-003	1.4000e-004		1.7200e-003	1.7200e-003		1.7200e-003	1.7200e-003	0.0000	24.5784	24.5784	4.7000e-004	4.5000e-004	24.7245
Mobile	0.1308	0.5248	1.5972	5.8000e-003	0.5337	4.4900e-003	0.5382	0.1429	4.1800e-003	0.1471	0.0000	536.2065	536.2065	0.0269	0.0000	536.8784
Waste						0.0000	0.0000		0.0000	0.0000	4.3511	0.0000	4.3511	0.2571	0.0000	10.7797
Water						0.0000	0.0000		0.0000	0.0000	1.0253	23.6063	24.6316	0.1063	2.6800e-003	28.0874
Total	**0.5701**	**0.5513**	**2.0670**	**5.9600e-003**	**0.5337**	**8.7600e-003**	**0.5424**	**0.1429**	**8.4500e-003**	**0.1514**	**5.3764**	**585.1439**	**590.5203**	**0.3915**	**3.1300e-003**	**601.2409**

	ROG	NOx	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**	**24.10**	**12.95**	**13.07**	**22.79**	**30.13**	**13.28**

3.0 Construction Detail

Construction Phase

Escondido Centre City Parkway Condominium Project - San Diego County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2021	2/26/2021	5	20	
2	Site Preparation	Site Preparation	2/1/2021	2/26/2021	5	20	
3	Grading	Grading	4/1/2021	7/30/2021	5	87	
4	Soil Hauling	Grading	7/27/2021	7/30/2021	5	4	
5	Underground Utilities/Infrastructure	Trenching	8/2/2021	11/30/2021	5	87	
6	Building Construction	Building Construction	12/1/2021	7/31/2023	5	434	
7	Paving	Paving	8/1/2023	8/24/2023	5	18	
8	Architectural Coating	Architectural Coating	8/1/2023	8/24/2023	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 43.5

Acres of Paving: 0.91

Residential Indoor: 201,500; Residential Outdoor: 67,167; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 2,384 (Architectural Coating – sqft)

OffRoad Equipment

Escondido Centre City Parkway Condominium Project - San Diego County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	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	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Soil Hauling	Excavators	0	8.00	158	0.38
Soil Hauling	Graders	0	8.00	187	0.41
Soil Hauling	Rubber Tired Dozers	0	8.00	247	0.40
Soil Hauling	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Underground Utilities/Infrastructure	Excavators	1	8.00	158	0.38
Underground Utilities/Infrastructure	Tractors/Loaders/Backhoes	2	8.00	97	0.37

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	56.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	74.00	18.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Soil Hauling	0	0.00	0.00	656.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Underground Utilities/Infrastructure	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.1800e-003	0.0000	6.1800e-003	9.4000e-004	0.0000	9.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400
Total	**0.0317**	**0.3144**	**0.2157**	**3.9000e-004**	**6.1800e-003**	**0.0155**	**0.0217**	**9.4000e-004**	**0.0144**	**0.0154**	**0.0000**	**34.0008**	**34.0008**	**9.5700e-003**	**0.0000**	**34.2400**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1000e-004	7.3100e-003	1.8000e-003	2.0000e-005	4.8000e-004	2.0000e-005	5.0000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	2.1325	2.1325	1.9000e-004	0.0000	2.1374
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	5.2000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0508	1.0508	3.0000e-005	0.0000	1.0515
Total	**7.3000e-004**	**7.6800e-003**	**5.5500e-003**	**3.0000e-005**	**1.6800e-003**	**3.0000e-005**	**1.7100e-003**	**4.5000e-004**	**3.0000e-005**	**4.8000e-004**	**0.0000**	**3.1833**	**3.1833**	**2.2000e-004**	**0.0000**	**3.1889**

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7800e-003	0.0000	2.7800e-003	4.2000e-004	0.0000	4.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400
Total	**0.0317**	**0.3144**	**0.2157**	**3.9000e-004**	**2.7800e-003**	**0.0155**	**0.0183**	**4.2000e-004**	**0.0144**	**0.0148**	**0.0000**	**34.0007**	**34.0007**	**9.5700e-003**	**0.0000**	**34.2400**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1000e-004	7.3100e-003	1.8000e-003	2.0000e-005	4.8000e-004	2.0000e-005	5.0000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	2.1325	2.1325	1.9000e-004	0.0000	2.1374
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	5.2000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0508	1.0508	3.0000e-005	0.0000	1.0515
Total	**7.3000e-004**	**7.6800e-003**	**5.5500e-003**	**3.0000e-005**	**1.6800e-003**	**3.0000e-005**	**1.7100e-003**	**4.5000e-004**	**3.0000e-005**	**4.8000e-004**	**0.0000**	**3.1833**	**3.1833**	**2.2000e-004**	**0.0000**	**3.1889**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7061
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7061**

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	6.3000e-004	4.5000e-004	4.5000e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2609	1.2609	4.0000e-005	0.0000	1.2618
Total	**6.3000e-004**	**4.5000e-004**	**4.5000e-003**	**1.0000e-005**	**1.4400e-003**	**1.0000e-005**	**1.4500e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.2609**	**1.2609**	**4.0000e-005**	**0.0000**	**1.2618**

3.3 Site Preparation - 2021

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					0.0813	0.0000	0.0813	0.0447	0.0000	0.0447	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7060
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.0813**	**0.0204**	**0.1017**	**0.0447**	**0.0188**	**0.0635**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7060**

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	6.3000e-004	4.5000e-004	4.5000e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2609	1.2609	4.0000e-005	0.0000	1.2618
Total	**6.3000e-004**	**4.5000e-004**	**4.5000e-003**	**1.0000e-005**	**1.4400e-003**	**1.0000e-005**	**1.4500e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.2609**	**1.2609**	**4.0000e-005**	**0.0000**	**1.2618**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2850	0.0000	0.2850	0.1465	0.0000	0.1465	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0996	1.0761	0.6898	1.2900e-003		0.0505	0.0505		0.0464	0.0464	0.0000	113.3336	113.3336	0.0367	0.0000	114.2499
Total	**0.0996**	**1.0761**	**0.6898**	**1.2900e-003**	**0.2850**	**0.0505**	**0.3355**	**0.1465**	**0.0464**	**0.1929**	**0.0000**	**113.3336**	**113.3336**	**0.0367**	**0.0000**	**114.2499**

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	2.2700e-003	1.6200e-003	0.0163	5.0000e-005	5.2300e-003	4.0000e-005	5.2700e-003	1.3900e-003	3.0000e-005	1.4200e-003	0.0000	4.5709	4.5709	1.3000e-004	0.0000	4.5742
Total	**2.2700e-003**	**1.6200e-003**	**0.0163**	**5.0000e-005**	**5.2300e-003**	**4.0000e-005**	**5.2700e-003**	**1.3900e-003**	**3.0000e-005**	**1.4200e-003**	**0.0000**	**4.5709**	**4.5709**	**1.3000e-004**	**0.0000**	**4.5742**

3.4 Grading - 2021

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					0.1283	0.0000	0.1283	0.0659	0.0000	0.0659	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0996	1.0760	0.6898	1.2900e-003		0.0505	0.0505		0.0464	0.0464	0.0000	113.3335	113.3335	0.0367	0.0000	114.2498
Total	**0.0996**	**1.0760**	**0.6898**	**1.2900e-003**	**0.1283**	**0.0505**	**0.1787**	**0.0659**	**0.0464**	**0.1123**	**0.0000**	**113.3335**	**113.3335**	**0.0367**	**0.0000**	**114.2498**

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	2.2700e-003	1.6200e-003	0.0163	5.0000e-005	5.2300e-003	4.0000e-005	5.2700e-003	1.3900e-003	3.0000e-005	1.4200e-003	0.0000	4.5709	4.5709	1.3000e-004	0.0000	4.5742
Total	**2.2700e-003**	**1.6200e-003**	**0.0163**	**5.0000e-005**	**5.2300e-003**	**4.0000e-005**	**5.2700e-003**	**1.3900e-003**	**3.0000e-005**	**1.4200e-003**	**0.0000**	**4.5709**	**4.5709**	**1.3000e-004**	**0.0000**	**4.5742**

3.5 Soil Hauling - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2000e-004	0.0000	3.2000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4600e-003	0.0857	0.0211	2.5000e-004	5.6100e-003	2.6000e-004	5.8700e-003	1.5400e-003	2.5000e-004	1.7900e-003	0.0000	24.9812	24.9812	2.2500e-003	0.0000	25.0375
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	0.0000	0.0000	0.0000	0.0000	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	**2.4600e-003**	**0.0857**	**0.0211**	**2.5000e-004**	**5.6100e-003**	**2.6000e-004**	**5.8700e-003**	**1.5400e-003**	**2.5000e-004**	**1.7900e-003**	**0.0000**	**24.9812**	**24.9812**	**2.2500e-003**	**0.0000**	**25.0375**

3.5 Soil Hauling - 2021

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					1.5000e-004	0.0000	1.5000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4600e-003	0.0857	0.0211	2.5000e-004	5.6100e-003	2.6000e-004	5.8700e-003	1.5400e-003	2.5000e-004	1.7900e-003	0.0000	24.9812	24.9812	2.2500e-003	0.0000	25.0375
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	0.0000	0.0000	0.0000	0.0000	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	**2.4600e-003**	**0.0857**	**0.0211**	**2.5000e-004**	**5.6100e-003**	**2.6000e-004**	**5.8700e-003**	**1.5400e-003**	**2.5000e-004**	**1.7900e-003**	**0.0000**	**24.9812**	**24.9812**	**2.2500e-003**	**0.0000**	**25.0375**

3.6 Underground Utilities/Infrastructure - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0263	0.2586	0.3390	5.0000e-004		0.0143	0.0143		0.0131	0.0131	0.0000	43.4874	43.4874	0.0141	0.0000	43.8390
Total	**0.0263**	**0.2586**	**0.3390**	**5.0000e-004**		**0.0143**	**0.0143**		**0.0131**	**0.0131**	**0.0000**	**43.4874**	**43.4874**	**0.0141**	**0.0000**	**43.8390**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2100e-003	8.6000e-004	8.6900e-003	3.0000e-005	2.7900e-003	2.0000e-005	2.8100e-003	7.4000e-004	2.0000e-005	7.6000e-004	0.0000	2.4378	2.4378	7.0000e-005	0.0000	2.4396
Total	**1.2100e-003**	**8.6000e-004**	**8.6900e-003**	**3.0000e-005**	**2.7900e-003**	**2.0000e-005**	**2.8100e-003**	**7.4000e-004**	**2.0000e-005**	**7.6000e-004**	**0.0000**	**2.4378**	**2.4378**	**7.0000e-005**	**0.0000**	**2.4396**

3.6 Underground Utilities/Infrastructure - 2021

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	0.0263	0.2586	0.3390	5.0000e-004		0.0143	0.0143		0.0131	0.0131	0.0000	43.4874	43.4874	0.0141	0.0000	43.8390
Total	**0.0263**	**0.2586**	**0.3390**	**5.0000e-004**		**0.0143**	**0.0143**		**0.0131**	**0.0131**	**0.0000**	**43.4874**	**43.4874**	**0.0141**	**0.0000**	**43.8390**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2100e-003	8.6000e-004	8.6900e-003	3.0000e-005	2.7900e-003	2.0000e-005	2.8100e-003	7.4000e-004	2.0000e-005	7.6000e-004	0.0000	2.4378	2.4378	7.0000e-005	0.0000	2.4396
Total	**1.2100e-003**	**8.6000e-004**	**8.6900e-003**	**3.0000e-005**	**2.7900e-003**	**2.0000e-005**	**2.8100e-003**	**7.4000e-004**	**2.0000e-005**	**7.6000e-004**	**0.0000**	**2.4378**	**2.4378**	**7.0000e-005**	**0.0000**	**2.4396**

3.7 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0219	0.2005	0.1906	3.1000e-004		0.0110	0.0110		0.0104	0.0104	0.0000	26.6383	26.6383	6.4300e-003	0.0000	26.7990
Total	**0.0219**	**0.2005**	**0.1906**	**3.1000e-004**		**0.0110**	**0.0110**		**0.0104**	**0.0104**	**0.0000**	**26.6383**	**26.6383**	**6.4300e-003**	**0.0000**	**26.7990**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.4000e-004	0.0213	5.6700e-003	6.0000e-005	1.3700e-003	5.0000e-005	1.4200e-003	4.0000e-004	4.0000e-005	4.4000e-004	0.0000	5.4118	5.4118	4.0000e-004	0.0000	5.4219
Worker	2.9600e-003	2.1100e-003	0.0213	7.0000e-005	6.8200e-003	5.0000e-005	6.8700e-003	1.8100e-003	4.0000e-005	1.8600e-003	0.0000	5.9615	5.9615	1.7000e-004	0.0000	5.9657
Total	**3.6000e-003**	**0.0234**	**0.0269**	**1.3000e-004**	**8.1900e-003**	**1.0000e-004**	**8.2900e-003**	**2.2100e-003**	**8.0000e-005**	**2.3000e-003**	**0.0000**	**11.3733**	**11.3733**	**5.7000e-004**	**0.0000**	**11.3876**

3.7 Building Construction - 2021

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	0.0219	0.2005	0.1906	3.1000e-004		0.0110	0.0110		0.0104	0.0104	0.0000	26.6383	26.6383	6.4300e-003	0.0000	26.7989
Total	**0.0219**	**0.2005**	**0.1906**	**3.1000e-004**		**0.0110**	**0.0110**		**0.0104**	**0.0104**	**0.0000**	**26.6383**	**26.6383**	**6.4300e-003**	**0.0000**	**26.7989**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.4000e-004	0.0213	5.6700e-003	6.0000e-005	1.3700e-003	5.0000e-005	1.4200e-003	4.0000e-004	4.0000e-005	4.4000e-004	0.0000	5.4118	5.4118	4.0000e-004	0.0000	5.4219
Worker	2.9600e-003	2.1100e-003	0.0213	7.0000e-005	6.8200e-003	5.0000e-005	6.8700e-003	1.8100e-003	4.0000e-005	1.8600e-003	0.0000	5.9615	5.9615	1.7000e-004	0.0000	5.9657
Total	**3.6000e-003**	**0.0234**	**0.0269**	**1.3000e-004**	**8.1900e-003**	**1.0000e-004**	**8.2900e-003**	**2.2100e-003**	**8.0000e-005**	**2.3000e-003**	**0.0000**	**11.3733**	**11.3733**	**5.7000e-004**	**0.0000**	**11.3876**

3.7 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2428	301.2428	0.0722	0.0000	303.0471
Total	**0.2218**	**2.0300**	**2.1272**	**3.5000e-003**		**0.1052**	**0.1052**		**0.0990**	**0.0990**	**0.0000**	**301.2428**	**301.2428**	**0.0722**	**0.0000**	**303.0471**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.7300e-003	0.2271	0.0607	6.2000e-004	0.0155	4.4000e-004	0.0160	4.4800e-003	4.2000e-004	4.9000e-003	0.0000	60.5976	60.5976	4.4000e-003	0.0000	60.7076
Worker	0.0317	0.0218	0.2231	7.2000e-004	0.0771	5.3000e-004	0.0777	0.0205	4.9000e-004	0.0210	0.0000	64.9199	64.9199	1.7700e-003	0.0000	64.9641
Total	**0.0384**	**0.2488**	**0.2839**	**1.3400e-003**	**0.0927**	**9.7000e-004**	**0.0937**	**0.0250**	**9.1000e-004**	**0.0259**	**0.0000**	**125.5175**	**125.5175**	**6.1700e-003**	**0.0000**	**125.6717**

3.7 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2425	301.2425	0.0722	0.0000	303.0467
Total	**0.2218**	**2.0300**	**2.1272**	**3.5000e-003**		**0.1052**	**0.1052**		**0.0990**	**0.0990**	**0.0000**	**301.2425**	**301.2425**	**0.0722**	**0.0000**	**303.0467**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.7300e-003	0.2271	0.0607	6.2000e-004	0.0155	4.4000e-004	0.0160	4.4800e-003	4.2000e-004	4.9000e-003	0.0000	60.5976	60.5976	4.4000e-003	0.0000	60.7076
Worker	0.0317	0.0218	0.2231	7.2000e-004	0.0771	5.3000e-004	0.0777	0.0205	4.9000e-004	0.0210	0.0000	64.9199	64.9199	1.7700e-003	0.0000	64.9641
Total	**0.0384**	**0.2488**	**0.2839**	**1.3400e-003**	**0.0927**	**9.7000e-004**	**0.0937**	**0.0250**	**9.1000e-004**	**0.0259**	**0.0000**	**125.5175**	**125.5175**	**6.1700e-003**	**0.0000**	**125.6717**

3.7 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1187	1.0861	1.2264	2.0300e-003		0.0528	0.0528		0.0497	0.0497	0.0000	175.0126	175.0126	0.0416	0.0000	176.0534
Total	**0.1187**	**1.0861**	**1.2264**	**2.0300e-003**		**0.0528**	**0.0528**		**0.0497**	**0.0497**	**0.0000**	**175.0126**	**175.0126**	**0.0416**	**0.0000**	**176.0534**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0200e-003	0.1036	0.0321	3.5000e-004	9.0200e-003	1.2000e-004	9.1400e-003	2.6000e-003	1.2000e-004	2.7200e-003	0.0000	34.3073	34.3073	2.3300e-003	0.0000	34.3656
Worker	0.0174	0.0115	0.1202	4.0000e-004	0.0448	3.0000e-004	0.0451	0.0119	2.8000e-004	0.0122	0.0000	36.2633	36.2633	9.4000e-004	0.0000	36.2868
Total	**0.0204**	**0.1151**	**0.1523**	**7.5000e-004**	**0.0538**	**4.2000e-004**	**0.0543**	**0.0145**	**4.0000e-004**	**0.0149**	**0.0000**	**70.5706**	**70.5706**	**3.2700e-003**	**0.0000**	**70.6524**

3.7 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1187	1.0861	1.2264	2.0300e-003		0.0528	0.0528		0.0497	0.0497	0.0000	175.0124	175.0124	0.0416	0.0000	176.0532
Total	**0.1187**	**1.0861**	**1.2264**	**2.0300e-003**		**0.0528**	**0.0528**		**0.0497**	**0.0497**	**0.0000**	**175.0124**	**175.0124**	**0.0416**	**0.0000**	**176.0532**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0200e-003	0.1036	0.0321	3.5000e-004	9.0200e-003	1.2000e-004	9.1400e-003	2.6000e-003	1.2000e-004	2.7200e-003	0.0000	34.3073	34.3073	2.3300e-003	0.0000	34.3656
Worker	0.0174	0.0115	0.1202	4.0000e-004	0.0448	3.0000e-004	0.0451	0.0119	2.8000e-004	0.0122	0.0000	36.2633	36.2633	9.4000e-004	0.0000	36.2868
Total	**0.0204**	**0.1151**	**0.1523**	**7.5000e-004**	**0.0538**	**4.2000e-004**	**0.0543**	**0.0145**	**4.0000e-004**	**0.0149**	**0.0000**	**70.5706**	**70.5706**	**3.2700e-003**	**0.0000**	**70.6524**

3.8 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2600e-003	0.0791	0.1097	1.7000e-004		3.9200e-003	3.9200e-003		3.6200e-003	3.6200e-003	0.0000	14.7407	14.7407	4.6300e-003	0.0000	14.8565
Paving	1.1900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.4500e-003**	**0.0791**	**0.1097**	**1.7000e-004**		**3.9200e-003**	**3.9200e-003**		**3.6200e-003**	**3.6200e-003**	**0.0000**	**14.7407**	**14.7407**	**4.6300e-003**	**0.0000**	**14.8565**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	3.7000e-004	3.8700e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1683	1.1683	3.0000e-005	0.0000	1.1691
Total	**5.6000e-004**	**3.7000e-004**	**3.8700e-003**	**1.0000e-005**	**1.4400e-003**	**1.0000e-005**	**1.4500e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1683**	**1.1683**	**3.0000e-005**	**0.0000**	**1.1691**

3.8 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2600e-003	0.0791	0.1097	1.7000e-004		3.9200e-003	3.9200e-003		3.6200e-003	3.6200e-003	0.0000	14.7407	14.7407	4.6300e-003	0.0000	14.8565
Paving	1.1900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.4500e-003**	**0.0791**	**0.1097**	**1.7000e-004**		**3.9200e-003**	**3.9200e-003**		**3.6200e-003**	**3.6200e-003**	**0.0000**	**14.7407**	**14.7407**	**4.6300e-003**	**0.0000**	**14.8565**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	3.7000e-004	3.8700e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1683	1.1683	3.0000e-005	0.0000	1.1691
Total	**5.6000e-004**	**3.7000e-004**	**3.8700e-003**	**1.0000e-005**	**1.4400e-003**	**1.0000e-005**	**1.4500e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1683**	**1.1683**	**3.0000e-005**	**0.0000**	**1.1691**

3.9 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3141					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7200e-003	0.0117	0.0163	3.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	2.2979	2.2979	1.4000e-004	0.0000	2.3014
Total	**0.3158**	**0.0117**	**0.0163**	**3.0000e-005**		**6.4000e-004**	**6.4000e-004**		**6.4000e-004**	**6.4000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.4000e-004**	**0.0000**	**2.3014**

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	4.2000e-004	2.8000e-004	2.9000e-003	1.0000e-005	1.0800e-003	1.0000e-005	1.0900e-003	2.9000e-004	1.0000e-005	2.9000e-004	0.0000	0.8762	0.8762	2.0000e-005	0.0000	0.8768
Total	**4.2000e-004**	**2.8000e-004**	**2.9000e-003**	**1.0000e-005**	**1.0800e-003**	**1.0000e-005**	**1.0900e-003**	**2.9000e-004**	**1.0000e-005**	**2.9000e-004**	**0.0000**	**0.8762**	**0.8762**	**2.0000e-005**	**0.0000**	**0.8768**

3.9 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3141					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7200e-003	0.0117	0.0163	3.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	2.2979	2.2979	1.4000e-004	0.0000	2.3014
Total	**0.3158**	**0.0117**	**0.0163**	**3.0000e-005**		**6.4000e-004**	**6.4000e-004**		**6.4000e-004**	**6.4000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.4000e-004**	**0.0000**	**2.3014**

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	4.2000e-004	2.8000e-004	2.9000e-003	1.0000e-005	1.0800e-003	1.0000e-005	1.0900e-003	2.9000e-004	1.0000e-005	2.9000e-004	0.0000	0.8762	0.8762	2.0000e-005	0.0000	0.8768
Total	**4.2000e-004**	**2.8000e-004**	**2.9000e-003**	**1.0000e-005**	**1.0800e-003**	**1.0000e-005**	**1.0900e-003**	**2.9000e-004**	**1.0000e-005**	**2.9000e-004**	**0.0000**	**0.8762**	**0.8762**	**2.0000e-005**	**0.0000**	**0.8768**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1308	0.5248	1.5972	5.8000e-003	0.5337	4.4900e-003	0.5382	0.1429	4.1800e-003	0.1471	0.0000	536.2065	536.2065	0.0269	0.0000	536.8784
Unmitigated	0.1308	0.5248	1.5972	5.8000e-003	0.5337	4.4900e-003	0.5382	0.1429	4.1800e-003	0.1471	0.0000	536.2065	536.2065	0.0269	0.0000	536.8784

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	496.00	496.00	496.00	1,416,230	1,416,230
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	496.00	496.00	496.00	1,416,230	1,416,230

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
Apartments Mid Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	9.50	7.30	7.30	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
Apartments Mid Rise	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056
City Park	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056
Other Asphalt Surfaces	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable 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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	81.1485	81.1485	3.2700e-003	6.8000e-004	81.4315
NaturalGas Mitigated	2.4800e-003	0.0212	9.0300e-003	1.4000e-004		1.7200e-003	1.7200e-003		1.7200e-003	1.7200e-003	0.0000	24.5784	24.5784	4.7000e-004	4.5000e-004	24.7245
NaturalGas Unmitigated	2.4800e-003	0.0212	9.0300e-003	1.4000e-004		1.7200e-003	1.7200e-003		1.7200e-003	1.7200e-003	0.0000	24.5784	24.5784	4.7000e-004	4.5000e-004	24.7245

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					
Apartments Mid Rise	460582	2.4800e-003	0.0212	9.0300e-003	1.4000e-004		1.7200e-003	1.7200e-003		1.7200e-003	1.7200e-003	0.0000	24.5784	24.5784	4.7000e-004	4.5000e-004	24.7245
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.4800e-003**	**0.0212**	**9.0300e-003**	**1.4000e-004**		**1.7200e-003**	**1.7200e-003**		**1.7200e-003**	**1.7200e-003**	**0.0000**	**24.5784**	**24.5784**	**4.7000e-004**	**4.5000e-004**	**24.7245**

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					
Apartments Mid Rise	460582	2.4800e-003	0.0212	9.0300e-003	1.4000e-004		1.7200e-003	1.7200e-003		1.7200e-003	1.7200e-003	0.0000	24.5784	24.5784	4.7000e-004	4.5000e-004	24.7245
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.4800e-003**	**0.0212**	**9.0300e-003**	**1.4000e-004**		**1.7200e-003**	**1.7200e-003**		**1.7200e-003**	**1.7200e-003**	**0.0000**	**24.5784**	**24.5784**	**4.7000e-004**	**4.5000e-004**	**24.7245**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	248306	81.1485	3.2700e-003	6.8000e-004	81.4315
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**81.1485**	**3.2700e-003**	**6.8000e-004**	**81.4315**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4368	5.3100e-003	0.4608	2.0000e-005		2.5500e-003	2.5500e-003		2.5500e-003	2.5500e-003	0.0000	0.7527	0.7527	7.3000e-004	0.0000	0.7708
Unmitigated	0.4368	5.3100e-003	0.4608	2.0000e-005		2.5500e-003	2.5500e-003		2.5500e-003	2.5500e-003	0.0000	0.7527	0.7527	7.3000e-004	0.0000	0.7708

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	0.0314					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3915					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0139	5.3100e-003	0.4608	2.0000e-005		2.5500e-003	2.5500e-003		2.5500e-003	2.5500e-003	0.0000	0.7527	0.7527	7.3000e-004	0.0000	0.7708
Total	**0.4368**	**5.3100e-003**	**0.4608**	**2.0000e-005**		**2.5500e-003**	**2.5500e-003**		**2.5500e-003**	**2.5500e-003**	**0.0000**	**0.7527**	**0.7527**	**7.3000e-004**	**0.0000**	**0.7708**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0314					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3915					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0139	5.3100e-003	0.4608	2.0000e-005		2.5500e-003	2.5500e-003		2.5500e-003	2.5500e-003	0.0000	0.7527	0.7527	7.3000e-004	0.0000	0.7708
Total	**0.4368**	**5.3100e-003**	**0.4608**	**2.0000e-005**		**2.5500e-003**	**2.5500e-003**		**2.5500e-003**	**2.5500e-003**	**0.0000**	**0.7527**	**0.7527**	**7.3000e-004**	**0.0000**	**0.7708**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	24.6316	0.1063	2.6800e-003	28.0874
Unmitigated	30.7895	0.1328	3.3500e-003	35.1093

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	4.03955 / 2.54667	27.7179	0.1327	3.3300e-003	32.0271
City Park	0 / 0.845952	3.0715	1.2000e-004	3.0000e-005	3.0822
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**30.7895**	**0.1328**	**3.3600e-003**	**35.1093**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	3.23164 / 2.03734	22.1744	0.1062	2.6600e-003	25.6217
City Park	0 / 0.676761	2.4572	1.0000e-004	2.0000e-005	2.4658
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**24.6316**	**0.1063**	**2.6800e-003**	**28.0874**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.3511	0.2571	0.0000	10.7797
Unmitigated	5.8015	0.3429	0.0000	14.3729

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	28.52	5.7893	0.3421	0.0000	14.3428
City Park	0.06	0.0122	7.2000e-004	0.0000	0.0302
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**5.8015**	**0.3429**	**0.0000**	**14.3729**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	21.39	4.3420	0.2566	0.0000	10.7571
City Park	0.045	9.1300e-003	5.4000e-004	0.0000	0.0226
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**4.3511**	**0.2571**	**0.0000**	**10.7797**

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