HELIX Environmental Planning

Allison Avenue Transit Oriented Development (TOD) Project

Greenhouse Gas Emissions Technical Report

July 2021 | 03164.00001.001

Prepared for:

USA Properties Fund, Inc.
3200 Douglas Boulevard, Suite 200
Roseville, CA 95661

Prepared by:

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7578 El Cajon Boulevard
La Mesa, CA 91942

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TABLE OF CONTENTS

Section **Page**

TABLE OF CONTENTS (cont.)

Section **Page**

LIST OF APPENDICES

TABLE OF CONTENTS (cont.)

LIST OF FIGURES

LIST OF TABLES

ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
CAA	Clean Air Act
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emission Estimator Model
CALGreen	CCR Title 24 Part 11, California Green Building Standards Code
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBSC	California Building Standards Commission
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFCs	chlorofluorocarbons
CH4	methane
City	City of La Mesa
CO_2	carbon dioxide
CO_2e	CO2-equivalent
EMFAC	Emission Factor model
EO	Executive Order
°F	Fahrenheit (degrees)
GHG	greenhouse gas
GWP	Global Warming Potential
HFCs	hydrofluorocarbons
HVAC	heating, ventilation, and air conditioning
IPCC	United Nations Intergovernmental Panel on Climate Change
LCFS	Low Carbon Fuel Standard
LOS	level of service
MMT	million metric tons
mpg	miles per gallon
MPO	Metropolitan Planning Organization
MT	metric ton

ACRONYMS AND ABBREVIATIONS (cont.)

N_2O	nitrous oxide
NASA	National Aeronautics and Space Administration
NHTSA	National Highway Traffic Safety Administration
NOAA	National Oceanic and Atmospheric Administration
NO_X	nitrogen oxides
PFCs	perfluorocarbons
ppm	parts per million
project	Allison Avenue Transit Oriented Development Project
RPS	Renewables Portfolio Standard
RTP	Regional Transportation Plan
SAFE Vehicles Rule	Safer Affordable Fuel-Efficient Vehicles Rule
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF	square feet/foot
SF_6	sulfur hexafluoride
Title 24	CCR Title 24 Part 6, California Energy Efficiency Standards for Residential and Nonresidential Buildings
TOD	Transportation-Oriented Development
USEPA	U.S. Environmental Protection Agency
VMT	vehicle miles traveled
VOC	volatile organic compound

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EXECUTIVE SUMMARY

This report presents an assessment of potential greenhouse gas (GHG) emissions impacts during construction and operation of the proposed Allison Avenue Transit Oriented Development (TOD) Project (project), located in the City of La Mesa (City). The project would develop a four-story residential structure consisting of 147 apartment homes and on-site amenities on a podium deck with a parking garage underneath.

The project proposes a high-density multi-family residential development located within 1/2 mile of a major transit station (approximately 500 feet southeast of the La Mesa Trolley Station and adjacent to Metropolitan Transit Service [MTS] bus stops). The project would be required to comply with the 2019 Title 24 Building Energy Code and the 2019 California Green Building Standards Code.

Project-related construction activities are estimated to generate 838 metric tons (MT) of carbon dioxide equivalent (CO_2e), or 27.9 MT of CO_2e emissions per year for 30 years. The project-related operational and amortized construction GHG emissions for the first full year of operation (estimated to be 2025) would be 1,096 MT CO_2e and the GHG emissions per capita would be 3.10 MT CO_2e. Project emissions would not exceed the 2035 GHG reduction target of 3.46 MT CO_2e per capita in the City's Climate Action Plan (CAP). The impacts related to GHG emissions and conflicts with GHG reduction plans and policies would be less than significant.

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1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

This report presents an assessment of potential Greenhouse Gas (GHG) emissions impacts associated with construction and operation of the proposed Allison Avenue Transit Oriented Development (TOD) Project (project). The analysis within this report addresses the relevant issues listed in Appendix G of the California Environmental Quality Act (CEQA) Guidelines.

1.2 PROJECT LOCATION

The project site is located within the city of La Mesa (City) at 8181 Allison Avenue, at the southeast corner of the intersection of Allison Avenue and Date Avenue. The project site consists of one parcel—Assessor's Parcel Number (APN) 470-672-22-00 (see Figure 1, *Regional Location*, and Figure 2, *Aerial Photograph*).

1.3 PROJECT DESCRIPTION

The project would develop a four-story residential structure consisting of 147 apartment homes (103 one-bedroom and 44 two-bedroom units) and on-site amenities on a podium deck with a parking garage underneath. The proposed building would encompass a total floor area of 145,735 square feet (SF). In addition to the residential units, 4,113-SF of lobby space would be provided. A partially subterranean parking garage would encompass 46,700 SF and provide a total of 117 parking spaces for residents. Access to the parking lot would be via one driveway on Date Avenue.

The ground floor would include the residential lobby, mechanical/electric rooms, and the parking garage, which includes 97 standard parking spaces, 15 tandem parking spaces, 5 compact spaces, and bicycle lockers. The podium level (first floor) includes the leasing/management offices, a clubhouse area with game and exercise facilities, and a laundry room. Floors two through four would include residential units and laundry facilities. Other improvements would include landscaping within the building courtyards and along the Allison Avenue and Date Avenue project frontage (see Figure 3, *Site Plan*).

The project proposes a high-density multi-family residential development located within 1/2 mile of a major transit station (approximately 500 feet southeast of the La Mesa Trolley Station and adjacent to Metropolitan Transit Service [MTS] bus stops).

1.4 PROJECT CONSTRUCTION

Project construction is anticipated to occur over an approximately two-year period starting in August 2022 and completing in July 2024. Construction activities would include site preparation (including removal of asphalt, fencing, concrete masonry unit [CMU] walls, and vegetation), grading and excavation for the parking garage/foundations, podium construction, building construction, and architectural coating (e.g., painting). During site preparation, approximately 600 cubic yards (CY) of debris would be exported. During grading/excavation, approximately 14,200 CY of soil would be exported.

2.0 ENVIRONMENTAL SETTING

2.1 CLIMATE CHANGE OVERVIEW

Global climate change refers to changes in average climatic conditions over the entire Earth including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by naturally occurring atmospheric gases. These gases are commonly referred to as GHGs because they function like a greenhouse by letting light in but preventing heat from escaping, thus warming the Earth's atmosphere. These gases allow solar radiation (sunlight) into the Earth's atmosphere but prevent radiative heat from escaping, thus warming the Earth's atmosphere.

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

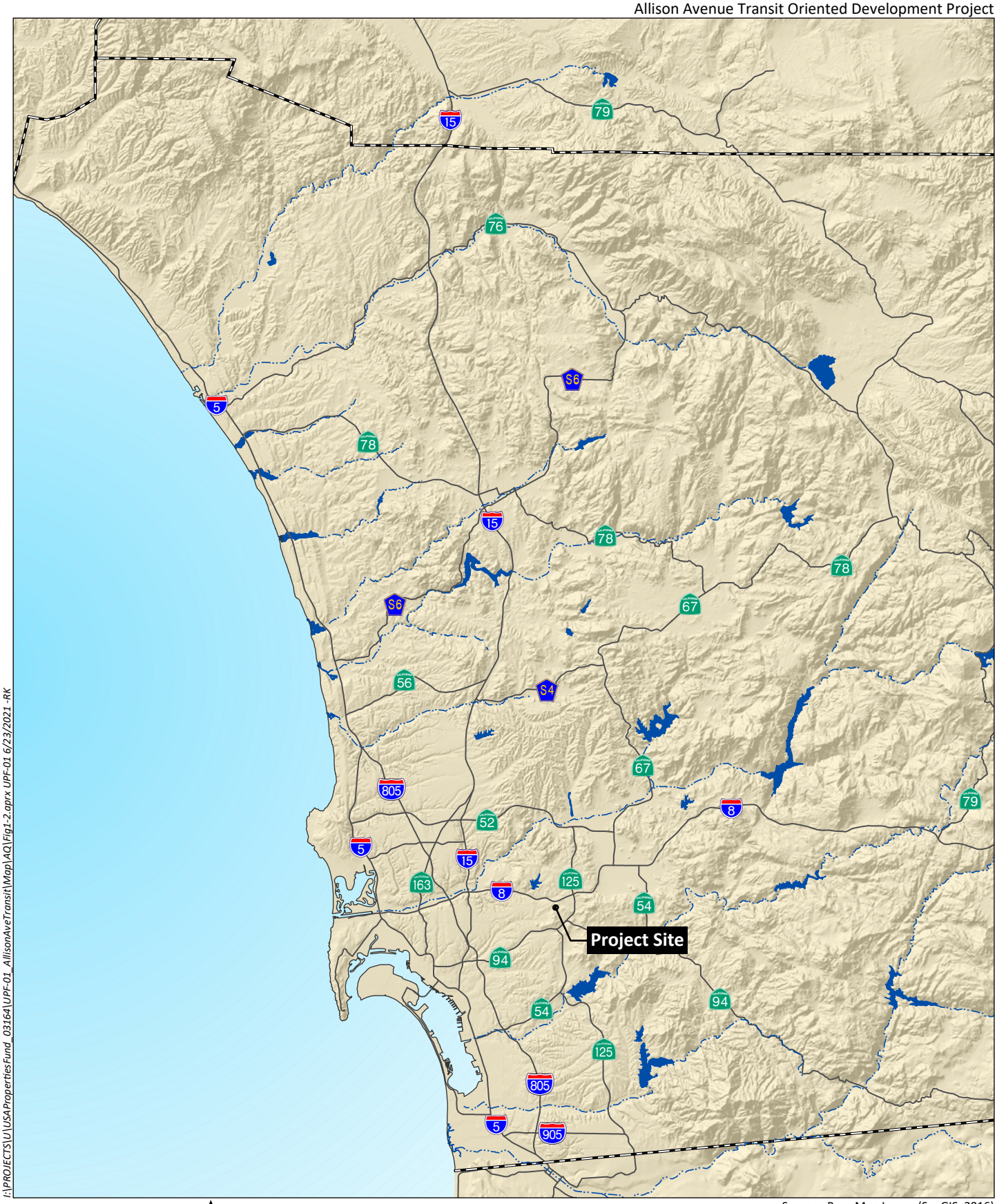
The temperature record shows a decades-long trend of warming, with 2016 global surface temperatures ranking as the warmest year on record since 1880. The latest news release of long-term warming trends announced 2020 ranked as tied with 2016 for the warmest year on record with an increase of 1.84 degrees Fahrenheit compared to the 1951-1980 average (National Aeronautics and Space Administration [NASA] 2021). GHG emissions from human activities are the most significant driver of observed climate change since the mid-20th century (United Nations Intergovernmental Panel on Climate Change [IPCC] 2013). The IPCC constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The statistical models show a "high confidence" that temperature increase caused by anthropogenic GHG emissions could be kept to less than two degrees Celsius relative to preindustrial levels if atmospheric concentrations are stabilized at about 450 parts per million (ppm) carbon dioxide equivalent (CO_2e) by the year 2100 (IPCC 2014).

2.2 GREENHOUSE GASES OF PRIMARY CONCERN

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

Carbon Dioxide. CO_2 is the most important and common anthropogenic GHG. CO_2 is an odorless, colorless GHG. Natural sources include the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungi; evaporation from oceans; and volcanic outgassing. Anthropogenic sources of CO_2 include burning fuels, such as coal, oil, natural gas, and wood. Data from ice cores indicate that CO_2 concentrations remained steady prior to the current period for approximately 10,000 years. The atmospheric CO_2 concentration in 2010 was 390 ppm, 39 percent above the concentration at the start of the Industrial Revolution (about 280 ppm in 1750). In February 2021, the CO_2 concentration was 416 ppm, a 48 percent increase since 1750 (National Oceanic and Atmospheric Administration [NOAA] 2021).

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



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Regional Location

Figure 1

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0 100 Feet

Source: Aerial (SanGIS, 2019)

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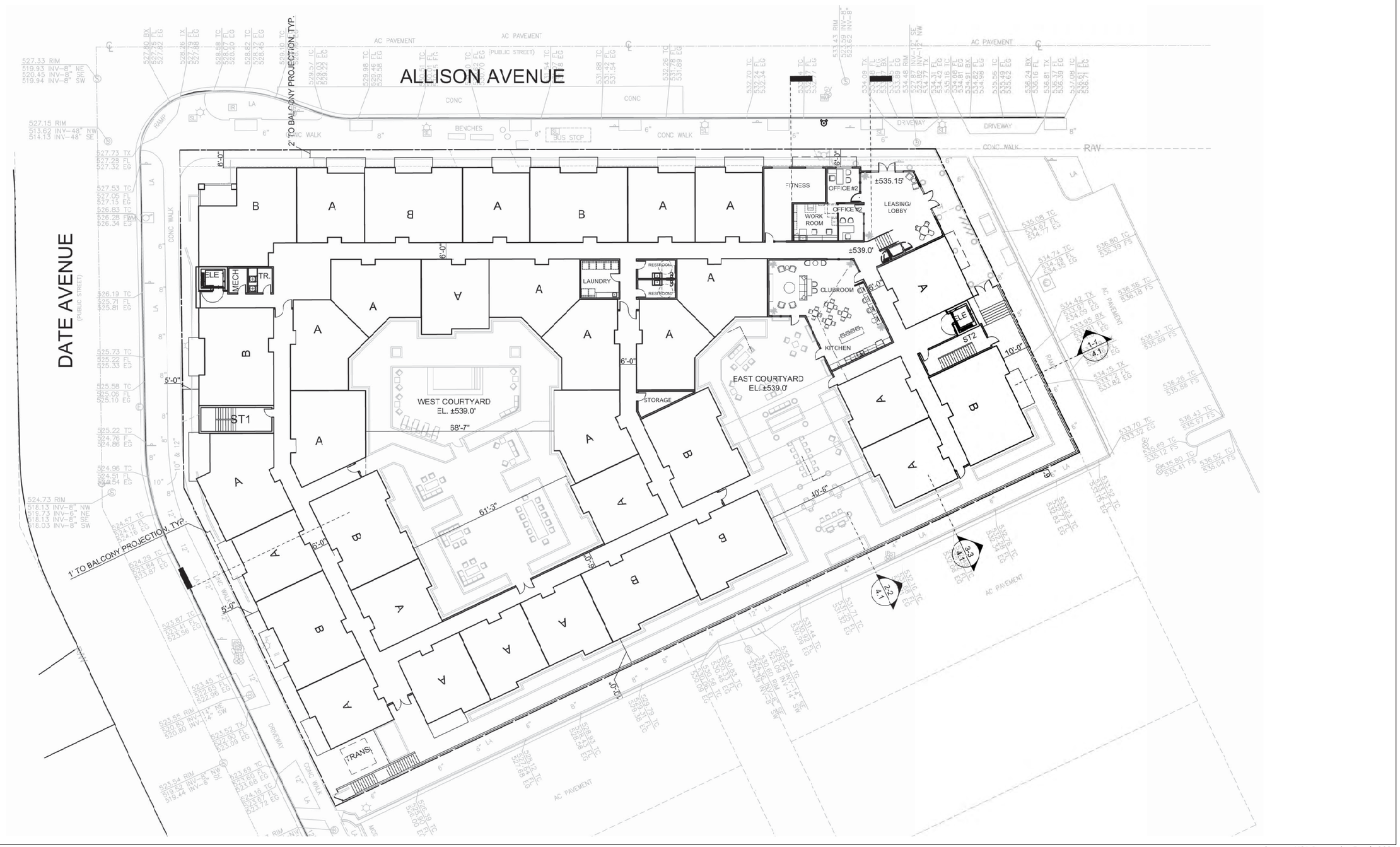
Aerial Photograph

Figure 2



Source: USA Properties Funds 2021

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Site Plan

Figure 3

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

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

Sulfur Hexafluoride. SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

GHGs have long atmospheric lifetimes that range from one year to several thousand years. Long atmospheric lifetimes allow for GHG emissions to disperse around the globe. Because GHG emissions vary widely in the power of their climatic effects, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO_2. For example, because methane and N_2O are approximately 25 and 298 times more powerful than CO_2, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 25 and 298, respectively (CO_2 has a GWP of 1). CO_2e 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_2e.

Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (SAR). In 2007, IPCC updated the GWP values based on the latest science at the time in its Fourth Assessment Report (AR4; IPCC 2007). The updated GWPs in the IPCC AR4 have begun to be used in recent GHG emissions inventories. In 2013, IPCC again updated the GWP values based on the latest science in its Fifth Assessment Report (AR5) (IPCC 2013). However, United Nations Framework Convention on Climate Change (UNFCCC) reporting guidelines for national inventories require the use of GWP values from the AR4. To comply with international reporting standards under the UNFCCC, official emission estimates for California and the U.S. are reported using AR4 GWP values.

By applying the GWP ratios, project related CO_2e emissions can be tabulated in metric tons per year. Typically, the GWP ratio corresponding to the warming potential of CO_2 over a 100-year period is used as a baseline. 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)	IPCC SAR GWP	IPCC AR4 GWP	IPCC AR5 GWP
Carbon Dioxide (CO_2)	50-200	1	1	1
Methane (CH_4)	12	21	25	28
Nitrous Oxide (N_2O)	114	310	298	265
HFC-134a	14	1,300	1,430	1,300
PFC: Tetraflouromethane (CF_4)	50,000	6,500	7,390	6,630
PFC: Hexafluoroethane (C_2F_6)	10,000	9,200	12,200	11,100
Sulfur Hexafluoride (SF_6)	3,200	23,900	22,800	23,500

Source: IPCC 2007
IPCC = Intergovernmental Panel on Climate Change; GWP = global warming potential; HFC = hydrofluorocarbon; PFC = perfluorocarbon

2.3 WORLDWIDE AND NATIONAL GHG INVENTORY

In 2014, total GHG emissions worldwide were estimated at 48,892 million metric tons (MMT) of CO_2e emissions (World Resource Institute [WRI] 2021). The U.S. contributed the second largest portion (13 percent) of global GHG emissions in 2014. The total U.S. GHG emissions was 6,319 MMT CO_2e in 2019, of which 82 percent was CO_2 emission (WRI 2021). On a national level, approximately 27 percent of GHG emissions were associated with transportation and about 38 percent were associated with electricity generation (WRI 2021).

2.4 STATE GHG INVENTORIES

The California Air Resource Board (CARB) performed statewide inventories for the years 1990 to 2017, as shown in Table 2, *California Greenhouse Gas Emissions by Sector*. The inventory is divided into six broad sectors of economic activity: agriculture, commercial, electricity generation, industrial, residential, and transportation. Emissions are quantified in MMT CO_2e.

Table 2
CALIFORNIA GREENHOUSE GAS EMISSIONS BY SECTOR

Sector	Emissions (MMT CO_2e)			
	1990	2000	2010	2017
Agriculture and Forestry	18.9 (4%)	31.0 (7%)	33.7 (8%)	32.4 (8%)
Commercial	14.4 (3%)	14.1 (3%)	20.1 (4%)	23.3 (5%)
Electricity Generation	110.5 (26%)	105.4 (22%)	90.6 (20%)	62.6 (15%)
Industrial	105.3 (24%)	105.8 (22%)	101.8 (23%)	101.1 (24%)
Residential	29.7 (7%)	31.7 (7%)	32.1 (7%)	30.4 (7%)
Transportation	150.6 (35%)	183.2 (39%)	170.2 (38%)	174.3 (41%)
Unspecified Remaining	1.3 (<1%)	0.0 (0%)	0.0 (0%)	0.0 (0%)
TOTAL	**430.7**	**471.1**	**448.5**	**424.1**

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

As shown in Table 2, statewide GHG source emissions totaled 431 MMT CO_2e in 1990, 471 MMT CO_2e in 2000, 449 MMT CO_2e in 2010, and 424 MMT CO_2e in 2017 (CARB 2007; CARB 2019). Transportation-related emissions consistently contribute the most GHG emissions, followed by electricity generation and industrial emissions.

2.5 REGIONAL GHG INVENTORY

A San Diego regional emissions inventory prepared for the San Diego County Climate Action Plan accounted for the unique characteristics of the region (San Diego County 2018). The 2014 emissions inventory for San Diego is presented in Table 3, *San Diego County GHG Emissions by Sector*. The sectors included in this inventory are somewhat different from those in the statewide inventory. Similar to the statewide emissions, transportation related GHG emissions contributed the most countywide, followed by emissions associated with energy use.

Table 3
SAN DIEGO COUNTY GHG EMISSIONS BY SECTOR

Sector	2014 Emissions MMT CO_2e (% total)[1]
On-Road Transportation	1.46 (45%)
Electricity	0.76 (24%)
Solid Waste	0.34 (11%)
Natural Gas Consumption	0.29 (9%)
Agriculture	0.16 (5%)
Water	0.13 (4%)
Off-Road Transportation	0.04 (1%)
Wastewater	0.02 (1%)
Propane	0.01 (<0.5%)
TOTAL	**3.21**

Source: San Diego County 2018

[1] Percentages may not total 100 due to rounding.

MMT = million metric tons; CO2e = carbon dioxide equivalent

3.0 REGULATORY SETTING

All levels of government have some responsibility for the protection of air quality, and each level (federal, State, and regional/local) has specific responsibilities relating to air quality regulation.

3.1 FEDERAL GREENHOUSE GAS REGULATIONS

3.1.1 Federal Clean Air Act

The U.S. Supreme Court ruled on April 2, 2007, in Massachusetts v. U.S. Environmental Protection Agency that CO_2 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_2, CH_4, N_2O, HFC, PFC, and SF_6) threaten the public health and welfare of the American people (USEPA 2021). 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).

3.1.2 Light-Duty Vehicle Greenhouse Gas Emissions Standards and Safer Affordable Fuel-Efficient Vehicles Rule

The USEPA and the NHTSA worked together on developing a national program of regulations to reduce GHG emissions and to improve fuel economy of light-duty vehicles. The USEPA established the first-ever national GHG emissions standards under the CAA, and the NHTSA established 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. On March 3, 2020, the agencies released the final Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule). The purpose of the SAFE Vehicles Rule is "to correct the national automobile fuel economy and GHG emissions standards to give the American people greater access to safer, more affordable vehicles that are cleaner for the environment." The direct effect of the rule is to eliminate the standards that were put in place to gradually raise average fuel economy for passenger cars and light trucks under test conditions from 37 miles per gallon (mpg) in 2020 to 50 mpg in 2025. The new SAFE Vehicles Rule freezes the average fuel economy level standards indefinitely at the 2020 levels. The new SAFE Vehicles Rule also results in the withdraw of the waiver previously provided to California for that State's GHG and zero emissions vehicle (ZEV) programs under Section 209 of the CAA (USEPA and NHTSA 2020).

3.2 CALIFORNIA GREENHOUSE GAS REGULATIONS

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

3.2.1 California Energy Code

California Code of Regulations (CCR) Title 24 Part 6, California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24), were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Energy-efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for space or 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 2019 Title 24 standards went into effect on January 1, 2020. The 2019 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 improvement to the residential standards is a requirement for onsite photovoltaic electricity generation (e.g., solar panels) for most new or modified residential building up to three stories high (California Energy Commission [CEC] 2019).

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.

3.2.2 California Green Building Standards Code

The California Green Building Standards Code (CALGreen; CCR Title 24, Part 11) is a code with mandatory requirements for all nonresidential buildings (including industrial buildings) and residential buildings for which no other state agency has authority to adopt green building standards. The current 2019 CALGreen standards for new construction of, and additions and alterations to, residential and nonresidential buildings went into effect on January 1, 2020 (California Building Standards Commission [CBSC] 2019).

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.

3.2.3 Executive Order S-3-05

On June 1, 2005, Executive Order (EO) S-3-05 proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To avoid or reduce climate change impacts, EO S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

3.2.4 Assembly Bill 32 – Global Warming Solution Act of 2006

The California Global Warming Solutions Act of 2006, widely known as AB 32, requires that CARB develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed by AB 32 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.

3.2.5 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 GHGs 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.

3.2.6 Senate Bill 32

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

3.2.7 Assembly Bill 197

A condition of approval for SB 32 was the passage of AB 197. AB 197 requires that CARB consider the social costs of GHG emissions and prioritize direct reductions in GHG emissions at mobile sources and large stationary sources. AB 197 also gives the California legislature more oversight over CARB through the addition of two legislatively appointed members to the CARB Board and the establishment a legislative committee to make recommendations about CARB programs to the legislature.

3.2.8 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. 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 2021).

3.2.9 Assembly Bill 341

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

3.2.10 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.

3.2.11 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 GHG emissions, and increase the use of clean energy.

3.2.12 Senate Bill 375

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

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

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

3.2.13 Senate Bill 100

Approved by Governor Brown on September 10, 2018, SB 100 extends the renewable electricity procurement goals and requirements of SB 350. SB 100 requires that all retail sale of electricity to California end-use customers be procured from 100 percent eligible renewable energy resources and zero-carbon resources by the end of 2045.

3.2.14 California Air Resources Board: Scoping Plan

On December 11, 2008, the 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 GHGs through fuel and efficiency measures. These measures would be implemented statewide rather than on a project-by-project basis.

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 (CARB 2014). 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 EO 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 adopted in December 2017. The Scoping Plan Update establishes a proposed framework for California to meet a 40 percent reduction in GHGs by 2030 compared to 1990 levels (CARB 2017).

3.3 LOCAL GREENHOUSE GAS PLANS

3.3.1 San Diego Association of Government's Regional Plan

San Diego Forward: The Regional Plan (Regional Plan; SANDAG 2015) is the long-range planning document developed to address the region's housing, economic, transportation, environmental, and overall quality-of-life needs. The underlying purpose is to provide direction and guidance on future regional growth (i.e., the location of new residential and non-residential land uses) and transportation patterns throughout the region as stipulated under SB 375. The Regional Plan establishes a planning framework and implementation actions that increase the region's sustainability and encourage "smart growth while preserving natural resources and limiting urban sprawl." The Regional Plan encourages local jurisdictions including the County of San Diego (County) to increase residential and employment concentrations in areas with the best existing and future transit connections, and to preserve important open spaces. The focus is on implementation of basic smart growth principles designed to strengthen the integration of land use and transportation. General urban form goals, policies, and objectives are summarized as follows:

- Mix compatible uses.
- Take advantage of compact building design.
- Create a range of housing opportunities and choices.
- Create walkable neighborhoods.
- Foster distinctive, attractive communities with a strong sense of place.
- Preserve open space, natural beauty, and critical environmental areas.
- Strengthen and direct development towards existing communities.
- Provide a variety of transportation choices.
- Make development decisions predictable, fair, and cost-effective.
- Encourage community and stakeholder collaboration in development decisions.

The Regional Plan also addresses border issues, providing an important guideline for communities that have borders with Mexico. In this case, the goal is to create a regional community where San Diego, its neighboring counties, tribal governments, and northern Baja California mutually benefit from San Diego's varied resources and international location.

3.3.2 City of La Mesa Climate Action Plan

The City of La Mesa Climate Action Plan (CAP) was adopted in March 2018. The CAP describes the 2010 GHG emissions baseline and forecasted emissions for 2020 and 2035, and identifies achievable, measurable strategies and actions for the City to reduce emissions to 15 percent below 2010 levels by 2020 and 53 percent below 2010 levels by 2035 (City of La Mesa 2018). These CAP reduction goals were designed to enable the City to meet the 2020 GHG reduction mandates of AB 32, the 2030 GHG reduction mandates SB 32, and to be on-track to meet the 2050 of EO-S-3-05 goal of GHG emissions 80 percent below 1990 levels by 2050. The CAP contains reduction measures within the City's direct influence to achieve the City's 2020 and 2035 GHG reduction targets in five strategy areas: energy; transportation and land use; water; solid waste; and green infrastructure (City of La Mesa 2018).

4.0 METHODOLOGY AND SIGNIFICANCE CRITERIA

4.1 METHODOLOGY

Criteria pollutant and precursor emissions were calculated using the California Emissions Estimator Model (CalEEMod), Version 2020.4.0. CalEEMod is a computer model used to estimate air emissions resulting from land development projects throughout the state of California. CalEEMod was developed by CAPCOA in collaboration with the California air quality management and pollution control districts, primarily the SCAQMD. The calculation methodology, source of emission factors used, and default data is described in the CalEEMod User's Guide, and Appendices A, D, and E (CAPCOA 2021).

In brief, CalEEMod is a computer model that estimates criteria air pollutant and greenhouse gas emissions from mobile (i.e., vehicular) sources, area sources (fireplaces, woodstoves, and landscape maintenance equipment), energy use (electricity and natural gas used in space heating, ventilation, and cooling; lighting; and plug-in appliances), water use and wastewater generation, and solid waste disposal. Emissions are estimated based on land use information input to the model by the user.

In the first module, the user defines the specific land uses that will occur at the project site. The user also selects the appropriate land use setting (urban or rural), operational year, location, climate zone, and utility provider. The input land uses, size features, and population are used throughout CalEEMod in determining default parameters and calculations in each of the subsequent modules. The input land use information consists of land use subtypes (such as the residential subtypes of single-family residential and multi-family medium-rise residential) and their unit or square footage quantities.

Subsequent modules include construction (including off-road vehicle emissions), mobile (on-road vehicle emissions), area sources (architectural coatings [painting], consumer products [cleansers, aerosols, solvents]), water and wastewater, and solid waste. Each module comprises multiple components including an associated mitigation module to account for further reductions in the reported baseline calculations. Other inputs include trip generation rates, trip lengths, vehicle fleet mix (percentage autos,

trucks, etc.), trip distribution (percent work to home, etc.), duration of construction activities, construction equipment usage, grading areas, season, and ambient temperature, as well as other parameters.

In various places the user can input additional information and/or override the default assumptions to account for project- or location-specific parameters. For this assessment, the default parameters were not changed unless otherwise noted. The CalEEMod output files are included in Appendix A to this report.

4.1.1 Construction Emissions

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. In compliance with SDPACD Rule 55, fugitive dust emissions calculations assume application of water on exposed surface a minimum of two times per day. Based on CalEEMod, Version 2020.4.0 defaults, the control efficiency for watering two times per day is 55 percent. The modeling also assumes building interior and exterior paint would not exceed 50 g/L VOC content and parking lot marking would not exceed 100 g/L VOC content, in conformance with SDAPCD Rule 67.0.1., as described in Section 2.4.

4.1.1.1 Construction Activities

Construction emissions were estimated based on the timeline provided by the project applicant, which assumes construction would commence with site preparation in August 2022 and be complete in July 2024 for a total construction period of 24 months. The quantity, duration, and intensity of construction activity influence the amount of construction emissions and 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 activity is occurring in a relatively intensive manner. Because of this conservative assumption, actual emissions could be less than those forecast. 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 assumed in CalEEMod; and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval).

Construction activities would include site preparation, grading and excavation, construction of the garage and podium, building construction, and architectural coatings. Construction is assumed to occur five days per week with equipment operating up to eight hours per day. Based on estimates from the aerial image of the project site, approximately 600 CY of debris (e.g., old asphalt, fencing, CMU walls, vegetation) would be exported during site preparation. Based on the estimates from the project plan set, approximately 14,200 CY of soil would be exported during grading/excavation. Architectural coating would overlap the last four months of building construction. The construction schedule assumed in the modeling is shown in Table 4, *Anticipated Construction Schedule*.

Table 4
ANTICIPATED CONSTRUCTION SCHEDULE

Construction Activity	Construction Period Start	Construction Period End	Number of Working Days
Site Preparation	8/1/2022	8/12/2022	10
Grading/Excavation	8/13/2022	9/23/2022	30
Podium Construction	9/24/2022	2/3/2023	95
Building Construction	2/4/2023	5/3/2024	325
Architectural Coatings	2/1/2024	7/31/2024	130

Source: USA Properties Fund; CalEEMod

4.1.1.2 Construction Off-Road Equipment

Construction would require the use of heavy off-road equipment. Construction equipment estimates for other activities estimates are based on site conditions and default values in CalEEMod, with additional equipment added for excavation for the semi-subterranean garage and foundations (based on assumptions used for similar projects). Table 5, *Construction Equipment Assumptions*, presents a summary of the assumed equipment that would be involved in each stage of construction.

Table 5
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Equipment	Horsepower	Number	Hours/Day
Site Preparation			
Rubber-Tired Dozers	247	1	8
Tractors/Loaders/Backhoes	97	2	7
Water Truck	402	1	4
Grading/Excavation			
Excavators	158	2	8
Rubber-Tired Dozers	247	1	8
Rubber-Tired Loaders	203	1	8
Tractors/Loaders/Backhoes	97	2	7
Water Truck	402	1	4
Podium Construction			
Concrete Pump Truck	402	1	4
Cranes	231	1	6
Forklifts	89	1	6
Generator Sets	84	1	8
Tractors/Loaders/Backhoes	97	1	6
Welders	46	3	8
Building Construction			
Cranes	231	1	6
Forklifts	89	1	6
Generator Sets	84	1	8
Tractors/Loaders/Backhoes	97	1	6
Welders	46	3	8
Architectural Coating			
Air Compressors	78	1	6

Source: CalEEMod

4.1.1.3 Construction On-Road Trips

Worker commute trips and vendor delivery trips were modeled based on CalEEMod defaults. Worker trips are anticipated to vary between 10 and 127 trips per day, depending on construction activity. Approximately 24 vendor trips are anticipated per day during podium and building construction. Debris hauling during site prep would result in 75 one-way trips and soil hauling during grading/excavation would result in 1,775 one-way trips. The CalEEMod default worker, vendor and haul trip distances were used in the model.

4.1.2 Operation Emissions

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

4.1.2.1 Area Source Emissions

This CalEEMod module estimates the GHG emissions that would occur from the use of hearths (e.g., wood or gas fireplaces and wood stoves), and landscaping equipment. This module also estimates emissions due to use of consumer products and architectural coatings that have volatile organic compounds (VOCs); however, these sources do not emit GHGs. The project would not include wood burning fireplace or woodstove, the modeling assumed only natural gas hearths.

The use of landscape equipment emits GHGs associated with the equipment's fuel combustion. CalEEMod estimates the number and type of equipment needed based on the number of summer days given the project's location as entered in the project characteristics module. The model defaults for landscaping equipment were assumed.

4.1.2.2 Energy Emissions

Development within the project would use electricity for lighting, heating, and cooling. Direct emissions from the burning of natural gas may result from furnaces and hot water heaters. Electricity generation typically entails the combustion of fossil fuels, including natural gas and coal, which is then transmitted to end users. A building's electricity use is thus associated with the off-site (indirect) emission of GHGs at the source of electricity generation (power plant). Energy source emissions were estimated using CalEEMod defaults which assume implementation of energy-reducing compliance with the 2019 Title 24 standards.

4.1.2.3 Vehicular (Mobile) Sources

Operational emissions from mobile source emissions are associated with project-related vehicle trip generation and trip length. Based on the trip generation rate from the Transportation Impact Analysis (TIA) prepared for the project, the project would generate 882 average daily trips. Due to the proximity of the project to the La Mesa Boulevard Trolley Station and adjacent to the MTS bus stops, impacts related to Vehicle Miles Traveled (VMT) would be less than significant (Linscott Law & Green [LLG] 2021). To account for the project's location in a low VMT area, the project trip distances were adjusted based on SANDAG household and VMT data for La Mesa. Based on the SANDAG 2019 estimated rate of 2.40 persons per household in La Mesa, the project population would be 353 persons (SANDAG 2021a). According to SANDAG VMT data for the downtown La Mesa census tract, the average VMT in 2016 was 14.4 miles per person (SANDAG 2021b). Using the SANDAG data for La Mesa, an average miles per trip

of 5.76 was calculated and used in the modeling.[1] The CalEEMod Version 2020.4.0 option to apply CARB's Emission Factor (EMFAC) off-model adjustments for the SAFE Vehicles Rule was selected.

4.1.3 Solid Waste Sources

The disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, and transportation of waste. CalEEMod determines the GHG emissions associated with disposal of solid waste into landfills. Portions of these emissions are biogenic. CalEEMod methods for quantifying GHG emissions from solid waste are based on the IPCC method using the degradable organic content of waste. A conservative 25 percent solid waste diversion rate was applied in CalEEMod to account for mandatory compliance with AB 341 which is not included in the model defaults.

4.1.4 Water Sources

Water-related GHG emissions are from the conveyance and treatment of water. CalEEMod uses the CEC's 2006 Refining Estimates of Water-Related Energy Use in California to establish default water related emission factors. Modeling was conducted using these defaults and a 20 percent reduction in potable water use and wastewater generation in accordance with 2019 CALGreen requirements not accounted for in the model defaults.

4.2 GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE

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. Therefore, the potential for a significant GHG impact is limited to cumulative impacts.

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

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

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

To determine whether the project would result in emissions that may have a significant impact on the environment, the project's GHG emissions were compared to the GHG emissions efficiency threshold of 3.46 MT CO_2e per capita by the year 2035 selected as a target by the City for GHG reductions in the CAP (City of La Mesa 2018). This target was developed to meet the statewide GHG emissions reduction target of 40 percent below 1990 levels by 2030 and be on track to meet the 80 percent below 1990 levels by 2050 target in accordance with SB 32 and EO S-3-05.

A 2035 target value between the 2030 and 2050 state reduction targets would require GHG reductions of 50 percent below 1990 levels. A 50 percent reduction below 1990 levels is equivalent to a 53 percent

[1] 14.4 miles per person ÷ 882 trips x 353 persons = 5.76 miles per trip.

reduction below 2010 levels. A 53 percent reduction below La Mesa's 2010 baseline of 7.37 MT CO_2e per capita would be 3.46 MT CO_2e per capita (City of La Mesa 2018).

5.0 IMPACT ANALYSIS

5.1 ISSUE 1: GENERATE DIRECT OR INDIRECT GHG EMISSIONS THAT MAY HAVE A SIGNIFICANT IMPACT ON THE ENVIRONMENT

5.1.1 Impacts

5.1.1.1 Construction Emissions

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

Emissions of GHGs related to the construction of the project would be temporary. As shown in Table 6, *Construction GHG Emissions*, total GHG emissions associated with construction of the project are estimated at 838 MT CO_2e. To be conservative in accounting for all the project's GHG emissions, construction emissions are amortized (i.e., averaged) over 30 year estimated life span of the project buildings and added to operational emissions. Averaged over 30 years, the proposed construction activities would contribute approximately 27.9 MT CO_2e emissions per year.

Table 6
CONSTRUCTION GHG EMISSIONS

Year/Activity	Emissions (MT CO_2e)
2022/Site Preparation, Grading and Excavation, and Podium Construction	253.9
2023/Podium Construction and Building Construction	416.8
2024 Building Construction and Architectural Coating	167.3
TOTAL[1]	**838.0**
Amortized Construction Emissions[2]	*27.9*

Source: CalEEMod (output data is provided in Appendices A and B)
[1] Totals may not sum due to rounding.
[2] Construction emissions are amortized over 30 years.
GHG = greenhouse gas; MT = metric tons; CO_2e = carbon dioxide equivalent

5.1.1.2 Operational Emissions

The project's operational GHG emissions were estimated using CalEEMod as described in Section 4.1. The complete modeling output is included as Appendix A to this report. As shown in Table 7, *Operational GHG Emissions*, the project would result in approximately 1,096 MT CO2e per year. For comparison with the City's 2035 GHG reduction target from the CAP, the project's operational emissions were divided by the project's estimated future population. Based on the SANDAG 2019 estimated rate of 2.40 persons per household in La Mesa, the project population would be 353 persons (SANDAG

2021a). As shown in Table 7, the project's per capita emissions would be approximately 3.10 MT CO_2e per year, below the City's GHG emissions target of 3.46 MT CO_2e per capita by the year 3035.

Table 7
OPERATIONAL GHG EMISSIONS

Emission Sources	2020 Emissions (MT CO_2e)
Area Sources	106.7
Energy Sources	274.6
Vehicular (Mobile) Sources	608.4
Solid Waste Sources	26.8
Water Sources	51.5
Subtotal[1]	**1,067.9**
Construction (Annualized over 30 years)	27.9
TOTAL[1]	**1,095.8**
Emissions per Capita[2]	**3.10**
CAP 2035 Target Emissions per Capita	**3.46**
Exceed Threshold?	**No**

Source: CalEEMod (output data is provided in Appendix A)
[1] Totals may not sum due to rounding.
[2] Emission per capita is the project total emissions divided by the project population (1,067.9/353).
GHG = greenhouse gas; MT = metric tons; CO_2e = carbon dioxide equivalent

5.1.2 Significance of Impacts

The project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, and the impact would be less than significant.

5.1.3 Mitigation Framework

Impacts would be less than significant; therefore, no mitigation measures are required.

5.1.4 Significance After Mitigation

The project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, and the impact would be less than significant. No mitigation measures are required.

5.2 ISSUE 2: CONFLICT WITH APPLICABLE PLANS ADOPTED FOR THE PURPOSE OF REDUCING GHG EMISSIONS

5.2.1 Impacts

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 is post-2020, the project aims to reach the quantitative goals set by SB 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 would not conflict with those plans and regulations.

The City's CAP describes the 2010 GHG emissions baseline and forecasted emissions for 2020 and 2035, and identifies achievable, measurable strategies and actions for the City to implement to reduce emissions to 15 percent below 2010 levels by 2020 and 53 percent below 2010 levels by 2035 (City of La Mesa 2018). These CAP reduction goals were designed to enable the City to meet the 2020 GHG reduction mandates of AB 32, the 2030 GHG reduction mandates SB 32, and to be on-track to meet the 2050 of EO S-3-05 goal of GHG emissions 80 percent below 1990 levels by 2050.

The CAP contains reduction measures within the City's direct influence to achieve the City's 2020 and 2035 GHG reduction targets in five strategy areas: energy; transportation and land use; water; solid waste; and green infrastructure (urban forest). The project is approximately 500 feet southeast of the La Mesa Trolley Station and adjacent to MTS bus stops. Due the project's proposed high-density multi-family housing and proximity to a major transit stop, the project would be considered TOD. Therefore, the project would support the CAP Transportation and Land Use reduction measure T-4, Mixed-Use and Transit-Oriented Development. In addition, the project's conformance to the 2019 Title 24 Part 6 building energy efficiency code and Part 11 CALGreen code would ensure the project is consistent with the CAP building energy, water use, and solid waste diversion strategies and measures; and the project would be consistent with the green infrastructure strategies and measures by implementing the 2019 CALGreen and City standards for public right of way and shade trees on the project's frontage with Allison Avenue and Date Avenue. As discussed in Issue 1, the project's GHG emissions would not exceed the City's CAP 2035 GHG reduction target. Therefore, the project would not conflict with or obstruct implementation of the City's CAP.

The project has a land use designation of Downtown Commercial and the project's proposed apartments are a permitted use consistent with the General Plan land use designation. Therefore, the project would not result in population growth beyond the levels assumed for the region and the project would not conflict with any population projections for the region used to develop the SANDAG's Regional Plan. As discussed in Sections 2.4 and 2.5, the transportation sector is the largest source of GHG emissions in the state and in the San Diego region. A project's GHG emissions from cars and light trucks are directly correlated to the project's VMT. A reduction of VMT through implementation of TOD projects is a key component of SANDAG's Regional Plan to mitigate the adverse effects of traffic congestion and reduce GHGs (SANDAG 2015). The TIA analyzed the project's VMT and concluded VMT impacts would be less than significant (LLG 2021). Therefore, the project would not conflict with or obstruct implementation of the SANDAG's Regional Plan.

5.2.2 Significance of Impacts

The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and the impacts would be less than significant.

5.2.3 Mitigation Framework

Impacts would be less than significant; therefore, no mitigation measures are required.

5.2.4 Significance After Mitigation

The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and the impacts would be less than significant. No mitigation measures are required.

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Appendix A

CalEEMod Output

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Allison Avenue TOD Projet - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Allison Avenue TOD Projet

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	3.74	1000sqft	0.00	3,740.00	0
Enclosed Parking with Elevator	46.70	1000sqft	0.00	46,700.00	0
Apartments Mid Rise	147.00	Dwelling Unit	3.87	141,995.00	420

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - R2 - Trip distance calculated from SANDAG household and SB 743 VMT data.
R3 - Adjustment to building SF and construction start.

Land Use - Land use sizes per project plan set.
General Office Building = lobbies, leasing offices, clubroom and fitness room.

Construction Phase - Construction schedule per applicant.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Grading/Excavation includes exacvation for semi-subterranean garage and foundations.
Off-Highway Truck = water truck.

Off-road Equipment - Off-Highway Truck = concrete pump truck

Off-road Equipment - Site prep includes demo of existing ashpalt and fencing.
Off-Highway Truck = water truck.

Allison Avenue TOD Projet - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Trips and VMT -

Grading - 600 CY old asphalt, fencing, CMU wall exported during site prep.
14,200 CY soil expoerted during grading/excavation.

Architectural Coating - VOC limits per SDAPCD Rule 67.0.1 (effective 1/1/2022).

Vehicle Trips - Project trip rates per project TIA (LLG March 2021).
All project trips applied to residential land use.
5.76 miles per trip per SANDAG household and VMT/capita data for La Mesa.

Area Coating - VOC limits per SDAPCD Rule 67.0.1 (effective 1/1/2022).

Construction Off-road Equipment Mitigation - Dust mitigation to comply with SDAPCD Rule 55.

Area Mitigation - No wood hearths.

Water Mitigation - 20% water reduction per CALGreen not accounted for in defaults.

Waste Mitigation - 25% solid waste diversion per AB 341/local and sate regs, not accounted for in defaults.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	95,847.00	95,783.00
tblArchitecturalCoating	ConstArea_Residential_Interior	287,540.00	287,348.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	50
tblAreaCoating	Area_EF_Residential_Interior	250	50
tblAreaCoating	Area_Residential_Exterior	95847	95783
tblAreaCoating	Area_Residential_Interior	287540	287348
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	8.00	30.00
tblConstructionPhase	NumDays	230.00	95.00

Allison Avenue TOD Projet - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	NumDays	230.00	325.00
tblConstructionPhase	NumDays	18.00	130.00
tblConstructionPhase	PhaseEndDate	8/2/2022	8/12/2022
tblConstructionPhase	PhaseEndDate	8/8/2022	9/23/2022
tblConstructionPhase	PhaseEndDate	5/15/2023	2/3/2023
tblConstructionPhase	PhaseEndDate	2/19/2024	5/3/2024
tblConstructionPhase	PhaseEndDate	3/4/2024	7/31/2024
tblConstructionPhase	PhaseStartDate	8/3/2022	8/13/2022
tblConstructionPhase	PhaseStartDate	8/9/2022	9/24/2022
tblConstructionPhase	PhaseStartDate	5/16/2023	2/4/2023
tblConstructionPhase	PhaseStartDate	2/20/2024	2/1/2024
tblGrading	MaterialExported	0.00	14,200.00
tblGrading	MaterialExported	0.00	600.00
tblLandUse	LandUseSquareFeet	147,000.00	141,995.00
tblLandUse	LotAcreage	0.09	0.00
tblLandUse	LotAcreage	1.07	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TTP	39.60	0.00
tblVehicleTrips	HS_TTP	18.80	0.00
tblVehicleTrips	HW_TL	10.80	5.76
tblVehicleTrips	HW_TTP	41.60	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	4.91	6.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	SU_TR	4.09	6.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	WD_TR	5.44	6.00
tblVehicleTrips	WD_TR	9.74	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	0.1251	1.0953	0.9802	2.7700e-003	0.1917	0.0425	0.2342	0.0836	0.0401	0.1237	0.0000	249.1439	249.1439	0.0408	0.0127	253.9376
2023	0.2495	1.7141	2.0861	4.7300e-003	0.1531	0.0692	0.2224	0.0412	0.0668	0.1080	0.0000	412.0162	412.0162	0.0474	0.0120	416.7762
2024	0.5547	0.6371	0.8544	1.8900e-003	0.0660	0.0248	0.0909	0.0177	0.0241	0.0418	0.0000	165.5920	165.5920	0.0165	4.3000e-003	167.2850
Maximum	**0.5547**	**1.7141**	**2.0861**	**4.7300e-003**	**0.1917**	**0.0692**	**0.2342**	**0.0836**	**0.0668**	**0.1237**	**0.0000**	**412.0162**	**412.0162**	**0.0474**	**0.0127**	**416.7762**

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					
2022	0.1251	1.0953	0.9802	2.7700e-003	0.1191	0.0425	0.1616	0.0465	0.0401	0.0866	0.0000	249.1437	249.1437	0.0408	0.0127	253.9375
2023	0.2495	1.7141	2.0861	4.7300e-003	0.1531	0.0692	0.2224	0.0412	0.0668	0.1080	0.0000	412.0159	412.0159	0.0474	0.0120	416.7760
2024	0.5547	0.6371	0.8544	1.8900e-003	0.0660	0.0248	0.0909	0.0177	0.0241	0.0418	0.0000	165.5919	165.5919	0.0165	4.3000e-003	167.2848
Maximum	**0.5547**	**1.7141**	**2.0861**	**4.7300e-003**	**0.1531**	**0.0692**	**0.2224**	**0.0465**	**0.0668**	**0.1080**	**0.0000**	**412.0159**	**412.0159**	**0.0474**	**0.0127**	**416.7760**

Allison Avenue TOD Projet - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**17.68**	**0.00**	**13.27**	**26.06**	**0.00**	**13.58**	**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	**8-1-2022**	**10-31-2022**	0.8082	0.8082
2	**11-1-2022**	**1-31-2023**	0.5905	0.5905
3	**2-1-2023**	**4-30-2023**	0.4764	0.4764
4	**5-1-2023**	**7-31-2023**	0.4881	0.4881
5	**8-1-2023**	**10-31-2023**	0.4892	0.4892
6	**11-1-2023**	**1-31-2024**	0.4824	0.4824
7	**2-1-2024**	**4-30-2024**	0.7293	0.7293
8	**5-1-2024**	**7-31-2024**	0.2965	0.2965
		Highest	0.8082	0.8082

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	9.8746	0.1927	12.4766	0.0207		1.6024	1.6024		1.6024	1.6024	151.8448	65.4653	217.3101	0.1418	0.0119	224.4153
Energy	6.1700e-003	0.0530	0.0241	3.4000e-004		4.2600e-003	4.2600e-003		4.2600e-003	4.2600e-003	0.0000	273.4158	273.4158	0.0142	2.6900e-003	274.5719
Mobile	0.3672	0.3733	3.1648	6.3200e-003	0.6917	5.0400e-003	0.6968	0.1846	4.7000e-003	0.1893	0.0000	598.7720	598.7720	0.0457	0.0284	608.3795
Waste						0.0000	0.0000		0.0000	0.0000	14.4327	0.0000	14.4327	0.8530	0.0000	35.7563
Water						0.0000	0.0000		0.0000	0.0000	3.2494	50.2048	53.4542	0.3368	8.2500e-003	64.3338
Total	**10.2479**	**0.6190**	**15.6654**	**0.0274**	**0.6917**	**1.6117**	**2.3035**	**0.1846**	**1.6114**	**1.7960**	**169.5269**	**987.8578**	**1,157.3847**	**1.3915**	**0.0513**	**1,207.4567**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.6614	0.1025	1.1292	6.3000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	105.9899	105.9899	3.7100e-003	1.9100e-003	106.6519
Energy	6.1700e-003	0.0530	0.0241	3.4000e-004		4.2600e-003	4.2600e-003		4.2600e-003	4.2600e-003	0.0000	273.4158	273.4158	0.0142	2.6900e-003	274.5719
Mobile	0.3672	0.3733	3.1648	6.3200e-003	0.6917	5.0400e-003	0.6968	0.1846	4.7000e-003	0.1893	0.0000	598.7720	598.7720	0.0457	0.0284	608.3795
Waste						0.0000	0.0000		0.0000	0.0000	10.8245	0.0000	10.8245	0.6397	0.0000	26.8172
Water						0.0000	0.0000		0.0000	0.0000	2.5995	40.1638	42.7634	0.2695	6.6000e-003	51.4670
Total	**1.0348**	**0.5288**	**4.3180**	**7.2900e-003**	**0.6917**	**0.0226**	**0.7144**	**0.1846**	**0.0223**	**0.2069**	**13.4240**	**1,018.3415**	**1,031.7655**	**0.9728**	**0.0396**	**1,067.8875**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**89.90**	**14.56**	**72.44**	**73.35**	**0.00**	**98.60**	**68.99**	**0.00**	**98.62**	**88.48**	**92.08**	**-3.09**	**10.85**	**30.09**	**22.78**	**11.56**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	8/1/2022	8/12/2022	5	10	
2	Grading/Excavation	Grading	8/13/2022	9/23/2022	5	30	
3	Podium Construction	Building Construction	9/24/2022	2/3/2023	5	95	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	2/4/2023	5/3/2024	5	325	
5	Architectural Coating	Architectural Coating	2/1/2024	7/31/2024	5	130	

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 15

Acres of Paving: 0

Residential Indoor: 287,348; Residential Outdoor: 95,783; Non-Residential Indoor: 5,610; Non-Residential Outdoor: 1,870; Striped Parking Area: 2,802 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	0	8.00	187	0.41
Site Preparation	Off-Highway Trucks	1	4.00	402	0.38
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading/Excavation	Excavators	2	8.00	158	0.38
Grading/Excavation	Graders	0	8.00	187	0.41
Grading/Excavation	Off-Highway Trucks	1	4.00	402	0.38
Grading/Excavation	Rubber Tired Dozers	1	8.00	247	0.40
Grading/Excavation	Rubber Tired Loaders	1	8.00	203	0.36
Grading/Excavation	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Podium Construction	Cranes	1	6.00	231	0.29
Podium Construction	Forklifts	1	6.00	89	0.20
Podium Construction	Generator Sets	1	8.00	84	0.74
Podium Construction	Off-Highway Trucks	1	4.00	402	0.38
Podium Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Podium Construction	Welders	3	8.00	46	0.45
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

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	4	10.00	0.00	75.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Excavation	7	18.00	0.00	1,775.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Podium Construction	8	127.00	24.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	127.00	24.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0328	0.0000	0.0328	0.0168	0.0000	0.0168	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1500e-003	0.0708	0.0487	1.1000e-004		3.3500e-003	3.3500e-003		3.0800e-003	3.0800e-003	0.0000	9.3849	9.3849	3.0400e-003	0.0000	9.4607
Total	**7.1500e-003**	**0.0708**	**0.0487**	**1.1000e-004**	**0.0328**	**3.3500e-003**	**0.0362**	**0.0168**	**3.0800e-003**	**0.0199**	**0.0000**	**9.3849**	**9.3849**	**3.0400e-003**	**0.0000**	**9.4607**

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	1.7000e-004	6.3100e-003	1.4900e-003	2.0000e-005	6.4000e-004	6.0000e-005	7.0000e-004	1.8000e-004	6.0000e-005	2.3000e-004	0.0000	2.3506	2.3506	1.1000e-004	3.7000e-004	2.4646
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	1.4000e-004	1.0000e-004	1.2300e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3298	0.3298	1.0000e-005	1.0000e-005	0.3328
Total	**3.1000e-004**	**6.4100e-003**	**2.7200e-003**	**2.0000e-005**	**1.0400e-003**	**6.0000e-005**	**1.1000e-003**	**2.9000e-004**	**6.0000e-005**	**3.4000e-004**	**0.0000**	**2.6803**	**2.6803**	**1.2000e-004**	**3.8000e-004**	**2.7975**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0148	0.0000	0.0148	7.5800e-003	0.0000	7.5800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1500e-003	0.0708	0.0487	1.1000e-004		3.3500e-003	3.3500e-003		3.0800e-003	3.0800e-003	0.0000	9.3848	9.3848	3.0400e-003	0.0000	9.4607
Total	**7.1500e-003**	**0.0708**	**0.0487**	**1.1000e-004**	**0.0148**	**3.3500e-003**	**0.0181**	**7.5800e-003**	**3.0800e-003**	**0.0107**	**0.0000**	**9.3848**	**9.3848**	**3.0400e-003**	**0.0000**	**9.4607**

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	1.7000e-004	6.3100e-003	1.4900e-003	2.0000e-005	6.4000e-004	6.0000e-005	7.0000e-004	1.8000e-004	6.0000e-005	2.3000e-004	0.0000	2.3506	2.3506	1.1000e-004	3.7000e-004	2.4646
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	1.4000e-004	1.0000e-004	1.2300e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3298	0.3298	1.0000e-005	1.0000e-005	0.3328
Total	**3.1000e-004**	**6.4100e-003**	**2.7200e-003**	**2.0000e-005**	**1.0400e-003**	**6.0000e-005**	**1.1000e-003**	**2.9000e-004**	**6.0000e-005**	**3.4000e-004**	**0.0000**	**2.6803**	**2.6803**	**1.2000e-004**	**3.8000e-004**	**2.7975**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading/Excavation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0993	0.0000	0.0993	0.0507	0.0000	0.0507	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0313	0.3047	0.2583	5.6000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	48.9797	48.9797	0.0158	0.0000	49.3757
Total	**0.0313**	**0.3047**	**0.2583**	**5.6000e-004**	**0.0993**	**0.0138**	**0.1131**	**0.0507**	**0.0127**	**0.0634**	**0.0000**	**48.9797**	**48.9797**	**0.0158**	**0.0000**	**49.3757**

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	3.9300e-003	0.1494	0.0352	5.6000e-004	0.0152	1.3900e-003	0.0166	4.1800e-003	1.3300e-003	5.5100e-003	0.0000	55.6296	55.6296	2.6700e-003	8.8400e-003	58.3299
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.8000e-004	5.7000e-004	6.6400e-003	2.0000e-005	2.1700e-003	1.0000e-005	2.1800e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.7807	1.7807	6.0000e-005	5.0000e-005	1.7974
Total	**4.7100e-003**	**0.1500**	**0.0419**	**5.8000e-004**	**0.0174**	**1.4000e-003**	**0.0188**	**4.7600e-003**	**1.3400e-003**	**6.1000e-003**	**0.0000**	**57.4102**	**57.4102**	**2.7300e-003**	**8.8900e-003**	**60.1273**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading/Excavation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0447	0.0000	0.0447	0.0228	0.0000	0.0228	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0313	0.3047	0.2583	5.6000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	48.9796	48.9796	0.0158	0.0000	49.3757
Total	**0.0313**	**0.3047**	**0.2583**	**5.6000e-004**	**0.0447**	**0.0138**	**0.0585**	**0.0228**	**0.0127**	**0.0355**	**0.0000**	**48.9796**	**48.9796**	**0.0158**	**0.0000**	**49.3757**

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	3.9300e-003	0.1494	0.0352	5.6000e-004	0.0152	1.3900e-003	0.0166	4.1800e-003	1.3300e-003	5.5100e-003	0.0000	55.6296	55.6296	2.6700e-003	8.8400e-003	58.3299
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.8000e-004	5.7000e-004	6.6400e-003	2.0000e-005	2.1700e-003	1.0000e-005	2.1800e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.7807	1.7807	6.0000e-005	5.0000e-005	1.7974
Total	**4.7100e-003**	**0.1500**	**0.0419**	**5.8000e-004**	**0.0174**	**1.4000e-003**	**0.0188**	**4.7600e-003**	**1.3400e-003**	**6.1000e-003**	**0.0000**	**57.4102**	**57.4102**	**2.7300e-003**	**8.8900e-003**	**60.1273**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Podium Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0670	0.5079	0.5042	1.0000e-003		0.0232	0.0232		0.0223	0.0223	0.0000	83.8568	83.8568	0.0176	0.0000	84.2976
Total	**0.0670**	**0.5079**	**0.5042**	**1.0000e-003**		**0.0232**	**0.0232**		**0.0223**	**0.0223**	**0.0000**	**83.8568**	**83.8568**	**0.0176**	**0.0000**	**84.2976**

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	1.8600e-003	0.0462	0.0151	1.8000e-004	5.5800e-003	4.9000e-004	6.0600e-003	1.6100e-003	4.7000e-004	2.0800e-003	0.0000	17.5173	17.5173	5.3000e-004	2.5400e-003	18.2889
Worker	0.0128	9.3200e-003	0.1093	3.2000e-004	0.0357	2.1000e-004	0.0359	9.4700e-003	1.9000e-004	9.6600e-003	0.0000	29.3148	29.3148	9.2000e-004	8.5000e-004	29.5899
Total	**0.0147**	**0.0556**	**0.1244**	**5.0000e-004**	**0.0412**	**7.0000e-004**	**0.0419**	**0.0111**	**6.6000e-004**	**0.0117**	**0.0000**	**46.8321**	**46.8321**	**1.4500e-003**	**3.3900e-003**	**47.8788**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Podium Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0670	0.5079	0.5042	1.0000e-003		0.0232	0.0232		0.0223	0.0223	0.0000	83.8567	83.8567	0.0176	0.0000	84.2975
Total	**0.0670**	**0.5079**	**0.5042**	**1.0000e-003**		**0.0232**	**0.0232**		**0.0223**	**0.0223**	**0.0000**	**83.8567**	**83.8567**	**0.0176**	**0.0000**	**84.2975**

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	1.8600e-003	0.0462	0.0151	1.8000e-004	5.5800e-003	4.9000e-004	6.0600e-003	1.6100e-003	4.7000e-004	2.0800e-003	0.0000	17.5173	17.5173	5.3000e-004	2.5400e-003	18.2889
Worker	0.0128	9.3200e-003	0.1093	3.2000e-004	0.0357	2.1000e-004	0.0359	9.4700e-003	1.9000e-004	9.6600e-003	0.0000	29.3148	29.3148	9.2000e-004	8.5000e-004	29.5899
Total	**0.0147**	**0.0556**	**0.1244**	**5.0000e-004**	**0.0412**	**7.0000e-004**	**0.0419**	**0.0111**	**6.6000e-004**	**0.0117**	**0.0000**	**46.8321**	**46.8321**	**1.4500e-003**	**3.3900e-003**	**47.8788**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Podium Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0222	0.1687	0.1782	3.6000e-004		7.2400e-003	7.2400e-003		6.9500e-003	6.9500e-003	0.0000	29.9567	29.9567	6.2000e-003	0.0000	30.1118
Total	**0.0222**	**0.1687**	**0.1782**	**3.6000e-004**		**7.2400e-003**	**7.2400e-003**		**6.9500e-003**	**6.9500e-003**	**0.0000**	**29.9567**	**29.9567**	**6.2000e-003**	**0.0000**	**30.1118**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5000e-004	0.0133	4.7000e-003	6.0000e-005	1.9900e-003	8.0000e-005	2.0700e-003	5.8000e-004	8.0000e-005	6.5000e-004	0.0000	6.0195	6.0195	1.8000e-004	8.7000e-004	6.2840
Worker	4.3000e-003	2.9700e-003	0.0363	1.1000e-004	0.0127	7.0000e-005	0.0128	3.3800e-003	6.0000e-005	3.4500e-003	0.0000	10.1998	10.1998	3.0000e-004	2.8000e-004	10.2910
Total	**4.6500e-003**	**0.0163**	**0.0410**	**1.7000e-004**	**0.0147**	**1.5000e-004**	**0.0149**	**3.9600e-003**	**1.4000e-004**	**4.1000e-003**	**0.0000**	**16.2193**	**16.2193**	**4.8000e-004**	**1.1500e-003**	**16.5750**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Podium Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0222	0.1687	0.1782	3.6000e-004		7.2400e-003	7.2400e-003		6.9500e-003	6.9500e-003	0.0000	29.9567	29.9567	6.2000e-003	0.0000	30.1117
Total	**0.0222**	**0.1687**	**0.1782**	**3.6000e-004**		**7.2400e-003**	**7.2400e-003**		**6.9500e-003**	**6.9500e-003**	**0.0000**	**29.9567**	**29.9567**	**6.2000e-003**	**0.0000**	**30.1117**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5000e-004	0.0133	4.7000e-003	6.0000e-005	1.9900e-003	8.0000e-005	2.0700e-003	5.8000e-004	8.0000e-005	6.5000e-004	0.0000	6.0195	6.0195	1.8000e-004	8.7000e-004	6.2840
Worker	4.3000e-003	2.9700e-003	0.0363	1.1000e-004	0.0127	7.0000e-005	0.0128	3.3800e-003	6.0000e-005	3.4500e-003	0.0000	10.1998	10.1998	3.0000e-004	2.8000e-004	10.2910
Total	**4.6500e-003**	**0.0163**	**0.0410**	**1.7000e-004**	**0.0147**	**1.5000e-004**	**0.0149**	**3.9600e-003**	**1.4000e-004**	**4.1000e-003**	**0.0000**	**16.2193**	**16.2193**	**4.8000e-004**	**1.1500e-003**	**16.5750**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1790	1.3760	1.4818	2.5900e-003		0.0605	0.0605		0.0584	0.0584	0.0000	213.3790	213.3790	0.0362	0.0000	214.2848
Total	**0.1790**	**1.3760**	**1.4818**	**2.5900e-003**		**0.0605**	**0.0605**		**0.0584**	**0.0584**	**0.0000**	**213.3790**	**213.3790**	**0.0362**	**0.0000**	**214.2848**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3100e-003	0.1252	0.0442	5.8000e-004	0.0187	7.4000e-004	0.0195	5.4100e-003	7.1000e-004	6.1100e-003	0.0000	56.5834	56.5834	1.7100e-003	8.2000e-003	59.0694
Worker	0.0404	0.0280	0.3410	1.0300e-003	0.1197	6.6000e-004	0.1203	0.0318	6.1000e-004	0.0324	0.0000	95.8778	95.8778	2.8100e-003	2.6400e-003	96.7353
Total	**0.0437**	**0.1532**	**0.3851**	**1.6100e-003**	**0.1384**	**1.4000e-003**	**0.1398**	**0.0372**	**1.3200e-003**	**0.0385**	**0.0000**	**152.4612**	**152.4612**	**4.5200e-003**	**0.0108**	**155.8047**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1790	1.3760	1.4818	2.5900e-003		0.0605	0.0605		0.0584	0.0584	0.0000	213.3787	213.3787	0.0362	0.0000	214.2846
Total	**0.1790**	**1.3760**	**1.4818**	**2.5900e-003**		**0.0605**	**0.0605**		**0.0584**	**0.0584**	**0.0000**	**213.3787**	**213.3787**	**0.0362**	**0.0000**	**214.2846**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3100e-003	0.1252	0.0442	5.8000e-004	0.0187	7.4000e-004	0.0195	5.4100e-003	7.1000e-004	6.1100e-003	0.0000	56.5834	56.5834	1.7100e-003	8.2000e-003	59.0694
Worker	0.0404	0.0280	0.3410	1.0300e-003	0.1197	6.6000e-004	0.1203	0.0318	6.1000e-004	0.0324	0.0000	95.8778	95.8778	2.8100e-003	2.6400e-003	96.7353
Total	**0.0437**	**0.1532**	**0.3851**	**1.6100e-003**	**0.1384**	**1.4000e-003**	**0.1398**	**0.0372**	**1.3200e-003**	**0.0385**	**0.0000**	**152.4612**	**152.4612**	**4.5200e-003**	**0.0108**	**155.8047**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	0.0639	0.4979	0.5633	9.9000e-004		0.0203	0.0203		0.0196	0.0196	0.0000	81.7251	81.7251	0.0136	0.0000	82.0653
Total	**0.0639**	**0.4979**	**0.5633**	**9.9000e-004**		**0.0203**	**0.0203**		**0.0196**	**0.0196**	**0.0000**	**81.7251**	**81.7251**	**0.0136**	**0.0000**	**82.0653**

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	1.2200e-003	0.0476	0.0165	2.2000e-004	7.1700e-003	2.8000e-004	7.4600e-003	2.0700e-003	2.7000e-004	2.3400e-003	0.0000	21.2928	21.2928	6.7000e-004	3.0800e-003	22.2289
Worker	0.0145	9.6300e-003	0.1222	3.8000e-004	0.0458	2.4000e-004	0.0461	0.0122	2.2000e-004	0.0124	0.0000	35.7989	35.7989	9.8000e-004	9.5000e-004	36.1052
Total	**0.0158**	**0.0573**	**0.1387**	**6.0000e-004**	**0.0530**	**5.2000e-004**	**0.0535**	**0.0143**	**4.9000e-004**	**0.0147**	**0.0000**	**57.0917**	**57.0917**	**1.6500e-003**	**4.0300e-003**	**58.3340**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	0.0639	0.4979	0.5633	9.9000e-004		0.0203	0.0203		0.0196	0.0196	0.0000	81.7250	81.7250	0.0136	0.0000	82.0652
Total	**0.0639**	**0.4979**	**0.5633**	**9.9000e-004**		**0.0203**	**0.0203**		**0.0196**	**0.0196**	**0.0000**	**81.7250**	**81.7250**	**0.0136**	**0.0000**	**82.0652**

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	1.2200e-003	0.0476	0.0165	2.2000e-004	7.1700e-003	2.8000e-004	7.4600e-003	2.0700e-003	2.7000e-004	2.3400e-003	0.0000	21.2928	21.2928	6.7000e-004	3.0800e-003	22.2289
Worker	0.0145	9.6300e-003	0.1222	3.8000e-004	0.0458	2.4000e-004	0.0461	0.0122	2.2000e-004	0.0124	0.0000	35.7989	35.7989	9.8000e-004	9.5000e-004	36.1052
Total	**0.0158**	**0.0573**	**0.1387**	**6.0000e-004**	**0.0530**	**5.2000e-004**	**0.0535**	**0.0143**	**4.9000e-004**	**0.0147**	**0.0000**	**57.0917**	**57.0917**	**1.6500e-003**	**4.0300e-003**	**58.3340**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

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	0.4591					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0118	0.0792	0.1177	1.9000e-004		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	16.5962	16.5962	9.3000e-004	0.0000	16.6195
Total	**0.4709**	**0.0792**	**0.1177**	**1.9000e-004**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**16.5962**	**16.5962**	**9.3000e-004**	**0.0000**	**16.6195**

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	4.1300e-003	2.7400e-003	0.0348	1.1000e-004	0.0130	7.0000e-005	0.0131	3.4600e-003	6.0000e-005	3.5300e-003	0.0000	10.1791	10.1791	2.8000e-004	2.7000e-004	10.2661
Total	**4.1300e-003**	**2.7400e-003**	**0.0348**	**1.1000e-004**	**0.0130**	**7.0000e-005**	**0.0131**	**3.4600e-003**	**6.0000e-005**	**3.5300e-003**	**0.0000**	**10.1791**	**10.1791**	**2.8000e-004**	**2.7000e-004**	**10.2661**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

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	0.4591					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0118	0.0792	0.1177	1.9000e-004		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	16.5961	16.5961	9.3000e-004	0.0000	16.6195
Total	**0.4709**	**0.0792**	**0.1177**	**1.9000e-004**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**16.5961**	**16.5961**	**9.3000e-004**	**0.0000**	**16.6195**

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	4.1300e-003	2.7400e-003	0.0348	1.1000e-004	0.0130	7.0000e-005	0.0131	3.4600e-003	6.0000e-005	3.5300e-003	0.0000	10.1791	10.1791	2.8000e-004	2.7000e-004	10.2661
Total	**4.1300e-003**	**2.7400e-003**	**0.0348**	**1.1000e-004**	**0.0130**	**7.0000e-005**	**0.0131**	**3.4600e-003**	**6.0000e-005**	**3.5300e-003**	**0.0000**	**10.1791**	**10.1791**	**2.8000e-004**	**2.7000e-004**	**10.2661**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3672	0.3733	3.1648	6.3200e-003	0.6917	5.0400e-003	0.6968	0.1846	4.7000e-003	0.1893	0.0000	598.7720	598.7720	0.0457	0.0284	608.3795
Unmitigated	0.3672	0.3733	3.1648	6.3200e-003	0.6917	5.0400e-003	0.6968	0.1846	4.7000e-003	0.1893	0.0000	598.7720	598.7720	0.0457	0.0284	608.3795

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	882.00	882.00	882.00	1,849,236	1,849,236
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Total	882.00	882.00	882.00	1,849,236	1,849,236

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	5.76	7.30	7.50	100.00	0.00	0.00	100	0	0
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
Enclosed Parking with Elevator	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
General Office Building	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	212.3413	212.3413	0.0130	1.5700e-003	213.1345
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	212.3413	212.3413	0.0130	1.5700e-003	213.1345
NaturalGas Mitigated	6.1700e-003	0.0530	0.0241	3.4000e-004		4.2600e-003	4.2600e-003		4.2600e-003	4.2600e-003	0.0000	61.0744	61.0744	1.1700e-003	1.1200e-003	61.4374
NaturalGas Unmitigated	6.1700e-003	0.0530	0.0241	3.4000e-004		4.2600e-003	4.2600e-003		4.2600e-003	4.2600e-003	0.0000	61.0744	61.0744	1.1700e-003	1.1200e-003	61.4374

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.06958e+006	5.7700e-003	0.0493	0.0210	3.1000e-004		3.9800e-003	3.9800e-003		3.9800e-003	3.9800e-003	0.0000	57.0768	57.0768	1.0900e-003	1.0500e-003	57.4160
Enclosed 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
General Office Building	74912.2	4.0000e-004	3.6700e-003	3.0800e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	3.9976	3.9976	8.0000e-005	7.0000e-005	4.0214
Total		**6.1700e-003**	**0.0530**	**0.0241**	**3.3000e-004**		**4.2600e-003**	**4.2600e-003**		**4.2600e-003**	**4.2600e-003**	**0.0000**	**61.0744**	**61.0744**	**1.1700e-003**	**1.1200e-003**	**61.4374**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.06958e+006	5.7700e-003	0.0493	0.0210	3.1000e-004		3.9800e-003	3.9800e-003		3.9800e-003	3.9800e-003	0.0000	57.0768	57.0768	1.0900e-003	1.0500e-003	57.4160
Enclosed 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
General Office Building	74912.2	4.0000e-004	3.6700e-003	3.0800e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	3.9976	3.9976	8.0000e-005	7.0000e-005	4.0214
Total		**6.1700e-003**	**0.0530**	**0.0241**	**3.3000e-004**		**4.2600e-003**	**4.2600e-003**		**4.2600e-003**	**4.2600e-003**	**0.0000**	**61.0744**	**61.0744**	**1.1700e-003**	**1.1200e-003**	**61.4374**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	564501	138.2636	8.4500e-003	1.0200e-003	138.7800
Enclosed Parking with Elevator	254048	62.2242	3.8000e-003	4.6000e-004	62.4566
General Office Building	48395.6	11.8536	7.2000e-004	9.0000e-005	11.8979
Total		**212.3413**	**0.0130**	**1.5700e-003**	**213.1345**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	564501	138.2636	8.4500e-003	1.0200e-003	138.7800
Enclosed Parking with Elevator	254048	62.2242	3.8000e-003	4.6000e-004	62.4566
General Office Building	48395.6	11.8536	7.2000e-004	9.0000e-005	11.8979
Total		**212.3413**	**0.0130**	**1.5700e-003**	**213.1345**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.6614	0.1025	1.1292	6.3000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	105.9899	105.9899	3.7100e-003	1.9100e-003	106.6519
Unmitigated	9.8746	0.1927	12.4766	0.0207		1.6024	1.6024		1.6024	1.6024	151.8448	65.4653	217.3101	0.1418	0.0119	224.4153

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	0.0459					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5722					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	9.2237	0.1801	11.3856	0.0206		1.5964	1.5964		1.5964	1.5964	151.8448	63.6815	215.5263	0.1401	0.0119	222.5887
Landscaping	0.0328	0.0126	1.0909	6.0000e-005		6.0500e-003	6.0500e-003		6.0500e-003	6.0500e-003	0.0000	1.7838	1.7838	1.7100e-003	0.0000	1.8266
Total	**9.8746**	**0.1927**	**12.4766**	**0.0207**		**1.6024**	**1.6024**		**1.6024**	**1.6024**	**151.8448**	**65.4653**	**217.3101**	**0.1418**	**0.0119**	**224.4153**

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	0.0459					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5722					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0105	0.0900	0.0383	5.7000e-004		7.2700e-003	7.2700e-003		7.2700e-003	7.2700e-003	0.0000	104.2061	104.2061	2.0000e-003	1.9100e-003	104.8253
Landscaping	0.0328	0.0126	1.0909	6.0000e-005		6.0500e-003	6.0500e-003		6.0500e-003	6.0500e-003	0.0000	1.7838	1.7838	1.7100e-003	0.0000	1.8266
Total	**0.6614**	**0.1025**	**1.1292**	**6.3000e-004**		**0.0133**	**0.0133**		**0.0133**	**0.0133**	**0.0000**	**105.9899**	**105.9899**	**3.7100e-003**	**1.9100e-003**	**106.6519**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	42.7634	0.2695	6.6000e-003	51.4670
Unmitigated	53.4542	0.3368	8.2500e-003	64.3338

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	9.57764 / 6.03808	50.0147	0.3150	7.7200e-003	60.1883
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0.664724 / 0.407412	3.4395	0.0219	5.4000e-004	4.1455
Total		**53.4542**	**0.3368**	**8.2600e-003**	**64.3338**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	7.66211 / 4.83046	40.0118	0.2520	6.1700e-003	48.1507
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0.531779 / 0.325929	2.7516	0.0175	4.3000e-004	3.3164
Total		**42.7634**	**0.2695**	**6.6000e-003**	**51.4670**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.8245	0.6397	0.0000	26.8172
Unmitigated	14.4327	0.8530	0.0000	35.7563

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	67.62	13.7263	0.8112	0.0000	34.0062
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	3.48	0.7064	0.0418	0.0000	1.7501
Total		**14.4327**	**0.8530**	**0.0000**	**35.7563**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	50.715	10.2947	0.6084	0.0000	25.5047
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	2.61	0.5298	0.0313	0.0000	1.3126
Total		**10.8245**	**0.6397**	**0.0000**	**26.8172**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

11.0 Vegetation