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May 2, 2019

Adam Finestone, AICP  
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City of Escondido  
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**Subject: Update to the 220 North Quince Street Senior Housing Project 2017 Greenhouse Gas Emissions Technical Report**

Dear Mr. Finestone:

HELIX Environmental Planning, Inc. (HELIX) prepared a Greenhouse Gas (GHG) Emissions Technical Report for the 220 North Quince Senior Housing Project, dated September 2017. The report presents an assessment of GHG emissions impacts during construction and operation of the project as proposed at the time. Since preparation of the report, the project has been refined based on comments from City staff, including minor updates to the site plan and changes to the Transportation Impact Analysis (TIA) prepared by Linscott, Law & Greenspan Engineers (LLG). Relevant project refinements are summarized below:

- Refinement of the proposed density from 97.32 to 97.9 units per acre.
- Reduction in the total number of parking spaces from 147 to 142 per revised City standards.
- Total open space is revised from 33,001 to 36,784 square feet.
- Construction start date revised to January 2020 (originally September 2018).
- Reduction in the anticipated export quantities from 2,000 to 1,000 cubic yards.

Note that these changes did not result in a difference in overall trip generation for the project, which remains at 590 average daily trips (ADT).

As described in Section 4.1 of the 2017 GHG Emissions Technical Report, criteria pollutant and GHG emissions were calculated using the California Emissions Estimator Model (CalEEMod), Version 2016.3.1. 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. Construction input data for CalEEMod included (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, utility installation, building construction, paving, and architectural coating. A complete listing of the assumptions used in the analysis and model output is provided in Appendix A of the 2017 report.

The project refinements would not result in substantial changes to the typical construction equipment or building construction methodology assumed in the construction modeling. Although the anticipated construction start date has changed from September 2018 to January 2020 with an associated shift in the construction schedule shown in Table 5, *Anticipated Construction Schedule*, of the 2017 GHG Emissions Technical Report, as noted in Section 4.1.1, if construction is delayed or occurs over a longer time period, emissions would likely 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); therefore, the construction emissions is a conservative analysis and construction emissions would not need to be remodeled due to the shift in construction schedule. Further, the reduction in export quantities would result in lower emissions associated with export truck trips. Therefore, the analysis in the GHG report is conservative.

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. The project refinements would not result in substantial changes to the proposed operational sources of GHG emissions. Mobile source emissions were modeled based on project-related vehicle trip generation and trip lengths identified in the TIA prepared by LLG dated August 9, 2017. Although an updated TIA was prepared by LLG following preparation of the 2017 GHG Emissions Technical Report, there were no changes to the average daily trips utilized in the GHG emissions modeling. The project would still be required to comply with the current Title 24 Energy Code; the California Green Building Standards Code (CALGreen); the Assembly Bill (AB) 341 solid waste diversion target of 75 percent. The project would aim to reduce potable water use by 20 percent when compared to the statewide average, would install low-flow water and bathroom fixtures and weather-based irrigation systems; reduce wastewater generation by 20 percent; and provide areas for storage and collection of recyclables and yard waste. Thus, remodeling of operational GHG emissions would not be required.

Based on the above considerations, the conclusions from the 2017 GHG Emissions Technical Report remain valid and the report does not need to be revised.

Regards,



Joanne M. Dramko, AICP  
Principal Air Quality and Noise Specialist

## REFERENCES

- HELIX Environmental Planning (HELIX).  
2017 Acoustical Analysis Report. August 30.
- Linscott, Law & Greenspan Engineers (LLG).  
2019 Transportation Impact Analysis, 220 N. Quince Street Senior Housing Project. April 29.
- 2017 Transportation Impact Analysis, 220 N. Quince Street Senior Housing Project. August 9.

# 220 North Quince Street Senior Housing Development Project

## Greenhouse Gas Emissions Technical Report

September 2017 | ISH-02

*Prepared for:*

**220 Quince, LLP**  
7956 Lester Avenue  
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# 220 North Quince Street Senior Housing Development Project

## Greenhouse Gas Emissions Technical Report

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## ACRONYMS AND ABBREVIATIONS

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AB	Assembly Bill
ADT	average daily trips
APN	Assessor's Parcel Number
C <sub>2</sub> F <sub>6</sub>	hexafluoroethane
CAA	Clean Air Act
CAP	Climate Action Plan
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
CFC	chlorofluorocarbon
CH <sub>4</sub>	methane
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
cy	cubic yards
EO	Executive Order
GHG	greenhouse gas
GWP	global warming potential
HFC	hydrofluorocarbon
I-	Interstate
IPCC	Intergovernmental Panel on Climate Change
LCFS	Low Carbon Fuel Standard
LLG	Linscott, Law & Greenspan Engineers
MT	metric ton
MMT	million metric tons
mpg	miles per gallon
N <sub>2</sub> O	nitrous oxide
NASA	National Aeronautics and Space Administration
NCTD	North County Transit District
NHTSA	National Highway Traffic Safety Administration
NOAA	National Oceanic and Atmospheric Administration
NO <sub>x</sub>	nitrogen oxides

## ACRONYMS AND ABBREVIATIONS (cont.)

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PFC	perfluorocarbon
PM	particulate matter
PM <sub>10</sub>	particulate matter less than 10 microns
PM <sub>2.5</sub>	particulate matter less than 2.5 microns
ppm	parts per million
ROG	reactive organic gas
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
sf	square foot
SF <sub>6</sub>	hexafluoride
SO <sub>2</sub>	sulfur dioxide
TIA	Transportation Impact Analysis
USEPA	U.S. Environmental Protection Agency
VMT	vehicle miles traveled
VOC	volatile organic compound



# EXECUTIVE SUMMARY

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This report presents an assessment of greenhouse gas (GHG) emission impacts during construction and operation of the proposed 220 North Quince Street Senior Housing Development Project (project), located at the northeast corner of West Valley Parkway and North Quince Street in the City of Escondido, California.

The project would result in emissions of GHGs during construction and operation. Construction sources of GHG emissions include heavy construction equipment, worker vehicle miles traveled (VMT), and water use. Operational sources of GHG emissions include area, energy, transportation, water use, and solid waste. The project would be required to comply with the 2016 Title 24 Energy Code; the 2016 California Green Building Standards Code (CALGreen); the Assembly Bill (AB) 341 solid waste diversion target of 75 percent; reduction of potable water use by 20 percent when compared to the statewide average; low-flow water and bathroom fixtures; reduction of wastewater generation by 20 percent; weather-based irrigation systems; provide areas for storage and collection of recyclables and yard waste.

The project-related construction activities are estimated to generate 764 metric tons (MT) of carbon dioxide equivalent (CO<sub>2</sub>e). Construction emissions are amortized over 30 years, such that the proposed construction activities would contribute an average of 25 MT per year of CO<sub>2</sub>e emissions. The annual project-related operational and amortized construction GHG emissions are estimated to be 832 MT CO<sub>2</sub>e. Project emissions would therefore not exceed the GHG screening threshold of 2,500 MT CO<sub>2</sub>e established by the City of Escondido Climate Action Plan (CAP), and project impacts related to GHG emissions would be less than significant.

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# 1.0 INTRODUCTION

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This report presents an assessment of GHG emission impacts during construction and operation of the proposed 220 North Quince Street Senior Housing Development Project (project), located at the northeast corner of West Valley Parkway and North Quince Street in the City of Escondido, California.

## 1.1 PROJECT LOCATION

The project site consists of 1.49 acres of land (Assessor's Parcel Number [APN] 229-331-10-00) currently developed with three approximately 10,000-square-foot (sf) warehouse buildings and one approximately 2,000-sf building formerly used as a maintenance and repair facility for a moving and storage company. The project is located east of Interstate 15 (I-15) at the northeast corner of West Valley Parkway and North Quince Street, in the City of Escondido, California (Figure 1, *Regional Location*; and Figure 2, *Project Vicinity [Aerial Photograph]*). The area surrounding the project site is primarily developed with commercial and industrial uses. The channelized Escondido Creek runs north of the project site, beyond which is the Escondido Fire Department Station 1, located at 310 North Quince Street #1. East of the project site is another storage facility and commercial offices. South of the project across West Valley Parkway is a paved parking lot and bank. Directly across the street of the project to the west is the North County Transit District (NCTD) Escondido Transit Center and Sprinter Station.

## 1.2 PROJECT DESCRIPTION

The project proposes to construct a five-story affordable senior housing development with ground-floor parking and four stories of residences above (Figures 3a, *Site Plan-Podium Level*, and 3b, *Site Plan-Ground Level*). The project would construct 145 residential units (97.32 units/acre density) and provide 147 parking spaces. The entrance lobby would be located at the street (parking) level facing North Quince Street. Two courtyards would be provided at the podium (second) level and would be open to the northeastern edge of the property. An overlook plaza would be provided in the southwest corner of the podium level, facing the intersection of North Quince Street and West Valley Parkway. A leasing area and a 4,800-sf community room with a kitchen, office, and laundry facilities also would be provided at the podium level. New curbs, gutters, sidewalks, and street trees would be provided along the project's western and southern frontages along North Quince Street and West Valley Parkway, respectively. The driveway entry into the ground-level parking would be located at the northwestern corner of the project from North Quince Street. Storm drain improvements and connections to public utility, sewer, and water lines would be installed.

## 1.3 CONSTRUCTION ACTIVITIES AND PHASING

Project construction is assumed to begin in September 2018 and is expected to last two years. Construction activities include site preparation (clearing and grubbing), demolition, grading, installation of underground infrastructure and utilities, construction of structures, paving of the site, and architectural coating. Two thousand cubic yards (cy) of soil movement (cut/fill) is expected. Detailed construction phasing and equipment assumptions are provided in Appendix A.

## 2.0 REGULATORY SETTING

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### 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 the first six months of 2016 being the warmest half-year on record (National Aeronautics and Space Administration [NASA] 2016). The statistical models show a "high confidence" that temperature increase caused by 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) CO<sub>2</sub>e by the year 2100 (IPCC 2014). The IPCC estimated the concentration of CO<sub>2</sub>e in 2011 to be 430 ppm (IPCC 2014).

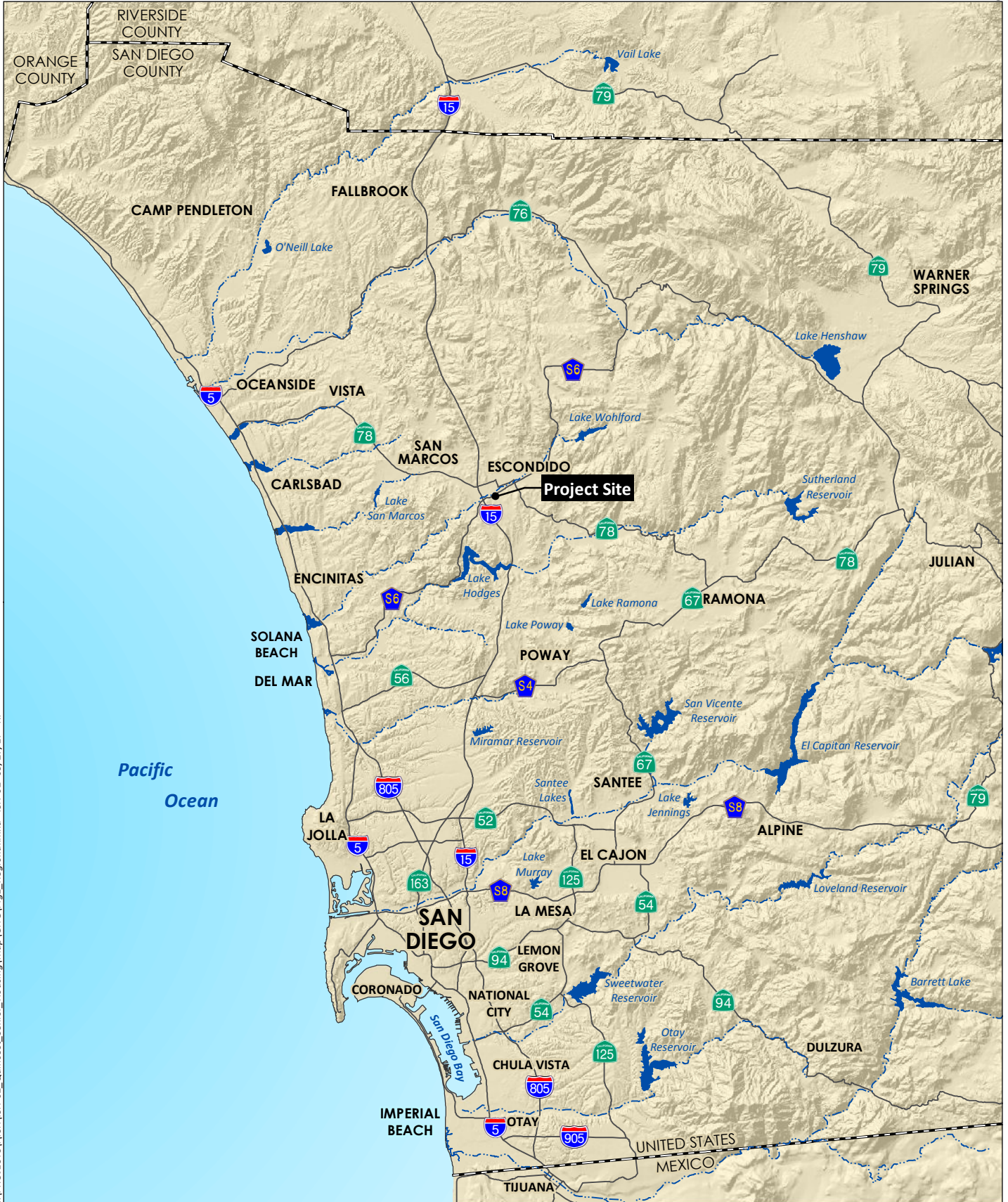
### 2.2 TYPES OF GREENHOUSE GASES

The GHGs defined under California's AB 32 include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>).

CO<sub>2</sub> is the most important and common GHG associated with human activity. CO<sub>2</sub> 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<sub>2</sub> include burning fuels, such as coal, oil, natural gas, and wood. Data from ice cores indicate that CO<sub>2</sub> concentrations remained steady prior to the current period for approximately 10,000 years. The atmospheric CO<sub>2</sub> concentration in 2010 was 390 ppm, 39 percent above the concentration at the start of the Industrial Revolution (about 280 ppm in 1750). As of April 2017, the CO<sub>2</sub> concentration exceeded 406 ppm (National Oceanic and Atmospheric Administration [NOAA] 2017).

CH<sub>4</sub> 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.

N<sub>2</sub>O is produced by both natural and human-related sources. N<sub>2</sub>O 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<sub>2</sub>O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic (fatty) acid production, and nitric acid production.



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Source: Base Map Layers (SanGIS, 2016)





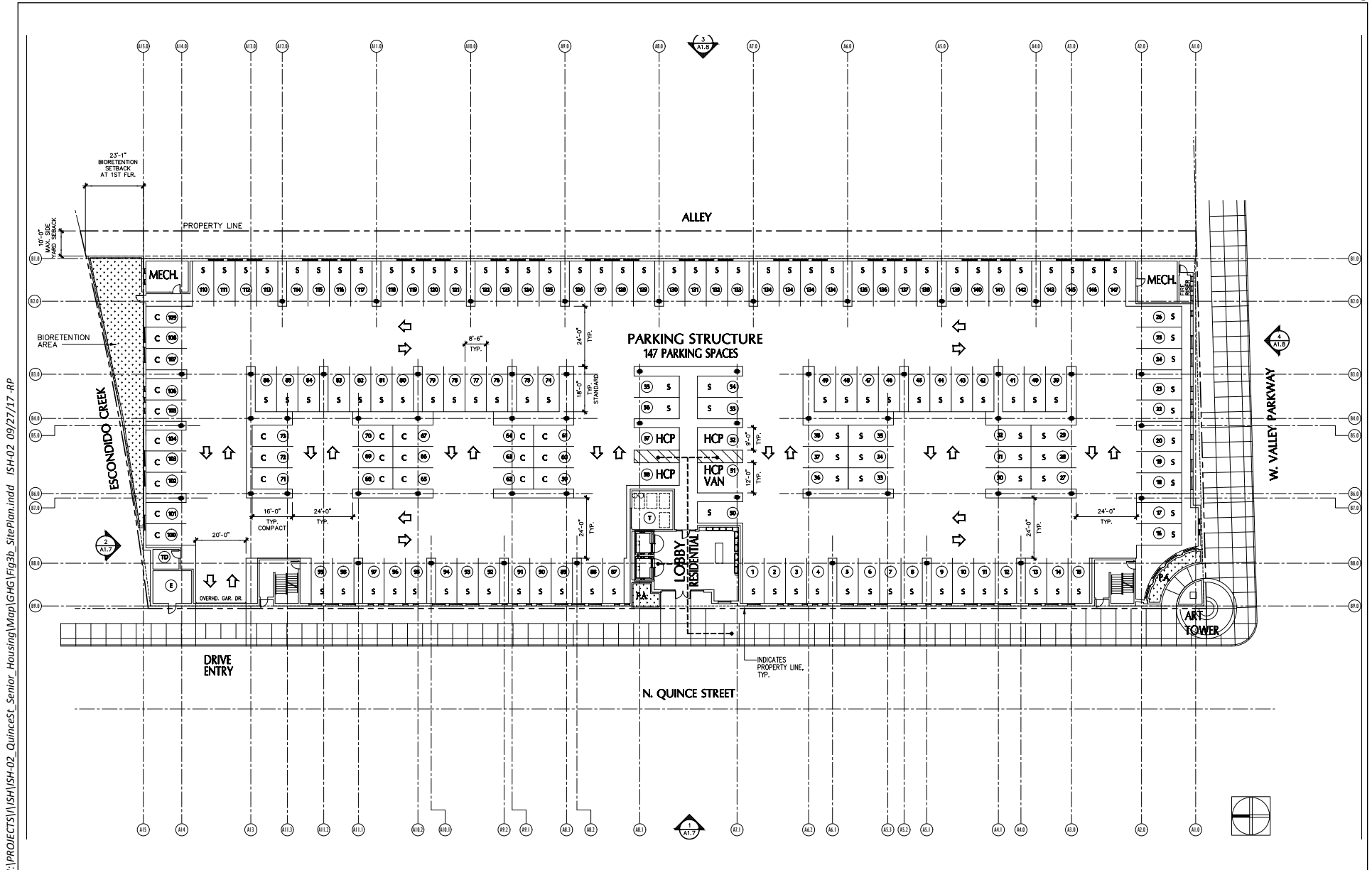
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Source: Base Map Layers (SanGIS, 2016)







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Source: HEGIS 2013



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.

SF<sub>6</sub> is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF<sub>6</sub> 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<sub>2</sub>. For example, because methane and N<sub>2</sub>O are approximately 25 and 298 times more powerful than CO<sub>2</sub>, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 25 and 298, respectively (CO<sub>2</sub> has a GWP of 1). CO<sub>2</sub>e is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO<sub>2</sub>e. The atmospheric lifetime and GWP of selected GHGs are summarized in Table 1, *Global Warming Potentials and Atmospheric Lifetimes*.

**Table 1**  
**GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES**

Greenhouse Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO <sub>2</sub> )	50-200	1
Methane (CH <sub>4</sub> )	12	25
Nitrous Oxide (N <sub>2</sub> O)	114	298
HFC-134a	14	1,430
PFC: Tetrafluoromethane (CF <sub>4</sub> )	50,000	7,390
PFC: Hexafluoroethane (C <sub>2</sub> F <sub>6</sub> )	10,000	12,200
Sulfur Hexafluoride (SF <sub>6</sub> )	3,200	22,800

Source: IPCC 2007

HFC: hydrofluorocarbon; PFC: perfluorocarbon

## 2.3 FEDERAL GREENHOUSE GAS REGULATIONS

### 2.3.1 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<sub>2</sub> is an air pollutant, as defined under the CAA, and that the USEPA has the authority to regulate emissions of GHGs. The USEPA announced that GHGs (including CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFC, PFC, and SF<sub>6</sub>) threaten the public health and welfare of the American people. This action was a prerequisite to finalizing the USEPA’s GHG emissions standards for light-duty vehicles, which were jointly proposed by the USEPA and the United States Department of Transportation’s National Highway Traffic Safety Administration (NHTSA). The standards were established on April 1, 2010 for 2012 through

2016 model year vehicles and on October 15, 2012 for 2017 through 2025 model year vehicles (USEPA 2017; USEPA and NHTSA 2012).

### **2.3.2 Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards**

The USEPA and the NHTSA have been working together on developing a national program of regulations to reduce GHG emissions and to improve fuel economy of light-duty vehicles. The USEPA is finalizing the first-ever national GHG emissions standards under the Clean Air Act (CAA), and the NHTSA is finalizing Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. On April 1, 2010, the USEPA and NHTSA announced a joint Final Rulemaking that established 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. The rules require these vehicles to meet an estimated combined average emissions level of 250 grams per mile by 2016, decreasing to an average industry fleet-wide level of 163 grams per mile in model year 2025. The 2016 standard is equivalent to 35.5 miles per gallon (mpg), and the 2025 standard is equivalent to 54.5 mpg if the levels were achieved solely through improvements in fuel efficiency. The agencies expect, however, that a portion of these improvements will be made through improvements in air conditioning leakage and the use of alternative refrigerants that would not contribute to fuel economy. These standards would cut GHG emissions by an estimated 2 billion metric tons (MT) and 4 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2017–2025). The combined USEPA GHG emission standards and NHTSA 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 2017; USEPA and NHTSA 2012).

## **2.4 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 California Environmental Quality Act (CEQA) analysis of GHG emissions.

### **2.4.1 California Code of Regulations, Title 24, Part 6**

California Code of Regulations (CCR) Title 24 Part 6: California's 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 2016 and went into effect on January 1, 2017. The 2016 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The most significant efficiency improvements to the residential Standards include improvements for attics, walls, water heating, and lighting. The Standards are divided into three basic sets. First, there is a basic 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.

## 2.4.2 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 (CBSC 2017). The current 2016 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings went into effect on January 1, 2017.

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.

## 2.4.3 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.

## 2.4.4 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.

## 2.4.5 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.

#### **2.4.6 Senate Bill 32**

As a follow-up to AB 32 and in response to EO-B-30-15, Senate Bill (SB) 32 was passed by the California legislature in August 2016 to codify the EO's California GHG emission reduction target of 40 percent below 1990 levels by 2030.

#### **2.4.7 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 (CARB 2013). In January 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single packet of standards called Advanced Clean Cars (CARB 2013).

#### **2.4.8 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 CY 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.

#### **2.4.9 Executive Order S-01-07**

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.

#### **2.4.10 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.

## 2.4.11 California Air Resources Board: 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 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).

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 and, therefore, is moving forward with the update process. 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. CARB is moving forward with a second update to the Scoping Plan to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. The 2017 Climate Change Scoping Plan Update, Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target, was released in draft form on January 20, 2017.

## 2.5 LOCAL

### 2.5.1 City of Escondido

The City of Escondido developed the 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 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 of Escondido 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<sub>2</sub>e. 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<sub>2</sub>e by the

year 2020. The development of the 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 of Escondido has included additional local reduction measures in the CAP which encourage energy efficiency and renewable energy in buildings, transit-oriented planning, water conservation, and increased waste diversion. For development projects, the City CAP established a 2,500 MT CO<sub>2</sub>e per year screening level threshold. Annual project CO<sub>2</sub>e 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.

## 3.0 EXISTING CONDITIONS

For 2012, total GHG emissions worldwide were estimated at 46,049 MMT CO<sub>2</sub>e (World Resources Institute 2017). The U.S. contributed the second largest portion of GHG emissions (behind China) at 12 percent of global emissions, with 5,823 MMT CO<sub>2</sub>e in 2012. On a national level in 2013, approximately 27 percent of GHG emissions are associated with transportation and about 31 percent are associated with electricity generation (USEPA 2015).

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<sub>2</sub>e. Table 2, *California Greenhouse Gas Emissions by Sector*, shows the estimated statewide GHG emissions for the years 1990, 2000, 2010, and 2013.

**Table 2**  
**CALIFORNIA GREENHOUSE GAS EMISSIONS BY SECTOR**  
**(MMT CO<sub>2</sub>e)**

Sector	1990	2000	2010	2013
Agriculture and Forestry	23.6 (5%)	32.1 (7%)	34.5 (8%)	36.2 (8%)
Commercial	14.4 (3%)	15.0 (3%)	21.6 (5%)	22.6 (5%)
Electricity Generation	110.6 (26%)	105.2 (22%)	90.5 (20%)	90.6 (20%)
Industrial	103.0 (24%)	105.4 (22%)	102.7 (23%)	104.2 (23%)
Residential	29.7 (7%)	31.8 (7%)	32.2 (7%)	32.3 (7%)
Transportation	150.7 (35%)	178.1 (38%)	173.7 (38%)	172.5 (38%)
Unspecified Remaining	1.3 (<1%)	1.2 (<1%)	0.8 (<1%)	0.8 (<1%)
<b>TOTAL</b>	<b>433.3</b>	<b>468.8</b>	<b>456.0</b>	<b>459.3</b>

Source: CARB 2007 and CARB 2015

As shown in Table 2, statewide GHG emissions totaled 433 MMT CO<sub>2</sub>e in 1990, 469 MMT CO<sub>2</sub>e in 2000, 456 MMT CO<sub>2</sub>e in 2010, and 459 MMT CO<sub>2</sub>e in 2013. Transportation-related emissions consistently contribute the most GHG emissions, followed by electricity generation and industrial emissions.

A City of Escondido regional emissions inventory was prepared as part of their 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<sub>2</sub>e)**

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

Source: City of Escondido 2013a

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



## 4.0 METHODOLOGY AND SIGNIFICANCE CRITERIA

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### 4.1 METHODOLOGY

Criteria pollutant and GHG emissions were calculated using the California Emissions Estimator Model (CalEEMod), Version 2016.3.1. 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 input data and subsequent construction and operation emission estimates for the proposed project are discussed below. CalEEMod output files are included in Appendix A.

#### 4.1.1 Construction Emissions

As described above, construction emissions are assessed using the 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 carbon monoxide (CO), particulate matter less than 10 microns (PM<sub>10</sub>), particulate matter less than 2.5 microns (PM<sub>2.5</sub>), sulfur dioxide (SO<sub>2</sub>), and the ozone precursors reactive organic gas (ROG) and nitrogen oxides (NO<sub>x</sub>).

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, utility installation, building construction, paving, and architectural coating.

Construction would require heavy equipment during demolition, site preparation, grading, utility installation, building construction, and paving. Construction equipment estimates are based on detailed assumptions provided by the Applicant. Table 4, *Construction Equipment Assumptions*, presents a summary of the assumed equipment that would be involved in each stage of construction.

**Table 4  
CONSTRUCTION EQUIPMENT ASSUMPTIONS**

Construction Phase	Equipment	Number
Demolition	Concrete/Industrial Slaws	1
	Rubber Tired Dozers	1
	Trackers/Loaders/Backhoes	3
Site Preparation	Graders	1
	Rubber Tired Dozers	1
	Tractors/Loaders/Backhoes	1
Grading	Graders	1
	Rubber Tired Dozers	1
	Tractors/Loaders/Backhoes	1
Trenching	Excavators	1
	Trenchers	1
Building Construction	Cranes	1
	Forklifts	1
	Generator Sets	1
	Tractors/Loaders/Backhoes	1
	Welders	3
Paving	Cement and Mortar Mixers	1
	Pavers	1
	Paving Equipment	1
	Rollers	1
	Tractors/Loaders/Backhoes	1
Architectural Coating	Air Compressors	1

Source: CalEEMod defaults and pers. communication with Matthew Jumper, San Diego Interfaith Housing Foundation.

Note: Output data, including equipment horsepower, is provided in Appendix A

The construction schedule was based on information provided by the Applicant. As shown in Table 5, *Anticipated Construction Schedule*, project development is assumed to start in September 2018 and projected to be complete November 2020.

**Table 5  
ANTICIPATED CONSTRUCTION SCHEDULE**

Construction Activity	Construction Period		
	Start	End	Number of Working Days
Demolition	9/3/2018	10/26/2018	40
Site Preparation	10/27/2018	11/9/2018	10
Grading	11/10/2018	2/1/2019	60
Trenching	2/2/2019	3/1/2019	20
Building Construction	3/2/2019	7/17/2020	360
Paving	7/18/2020	8/14/2020	20
Architectural Coating	8/15/2020	11/6/2020	60

Source: Personal communication with Matthew Jumper, San Diego Interfaith Housing Foundation.

Note: Output data is provided in Appendix A.

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 has the capability to calculate reductions in construction emissions from the effects of dust control, diesel-engine classifications, and other selected emissions reduction measures. Emissions calculations assume application of water during grading. Based on CalEEMod, Version 2016.3.1, the control efficiency for watering two times per day is 55 percent.

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.

#### 4.1.2 Operation Emissions

Operational impacts were estimated using CalEEMod. Operational sources of emissions include area, energy, transportation, water use, and solid waste. Operational emissions from area sources include the use of consumer products, engine emissions from landscape maintenance equipment, and volatile organic compound (VOC) emissions from repainting of buildings.

Operational emissions from mobile source emissions are associated with project-related vehicle trip generation and trip length. Based on the Transportation Impact Analysis (TIA; Linscott, Law & Greenspan Engineers [LLG] 2017), the project would generate 590 average daily trips (ADT). CalEEMod default vehicle speeds, trip purpose, and distance were used. Model output data sheets are included in Appendix A.

## 4.2 SIGNIFICANCE CRITERIA

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

The City of Escondido's CAP establishes a screening level threshold of 2,500 MT CO<sub>2</sub>e per year for mixed-use projects. 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 CAP Screening Tables or a reduction of 20.6 percent over the unmitigated emissions conditions must be demonstrated.

## 5.0 IMPACT ANALYSIS

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

### 5.1 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 1.2 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 764 MT CO<sub>2</sub>e. 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 25 MT CO<sub>2</sub>e emissions per year.

**Table 6**  
**ESTIMATED CONSTRUCTION GHG EMISSIONS**

Phase	Emissions (MT CO <sub>2</sub> e)
Demolition	57
Site Preparation	8
Grading	41
Underground Utilities	8
Building Construction	624
Paving	13
Architectural Coating	13
<b>TOTAL<sup>1</sup></b>	<b>764</b>
Amortized Construction Emissions <sup>2</sup>	25

Source: CalEEMod (output data is provided in Appendix A)

<sup>1</sup> The total presented is the sum of the unrounded values.

<sup>2</sup> Construction emissions are amortized over 30 years in accordance with City guidance.

### 5.2 OPERATIONAL EMISSIONS

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.

### 5.2.1 Area Source Emissions

Project area sources include emissions from landscaping equipment. GHG emissions associated with area sources were estimated using the CalEEMod default values for the project. The annual GHG emissions from area sources are estimated to be 2 MT CO<sub>2</sub>e per year.

### 5.2.2 Energy Emissions

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). Project electricity and natural gas would be supplied by San Diego Gas & Electric. Solar panels, which would supply approximately 100 DC kW and approximately 90 AC kW, would likely be installed to cover energy associated with common areas. Although solar would reduce overall energy emissions, this reduction was not quantified in this report, therefore, resulting in a conservative estimate of energy-related emissions.

With the implementation of energy-reducing project design features to comply with 2016 Title 24 standards, the annual GHG emissions from electricity consumption are estimated to be 356 MT CO<sub>2</sub>e.

### 5.2.3 Vehicular (Mobile) Sources

Operational emissions from mobile source emissions are associated with project-related vehicle trip generation and trip length. Based on information from Traffic Impact Analysis prepared for the project (LLG 2017), the project would generate approximately 590 ADT. CalEEMod default vehicle speeds were used. The project would result in vehicle-related emissions of 379 MT CO<sub>2</sub>e.

### 5.2.4 Solid Waste Sources

Solid waste generated by the project would also contribute to GHG emissions. Treatment and disposal of solid waste produces emissions of methane. Using CalEEMod defaults and a 75 percent operational solid waste diversion rate in accordance AB 341 standards, GHG emissions from project-related solid waste would be 9 MT CO<sub>2</sub>e per year.

### 5.2.5 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. Using these defaults and a 20 percent reduction in potable water use and wastewater generation in accordance with CALGreen, the project's estimated GHG emissions related to water treatment and conveyance would be 61 MT CO<sub>2</sub>e per year.

## 5.3 OTHER GHG EMISSION SOURCES

Ozone is also a GHG; however, unlike other GHGs, ozone in the troposphere is relatively short lived and therefore is not global in nature. According to CARB, it is difficult to make an accurate determination of the contribution of ozone precursors (NO<sub>x</sub> and VOCs) to global warming (CARB 2006). Therefore, it is

assumed that emission of ozone precursors associated with the project would not significantly contribute to climate change.

At present, there is a federal ban on chlorofluorocarbons (CFCs); therefore, it is assumed that the project would not generate emissions of this GHG. Implementation of the project may emit a small amount of HFC emissions from leakage, service of, and from disposal at the end of the life of refrigeration and air conditioning equipment. However, these emissions are not quantifiable and are assumed to be negligible. PFCs and sulfur hexafluoride are typically used in heavy-duty industrial manufacturing applications. The proposed project is a senior housing development and would not include heavy-duty industrial manufacturing applications. Therefore, it is not anticipated that the project would contribute significant emissions of these GHGs.

## 5.4 SUMMARY

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 832 MT CO<sub>2</sub>e. This value is less than the City CAP's 2,500 MT CO<sub>2</sub>e per year screening threshold.

**Table 7  
TOTAL ESTIMATED OPERATIONAL GHG EMISSIONS**

Emission Sources	Emissions (MT CO <sub>2</sub> e)
	2020
Area Sources	2
Energy Sources	356
Vehicular (Mobile) Sources	379
Solid Waste Sources	9
Water Sources	61
Operational Subtotal	807
Construction (Annualized over 30 years)	25
<b>TOTAL OPERATIONAL EMISSIONS</b>	<b>832</b>

Source: CalEEMod output data is provided in Appendix A

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<sub>2</sub>e 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.

## 5.5 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 would require further reductions of 40 percent below 1990 levels by 2030. Because the project's

operational year in 2020, the project aims to reach the quantitative goals set by AB 32. 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 City CAP applies a screening threshold of 2,500 MT CO<sub>2</sub>e per year to comply with the reduction goals of AB 32. The proposed project's increase in GHG emissions would be less than the City's screening threshold and 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.



## 6.0 REFERENCES

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# Appendix A

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CalEEMod Output

220 North Quince Street Senior Housing Project - San Diego County, Annual

**220 North Quince Street Senior Housing Project**  
**San Diego County, Annual**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	147.00	Space	0.00	58,800.00	0
Retirement Community	147.00	Dwelling Unit	1.49	147,000.00	420

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2021
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	720.49	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

220 North Quince Street Senior Housing Project - San Diego County, Annual

Project Characteristics - Operational year = 2021

Land Use - Lot acreage obtained from Applicant.

Construction Phase - Construction schedule obtained from Applicant.

Off-road Equipment - Typical equipment for this construction activity.

Demolition -

Grading -

Architectural Coating - Low-VOC paint.

Vehicle Trips - TIA (LLG 8-9-2017)

Woodstoves - No hearth

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - 36.25%. Model is based on 2013 T24. 2016 T24 is 25% more efficient. Project will exceed 2016 T24 by 15%. Therefore,  $25\% + (15\% \times 75\%) = 36.25\%$ .

Water Mitigation -

Waste Mitigation -

Operational Off-Road Equipment - None

Stationary Sources - Emergency Generators and Fire Pumps -

## 220 North Quince Street Senior Housing Project - San Diego County, Annual

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
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	10.00	60.00
tblConstructionPhase	NumDays	200.00	360.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	4.00	60.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	10.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	80.85	0.00
tblFireplaces	NumberNoFireplace	14.70	147.00
tblFireplaces	NumberWood	51.45	0.00
tblLandUse	LotAcreage	1.32	0.00
tblLandUse	LotAcreage	29.40	1.49
tblProjectCharacteristics	OperationalYear	2018	2021
tblVehicleTrips	ST_TR	2.03	4.00
tblVehicleTrips	SU_TR	1.95	4.00
tblVehicleTrips	WD_TR	2.40	4.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

## 2.0 Emissions Summary

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220 North Quince Street Senior Housing Project - San Diego County, Annual

**2.1 Overall Construction**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0889	0.9455	0.4883	9.7000e-004	0.2133	0.0480	0.2613	0.0968	0.0446	0.1414	0.0000	89.0022	89.0022	0.0218	0.0000	89.5469
2019	0.3398	2.3762	2.1133	4.5800e-003	0.2806	0.1157	0.3962	0.1116	0.1111	0.2226	0.0000	401.0455	401.0455	0.0547	0.0000	402.4120
2020	0.6695	1.4242	1.4158	3.1100e-003	0.0943	0.0665	0.1608	0.0253	0.0641	0.0895	0.0000	270.8852	270.8852	0.0343	0.0000	271.7419
<b>Maximum</b>	<b>0.6695</b>	<b>2.3762</b>	<b>2.1133</b>	<b>4.5800e-003</b>	<b>0.2806</b>	<b>0.1157</b>	<b>0.3962</b>	<b>0.1116</b>	<b>0.1111</b>	<b>0.2226</b>	<b>0.0000</b>	<b>401.0455</b>	<b>401.0455</b>	<b>0.0547</b>	<b>0.0000</b>	<b>402.4120</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0889	0.9455	0.4883	9.7000e-004	0.0993	0.0480	0.1473	0.0445	0.0446	0.0891	0.0000	89.0021	89.0021	0.0218	0.0000	89.5468
2019	0.3398	2.3762	2.1133	4.5800e-003	0.1995	0.1157	0.3152	0.0699	0.1111	0.1809	0.0000	401.0452	401.0452	0.0547	0.0000	402.4117
2020	0.6695	1.4242	1.4158	3.1100e-003	0.0943	0.0665	0.1608	0.0253	0.0641	0.0895	0.0000	270.8850	270.8850	0.0343	0.0000	271.7417
<b>Maximum</b>	<b>0.6695</b>	<b>2.3762</b>	<b>2.1133</b>	<b>4.5800e-003</b>	<b>0.1995</b>	<b>0.1157</b>	<b>0.3152</b>	<b>0.0699</b>	<b>0.1111</b>	<b>0.1809</b>	<b>0.0000</b>	<b>401.0452</b>	<b>401.0452</b>	<b>0.0547</b>	<b>0.0000</b>	<b>402.4117</b>

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	33.17	0.00	23.84	40.24	0.00	20.74	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	9-3-2018	12-2-2018	0.8306	0.8306
2	12-3-2018	3-2-2019	0.4012	0.4012
3	3-3-2019	6-2-2019	0.7353	0.7353
4	6-3-2019	9-2-2019	0.7340	0.7340
5	9-3-2019	12-2-2019	0.7287	0.7287
6	12-3-2019	3-2-2020	0.6897	0.6897
7	3-3-2020	6-2-2020	0.6758	0.6758
8	6-3-2020	9-2-2020	0.5429	0.5429
9	9-3-2020	9-30-2020	0.1755	0.1755
		Highest	0.8306	0.8306



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**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	0.8432	0.0126	1.0952	6.0000e-005		6.0300e-003	6.0300e-003		6.0300e-003	6.0300e-003	0.0000	1.7856	1.7856	1.7300e-003	0.0000	1.8289
Energy	0.0114	0.0972	0.0414	6.2000e-004		7.8600e-003	7.8600e-003		7.8600e-003	7.8600e-003	0.0000	393.8253	393.8253	0.0135	4.4100e-003	395.4752
Mobile	0.1795	0.7993	2.1756	7.3800e-003	0.6327	6.2700e-003	0.6390	0.1694	5.8700e-003	0.1753	0.0000	679.8302	679.8302	0.0361	0.0000	680.7321
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	13.7263	0.0000	13.7263	0.8112	0.0000	34.0062
Water						0.0000	0.0000		0.0000	0.0000	3.0385	62.6798	65.7184	0.3146	7.8900e-003	75.9351
<b>Total</b>	<b>1.0341</b>	<b>0.9091</b>	<b>3.3122</b>	<b>8.0600e-003</b>	<b>0.6327</b>	<b>0.0202</b>	<b>0.6529</b>	<b>0.1694</b>	<b>0.0198</b>	<b>0.1892</b>	<b>16.7648</b>	<b>1,138.1209</b>	<b>1,154.8857</b>	<b>1.1771</b>	<b>0.0123</b>	<b>1,187.9775</b>

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**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	0.8432	0.0126	1.0952	6.0000e-005		6.0300e-003	6.0300e-003		6.0300e-003	6.0300e-003	0.0000	1.7856	1.7856	1.7300e-003	0.0000	1.8289
Energy	8.4500e-003	0.0722	0.0307	4.6000e-004		5.8400e-003	5.8400e-003		5.8400e-003	5.8400e-003	0.0000	354.3148	354.3148	0.0125	3.7900e-003	355.7559
Mobile	0.1433	0.5736	1.3869	4.1100e-003	0.3355	3.6400e-003	0.3391	0.0898	3.4000e-003	0.0932	0.0000	378.7092	378.7092	0.0225	0.0000	379.2711
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	3.4316	0.0000	3.4316	0.2028	0.0000	8.5016
Water						0.0000	0.0000		0.0000	0.0000	2.4308	50.1438	52.5747	0.2517	6.3100e-003	60.7481
<b>Total</b>	<b>0.9950</b>	<b>0.6584</b>	<b>2.5128</b>	<b>4.6300e-003</b>	<b>0.3355</b>	<b>0.0155</b>	<b>0.3510</b>	<b>0.0898</b>	<b>0.0153</b>	<b>0.1051</b>	<b>5.8624</b>	<b>784.9534</b>	<b>790.8158</b>	<b>0.4912</b>	<b>0.0101</b>	<b>806.1056</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>3.78</b>	<b>27.58</b>	<b>24.13</b>	<b>42.56</b>	<b>46.98</b>	<b>23.07</b>	<b>46.24</b>	<b>46.98</b>	<b>22.72</b>	<b>44.45</b>	<b>65.03</b>	<b>31.03</b>	<b>31.52</b>	<b>58.27</b>	<b>17.89</b>	<b>32.14</b>

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**2.3 Vegetation**

Vegetation

	CO2e
Category	MT
New Trees	0.0000
<b>Total</b>	<b>0.0000</b>

**3.0 Construction Detail**

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/3/2018	10/26/2018	5	40	
2	Site Preparation	Site Preparation	10/27/2018	11/9/2018	5	10	
3	Grading	Grading	11/10/2018	2/1/2019	5	60	
4	Underground Utilities	Trenching	2/2/2019	3/1/2019	5	20	
5	Building Construction	Building Construction	3/2/2019	7/17/2020	5	360	
6	Paving	Paving	7/18/2020	8/14/2020	5	20	
7	Architectural Coating	Architectural Coating	8/15/2020	11/6/2020	5	60	

**Acres of Grading (Site Preparation Phase): 5**

**Acres of Grading (Grading Phase): 22.5**

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**Acres of Paving: 0****Residential Indoor: 297,675; Residential Outdoor: 99,225; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 3,528 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Underground Utilities	Excavators	1	8.00	158	0.38
Underground Utilities	Trenchers	1	8.00	78	0.50
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	282.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Underground Utilities	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	131.00	25.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	26.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0309	0.0000	0.0309	4.6800e-003	0.0000	4.6800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0497	0.4873	0.3022	4.8000e-004		0.0287	0.0287		0.0269	0.0269	0.0000	43.3846	43.3846	0.0110	0.0000	43.6594
<b>Total</b>	<b>0.0497</b>	<b>0.4873</b>	<b>0.3022</b>	<b>4.8000e-004</b>	<b>0.0309</b>	<b>0.0287</b>	<b>0.0596</b>	<b>4.6800e-003</b>	<b>0.0269</b>	<b>0.0315</b>	<b>0.0000</b>	<b>43.3846</b>	<b>43.3846</b>	<b>0.0110</b>	<b>0.0000</b>	<b>43.6594</b>

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**3.2 Demolition - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3100e-003	0.0458	9.5500e-003	1.1000e-004	2.4100e-003	1.8000e-004	2.5900e-003	6.6000e-004	1.7000e-004	8.3000e-004	0.0000	11.1113	11.1113	1.0000e-003	0.0000	11.1363
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	1.1100e-003	8.8000e-004	8.4400e-003	2.0000e-005	2.0800e-003	2.0000e-005	2.1000e-003	5.5000e-004	1.0000e-005	5.7000e-004	0.0000	2.0066	2.0066	7.0000e-005	0.0000	2.0084
<b>Total</b>	<b>2.4200e-003</b>	<b>0.0467</b>	<b>0.0180</b>	<b>1.3000e-004</b>	<b>4.4900e-003</b>	<b>2.0000e-004</b>	<b>4.6900e-003</b>	<b>1.2100e-003</b>	<b>1.8000e-004</b>	<b>1.4000e-003</b>	<b>0.0000</b>	<b>13.1179</b>	<b>13.1179</b>	<b>1.0700e-003</b>	<b>0.0000</b>	<b>13.1447</b>

**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					0.0139	0.0000	0.0139	2.1100e-003	0.0000	2.1100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0497	0.4873	0.3022	4.8000e-004		0.0287	0.0287		0.0269	0.0269	0.0000	43.3845	43.3845	0.0110	0.0000	43.6593
<b>Total</b>	<b>0.0497</b>	<b>0.4873</b>	<b>0.3022</b>	<b>4.8000e-004</b>	<b>0.0139</b>	<b>0.0287</b>	<b>0.0426</b>	<b>2.1100e-003</b>	<b>0.0269</b>	<b>0.0290</b>	<b>0.0000</b>	<b>43.3845</b>	<b>43.3845</b>	<b>0.0110</b>	<b>0.0000</b>	<b>43.6593</b>

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**3.2 Demolition - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3100e-003	0.0458	9.5500e-003	1.1000e-004	2.4100e-003	1.8000e-004	2.5900e-003	6.6000e-004	1.7000e-004	8.3000e-004	0.0000	11.1113	11.1113	1.0000e-003	0.0000	11.1363
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	1.1100e-003	8.8000e-004	8.4400e-003	2.0000e-005	2.0800e-003	2.0000e-005	2.1000e-003	5.5000e-004	1.0000e-005	5.7000e-004	0.0000	2.0066	2.0066	7.0000e-005	0.0000	2.0084
<b>Total</b>	<b>2.4200e-003</b>	<b>0.0467</b>	<b>0.0180</b>	<b>1.3000e-004</b>	<b>4.4900e-003</b>	<b>2.0000e-004</b>	<b>4.6900e-003</b>	<b>1.2100e-003</b>	<b>1.8000e-004</b>	<b>1.4000e-003</b>	<b>0.0000</b>	<b>13.1179</b>	<b>13.1179</b>	<b>1.0700e-003</b>	<b>0.0000</b>	<b>13.1447</b>

**3.3 Site Preparation - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0290	0.0000	0.0290	0.0148	0.0000	0.0148	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0300e-003	0.1037	0.0404	9.0000e-005		4.7600e-003	4.7600e-003		4.3800e-003	4.3800e-003	0.0000	7.8715	7.8715	2.4500e-003	0.0000	7.9327
<b>Total</b>	<b>9.0300e-003</b>	<b>0.1037</b>	<b>0.0404</b>	<b>9.0000e-005</b>	<b>0.0290</b>	<b>4.7600e-003</b>	<b>0.0338</b>	<b>0.0148</b>	<b>4.3800e-003</b>	<b>0.0192</b>	<b>0.0000</b>	<b>7.8715</b>	<b>7.8715</b>	<b>2.4500e-003</b>	<b>0.0000</b>	<b>7.9327</b>

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**3.3 Site Preparation - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.4000e-004	1.3000e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3087	0.3087	1.0000e-005	0.0000	0.3090
<b>Total</b>	<b>1.7000e-004</b>	<b>1.4000e-004</b>	<b>1.3000e-003</b>	<b>0.0000</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>3.2000e-004</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>0.3087</b>	<b>0.3087</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3090</b>

**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					0.0131	0.0000	0.0131	6.6500e-003	0.0000	6.6500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0300e-003	0.1037	0.0404	9.0000e-005		4.7600e-003	4.7600e-003		4.3800e-003	4.3800e-003	0.0000	7.8715	7.8715	2.4500e-003	0.0000	7.9327
<b>Total</b>	<b>9.0300e-003</b>	<b>0.1037</b>	<b>0.0404</b>	<b>9.0000e-005</b>	<b>0.0131</b>	<b>4.7600e-003</b>	<b>0.0178</b>	<b>6.6500e-003</b>	<b>4.3800e-003</b>	<b>0.0110</b>	<b>0.0000</b>	<b>7.8715</b>	<b>7.8715</b>	<b>2.4500e-003</b>	<b>0.0000</b>	<b>7.9327</b>



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**3.3 Site Preparation - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.4000e-004	1.3000e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3087	0.3087	1.0000e-005	0.0000	0.3090
<b>Total</b>	<b>1.7000e-004</b>	<b>1.4000e-004</b>	<b>1.3000e-003</b>	<b>0.0000</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>3.2000e-004</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>0.3087</b>	<b>0.3087</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3090</b>

**3.4 Grading - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1474	0.0000	0.1474	0.0758	0.0000	0.0758	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0270	0.3072	0.1217	2.5000e-004		0.0143	0.0143		0.0132	0.0132	0.0000	23.2082	23.2082	7.2300e-003	0.0000	23.3889
<b>Total</b>	<b>0.0270</b>	<b>0.3072</b>	<b>0.1217</b>	<b>2.5000e-004</b>	<b>0.1474</b>	<b>0.0143</b>	<b>0.1617</b>	<b>0.0758</b>	<b>0.0132</b>	<b>0.0889</b>	<b>0.0000</b>	<b>23.2082</b>	<b>23.2082</b>	<b>7.2300e-003</b>	<b>0.0000</b>	<b>23.3889</b>

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**3.4 Grading - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2000e-004	4.9000e-004	4.6700e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	1.1114	1.1114	4.0000e-005	0.0000	1.1123
<b>Total</b>	<b>6.2000e-004</b>	<b>4.9000e-004</b>	<b>4.6700e-003</b>	<b>1.0000e-005</b>	<b>1.1500e-003</b>	<b>1.0000e-005</b>	<b>1.1600e-003</b>	<b>3.1000e-004</b>	<b>1.0000e-005</b>	<b>3.1000e-004</b>	<b>0.0000</b>	<b>1.1114</b>	<b>1.1114</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.1123</b>

**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					0.0663	0.0000	0.0663	0.0341	0.0000	0.0341	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0270	0.3072	0.1217	2.5000e-004		0.0143	0.0143		0.0132	0.0132	0.0000	23.2082	23.2082	7.2300e-003	0.0000	23.3888
<b>Total</b>	<b>0.0270</b>	<b>0.3072</b>	<b>0.1217</b>	<b>2.5000e-004</b>	<b>0.0663</b>	<b>0.0143</b>	<b>0.0806</b>	<b>0.0341</b>	<b>0.0132</b>	<b>0.0473</b>	<b>0.0000</b>	<b>23.2082</b>	<b>23.2082</b>	<b>7.2300e-003</b>	<b>0.0000</b>	<b>23.3888</b>

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**3.4 Grading - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2000e-004	4.9000e-004	4.6700e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	1.1114	1.1114	4.0000e-005	0.0000	1.1123
<b>Total</b>	<b>6.2000e-004</b>	<b>4.9000e-004</b>	<b>4.6700e-003</b>	<b>1.0000e-005</b>	<b>1.1500e-003</b>	<b>1.0000e-005</b>	<b>1.1600e-003</b>	<b>3.1000e-004</b>	<b>1.0000e-005</b>	<b>3.1000e-004</b>	<b>0.0000</b>	<b>1.1114</b>	<b>1.1114</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.1123</b>

**3.4 Grading - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1474	0.0000	0.1474	0.0758	0.0000	0.0758	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0170	0.1924	0.0793	1.7000e-004		8.8400e-003	8.8400e-003		8.1300e-003	8.1300e-003	0.0000	15.2014	15.2014	4.8100e-003	0.0000	15.3217
<b>Total</b>	<b>0.0170</b>	<b>0.1924</b>	<b>0.0793</b>	<b>1.7000e-004</b>	<b>0.1474</b>	<b>8.8400e-003</b>	<b>0.1563</b>	<b>0.0758</b>	<b>8.1300e-003</b>	<b>0.0839</b>	<b>0.0000</b>	<b>15.2014</b>	<b>15.2014</b>	<b>4.8100e-003</b>	<b>0.0000</b>	<b>15.3217</b>

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**3.4 Grading - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.9000e-004	2.8100e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.8000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.7186	0.7186	2.0000e-005	0.0000	0.7191
<b>Total</b>	<b>3.8000e-004</b>	<b>2.9000e-004</b>	<b>2.8100e-003</b>	<b>1.0000e-005</b>	<b>7.7000e-004</b>	<b>1.0000e-005</b>	<b>7.8000e-004</b>	<b>2.0000e-004</b>	<b>1.0000e-005</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>0.7186</b>	<b>0.7186</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.7191</b>

**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					0.0663	0.0000	0.0663	0.0341	0.0000	0.0341	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0170	0.1924	0.0793	1.7000e-004		8.8400e-003	8.8400e-003		8.1300e-003	8.1300e-003	0.0000	15.2014	15.2014	4.8100e-003	0.0000	15.3216
<b>Total</b>	<b>0.0170</b>	<b>0.1924</b>	<b>0.0793</b>	<b>1.7000e-004</b>	<b>0.0663</b>	<b>8.8400e-003</b>	<b>0.0752</b>	<b>0.0341</b>	<b>8.1300e-003</b>	<b>0.0422</b>	<b>0.0000</b>	<b>15.2014</b>	<b>15.2014</b>	<b>4.8100e-003</b>	<b>0.0000</b>	<b>15.3216</b>

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**3.4 Grading - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.9000e-004	2.8100e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.8000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.7186	0.7186	2.0000e-005	0.0000	0.7191
<b>Total</b>	<b>3.8000e-004</b>	<b>2.9000e-004</b>	<b>2.8100e-003</b>	<b>1.0000e-005</b>	<b>7.7000e-004</b>	<b>1.0000e-005</b>	<b>7.8000e-004</b>	<b>2.0000e-004</b>	<b>1.0000e-005</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>0.7186</b>	<b>0.7186</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.7191</b>

**3.5 Underground Utilities - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.9500e-003	0.0660	0.0590	9.0000e-005		4.2600e-003	4.2600e-003		3.9100e-003	3.9100e-003	0.0000	7.6655	7.6655	2.4300e-003	0.0000	7.7262
<b>Total</b>	<b>6.9500e-003</b>	<b>0.0660</b>	<b>0.0590</b>	<b>9.0000e-005</b>		<b>4.2600e-003</b>	<b>4.2600e-003</b>		<b>3.9100e-003</b>	<b>3.9100e-003</b>	<b>0.0000</b>	<b>7.6655</b>	<b>7.6655</b>	<b>2.4300e-003</b>	<b>0.0000</b>	<b>7.7262</b>

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**3.5 Underground Utilities - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.5000e-004	1.4600e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3743	0.3743	1.0000e-005	0.0000	0.3746
<b>Total</b>	<b>2.0000e-004</b>	<b>1.5000e-004</b>	<b>1.4600e-003</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.3743</b>	<b>0.3743</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3746</b>

**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	6.9500e-003	0.0660	0.0590	9.0000e-005		4.2500e-003	4.2500e-003		3.9100e-003	3.9100e-003	0.0000	7.6655	7.6655	2.4300e-003	0.0000	7.7261
<b>Total</b>	<b>6.9500e-003</b>	<b>0.0660</b>	<b>0.0590</b>	<b>9.0000e-005</b>		<b>4.2500e-003</b>	<b>4.2500e-003</b>		<b>3.9100e-003</b>	<b>3.9100e-003</b>	<b>0.0000</b>	<b>7.6655</b>	<b>7.6655</b>	<b>2.4300e-003</b>	<b>0.0000</b>	<b>7.7261</b>

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**3.5 Underground Utilities - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.5000e-004	1.4600e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3743	0.3743	1.0000e-005	0.0000	0.3746
<b>Total</b>	<b>2.0000e-004</b>	<b>1.5000e-004</b>	<b>1.4600e-003</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.3743</b>	<b>0.3743</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3746</b>

**3.6 Building Construction - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2465	1.7339	1.4633	2.3900e-003		0.0994	0.0994		0.0960	0.0960	0.0000	198.6330	198.6330	0.0382	0.0000	199.5877
<b>Total</b>	<b>0.2465</b>	<b>1.7339</b>	<b>1.4633</b>	<b>2.3900e-003</b>		<b>0.0994</b>	<b>0.0994</b>		<b>0.0960</b>	<b>0.0960</b>	<b>0.0000</b>	<b>198.6330</b>	<b>198.6330</b>	<b>0.0382</b>	<b>0.0000</b>	<b>199.5877</b>

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**3.6 Building Construction - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0127	0.3405	0.0915	7.4000e-004	0.0180	2.3600e-003	0.0204	5.2000e-003	2.2500e-003	7.4500e-003	0.0000	72.0652	72.0652	5.7800e-003	0.0000	72.2097
Worker	0.0560	0.0430	0.4159	1.1800e-003	0.1140	8.3000e-004	0.1148	0.0303	7.7000e-004	0.0311	0.0000	106.3876	106.3876	3.4200e-003	0.0000	106.4731
<b>Total</b>	<b>0.0688</b>	<b>0.3835</b>	<b>0.5074</b>	<b>1.9200e-003</b>	<b>0.1320</b>	<b>3.1900e-003</b>	<b>0.1352</b>	<b>0.0355</b>	<b>3.0200e-003</b>	<b>0.0385</b>	<b>0.0000</b>	<b>178.4527</b>	<b>178.4527</b>	<b>9.2000e-003</b>	<b>0.0000</b>	<b>178.6828</b>

**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	0.2465	1.7339	1.4633	2.3900e-003		0.0994	0.0994		0.0960	0.0960	0.0000	198.6328	198.6328	0.0382	0.0000	199.5874
<b>Total</b>	<b>0.2465</b>	<b>1.7339</b>	<b>1.4633</b>	<b>2.3900e-003</b>		<b>0.0994</b>	<b>0.0994</b>		<b>0.0960</b>	<b>0.0960</b>	<b>0.0000</b>	<b>198.6328</b>	<b>198.6328</b>	<b>0.0382</b>	<b>0.0000</b>	<b>199.5874</b>



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**3.6 Building Construction - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0127	0.3405	0.0915	7.4000e-004	0.0180	2.3600e-003	0.0204	5.2000e-003	2.2500e-003	7.4500e-003	0.0000	72.0652	72.0652	5.7800e-003	0.0000	72.2097
Worker	0.0560	0.0430	0.4159	1.1800e-003	0.1140	8.3000e-004	0.1148	0.0303	7.7000e-004	0.0311	0.0000	106.3876	106.3876	3.4200e-003	0.0000	106.4731
<b>Total</b>	<b>0.0688</b>	<b>0.3835</b>	<b>0.5074</b>	<b>1.9200e-003</b>	<b>0.1320</b>	<b>3.1900e-003</b>	<b>0.1352</b>	<b>0.0355</b>	<b>3.0200e-003</b>	<b>0.0385</b>	<b>0.0000</b>	<b>178.4527</b>	<b>178.4527</b>	<b>9.2000e-003</b>	<b>0.0000</b>	<b>178.6828</b>

**3.6 Building Construction - 2020**

**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	0.1452	1.0574	0.9430	1.5800e-003		0.0569	0.0569		0.0550	0.0550	0.0000	129.8026	129.8026	0.0241	0.0000	130.4050
<b>Total</b>	<b>0.1452</b>	<b>1.0574</b>	<b>0.9430</b>	<b>1.5800e-003</b>		<b>0.0569</b>	<b>0.0569</b>		<b>0.0550</b>	<b>0.0550</b>	<b>0.0000</b>	<b>129.8026</b>	<b>129.8026</b>	<b>0.0241</b>	<b>0.0000</b>	<b>130.4050</b>

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**3.6 Building Construction - 2020**

**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	6.8100e-003	0.2038	0.0541	4.8000e-004	0.0119	9.9000e-004	0.0129	3.4300e-003	9.5000e-004	4.3800e-003	0.0000	47.1652	47.1652	3.6200e-003	0.0000	47.2556
Worker	0.0345	0.0256	0.2506	7.5000e-004	0.0751	5.4000e-004	0.0757	0.0200	5.0000e-004	0.0205	0.0000	67.8955	67.8955	2.0400e-003	0.0000	67.9464
<b>Total</b>	<b>0.0413</b>	<b>0.2293</b>	<b>0.3048</b>	<b>1.2300e-003</b>	<b>0.0870</b>	<b>1.5300e-003</b>	<b>0.0885</b>	<b>0.0234</b>	<b>1.4500e-003</b>	<b>0.0248</b>	<b>0.0000</b>	<b>115.0607</b>	<b>115.0607</b>	<b>5.6600e-003</b>	<b>0.0000</b>	<b>115.2020</b>

**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	0.1452	1.0574	0.9430	1.5800e-003		0.0569	0.0569		0.0550	0.0550	0.0000	129.8025	129.8025	0.0241	0.0000	130.4049
<b>Total</b>	<b>0.1452</b>	<b>1.0574</b>	<b>0.9430</b>	<b>1.5800e-003</b>		<b>0.0569</b>	<b>0.0569</b>		<b>0.0550</b>	<b>0.0550</b>	<b>0.0000</b>	<b>129.8025</b>	<b>129.8025</b>	<b>0.0241</b>	<b>0.0000</b>	<b>130.4049</b>

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**3.6 Building Construction - 2020**

**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	6.8100e-003	0.2038	0.0541	4.8000e-004	0.0119	9.9000e-004	0.0129	3.4300e-003	9.5000e-004	4.3800e-003	0.0000	47.1652	47.1652	3.6200e-003	0.0000	47.2556
Worker	0.0345	0.0256	0.2506	7.5000e-004	0.0751	5.4000e-004	0.0757	0.0200	5.0000e-004	0.0205	0.0000	67.8955	67.8955	2.0400e-003	0.0000	67.9464
<b>Total</b>	<b>0.0413</b>	<b>0.2293</b>	<b>0.3048</b>	<b>1.2300e-003</b>	<b>0.0870</b>	<b>1.5300e-003</b>	<b>0.0885</b>	<b>0.0234</b>	<b>1.4500e-003</b>	<b>0.0248</b>	<b>0.0000</b>	<b>115.0607</b>	<b>115.0607</b>	<b>5.6600e-003</b>	<b>0.0000</b>	<b>115.2020</b>

**3.7 Paving - 2020**

**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	8.4000e-003	0.0845	0.0888	1.4000e-004		4.7000e-003	4.7000e-003		4.3300e-003	4.3300e-003	0.0000	11.7657	11.7657	3.7300e-003	0.0000	11.8589
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>8.4000e-003</b>	<b>0.0845</b>	<b>0.0888</b>	<b>1.4000e-004</b>		<b>4.7000e-003</b>	<b>4.7000e-003</b>		<b>4.3300e-003</b>	<b>4.3300e-003</b>	<b>0.0000</b>	<b>11.7657</b>	<b>11.7657</b>	<b>3.7300e-003</b>	<b>0.0000</b>	<b>11.8589</b>

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**3.7 Paving - 2020**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.5000e-004	3.4800e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.9423	0.9423	3.0000e-005	0.0000	0.9431
<b>Total</b>	<b>4.8000e-004</b>	<b>3.5000e-004</b>	<b>3.4800e-003</b>	<b>1.0000e-005</b>	<b>1.0400e-003</b>	<b>1.0000e-005</b>	<b>1.0500e-003</b>	<b>2.8000e-004</b>	<b>1.0000e-005</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>0.9423</b>	<b>0.9423</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.9431</b>

**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	8.4000e-003	0.0845	0.0888	1.4000e-004		4.7000e-003	4.7000e-003		4.3300e-003	4.3300e-003	0.0000	11.7657	11.7657	3.7300e-003	0.0000	11.8589
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>8.4000e-003</b>	<b>0.0845</b>	<b>0.0888</b>	<b>1.4000e-004</b>		<b>4.7000e-003</b>	<b>4.7000e-003</b>		<b>4.3300e-003</b>	<b>4.3300e-003</b>	<b>0.0000</b>	<b>11.7657</b>	<b>11.7657</b>	<b>3.7300e-003</b>	<b>0.0000</b>	<b>11.8589</b>

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**3.7 Paving - 2020**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.5000e-004	3.4800e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.9423	0.9423	3.0000e-005	0.0000	0.9431
<b>Total</b>	<b>4.8000e-004</b>	<b>3.5000e-004</b>	<b>3.4800e-003</b>	<b>1.0000e-005</b>	<b>1.0400e-003</b>	<b>1.0000e-005</b>	<b>1.0500e-003</b>	<b>2.8000e-004</b>	<b>1.0000e-005</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>0.9423</b>	<b>0.9423</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.9431</b>

**3.8 Architectural Coating - 2020**

**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	0.4640					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2700e-003	0.0505	0.0549	9.0000e-005		3.3300e-003	3.3300e-003		3.3300e-003	3.3300e-003	0.0000	7.6598	7.6598	5.9000e-004	0.0000	7.6746
<b>Total</b>	<b>0.4713</b>	<b>0.0505</b>	<b>0.0549</b>	<b>9.0000e-005</b>		<b>3.3300e-003</b>	<b>3.3300e-003</b>		<b>3.3300e-003</b>	<b>3.3300e-003</b>	<b>0.0000</b>	<b>7.6598</b>	<b>7.6598</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>7.6746</b>

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**3.8 Architectural Coating - 2020**

**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	2.8800e-003	2.1300e-003	0.0209	6.0000e-005	6.2500e-003	4.0000e-005	6.3000e-003	1.6600e-003	4.0000e-005	1.7000e-003	0.0000	5.6540	5.6540	1.7000e-004	0.0000	5.6583
<b>Total</b>	<b>2.8800e-003</b>	<b>2.1300e-003</b>	<b>0.0209</b>	<b>6.0000e-005</b>	<b>6.2500e-003</b>	<b>4.0000e-005</b>	<b>6.3000e-003</b>	<b>1.6600e-003</b>	<b>4.0000e-005</b>	<b>1.7000e-003</b>	<b>0.0000</b>	<b>5.6540</b>	<b>5.6540</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>5.6583</b>

**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	0.4640					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2700e-003	0.0505	0.0549	9.0000e-005		3.3300e-003	3.3300e-003		3.3300e-003	3.3300e-003	0.0000	7.6598	7.6598	5.9000e-004	0.0000	7.6746
<b>Total</b>	<b>0.4713</b>	<b>0.0505</b>	<b>0.0549</b>	<b>9.0000e-005</b>		<b>3.3300e-003</b>	<b>3.3300e-003</b>		<b>3.3300e-003</b>	<b>3.3300e-003</b>	<b>0.0000</b>	<b>7.6598</b>	<b>7.6598</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>7.6746</b>

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**3.8 Architectural Coating - 2020**

**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	2.8800e-003	2.1300e-003	0.0209	6.0000e-005	6.2500e-003	4.0000e-005	6.3000e-003	1.6600e-003	4.0000e-005	1.7000e-003	0.0000	5.6540	5.6540	1.7000e-004	0.0000	5.6583
<b>Total</b>	<b>2.8800e-003</b>	<b>2.1300e-003</b>	<b>0.0209</b>	<b>6.0000e-005</b>	<b>6.2500e-003</b>	<b>4.0000e-005</b>	<b>6.3000e-003</b>	<b>1.6600e-003</b>	<b>4.0000e-005</b>	<b>1.7000e-003</b>	<b>0.0000</b>	<b>5.6540</b>	<b>5.6540</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>5.6583</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

Increase Density

Increase Transit Accessibility

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1433	0.5736	1.3869	4.1100e-003	0.3355	3.6400e-003	0.3391	0.0898	3.4000e-003	0.0932	0.0000	378.7092	378.7092	0.0225	0.0000	379.2711
Unmitigated	0.1795	0.7993	2.1756	7.3800e-003	0.6327	6.2700e-003	0.6390	0.1694	5.8700e-003	0.1753	0.0000	679.8302	679.8302	0.0361	0.0000	680.7321

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Retirement Community	588.00	588.00	588.00	1,678,918	890,199
Unenclosed Parking with Elevator	0.00	0.00	0.00		
<b>Total</b>	<b>588.00</b>	<b>588.00</b>	<b>588.00</b>	<b>1,678,918</b>	<b>890,199</b>

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Retirement Community	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Unenclosed Parking with Elevator	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
Unenclosed Parking with Elevator	0.593936	0.041843	0.182569	0.108325	0.016436	0.005513	0.015940	0.023523	0.001912	0.001972	0.006090	0.000748	0.001193
Retirement Community	0.593936	0.041843	0.182569	0.108325	0.016436	0.005513	0.015940	0.023523	0.001912	0.001972	0.006090	0.000748	0.001193



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**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	270.6829	270.6829	0.0109	2.2500e-003	271.6270
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	281.2833	281.2833	0.0113	2.3400e-003	282.2643
NaturalGas Mitigated	8.4500e-003	0.0722	0.0307	4.6000e-004		5.8400e-003	5.8400e-003		5.8400e-003	5.8400e-003	0.0000	83.6319	83.6319	1.6000e-003	1.5300e-003	84.1289
NaturalGas Unmitigated	0.0114	0.0972	0.0414	6.2000e-004		7.8600e-003	7.8600e-003		7.8600e-003	7.8600e-003	0.0000	112.5421	112.5421	2.1600e-003	2.0600e-003	113.2109

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**5.2 Energy by Land Use - Natural Gas**

**Unmitigated**

	Natural Gas 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					
Retirement Community	2.10896e+006	0.0114	0.0972	0.0414	6.2000e-004		7.8600e-003	7.8600e-003		7.8600e-003	7.8600e-003	0.0000	112.5421	112.5421	2.1600e-003	2.0600e-003	113.2109
Unenclosed Parking with Elevator	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
<b>Total</b>		<b>0.0114</b>	<b>0.0972</b>	<b>0.0414</b>	<b>6.2000e-004</b>		<b>7.8600e-003</b>	<b>7.8600e-003</b>		<b>7.8600e-003</b>	<b>7.8600e-003</b>	<b>0.0000</b>	<b>112.5421</b>	<b>112.5421</b>	<b>2.1600e-003</b>	<b>2.0600e-003</b>	<b>113.2109</b>

**Mitigated**

	Natural Gas 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					
Retirement Community	1.5672e+006	8.4500e-003	0.0722	0.0307	4.6000e-004		5.8400e-003	5.8400e-003		5.8400e-003	5.8400e-003	0.0000	83.6319	83.6319	1.6000e-003	1.5300e-003	84.1289
Unenclosed Parking with Elevator	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
<b>Total</b>		<b>8.4500e-003</b>	<b>0.0722</b>	<b>0.0307</b>	<b>4.6000e-004</b>		<b>5.8400e-003</b>	<b>5.8400e-003</b>		<b>5.8400e-003</b>	<b>5.8400e-003</b>	<b>0.0000</b>	<b>83.6319</b>	<b>83.6319</b>	<b>1.6000e-003</b>	<b>1.5300e-003</b>	<b>84.1289</b>

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**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Retirement Community	694881	227.0931	9.1400e-003	1.8900e-003	227.8852
Unenclosed Parking with Elevator	165816	54.1901	2.1800e-003	4.5000e-004	54.3791
<b>Total</b>		<b>281.2832</b>	<b>0.0113</b>	<b>2.3400e-003</b>	<b>282.2643</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Retirement Community	662445	216.4928	8.7100e-003	1.8000e-003	217.2479
Unenclosed Parking with Elevator	165816	54.1901	2.1800e-003	4.5000e-004	54.3791
<b>Total</b>		<b>270.6829</b>	<b>0.0109</b>	<b>2.2500e-003</b>	<b>271.6270</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.8432	0.0126	1.0952	6.0000e-005		6.0300e-003	6.0300e-003		6.0300e-003	6.0300e-003	0.0000	1.7856	1.7856	1.7300e-003	0.0000	1.8289
Unmitigated	0.8432	0.0126	1.0952	6.0000e-005		6.0300e-003	6.0300e-003		6.0300e-003	6.0300e-003	0.0000	1.7856	1.7856	1.7300e-003	0.0000	1.8289

**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	0.2320					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5779					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	0.0333	0.0126	1.0952	6.0000e-005		6.0300e-003	6.0300e-003		6.0300e-003	6.0300e-003	0.0000	1.7856	1.7856	1.7300e-003	0.0000	1.8289
<b>Total</b>	<b>0.8432</b>	<b>0.0126</b>	<b>1.0952</b>	<b>6.0000e-005</b>		<b>6.0300e-003</b>	<b>6.0300e-003</b>		<b>6.0300e-003</b>	<b>6.0300e-003</b>	<b>0.0000</b>	<b>1.7856</b>	<b>1.7856</b>	<b>1.7300e-003</b>	<b>0.0000</b>	<b>1.8289</b>

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**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	0.2320					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5779					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	0.0333	0.0126	1.0952	6.0000e-005		6.0300e-003	6.0300e-003		6.0300e-003	6.0300e-003	0.0000	1.7856	1.7856	1.7300e-003	0.0000	1.8289
<b>Total</b>	<b>0.8432</b>	<b>0.0126</b>	<b>1.0952</b>	<b>6.0000e-005</b>		<b>6.0300e-003</b>	<b>6.0300e-003</b>		<b>6.0300e-003</b>	<b>6.0300e-003</b>	<b>0.0000</b>	<b>1.7856</b>	<b>1.7856</b>	<b>1.7300e-003</b>	<b>0.0000</b>	<b>1.8289</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

Apply Water Conservation Strategy

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	52.5747	0.2517	6.3100e-003	60.7481
Unmitigated	65.7184	0.3146	7.8900e-003	75.9351

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Retirement Community	9.57764 / 6.03808	65.7184	0.3146	7.8900e-003	75.9351
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>65.7184</b>	<b>0.3146</b>	<b>7.8900e-003</b>	<b>75.9351</b>

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**7.2 Water by Land Use**

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Retirement Community	7.66211 / 4.83046	52.5747	0.2517	6.3100e-003	60.7481
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>52.5747</b>	<b>0.2517</b>	<b>6.3100e-003</b>	<b>60.7481</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

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**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.4316	0.2028	0.0000	8.5016
Unmitigated	13.7263	0.8112	0.0000	34.0062

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Retirement Community	67.62	13.7263	0.8112	0.0000	34.0062
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>13.7263</b>	<b>0.8112</b>	<b>0.0000</b>	<b>34.0062</b>



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**8.2 Waste by Land Use**

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Retirement Community	16.905	3.4316	0.2028	0.0000	8.5016
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>3.4316</b>	<b>0.2028</b>	<b>0.0000</b>	<b>8.5016</b>

**9.0 Operational Offroad**

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

**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	0	0	0	0	0.73	Diesel

**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**10.1 Stationary Sources**

**Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (0 - 11 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**11.0 Vegetation**

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

**11.2 Net New Trees**

**Species Class**

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
	20	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

**220 North Quince Street Senior Housing Project**  
**San Diego County, Winter**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	147.00	Space	0.00	58,800.00	0
Retirement Community	147.00	Dwelling Unit	1.49	147,000.00	420

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2021
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MW hr)</b>	720.49	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

220 North Quince Street Senior Housing Project - San Diego County, Winter

Project Characteristics - Operational year = 2021

Land Use - Lot acreage obtained from Applicant.

Construction Phase - Construction schedule obtained from Applicant.

Off-road Equipment - Typical equipment for this construction activity.

Demolition -

Grading -

Architectural Coating - Low-VOC paint.

Vehicle Trips - TIA (LLG 8-9-2017)

Woodstoves - No hearth

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - 36.25%. Model is based on 2013 T24. 2016 T24 is 25% more efficient. Project will exceed 2016 T24 by 15%. Therefore,  $25\% + (15\% \times 75\%) = 36.25\%$ .

Water Mitigation -

Waste Mitigation -

Operational Off-Road Equipment - None

Stationary Sources - Emergency Generators and Fire Pumps -

## 220 North Quince Street Senior Housing Project - San Diego County, Winter

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
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	10.00	60.00
tblConstructionPhase	NumDays	200.00	360.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	4.00	60.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	10.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	80.85	0.00
tblFireplaces	NumberNoFireplace	14.70	147.00
tblFireplaces	NumberWood	51.45	0.00
tblLandUse	LotAcreage	1.32	0.00
tblLandUse	LotAcreage	29.40	1.49
tblProjectCharacteristics	OperationalYear	2018	2021
tblVehicleTrips	ST_TR	2.03	4.00
tblVehicleTrips	SU_TR	1.95	4.00
tblVehicleTrips	WD_TR	2.40	4.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

## 2.0 Emissions Summary

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220 North Quince Street Senior Housing Project - San Diego County, Winter

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	2.6127	26.6752	16.0301	0.0308	5.8653	1.4462	6.8180	2.9711	1.3522	3.8476	0.0000	3,107.1367	3,107.1367	0.6660	0.0000	3,123.7862
2019	2.9739	19.4856	18.2047	0.0395	4.9800	0.9455	5.7169	2.5430	0.9126	3.2210	0.0000	3,809.4300	3,809.4300	0.4833	0.0000	3,821.5114
2020	15.8168	17.9686	17.4860	0.0391	1.2454	0.8176	2.0629	0.3342	0.7892	1.1234	0.0000	3,753.6979	3,753.6979	0.4603	0.0000	3,765.2059
<b>Maximum</b>	<b>15.8168</b>	<b>26.6752</b>	<b>18.2047</b>	<b>0.0395</b>	<b>5.8653</b>	<b>1.4462</b>	<b>6.8180</b>	<b>2.9711</b>	<b>1.3522</b>	<b>3.8476</b>	<b>0.0000</b>	<b>3,809.4300</b>	<b>3,809.4300</b>	<b>0.6660</b>	<b>0.0000</b>	<b>3,821.5114</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	2.6127	26.6752	16.0301	0.0308	2.6755	1.4462	3.6283	1.3466	1.3522	2.2231	0.0000	3,107.1367	3,107.1367	0.6660	0.0000	3,123.7862
2019	2.9739	19.4856	18.2047	0.0395	2.2771	0.9455	3.0141	1.1540	0.9126	1.8319	0.0000	3,809.4300	3,809.4300	0.4833	0.0000	3,821.5114
2020	15.8168	17.9686	17.4860	0.0391	1.2454	0.8176	2.0629	0.3342	0.7892	1.1234	0.0000	3,753.6979	3,753.6979	0.4603	0.0000	3,765.2059
<b>Maximum</b>	<b>15.8168</b>	<b>26.6752</b>	<b>18.2047</b>	<b>0.0395</b>	<b>2.6755</b>	<b>1.4462</b>	<b>3.6283</b>	<b>1.3466</b>	<b>1.3522</b>	<b>2.2231</b>	<b>0.0000</b>	<b>3,809.4300</b>	<b>3,809.4300</b>	<b>0.6660</b>	<b>0.0000</b>	<b>3,821.5114</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	48.74	0.00	40.37	51.53	0.00	36.79	0.00	0.00	0.00	0.00	0.00	0.00

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.8075	0.1404	12.1691	6.4000e-004		0.0671	0.0671		0.0671	0.0671	0.0000	21.8694	21.8694	0.0213	0.0000	22.4005
Energy	0.0623	0.5325	0.2266	3.4000e-003		0.0431	0.0431		0.0431	0.0431		679.7612	679.7612	0.0130	0.0125	683.8007
Mobile	1.0106	4.3793	12.0816	0.0402	3.5601	0.0347	3.5947	0.9515	0.0324	0.9839		4,079.5293	4,079.5293	0.2207		4,085.0476
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>5.8804</b>	<b>5.0522</b>	<b>24.4773</b>	<b>0.0442</b>	<b>3.5601</b>	<b>0.1448</b>	<b>3.7048</b>	<b>0.9515</b>	<b>0.1425</b>	<b>1.0940</b>	<b>0.0000</b>	<b>4,781.1599</b>	<b>4,781.1599</b>	<b>0.2550</b>	<b>0.0125</b>	<b>4,791.2488</b>



220 North Quince Street Senior Housing Project - San Diego County, Winter

**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	lb/day										lb/day					
Area	4.8075	0.1404	12.1691	6.4000e-004		0.0671	0.0671		0.0671	0.0671	0.0000	21.8694	21.8694	0.0213	0.0000	22.4005
Energy	0.0463	0.3957	0.1684	2.5300e-003		0.0320	0.0320		0.0320	0.0320		505.1420	505.1420	9.6800e-003	9.2600e-003	508.1438
Mobile	0.8119	3.1346	7.7879	0.0223	1.8876	0.0202	1.9078	0.5045	0.0188	0.5233		2,268.0414	2,268.0414	0.1386		2,271.5068
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>5.6657</b>	<b>3.6707</b>	<b>20.1254</b>	<b>0.0255</b>	<b>1.8876</b>	<b>0.1192</b>	<b>2.0068</b>	<b>0.5045</b>	<b>0.1179</b>	<b>0.6224</b>	<b>0.0000</b>	<b>2,795.0528</b>	<b>2,795.0528</b>	<b>0.1696</b>	<b>9.2600e-003</b>	<b>2,802.0512</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	3.65	27.34	17.78	42.35	46.98	17.66	45.83	46.98	17.28	43.11	0.00	41.54	41.54	33.51	25.68	41.52

**3.0 Construction Detail**

**Construction Phase**

## 220 North Quince Street Senior Housing Project - San Diego County, Winter

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/3/2018	10/26/2018	5	40	
2	Site Preparation	Site Preparation	10/27/2018	11/9/2018	5	10	
3	Grading	Grading	11/10/2018	2/1/2019	5	60	
4	Underground Utilities	Trenching	2/2/2019	3/1/2019	5	20	
5	Building Construction	Building Construction	3/2/2019	7/17/2020	5	360	
6	Paving	Paving	7/18/2020	8/14/2020	5	20	
7	Architectural Coating	Architectural Coating	8/15/2020	11/6/2020	5	60	

**Acres of Grading (Site Preparation Phase): 5**

**Acres of Grading (Grading Phase): 22.5**

**Acres of Paving: 0**

**Residential Indoor: 297,675; Residential Outdoor: 99,225; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 3,528 (Architectural Coating – sqft)**

**OffRoad Equipment**

## 220 North Quince Street Senior Housing Project - San Diego County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Underground Utilities	Excavators	1	8.00	158	0.38
Underground Utilities	Trenchers	1	8.00	78	0.50
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

**Trips and VMT**

220 North Quince Street Senior Housing Project - San Diego County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	282.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Underground Utilities	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	131.00	25.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	26.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5448	0.0000	1.5448	0.2339	0.0000	0.2339			0.0000			0.0000
Off-Road	2.4838	24.3641	15.1107	0.0241		1.4365	1.4365		1.3429	1.3429		2,391.1659	2,391.1659	0.6058		2,406.3105
<b>Total</b>	<b>2.4838</b>	<b>24.3641</b>	<b>15.1107</b>	<b>0.0241</b>	<b>1.5448</b>	<b>1.4365</b>	<b>2.9812</b>	<b>0.2339</b>	<b>1.3429</b>	<b>1.5768</b>		<b>2,391.1659</b>	<b>2,391.1659</b>	<b>0.6058</b>		<b>2,406.3105</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.2 Demolition - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0664	2.2664	0.4973	5.5800e-003	0.1232	9.0300e-003	0.1322	0.0338	8.6400e-003	0.0424		606.4683	606.4683	0.0564		607.8783
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0625	0.0448	0.4221	1.1000e-003	0.1068	7.7000e-004	0.1076	0.0283	7.1000e-004	0.0290		109.5026	109.5026	3.7900e-003		109.5974
<b>Total</b>	<b>0.1289</b>	<b>2.3112</b>	<b>0.9194</b>	<b>6.6800e-003</b>	<b>0.2300</b>	<b>9.8000e-003</b>	<b>0.2398</b>	<b>0.0621</b>	<b>9.3500e-003</b>	<b>0.0714</b>		<b>715.9709</b>	<b>715.9709</b>	<b>0.0602</b>		<b>717.4757</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6952	0.0000	0.6952	0.1053	0.0000	0.1053			0.0000			0.0000
Off-Road	2.4838	24.3641	15.1107	0.0241		1.4365	1.4365		1.3429	1.3429	0.0000	2,391.1659	2,391.1659	0.6058		2,406.3105
<b>Total</b>	<b>2.4838</b>	<b>24.3641</b>	<b>15.1107</b>	<b>0.0241</b>	<b>0.6952</b>	<b>1.4365</b>	<b>2.1316</b>	<b>0.1053</b>	<b>1.3429</b>	<b>1.4482</b>	<b>0.0000</b>	<b>2,391.1659</b>	<b>2,391.1659</b>	<b>0.6058</b>		<b>2,406.3105</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.2 Demolition - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0664	2.2664	0.4973	5.5800e-003	0.1232	9.0300e-003	0.1322	0.0338	8.6400e-003	0.0424		606.4683	606.4683	0.0564		607.8783
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0625	0.0448	0.4221	1.1000e-003	0.1068	7.7000e-004	0.1076	0.0283	7.1000e-004	0.0290		109.5026	109.5026	3.7900e-003		109.5974
<b>Total</b>	<b>0.1289</b>	<b>2.3112</b>	<b>0.9194</b>	<b>6.6800e-003</b>	<b>0.2300</b>	<b>9.8000e-003</b>	<b>0.2398</b>	<b>0.0621</b>	<b>9.3500e-003</b>	<b>0.0714</b>		<b>715.9709</b>	<b>715.9709</b>	<b>0.0602</b>		<b>717.4757</b>

**3.3 Site Preparation - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.8061	20.7472	8.0808	0.0172		0.9523	0.9523		0.8761	0.8761		1,735.3630	1,735.3630	0.5402		1,748.8690
<b>Total</b>	<b>1.8061</b>	<b>20.7472</b>	<b>8.0808</b>	<b>0.0172</b>	<b>5.7996</b>	<b>0.9523</b>	<b>6.7518</b>	<b>2.9537</b>	<b>0.8761</b>	<b>3.8298</b>		<b>1,735.3630</b>	<b>1,735.3630</b>	<b>0.5402</b>		<b>1,748.8690</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.3 Site Preparation - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0385	0.0275	0.2598	6.8000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.4000e-004	0.0179		67.3862	67.3862	2.3400e-003		67.4446
<b>Total</b>	<b>0.0385</b>	<b>0.0275</b>	<b>0.2598</b>	<b>6.8000e-004</b>	<b>0.0657</b>	<b>4.7000e-004</b>	<b>0.0662</b>	<b>0.0174</b>	<b>4.4000e-004</b>	<b>0.0179</b>		<b>67.3862</b>	<b>67.3862</b>	<b>2.3400e-003</b>		<b>67.4446</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	1.8061	20.7472	8.0808	0.0172		0.9523	0.9523		0.8761	0.8761	0.0000	1,735.3630	1,735.3630	0.5402		1,748.8690
<b>Total</b>	<b>1.8061</b>	<b>20.7472</b>	<b>8.0808</b>	<b>0.0172</b>	<b>2.6098</b>	<b>0.9523</b>	<b>3.5621</b>	<b>1.3292</b>	<b>0.8761</b>	<b>2.2052</b>	<b>0.0000</b>	<b>1,735.3630</b>	<b>1,735.3630</b>	<b>0.5402</b>		<b>1,748.8690</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.3 Site Preparation - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0385	0.0275	0.2598	6.8000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.4000e-004	0.0179		67.3862	67.3862	2.3400e-003		67.4446
<b>Total</b>	<b>0.0385</b>	<b>0.0275</b>	<b>0.2598</b>	<b>6.8000e-004</b>	<b>0.0657</b>	<b>4.7000e-004</b>	<b>0.0662</b>	<b>0.0174</b>	<b>4.4000e-004</b>	<b>0.0179</b>		<b>67.3862</b>	<b>67.3862</b>	<b>2.3400e-003</b>		<b>67.4446</b>

**3.4 Grading - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.4972	17.0666	6.7630	0.0141		0.7947	0.7947		0.7311	0.7311		1,421.2605	1,421.2605	0.4425		1,432.3219
<b>Total</b>	<b>1.4972</b>	<b>17.0666</b>	<b>6.7630</b>	<b>0.0141</b>	<b>4.9143</b>	<b>0.7947</b>	<b>5.7090</b>	<b>2.5256</b>	<b>0.7311</b>	<b>3.2568</b>		<b>1,421.2605</b>	<b>1,421.2605</b>	<b>0.4425</b>		<b>1,432.3219</b>



220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.4 Grading - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0385	0.0275	0.2598	6.8000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.4000e-004	0.0179		67.3862	67.3862	2.3400e-003		67.4446
<b>Total</b>	<b>0.0385</b>	<b>0.0275</b>	<b>0.2598</b>	<b>6.8000e-004</b>	<b>0.0657</b>	<b>4.7000e-004</b>	<b>0.0662</b>	<b>0.0174</b>	<b>4.4000e-004</b>	<b>0.0179</b>		<b>67.3862</b>	<b>67.3862</b>	<b>2.3400e-003</b>		<b>67.4446</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2114	0.0000	2.2114	1.1365	0.0000	1.1365			0.0000			0.0000
Off-Road	1.4972	17.0666	6.7630	0.0141		0.7947	0.7947		0.7311	0.7311	0.0000	1,421.2605	1,421.2605	0.4425		1,432.3219
<b>Total</b>	<b>1.4972</b>	<b>17.0666</b>	<b>6.7630</b>	<b>0.0141</b>	<b>2.2114</b>	<b>0.7947</b>	<b>3.0061</b>	<b>1.1365</b>	<b>0.7311</b>	<b>1.8677</b>	<b>0.0000</b>	<b>1,421.2605</b>	<b>1,421.2605</b>	<b>0.4425</b>		<b>1,432.3219</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.4 Grading - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0385	0.0275	0.2598	6.8000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.4000e-004	0.0179		67.3862	67.3862	2.3400e-003		67.4446
<b>Total</b>	<b>0.0385</b>	<b>0.0275</b>	<b>0.2598</b>	<b>6.8000e-004</b>	<b>0.0657</b>	<b>4.7000e-004</b>	<b>0.0662</b>	<b>0.0174</b>	<b>4.4000e-004</b>	<b>0.0179</b>		<b>67.3862</b>	<b>67.3862</b>	<b>2.3400e-003</b>		<b>67.4446</b>

**3.4 Grading - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.4197	16.0357	6.6065	0.0141		0.7365	0.7365		0.6775	0.6775		1,396.3909	1,396.3909	0.4418		1,407.4359
<b>Total</b>	<b>1.4197</b>	<b>16.0357</b>	<b>6.6065</b>	<b>0.0141</b>	<b>4.9143</b>	<b>0.7365</b>	<b>5.6507</b>	<b>2.5256</b>	<b>0.6775</b>	<b>3.2032</b>		<b>1,396.3909</b>	<b>1,396.3909</b>	<b>0.4418</b>		<b>1,407.4359</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.4 Grading - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0355	0.0246	0.2339	6.6000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.3000e-004	0.0179		65.3531	65.3531	2.1100e-003		65.4058
<b>Total</b>	<b>0.0355</b>	<b>0.0246</b>	<b>0.2339</b>	<b>6.6000e-004</b>	<b>0.0657</b>	<b>4.7000e-004</b>	<b>0.0662</b>	<b>0.0174</b>	<b>4.3000e-004</b>	<b>0.0179</b>		<b>65.3531</b>	<b>65.3531</b>	<b>2.1100e-003</b>		<b>65.4058</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2114	0.0000	2.2114	1.1365	0.0000	1.1365			0.0000			0.0000
Off-Road	1.4197	16.0357	6.6065	0.0141		0.7365	0.7365		0.6775	0.6775	0.0000	1,396.3909	1,396.3909	0.4418		1,407.4359
<b>Total</b>	<b>1.4197</b>	<b>16.0357</b>	<b>6.6065</b>	<b>0.0141</b>	<b>2.2114</b>	<b>0.7365</b>	<b>2.9479</b>	<b>1.1365</b>	<b>0.6775</b>	<b>1.8141</b>	<b>0.0000</b>	<b>1,396.3909</b>	<b>1,396.3909</b>	<b>0.4418</b>		<b>1,407.4359</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.4 Grading - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0355	0.0246	0.2339	6.6000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.3000e-004	0.0179		65.3531	65.3531	2.1100e-003		65.4058
<b>Total</b>	<b>0.0355</b>	<b>0.0246</b>	<b>0.2339</b>	<b>6.6000e-004</b>	<b>0.0657</b>	<b>4.7000e-004</b>	<b>0.0662</b>	<b>0.0174</b>	<b>4.3000e-004</b>	<b>0.0179</b>		<b>65.3531</b>	<b>65.3531</b>	<b>2.1100e-003</b>		<b>65.4058</b>

**3.5 Underground Utilities - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6951	6.5992	5.9023	8.5300e-003		0.4255	0.4255		0.3915	0.3915		844.9791	844.9791	0.2673		851.6627
<b>Total</b>	<b>0.6951</b>	<b>6.5992</b>	<b>5.9023</b>	<b>8.5300e-003</b>		<b>0.4255</b>	<b>0.4255</b>		<b>0.3915</b>	<b>0.3915</b>		<b>844.9791</b>	<b>844.9791</b>	<b>0.2673</b>		<b>851.6627</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.5 Underground Utilities - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0222	0.0154	0.1462	4.1000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		40.8457	40.8457	1.3200e-003		40.8786
<b>Total</b>	<b>0.0222</b>	<b>0.0154</b>	<b>0.1462</b>	<b>4.1000e-004</b>	<b>0.0411</b>	<b>2.9000e-004</b>	<b>0.0414</b>	<b>0.0109</b>	<b>2.7000e-004</b>	<b>0.0112</b>		<b>40.8457</b>	<b>40.8457</b>	<b>1.3200e-003</b>		<b>40.8786</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6951	6.5992	5.9023	8.5300e-003		0.4255	0.4255		0.3915	0.3915	0.0000	844.9791	844.9791	0.2673		851.6627
<b>Total</b>	<b>0.6951</b>	<b>6.5992</b>	<b>5.9023</b>	<b>8.5300e-003</b>		<b>0.4255</b>	<b>0.4255</b>		<b>0.3915</b>	<b>0.3915</b>	<b>0.0000</b>	<b>844.9791</b>	<b>844.9791</b>	<b>0.2673</b>		<b>851.6627</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.5 Underground Utilities - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0222	0.0154	0.1462	4.1000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		40.8457	40.8457	1.3200e-003		40.8786
<b>Total</b>	<b>0.0222</b>	<b>0.0154</b>	<b>0.1462</b>	<b>4.1000e-004</b>	<b>0.0411</b>	<b>2.9000e-004</b>	<b>0.0414</b>	<b>0.0109</b>	<b>2.7000e-004</b>	<b>0.0112</b>		<b>40.8457</b>	<b>40.8457</b>	<b>1.3200e-003</b>		<b>40.8786</b>

**3.6 Building Construction - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846		2,018.0224	2,018.0224	0.3879		2,027.7210
<b>Total</b>	<b>2.2721</b>	<b>15.9802</b>	<b>13.4870</b>	<b>0.0220</b>		<b>0.9158</b>	<b>0.9158</b>		<b>0.8846</b>	<b>0.8846</b>		<b>2,018.0224</b>	<b>2,018.0224</b>	<b>0.3879</b>		<b>2,027.7210</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.6 Building Construction - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1200	3.1022	0.8873	6.7300e-003	0.1692	0.0220	0.1912	0.0487	0.0210	0.0697		721.2506	721.2506	0.0608		722.7702
Worker	0.5817	0.4032	3.8304	0.0107	1.0761	7.6700e-003	1.0838	0.2854	7.0700e-003	0.2925		1,070.1570	1,070.1570	0.0345		1,071.0203
<b>Total</b>	<b>0.7018</b>	<b>3.5054</b>	<b>4.7176</b>	<b>0.0175</b>	<b>1.2454</b>	<b>0.0296</b>	<b>1.2750</b>	<b>0.3342</b>	<b>0.0281</b>	<b>0.3622</b>		<b>1,791.4076</b>	<b>1,791.4076</b>	<b>0.0953</b>		<b>1,793.7904</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846	0.0000	2,018.0224	2,018.0224	0.3879		2,027.7210
<b>Total</b>	<b>2.2721</b>	<b>15.9802</b>	<b>13.4870</b>	<b>0.0220</b>		<b>0.9158</b>	<b>0.9158</b>		<b>0.8846</b>	<b>0.8846</b>	<b>0.0000</b>	<b>2,018.0224</b>	<b>2,018.0224</b>	<b>0.3879</b>		<b>2,027.7210</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.6 Building Construction - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1200	3.1022	0.8873	6.7300e-003	0.1692	0.0220	0.1912	0.0487	0.0210	0.0697		721.2506	721.2506	0.0608		722.7702
Worker	0.5817	0.4032	3.8304	0.0107	1.0761	7.6700e-003	1.0838	0.2854	7.0700e-003	0.2925		1,070.1570	1,070.1570	0.0345		1,071.0203
<b>Total</b>	<b>0.7018</b>	<b>3.5054</b>	<b>4.7176</b>	<b>0.0175</b>	<b>1.2454</b>	<b>0.0296</b>	<b>1.2750</b>	<b>0.3342</b>	<b>0.0281</b>	<b>0.3622</b>		<b>1,791.4076</b>	<b>1,791.4076</b>	<b>0.0953</b>		<b>1,793.7904</b>

**3.6 Building Construction - 2020**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467
<b>Total</b>	<b>2.0305</b>	<b>14.7882</b>	<b>13.1881</b>	<b>0.0220</b>		<b>0.7960</b>	<b>0.7960</b>		<b>0.7688</b>	<b>0.7688</b>		<b>2,001.1595</b>	<b>2,001.1595</b>	<b>0.3715</b>		<b>2,010.4467</b>



220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.6 Building Construction - 2020**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0978	2.8167	0.7970	6.6700e-003	0.1692	0.0141	0.1833	0.0487	0.0134	0.0622		716.1555	716.1555	0.0576		717.5962
Worker	0.5444	0.3637	3.5009	0.0104	1.0761	7.5500e-003	1.0837	0.2854	6.9600e-003	0.2924		1,036.3829	1,036.3829	0.0312		1,037.1629
<b>Total</b>	<b>0.6423</b>	<b>3.1803</b>	<b>4.2979</b>	<b>0.0171</b>	<b>1.2454</b>	<b>0.0216</b>	<b>1.2670</b>	<b>0.3342</b>	<b>0.0204</b>	<b>0.3546</b>		<b>1,752.5384</b>	<b>1,752.5384</b>	<b>0.0888</b>		<b>1,754.7591</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
<b>Total</b>	<b>2.0305</b>	<b>14.7882</b>	<b>13.1881</b>	<b>0.0220</b>		<b>0.7960</b>	<b>0.7960</b>		<b>0.7688</b>	<b>0.7688</b>	<b>0.0000</b>	<b>2,001.1595</b>	<b>2,001.1595</b>	<b>0.3715</b>		<b>2,010.4467</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.6 Building Construction - 2020**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0978	2.8167	0.7970	6.6700e-003	0.1692	0.0141	0.1833	0.0487	0.0134	0.0622		716.1555	716.1555	0.0576		717.5962
Worker	0.5444	0.3637	3.5009	0.0104	1.0761	7.5500e-003	1.0837	0.2854	6.9600e-003	0.2924		1,036.3829	1,036.3829	0.0312		1,037.1629
<b>Total</b>	<b>0.6423</b>	<b>3.1803</b>	<b>4.2979</b>	<b>0.0171</b>	<b>1.2454</b>	<b>0.0216</b>	<b>1.2670</b>	<b>0.3342</b>	<b>0.0204</b>	<b>0.3546</b>		<b>1,752.5384</b>	<b>1,752.5384</b>	<b>0.0888</b>		<b>1,754.7591</b>

**3.7 Paving - 2020**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328		1,296.9461	1,296.9461	0.4111		1,307.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.8402</b>	<b>8.4514</b>	<b>8.8758</b>	<b>0.0135</b>		<b>0.4695</b>	<b>0.4695</b>		<b>0.4328</b>	<b>0.4328</b>		<b>1,296.9461</b>	<b>1,296.9461</b>	<b>0.4111</b>		<b>1,307.2246</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.7 Paving - 2020**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0540	0.0361	0.3474	1.0300e-003	0.1068	7.5000e-004	0.1075	0.0283	6.9000e-004	0.0290		102.8472	102.8472	3.1000e-003		102.9246
<b>Total</b>	<b>0.0540</b>	<b>0.0361</b>	<b>0.3474</b>	<b>1.0300e-003</b>	<b>0.1068</b>	<b>7.5000e-004</b>	<b>0.1075</b>	<b>0.0283</b>	<b>6.9000e-004</b>	<b>0.0290</b>		<b>102.8472</b>	<b>102.8472</b>	<b>3.1000e-003</b>		<b>102.9246</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	0.0000	1,296.9461	1,296.9461	0.4111		1,307.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.8402</b>	<b>8.4514</b>	<b>8.8758</b>	<b>0.0135</b>		<b>0.4695</b>	<b>0.4695</b>		<b>0.4328</b>	<b>0.4328</b>	<b>0.0000</b>	<b>1,296.9461</b>	<b>1,296.9461</b>	<b>0.4111</b>		<b>1,307.2246</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.7 Paving - 2020**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0540	0.0361	0.3474	1.0300e-003	0.1068	7.5000e-004	0.1075	0.0283	6.9000e-004	0.0290		102.8472	102.8472	3.1000e-003		102.9246
<b>Total</b>	<b>0.0540</b>	<b>0.0361</b>	<b>0.3474</b>	<b>1.0300e-003</b>	<b>0.1068</b>	<b>7.5000e-004</b>	<b>0.1075</b>	<b>0.0283</b>	<b>6.9000e-004</b>	<b>0.0290</b>		<b>102.8472</b>	<b>102.8472</b>	<b>3.1000e-003</b>		<b>102.9246</b>

**3.8 Architectural Coating - 2020**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.4665					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
<b>Total</b>	<b>15.7087</b>	<b>1.6838</b>	<b>1.8314</b>	<b>2.9700e-003</b>		<b>0.1109</b>	<b>0.1109</b>		<b>0.1109</b>	<b>0.1109</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0218</b>		<b>281.9928</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.8 Architectural Coating - 2020**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1081	0.0722	0.6948	2.0600e-003	0.2136	1.5000e-003	0.2151	0.0567	1.3800e-003	0.0580		205.6943	205.6943	6.1900e-003		205.8491
<b>Total</b>	<b>0.1081</b>	<b>0.0722</b>	<b>0.6948</b>	<b>2.0600e-003</b>	<b>0.2136</b>	<b>1.5000e-003</b>	<b>0.2151</b>	<b>0.0567</b>	<b>1.3800e-003</b>	<b>0.0580</b>		<b>205.6943</b>	<b>205.6943</b>	<b>6.1900e-003</b>		<b>205.8491</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.4665					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
<b>Total</b>	<b>15.7087</b>	<b>1.6838</b>	<b>1.8314</b>	<b>2.9700e-003</b>		<b>0.1109</b>	<b>0.1109</b>		<b>0.1109</b>	<b>0.1109</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0218</b>		<b>281.9928</b>

220 North Quince Street Senior Housing Project - San Diego County, Winter

**3.8 Architectural Coating - 2020**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1081	0.0722	0.6948	2.0600e-003	0.2136	1.5000e-003	0.2151	0.0567	1.3800e-003	0.0580		205.6943	205.6943	6.1900e-003		205.8491
<b>Total</b>	<b>0.1081</b>	<b>0.0722</b>	<b>0.6948</b>	<b>2.0600e-003</b>	<b>0.2136</b>	<b>1.5000e-003</b>	<b>0.2151</b>	<b>0.0567</b>	<b>1.3800e-003</b>	<b>0.0580</b>		<b>205.6943</b>	<b>205.6943</b>	<b>6.1900e-003</b>		<b>205.8491</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Increase Density

Increase Transit Accessibility

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8119	3.1346	7.7879	0.0223	1.8876	0.0202	1.9078	0.5045	0.0188	0.5233		2,268.0414	2,268.0414	0.1386		2,271.5068
Unmitigated	1.0106	4.3793	12.0816	0.0402	3.5601	0.0347	3.5947	0.9515	0.0324	0.9839		4,079.5293	4,079.5293	0.2207		4,085.0476

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Retirement Community	588.00	588.00	588.00	1,678,918	890,199
Unenclosed Parking with Elevator	0.00	0.00	0.00		
<b>Total</b>	<b>588.00</b>	<b>588.00</b>	<b>588.00</b>	<b>1,678,918</b>	<b>890,199</b>

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Retirement Community	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Unenclosed Parking with Elevator	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
Unenclosed Parking with Elevator	0.593936	0.041843	0.182569	0.108325	0.016436	0.005513	0.015940	0.023523	0.001912	0.001972	0.006090	0.000748	0.001193
Retirement Community	0.593936	0.041843	0.182569	0.108325	0.016436	0.005513	0.015940	0.023523	0.001912	0.001972	0.006090	0.000748	0.001193

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**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0463	0.3957	0.1684	2.5300e-003		0.0320	0.0320		0.0320	0.0320		505.1420	505.1420	9.6800e-003	9.2600e-003	508.1438
NaturalGas Unmitigated	0.0623	0.5325	0.2266	3.4000e-003		0.0431	0.0431		0.0431	0.0431		679.7612	679.7612	0.0130	0.0125	683.8007



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**5.2 Energy by Land Use - Natural Gas**

**Unmitigated**

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Retirement Community	5777.97	0.0623	0.5325	0.2266	3.4000e-003		0.0431	0.0431		0.0431	0.0431		679.7612	679.7612	0.0130	0.0125	683.8007
Unenclosed Parking with Elevator	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
<b>Total</b>		<b>0.0623</b>	<b>0.5325</b>	<b>0.2266</b>	<b>3.4000e-003</b>		<b>0.0431</b>	<b>0.0431</b>		<b>0.0431</b>	<b>0.0431</b>		<b>679.7612</b>	<b>679.7612</b>	<b>0.0130</b>	<b>0.0125</b>	<b>683.8007</b>

**Mitigated**

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Retirement Community	4.29371	0.0463	0.3957	0.1684	2.5300e-003		0.0320	0.0320		0.0320	0.0320		505.1420	505.1420	9.6800e-003	9.2600e-003	508.1438
Unenclosed Parking with Elevator	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
<b>Total</b>		<b>0.0463</b>	<b>0.3957</b>	<b>0.1684</b>	<b>2.5300e-003</b>		<b>0.0320</b>	<b>0.0320</b>		<b>0.0320</b>	<b>0.0320</b>		<b>505.1420</b>	<b>505.1420</b>	<b>9.6800e-003</b>	<b>9.2600e-003</b>	<b>508.1438</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.8075	0.1404	12.1691	6.4000e-004		0.0671	0.0671		0.0671	0.0671	0.0000	21.8694	21.8694	0.0213	0.0000	22.4005
Unmitigated	4.8075	0.1404	12.1691	6.4000e-004		0.0671	0.0671		0.0671	0.0671	0.0000	21.8694	21.8694	0.0213	0.0000	22.4005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.2712					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1666					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	0.3697	0.1404	12.1691	6.4000e-004		0.0671	0.0671		0.0671	0.0671		21.8694	21.8694	0.0213		22.4005
<b>Total</b>	<b>4.8075</b>	<b>0.1404</b>	<b>12.1691</b>	<b>6.4000e-004</b>		<b>0.0671</b>	<b>0.0671</b>		<b>0.0671</b>	<b>0.0671</b>	<b>0.0000</b>	<b>21.8694</b>	<b>21.8694</b>	<b>0.0213</b>	<b>0.0000</b>	<b>22.4005</b>

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**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.2712					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1666					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	0.3697	0.1404	12.1691	6.4000e-004		0.0671	0.0671		0.0671	0.0671		21.8694	21.8694	0.0213		22.4005
<b>Total</b>	<b>4.8075</b>	<b>0.1404</b>	<b>12.1691</b>	<b>6.4000e-004</b>		<b>0.0671</b>	<b>0.0671</b>		<b>0.0671</b>	<b>0.0671</b>	<b>0.0000</b>	<b>21.8694</b>	<b>21.8694</b>	<b>0.0213</b>	<b>0.0000</b>	<b>22.4005</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

Apply Water Conservation Strategy

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

**9.0 Operational Offroad**

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

**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	0	0	0	0	0.73	Diesel

**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**10.1 Stationary Sources**

**Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (0 - 11 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**11.0 Vegetation**