

# **GREENHOUSE GAS ASSESSMENT**

**Fox Point Farms  
Case Nos. MULTI-3524-2019; CPP-3525-2019;  
SUB-3526-2019; DR-3528-2019; and  
CDPNF-3529-2019**

**City of Encinitas, CA**

*Prepared For:*

**Michael Baker International  
5050 Avenida Encinas, Suite 260  
Carlsbad, CA 92008**

*Prepared By:*

***Ldn Consulting, Inc.***  
**42428 Chisolm Trail  
Murrieta, CA 92562**

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## **COMMON ACRONYMS**

Assembly Bill 32 (AB32)

Business as Usual (BAU)

California Air Pollution Control Officers Association's (CAPCOA)

California Air Resource Board (CARB)

California Climate Action Registry General Reporting Protocol Version 3.1 (CCARGRPV3.1)

California Environmental Quality Act (CEQA)

Carbon Dioxide (CO<sub>2</sub>)

Cubic Yards (CY)

Environmental Protection Agency (EPA)

Green House Gas (GHG)

International Residential Code (IRC)

Low Carbon Fuel Standard (LCFS)

Methane (CH<sub>4</sub>)

Nitrous Oxide (N<sub>2</sub>O)

San Diego Air Basin (SDAB)

San Diego Air Pollution Control District (SDAPCD)

South Coast Air Quality Management District (SCAQMD)

Senate Bill 97 (SB97)

Vehicle Miles Traveled (VMT)

## **EXECUTIVE SUMMARY**

This greenhouse gas assessment was prepared according to guidelines established within the California Global Warming Solutions Act of 2006 – Assembly Bill 32 (AB32), Senate Bill 97 (SB97), California Environmental Quality Act (CEQA) and SB32. Greenhouse Gases (GHGs) analyzed in this study are Carbon Dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), and Nitrous Oxide (N<sub>2</sub>O). To simplify GHG calculations, both CH<sub>4</sub> and N<sub>2</sub>O are converted to equivalent amounts of CO<sub>2</sub> and are identified as carbon dioxide equivalent (CO<sub>2</sub>e).

The project site is located in the northwest corner of the Leucadia Boulevard/Quail Gardens Drive intersection, in the Leucadia community of Encinitas, in central coastal San Diego County. The community would be situated on a 21.48-acre site and would consist of 53 for-sale cottages/carriage units/townhomes, 197 apartments, edible landscaping, community gardens, trails, a bocce court, social spaces, a community library, and a community recreation center. The project would also include a shared public/private agricultural amenity area including a farm-to-table restaurant, farm stand, event lawns, discovery garden, greenhouse and community event space, and an outdoor education patio. Lastly, the northern portion of the project site would remain in agricultural use, serving as an organic farm operation. All phases (i.e. demolition, grading and construction) of the proposed project are anticipated to be complete sometime in late 2023 and full buildout operations are expected in 2024.

Project design features (PDFs) have been included in this project and are identified in Section 1.4 of this report. The applicant has agreed to implement all PDFs, which will be included in the proposed project's Conditions of Approval (COA).

During construction of the project, it is expected that approximately 1,133.98 Metric Tons (MT) of CO<sub>2</sub>e would be generated. Given this, the project would generate 37.80 MT CO<sub>2</sub>e per year over the amortized 30-year minimum life of the project. After construction and during operations of the project, a combined annual GHG emissions of 1,344.72 MT CO<sub>2</sub>e is expected. The project is consistent with the City's General Plan (Housing Element), and the project is also consistent with the City's Climate Action Plan (CAP) measures to reduce GHG emissions. These measures have been included as project design features.

The project was also analyzed using an alternative approach for consistency with SB 32 using a project-specific, locally appropriate efficiency-based threshold based on forecasted service population (residents plus employment) and the allowable emissions which the City must achieve in 2030 to be compliant with SB 32. Based on this approach, the project would be required to generate fewer emissions per service population (SP) than 3.1 MT CO<sub>2</sub>e. The project was found to generate 1,344.72 MT CO<sub>2</sub>e, after implementation of PDFs, from both annualized construction and annual operations GHG emissions. Based on an estimated project population of 648 persons,

the project would have a projected GHG emission rate of 2.08 MT CO<sub>2</sub>e per SP or (1,344.72 MT CO<sub>2</sub>e/648 persons). Based on this, the proposed project would generate fewer emissions than a City-specific localized efficiency metric of 3.1 MT CO<sub>2</sub>e per SP. Given this, the project would be found to generate a less than significant GHG impact.

## **1.0 INTRODUCTION**

### 1.1 Purpose of this Study

The purpose of this GHG assessment is to provide documentation in support of the City's CEQA compliance requirement to analyze a project's contribution to greenhouse gas emissions. The proposed project's GHG emissions impacts are analyzed based on the recommended thresholds provided in Appendix G of the CEQA Guidelines which are (14 CCR 15000 et seq.):

- 1. Will the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*
- 2. Will the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

### 1.2 Project Location

The project site is located at the northwest corner of the Leucadia Boulevard/Quail Gardens Drive intersection, in the Leucadia community of Encinitas, in central coastal San Diego County. The San Diego County Assessor's Parcel Number (APN) for the property is 254-612-12-00. The Encinitas Ranch Golf Course is located to the east of the project site. Leucadia Boulevard forms the southern boundary of the subject property. Existing single-family residential development lies west of the project site. The Magdalena Ecke Open Space Preserve borders the site along the entire northern property boundary.

The site is within walking/biking distance to Capri Elementary School (1.25 miles), shopping centers on El Camino Real (0.75 miles), Paul Ecke Sports Park and YMCA (0.85 miles), and is 0.7 miles from the Leucadia Boulevard/Interstate 5 interchange. Transit stops are located on Leucadia Boulevard immediately adjacent to the site, providing residents with an affordable means of transportation to these community resources and jobs. Indian Head Canyon is located north of the property. A general project vicinity map is shown in Figure 1-A.

### 1.3 Project Description

The Fox Point Farms project proposes the development of an "agrihood" community on a 21.48-acre site located at 1150 Quail Gardens Drive. The property would be subdivided into four lots. Lot 1 would consist of 197 apartments, edible landscaping, community gardens, trails, a bocce court, social spaces, a community reading room, and a community recreation center. Lot 2 would consist of a shared public/private agricultural amenity area including a 3,500 square foot (SF) farm-to-table restaurant, farm stand, event lawns, discovery garden, greenhouse and community event space, and an outdoor education patio. Lot 3 would consist

of an organic farm operation on approximately 5.5 acres consistent with the existing land use, but converting above-ground flower growing operations into field row crops. Finally, Lot 4 would consist of 53 for-sale cottages/carriage units/townhomes. The proposed site development plan is shown on Figure 1-B.

It is expected that the project would begin construction in 2021, beginning with demolition of existing structures, and be completed in 2023, with full occupancy and operations expected in 2024. During the demolition phase it is expected that approximately 10,500 tons of debris would be generated through demolishing the onsite residential unit and greenhouses, which is assumed to be exported offsite; however, salvageable materials may be reused onsite. The project also anticipates importing up to approximately 10,000 cubic yards (CY) of topsoil onsite for the organic farm field to amend the existing soil; however, if existing soil is determined to be suitable, this import would not occur.

The project site is one of 15 sites included in the City of Encinitas Housing Element Update, which was adopted by the City of Encinitas on March 13, 2019. Subsequently, on June 13, 2019, the California Coastal Commission unanimously approved the Local Coastal Program Amendment (LCPA) associated with the City's Housing Plan Update 2019. On July 10, 2019, the City Council held a public hearing to review and consider the amendment specified in Ordinance No. 2019-08 and introduced and adopted Ordinance No. 2019-08, accepting the Coastal Commissions LCPA as amended. Finally, on October 8, 2019, the California Department of Housing and Community Development (HCD) certified the City's Housing Element. As part of these approvals, the project site was designated with an R-30 overlay and allocated between 246 units and 295 units.

The analysis includes a "Sidonia Secondary Access Option" to the proposed project which is limited to the project ingress/egress access only. Both the proposed project and the Option call for identical construction requirements, and the site development plan would be the same. The proposed project and Option are described as follows:

#### Proposed Project

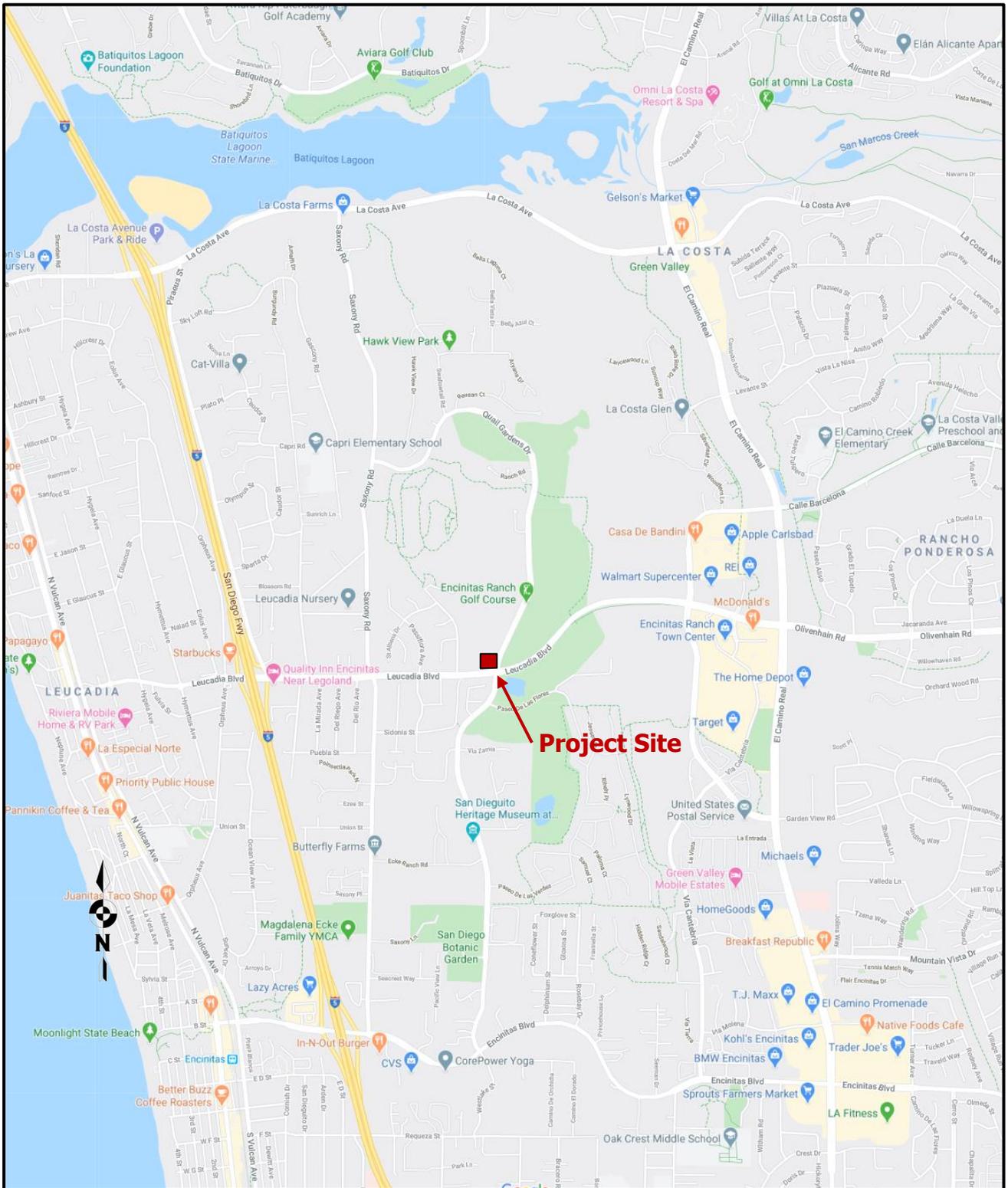
1. *Full access at Quail Gardens Drive*
2. *Emergency access only along Sidonia Street*

#### Sidonia Secondary Access Option

1. *Full access at Quail Gardens Drive*
2. *Full access at Sidonia Street*

Since this would not alter the GHG emission generation, the alternatives are considered the same and are analyzed as such within this GHG assessment.

**Figure 1-A: Project Vicinity Map**



Source: (Google, 2020)

Figure 1-B: Proposed Project Site Plan



Source: (Nolen Communities, 2020)

## 1.4 Project Design Features

The proposed project would implement Project Design Features (PDFs) specifically chosen to reduce both greenhouse gas and air quality emissions. These PDFs would promote sustainability through site design that would conserve energy, water, open space, and other natural resources, and would become specific Conditions of Approval (COA) by the City of Encinitas:

1. The project would install low flow water fixtures in all residential units.
2. All lighting within the project will be designed using LED technology for both indoor and outdoor areas.
3. The project would provide separate waste containers to allow for simpler material separations, or the project would pay for a waste collection service that recycles the materials in accordance with AB 341 to achieve a 75% waste diversion. 100% of all green waste will be diverted from landfills and recycled as mulch and used onsite. For purposes of this analysis only a 50% reduction in GHG emissions was assumed. 100% of all green waste will be diverted from landfills and recycled as mulch and used onsite.
4. The project would not install hearth options in residential units.
5. The project would be required to utilize Tier 4 construction Equipment with Diesel Particulate Filters (DPF) attached or equivalent.
6. The project would install 434 kilowatts (KW) of solar.
7. The project would provide circuit and capacity in all 250 residential garages for use by electric vehicles, and would install 13 Electric Vehicle (EV) Charging Stations in surface parking areas throughout the project site.
8. The project would install high-efficiency water heaters or solar water heater systems.
9. The project would comply with ENERGYSTAR appliance requirements, and would meet ENERGYSTAR for Homes.
10. The project would install water efficient/drought tolerant and/or native landscape, use smart evapotranspiration controllers, would use reclaimed water on non-agricultural project landscaping areas and would limit conventional turf.
11. The project would install high-efficiency HVAC systems areas.
12. The project has been designed such that most buildings are oriented in a north/south direction.
13. The project includes a mix of uses, including an on-site restaurant, on-site recreation areas (community recreation center, trail system, linear park) and is within walking distance of off-site retail and commercial centers areas.
14. The project would improve duct insulation 15% over 2013 Title 24.
15. The project would comply with CALGreen Tier II standards.
16. The project would install a storm water reuse system on-site to collect, filter and re-use captured stormwater in landscaped areas.

17. The project would provide residential development within walking and biking distance of local retail.

PDFs 1-7 above have been quantified in this analysis, while PDFs 8-17 are not specifically analyzed quantitatively in this analysis. As a result, the proposed project air quality (and GHG) emissions are "worst case." Many of the measures listed above are outlined in the City's 2019 Housing Element Update Environmental Assessment measure GHG-3, Table A as recommended measures. The project would also implement a Transportation Demand Management (TDM) program to reduce automobile trips, both internal and external to the community (refer to the project's traffic mitigation measures in the Environmental Impact Report). Conservatively, this analysis has not taken any reductions for those TDM measures.

## **2.0 EXISTING ENVIRONMENTAL SETTING**

### 2.1 Understanding Greenhouse Gases

GHGs, such as water vapor and carbon dioxide, are abundant in the earth's atmosphere. These gases are called "Greenhouse Gases" because they absorb and emit thermal infrared radiation, which acts like an insulator to the planet. Without these gases, the earth's ambient temperature would either be extremely hot during the day or blistering cold at night. However, because these gases can both absorb and emit heat, the earth's temperature does not sway too far in either direction.

Over the years, scientists have measured a rise in carbon dioxide and the general consensus is that human activities contribute to the heating of the planet. Other GHGs, such as methane and nitrous oxide, also contribute to global warming.

GHGs of concern, as analyzed in this study, are CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O. Both CH<sub>4</sub> and N<sub>2</sub>O are converted to an equivalent amount of CO<sub>2</sub>, referred to as CO<sub>2</sub>e. CO<sub>2</sub>e is calculated by multiplying the calculated levels of CH<sub>4</sub> and N<sub>2</sub>O by a Global Warming Potential (GWP). The latest California Emissions Estimator Model (CalEEMod 2016.3.2) developed by Breeze Software uses the Intergovernmental Panel on Climate Change (IPCC) 2007 report as source data for GWP factors for both CH<sub>4</sub> and N<sub>2</sub>O (CAPCOA, September 2016), using the 100-year periods of 25 and 298, respectively (IPCC, 2007).

### 2.2 Existing Setting

The Project site lies in the western portion of San Diego County in the City of Encinitas. The existing site is occupied by private commercial development with a flower-growing operation and consists of multiple greenhouse and support buildings as well as a single family home. The existing site is SP-3 (Encinitas Ranch Specific Plan) w/ R-30 overlay per Housing Element Update (City of Encinitas, 2019). The site is zoned R-30 and allows for the construction of up to 482 homes. Site topography onsite is generally flat with elevations at or around 325 feet above mean sea level (AMSL).

### 2.3 Climate (Encinitas)

Climate within the San Diego Air Basin (SDAB) area varies dramatically over short geographical distances due to size and topography. Most of southern California is dominated by high-pressure systems for much of the year, which keeps the high desert mostly sunny and warm. Typically, during the winter months, the high pressure system drops to the south and brings cooler, moister weather from the north. Prevailing winds are generally westerly flowing

towards the east for most of the year; however, during the autumn and winter, it is common for strong warm dry winds originating in the desert having a more easterly flow characteristic.

Meteorological trends within the City of Encinitas are typically cooler given the close vicinity to the ocean. Median temperatures range from approximately 55°F in the winter to approximately 72°F in the summer (City-Data, 2020)

## **3.0 CLIMATE CHANGE REGULATORY ENVIRONMENT**

### 3.1 Federal

#### *Massachusetts v. EPA*

On April 2, 2007, in *Massachusetts v. EPA*, the Supreme Court directed the EPA Administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare. In making these decisions, the EPA Administrator is required to follow the language of Section 202(a) of the federal Clean Air Act. On December 7, 2009, the EPA Administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- The Administrator found that elevated concentrations of GHGs— Carbon Dioxide CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulfur hexafluoride (SF<sub>6</sub>)— in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the “endangerment finding.”
- The Administrator further found the combined emissions of GHGs—CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the “cause or contribute finding.”

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

### 3.2 State

#### State Greenhouse Gas Targets

##### *Executive Order S-3-05*

EO S-3-05 (June 2005) established the following statewide goals: GHG emissions should be reduced to 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050.

##### *AB 32 and CARB's Climate Change Scoping Plan*

In furtherance of the goals established in EO S-3-05, the Legislature enacted Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020.

Under AB 32, the California Air Resources Board (CARB) is responsible for and is recognized as having the expertise to carry out and develop the programs and regulations necessary to achieve the GHG emissions reduction mandate of AB 32. Therefore, in furtherance of AB 32, CARB adopted regulations requiring the reporting and verification of GHG emissions from specified sources, such as industrial facilities, fuel suppliers and electricity importers (see Health & Safety Code Section 35830; Cal. Code Regs., tit. 17, §§95100 et seq.). CARB is also required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 relatedly authorized CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

In 2007, CARB approved a limit on the statewide GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 million metric tons (MMT) CO<sub>2</sub>e). CARB's adoption of this limit is in accordance with Health and Safety Code Section 38550.

Further, in 2008, CARB adopted the *Climate Change Scoping Plan: A Framework for Change (Scoping Plan)* in accordance with Health and Safety Code Section 38561. The *Scoping Plan* established an overall framework for the measures that will be implemented to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The 2008 *Scoping Plan* evaluated opportunities for sector-specific reductions, integrated all CARB and Climate Action Team<sup>1</sup> early actions and additional GHG reduction features by both entities, identified additional measures to be pursued as regulations, and outlined the role of a cap-and-trade program. The key elements of the 2008 *Scoping Plan* include the following (CARB, 2008):

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards
2. Achieving a statewide renewable energy mix of 33 percent
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets
5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard

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<sup>1</sup> The Climate Action Team is comprised of state agency secretaries and heads of state agencies, boards and departments; these members work to coordinate statewide efforts to implement GHG emissions reduction programs and adaptation programs.

6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation

In the 2008 *Scoping Plan*, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent from the otherwise projected 2020 emissions level; i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations (referred to as "Business-As-Usual" [BAU]). For purposes of calculating this percent reduction, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards.

In the 2011 Final Supplement to the *Scoping Plan's* Functional Equivalent Document, CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations (CARB, 2011). Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 percent (down from 28.5 percent) from the BAU conditions. When the 2020 emissions level projection was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009–2016) and the Renewables Portfolio Standard (12 percent to 20 percent), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16 percent (down from 28.5 percent) from the BAU conditions.

In 2014, CARB adopted the *First Update to the Climate Change Scoping Plan: Building on the Framework (First Update)*. The stated purpose of the *First Update* was to "highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050." The *First Update* found that California is on track to meet the 2020 emissions reduction mandate established by AB 32, and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.

In conjunction with the *First Update*, CARB identified "six key focus areas comprising major components of the state's economy to evaluate and describe the larger transformative actions that will be needed to meet the state's more expansive emission reduction needs by 2050." Those six areas are: (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and, (6) natural and working lands. The *First Update* identified key recommended actions for each sector that will facilitate achievement of EO S-3-05's 2050 reduction goal.

Based on CARB's research efforts presented in the *First Update*, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050." Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings and industrial machinery; decarbonizing electricity and fuel supplies; and, the rapid market penetration of efficient and clean energy technologies.

As part of the *First Update*, CARB recalculated the state's 1990 emissions level using more recent global warming potentials identified by the IPCC. Using the recalculated 1990 emissions level (431 MMT CO<sub>2</sub>e) and the revised 2020 emissions level projection identified in the 2011 Final Supplement, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15 percent (instead of 28.5 percent or 16 percent) from the BAU conditions.

In November 2017, CARB released *California's 2017 Climate Change Scoping Plan (Second Update)* for public review and comment (CARB, 2017). This update proposes CARB's strategy for achieving the state's 2030 GHG target as established in Senate Bill (SB) 32 (discussed below). The strategy includes continuing the Cap-and-Trade Program through 2030,<sup>2</sup> inclusive policies and broad support for clean technologies, enhanced industrial efficiency and competitiveness, prioritization of transportation sustainability, continued leadership on clean energy, putting waste resources to beneficial use, supporting resilient agricultural and rural economics and natural and working lands, securing California's water supplies, and cleaning the air and public health. When discussing project-level GHG emissions reduction actions and thresholds, the *Second Update* states "[a]chieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development." However, the *Second Update* also recognizes that such an achievement "may not be feasible or appropriate for every project ... and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA." CARB's Governing Board adopted the *Second Update* in December 2017.

### *EO B-30-15*

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under S-3-05 and AB 32. EO B-30-15 set an interim goal of reducing statewide GHG emissions to 40 percent below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing statewide GHG emissions to 80 percent below 1990 levels by 2050 as set forth in S-3-05. To facilitate

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<sup>2</sup> In July 2017, AB 398 was enacted into law, thereby extending the legislatively-authorized lifetime of the Cap-and-Trade Program to December 31, 2030.

achievement of this goal, EO B-30-15 calls for an update to CARB's *Scoping Plan* to express the 2030 target in terms of MMT CO<sub>2</sub>e. The EO also calls for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. Sector-specific agencies in transportation, energy, water, and forestry were required to prepare GHG reduction plans by September 2015, followed by a report on action taken in relation to these plans in June 2016.

### *SB 32 and AB 197*

SB 32 and AB 197 (enacted in 2016) are companion bills that set a new statewide GHG reduction target; make changes to CARB's membership, and increase legislative oversight of CARB's climate change-based activities; and expand dissemination of GHG and other air quality-related emissions data to enhance transparency and accountability. More specifically, SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, in order to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to CARB as nonvoting members. The legislation further requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and identify specific information for GHG emissions reduction measures when updating the scoping plan, including information regarding the range of projected GHG emissions and air pollution reductions that result from each measure and the cost-effectiveness (including avoided social costs) of each measure (see Health & Safety Code Section 38562.7).

### Building Energy

#### *Title 24, Part 6*

Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure new buildings and alterations or additions to existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. The California Energy Commission (CEC) is required by law to adopt standards every 3 years that are cost effective for homeowners over the 30-year lifespan of a building. These standards are updated to consider and incorporate new energy efficient technologies and construction methods. As a result, these standards save energy, increase electricity supply

reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2013 Title 24 standards went into effect on July 1, 2014 and were estimated to reduce energy uses between 3.8% to 36.4%, depending on the energy source and land (Architectural Energy Corporation (AEC), 2013).

The 2016 Title 24 standards, which went into effect on January 1, 2017, are the currently applicable standards. When comparing the 2013 and 2016 standards for electrical consumption, it is expected that low-rise, single-family detached homes and multi-family homes would use 12% and 15% less electricity under the 2016 standards, respectively. Similarly, implementation of the 2016 standards is expected to reduce natural gas consumption by 21% in single-family homes and 31% in multi-family homes. Newly constructed non-residential buildings are estimated to achieve a 5% reduction in electricity consumption under the 2016 standards and no significant change relative to natural gas consumption (California Energy Commission, 2015). The current version of CalEEMod used in this analysis employs, as a default parameter, the 2016 Title 24 standards to estimate GHG emissions.

The Project would be required, at a minimum, to comply with the latest version of Title 24 standards at the time the Project seeks building permits. This will likely be the 2019 standards, as those standards will go into effect on January 1, 2020. The 2019 standards continue to improve upon the 2016 standards for residential and nonresidential buildings. One of the most notable changes in the 2019 standards is the requirement for the installation of rooftop solar on residential buildings (California Energy Commission, 2017). It should be noted that the State updates these regulations every three years. Thus, throughout Project construction, buildings will need comply with the most recently adopted standards.

#### *Title 24, Part 11*

In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CALGreen, and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential and state-owned buildings and schools and hospitals. The CALGreen 2016 standards became effective on January 1, 2017. The mandatory standards require the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings
- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance
- Sixty-five (65) percent of construction and demolition waste must be diverted from landfills
- Mandatory inspections of energy systems to ensure optimal working efficiency
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations
- Low-pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. CALGreen's Tier 1 standards call for a 15 percent improvement in energy requirements; stricter water conservation, 10 percent recycled content in building materials, 20 percent permeable paving, 20 percent cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30 percent improvement in energy requirements, stricter water conservation, 75 percent diversion of construction and demolition waste, 15 percent recycled content in building materials, 30 percent permeable paving, 25 percent cement reduction, and cool/solar-reflective roofs.

The newest CALGreen Standards were updated in 2019 and will become effective on January 1, 2020. The updated Code includes modifications to current codes under Division 5.1 (Planning and Design), Division 5.3 (Water Efficiency and Conservation), Division 5.4 and 5.5 (Material Conservation and Resource Efficiency) and (Environmental Quality). (California Title 24, Part 11, 2019). Should building permits be required after January 2020, CALGreen standards would be applicable.

### *Zero Net Energy Design Goals*

As recognized in the *First Update to the Scoping Plan*, the California Public Utilities Commission, CEC, and CARB also have a shared, established goal of achieving zero net energy (ZNE) for new construction in California. As background, the California Public Utilities Commission first set forth its zero net energy goals in the 2008 Energy Efficiency Strategic Plan and the 2011 Big Bold Energy Efficiency Strategies. The key policy timelines include: (1) all new residential construction in California will be zero net energy by 2020, and (2) all new commercial construction in California will be zero net energy by 2030. As most recently defined by the CEC in its 2015 *Integrated Energy Policy Report*, a zero net energy code building is

one where the value of the energy produced by on-site renewable energy resources is equal to the value of the energy consumed annually by the building using the CEC's Time Dependent Valuation metric. It should be noted that Title 24 (2019) which will be effective in 2020 requires rooftop solar for all new residential units.

### *Title 20*

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified through the CEC to demonstrate compliance with standards. New appliances regulated under Title 20 include: refrigerators, refrigerator-freezers and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwashers; clothes washers and dryers; cooking products; electric motors; low voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing for each type of appliance covered under the regulations and appliances must meet the standards for energy performance, energy design, water performance and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

### Mobile Sources

#### *AB 1493*

In response to the transportation sector accounting for more than half of California's CO<sub>2</sub> emissions, AB 1493 was enacted in July 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by CARB to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards will result in a reduction of about 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of about 30 percent (CARB, Clean Car Standards - Pavley, Assembly Bill 1493, 2017).

### *EO S-1-07*

Issued in January 2007, EO S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO<sub>2</sub>e grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10 percent by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste.

In 2018, CARB extended and expanded the Low Carbon Fuel Standard regulations to include a 20 percent target for reduction in carbon intensity by 2030.

### *SB 375*

SB 375 (2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 required CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. Regional metropolitan planning organizations (MPOs) are then responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan. The goal of the SCS is to establish a forecasted development pattern for the region that, after considering transportation measures and policies, will achieve, if feasible and if implemented, the GHG reduction targets. If a SCS is unable to achieve the GHG reduction target, an MPO must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code Section 65080(b)(2)(K), a SCS does not: (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations. The targets for SANDAG adopted in 2010 are a 7 percent reduction in emissions per capita by 2020 and a 13 percent reduction by 2035; the targets are expressed as a percent change in per capita passenger vehicle GHG emissions relative to 2005.

In October 2015, SANDAG adopted *San Diego Forward: The Regional Plan*, which contains the region's current SCS. In December 2015, CARB, by resolution, accepted SANDAG's GHG emissions quantification analysis and determination that, if implemented, the SCS would achieve CARB's 2020 and 2035 GHG emissions reduction targets for the region. More specifically, as set forth in CARB Executive Order G-15-075, CARB determined that SANDAG's SCS would achieve a 15 percent per capita reduction by 2020 and a 21 percent per capita reduction by 2035.

In 2018, CARB updated the SB 375 targets. For purposes of SANDAG, the updated targets include a 15 percent reduction in emissions per capita by 2020 and a 19 percent reduction by 2035. SANDAG is in the process of preparing its next SCS, which will consider whether and how the region could attain these reduction targets.

### *Advanced Clean Cars Program*

In January 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB, 2017). To improve air quality, CARB also has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that, in 2025, cars will emit 75 percent less smog-forming pollution than the average new car sold today. To reduce GHG emissions, CARB, in conjunction with the EPA and the NHTSA, also has adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34 percent in 2025 (California Air Resources Board, 2012).

The Zero Emission Vehicle (ZEV) program acts as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles (PHEVs) in the 2018 to 2025 model years (California Air Resources Board, 2017). PHEVs contain both an internal combustion engine and an electric motor, which is powered by batteries. As defined by CARB, ZEVs includes PHEVs, Battery Electric Vehicles (BEV) and Fuel Cell Electric Vehicles (FCEV). The Clean Fuels Outlet regulation will ensure that fuels such as electricity and hydrogen are available to meet the fueling needs of the new advanced technology vehicles as they come to the market. In the context of this report, "EV" is used to refer to all types of electric, and low- or zero-emission vehicles.

As of the publication date of this report, FCEVs are not common in the San Diego region due to limited refueling capabilities. Based on information obtained from the California Fuel Cell Partnership, only one hydrogen fuel station (located in the City of Del Mar) exists in San Diego

County. At this time, one station is planned for construction in the City of San Diego sometime in the future. (California Fuel Cell Partnership, 2017). Therefore, for purposes of this analysis, only BEVs and PHEVs are referenced when ZEVs are discussed. If FCEVs gain traction in San Diego, additional GHG reductions would be realized.

### *EO B-16-12*

EO B-16-12 (March 2012) directs state entities under the Governor's direction and control to support and facilitate development and distribution of ZEVs. This EO also sets a long-term target of reaching 1.5 million zero-emission vehicles on California's roadways by 2025. On a statewide basis, EO B-16-12 also establishes a GHG emissions reduction target from the transportation sector equaling 80 percent less than 1990 levels by 2050. In furtherance of this EO, the Governor convened an Interagency Working Group on Zero-Emission Vehicles that has published multiple reports regarding the progress made on the penetration of ZEVs in the statewide vehicle fleet. As of January 2018, the Governor has called for as many as 1.5 million EV by 2025 and up to five million EV by 2030 (Office of Governor Edmund G. Brown Jr., 2018).

### *SB 350*

In 2015, SB 350 – the Clean Energy and Pollution Reduction Act – was enacted into law. As one of its elements, SB 350 establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state's 2030 and 2050 reduction targets (see Public Utilities Code Section 740.12).

## Renewable Energy Procurement

### *SB 1078*

SB 1078 (2002) established the Renewables Portfolio Standard (RPS) program, which requires an annual increase in renewable generation by the utilities equivalent to at least 1 percent of sales, with an aggregate goal of 20 percent by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20 percent of their power from renewable sources by 2010.

### *SB X1 2*

SB X1 2 (2011) expanded the RPS by establishing that 20 percent of the total electricity sold to retail customers in California per year by December 31, 2013, and 33 percent by December 31, 2020, and in subsequent years be secured from qualifying renewable energy sources. Under the bill, a renewable electrical generation facility is one that uses biomass,

solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location. In addition to the retail sellers previously covered by the RPS, SB X1 2 added local, publicly owned electric utilities to the RPS.

### *SB 350*

SB 350 (2015) further expanded the RPS by establishing that 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030 be secured from qualifying renewable energy sources. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency.

### *SB 100*

SB 100 (2018) has further accelerated and expanded the RPS, requiring achievement of a 50 percent RPS by December 31, 2026 and a 60 percent RPS by December 31, 2030. SB 100 also established a new statewide policy goal that calls for eligible renewable energy resources and zero-carbon resources to supply 100 percent of electricity retail sales and 100 percent of electricity procured to serve all state agencies by December 31, 2045.

## Water

### *EO B-29-15*

In response to drought-related concerns, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25 percent relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have since become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

## Solid Waste

### *AB 939 and AB 341*

In 1989, AB 939, known as the Integrated Waste Management Act (Public Resources Code Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25 percent by 1995 and 50 percent by the year 2000.

AB 341 (2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75 percent of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle has conducted multiple workshops and published documents that identify priority strategies that CalRecycle believes would assist the state in reaching the 75 percent goal by 2020.

Increasing the amount of commercial solid waste that is recycled, reused, or composted will reduce GHG emissions primarily by 1) reducing the energy requirements associated with the extraction, harvest, and processing of raw materials and 2) using recyclable materials that require less energy than raw materials to manufacture finished products (CalRecycle, 2018). Increased diversion of organic materials (green and food waste) will also reduce GHG emissions (CO<sub>2</sub> and CH<sub>4</sub>) resulting from decomposition in landfills by redirecting this material to processes that use the solid waste material to produce vehicle fuels, heat, electricity, or compost.

### CEQA Guidelines

With respect to GHG emissions, the CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or performance based standards" (14 CCR 15064.4[a]). A lead agency may use a "model or methodology" to estimate greenhouse gas emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change" (14 CCR 15064.4[c]). The CEQA Guidelines provide that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment (14 CCR 15064.4[b]):

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

In addition, the CEQA Guidelines specify that “[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence” (14 CCR 15064.7[c]).

#### Governor’s Office of Planning and Research Guidance

The Governor’s Office of Planning and Research technical advisory titled, CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review, states that “public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact” (OPR, 2008). Furthermore, the advisory document indicates that “in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a ‘significant impact,’ individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice” (OPR, 2008).

#### Cumulative Nature of Climate Change

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project in the SDAB, such as the Project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project’s contribution to global climate change.

While the Project would result in emissions of GHGs during construction and operation, no guidance exists to indicate what level of GHG emissions would be considered substantial enough to result in a significant adverse impact on global climate. However, it is generally believed that an individual project is of insufficient magnitude by itself to influence climate

change or result in a substantial contribution to the global GHG inventory as scientific uncertainty regarding the significance a project's individual and cumulative effects on global climate change remains.

Thus, GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA, 2008). This approach is consistent with that recommended by the CNRA, which noted in its Public Notice for the proposed CEQA amendments (pursuant to SB97) that the evidence before it indicates that in most cases, the impact of GHG emissions should be considered in the context of a cumulative impact, rather than a project-level impact (CNRA, 2009). Similarly, the Final Statement of Reasons for Regulatory Action on the CEQA Amendments confirm that an environmental impact report or other environmental document must analyze the incremental contribution of a project to GHG levels and determine whether those emissions are cumulatively considerable (CNRA, 2009).

#### Approaches to Determining Significance

Neither the State of California nor the SDAPCD has adopted quantitative emission-based thresholds of significance for GHG emissions under CEQA. In the absence of any adopted numeric threshold, the significance of the Project's GHG emissions will be evaluated consistent with CEQA Guidelines Section 15064.4(b) by considering whether the Project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

### 3.3 Local

#### City of Encinitas General Plan

A project's adherence to the City's General Plan can be determined through demonstrating consistency with General Plan assumptions and policies. If a project would generate GHG emissions consistent with the maximum allowable buildout as defined by the General Plan, the project would be consistent with the estimated GHG emissions for that site.

The City of Encinitas General Plan, along with relevant specific plans, contains policies directly and indirectly related to GHG emissions. Pertinent goals and policies related to GHG emissions are listed below.

*City of Encinitas General Plan Circulation Element (City of Encinitas, 2003)*

- Policy 1.15: The City will actively support an integrated transportation program that encourages and provides for mass-transit, bicycle transportation, pedestrians, equestrians, and car-pooling.
- Goal 3: The City of Encinitas will promote the use of other modes of transport to reduce the dependence on the personal automobile.
- 3.2. Continue to assist in expanding public transportation and emphasize public transportation in future development with preference given to cost-effective alternatives.
  - 3.3. Create a safe and convenient circulation system for pedestrians.
  - 3.4. Cooperate with San Diego County, SANDAG, and other jurisdictions to help plan and implement a regional multi-modal transportation system that is accessible to residents in the City.
  - 3.5. Encourage development of mass transit and transit access points along the existing Interstate 5 freeway corridor or along the railroad right-of-way.
  - 3.6. The City should provide and encourage efficient links between possible rail transit service and other transportation modes, including rerouting of bus service to interface with transit stops.
  - 3.11. The City will strive to implement a safe, direct, and convenient circulation system for commuting and recreational bicycle traffic. The City will support the development of additional bicycle facilities in the Coastal Zone, including the following:
    - All Circulation Element roads will include provisions for bicycle lanes unless precluded by design and safety considerations in which cases, alternative routes shall be provided to form a continuous network.
    - The provision of secure bicycle storage facilities at all beaches designated for high and moderate levels of use.
    - The installation of bicycle and surfboard racks on all buses serving the Coastal Zone.

*City of Encinitas General Plan Resource Management Element (City of Encinitas, 2011)*

- Policy 1.1: Require new development to utilize measures designed to conserve water in their construction.
- Policy 1.10: Promote the use of water efficient sprinkling and gardening systems to include ordinances and technology to encourage drought tolerant plants.
- Goal 5: The City will make every effort to participate in programs to improve air and water quality in the San Diego region.
- 5.1. The City will monitor and cooperate with the ongoing efforts of the U. S. Environmental Protection Agency, the San Diego Air Pollution Control District, and the State of California Air Resources Board in improving air quality in the regional air basin. The City will implement appropriate strategies from the San Diego County SIP which are consistent with the goals and policies of this plan.
- Goal 6: The City will make every effort to reduce the amount of solid and liquid waste generated in the Planning Area and will identify ways to responsibly deal with these wastes.

- 6.1. The City will phase in all practical forms of mandatory recycling as soon as possible.
- 6.2. The City will contract only with waste haulers who will willingly cooperate with the City's recycling effort.
- Goal 9: The City will encourage the abundant use of natural and drought tolerant landscaping in new development and preserve natural vegetation, as much as possible, in undeveloped areas.
  - 9.4. Encourage and adopt standards for the use of drought tolerant and/or natural landscaping and efficient irrigation systems throughout the City.
- Goal 13: Create a desirable, healthful, and comfortable environment for living while preserving Encinitas, unique natural resources by encouraging land use policies that will preserve the environment.
  - 13.1. The City shall plan for types and patterns of development which minimize water pollution, air pollution, fire hazard, soil erosion, silting, slide damage, flooding and severe hillside cutting and scarring.
- Goal 15: The City will make every effort to conserve energy in the City thus reducing our dependence on fossil fuels.
  - 15.1. The City will encourage the use of alternate energy systems, including passive solar and architectural and mechanical systems, in both commercial and residential development.
  - 15.2. The patterns of proposed subdivisions and the orientation and design of structures on lots shall be designed with the objective of maximizing the opportunities for solar energy use and energy conservation.
  - 15.3. Energy conserving construction standards and requirements shall be enforced in the field inspection of new construction.

#### City of Encinitas Climate Action Plan

Per the City's Climate Action Plan (City of Encinitas, 2018), Encinitas' CAP serves as a guiding document and outlines a course of action for community and municipal operations to reduce greenhouse gas emissions and the potential impacts of climate change within the jurisdiction. The CAP benchmarks GHG emissions in 2012 and identifies what reductions are required to meet GHG reduction targets based on State goals embodied in AB 32, SB 32, and EOs B-30-15 and S-3-05. The CAP aims to achieve the following local community-wide GHG reduction targets:

- 13 percent below 2012 levels by 2020
- 41 percent below 2012 levels by 2030

Given this, if a project is consistent with the projections in the CAP which are directly related the consistency with the General Plan, its associated growth in terms of GHG emissions was accounted for in the CAP's projections and would not increase emissions beyond what is

anticipated in the CAP or inhibit the City from meeting its reduction targets. If a land use and/or zoning designation amendment results in a more GHG-intensive project, the project would be required to demonstrate consistency with applicable CAP measures and offset the increase in emissions.

As explained in the CAP, an implementation strategy was prepared which includes an implementation strategy matrix with 19 City Actions or requirements which the city will implement directly through policy as well as require both private and municipal projects to include features such as low flow water fixtures, solar and electric vehicle (EV) charging stations.

If a project is consistent with the projections in the CAP, then its associated growth in terms of GHG emissions was accounted for in the CAP's projections and would not increase emissions beyond what is anticipated in the CAP or inhibit the County from reaching its reduction targets. If a project is consistent with the projections in the CAP, its GHG emissions would not conflict with an applicable plan adopted for the purpose of reducing the emissions of greenhouse gases. Additionally, if a project is consistent with the CAP, the project would be consistent with reduction targets CARB's Scoping Plan Update's recommended community targets, as well as the State's 2014 GHG emissions inventory and the targets established by AB 32, SB 32, and EOs B-30-15 and S-3-05 and would similarly be in compliance with CEQA Guidelines.

The City of Encinitas has prepared a CAP implementation plan and calls for an annual report to evaluate whether the City is on track to meet the 2020 GHG emissions reduction target and provides an early look at the City's trend toward the 2030 emissions target. The City's annual report for 2019 indicated the City has met the 2020 goals and is on track to meet the 2030 goals (City of Encinitas, 2020).

#### 2019 Housing Element Update

The Housing Plan Update 2019 includes the 2013 - 2021 Housing Element Update and a series of discretionary actions to update and implement the City's Housing Element. On March 13, 2019, the City Council considered the project and unanimously approved Resolution 2019-09 adopting the Housing Element Update. The Environmental Assessment conducted for the 2018 Housing Element Update determined that the projects anticipated under the 2018 Housing Element Update would not directly conflict with the policies and reduction measures within the City's CAP; however, they had the potential to result in exceedance of the City's interim screening threshold (900 MT CO<sub>2</sub>e/Yr) which would potentially conflict with the City's ability to achieve the CAP's GHG emissions reduction targets. Therefore, individual projects are required to perform Greenhouse Gas Emissions Assessments (City of Encinitas, 2018). Projects that do not achieve the screening level threshold shall prepare a project-specific GHG analysis that identifies an appropriate project-level significance threshold and project-specific

mitigation measures. Examples of mitigation measures which can be utilized were identified within the GHG-3 Table A of the Environmental Assessment and are shown in Table 3.1 below:

**Table 3.1: Menu of Potential Project Level GHG Reduction Measures**

<b>GHG-3 TABLE A: Menu of Potential Project-Level GHG Reduction Measures</b>	
<b>Feature</b>	<b>Description</b>
<b>Indoor Space Efficiencies</b>	
Heating/Cooling Distribution System	Improve duct insulation 15% over standard requirement (2013 Title 24)
Space Heating/Cooling Equipment	High Efficiency HVAC (equivalent to SEER 15 AFUE or 8.5 HSPF)
Water Heaters	High Efficiency Water Heaters or, Solar Water Heater Systems or, Water Heater with Solar Pre-heat System
Daylighting	Daylighting is the ability of each room within the building to provide outside light during the day reducing the need for artificial lighting during daylight hours. Future development under the HEU, should strive for daylighting in all rooms within the living space through use of windows, solar tubes, skylights, etc.
Artificial Lighting	High Efficiency Lights (50% of in-unit fixtures are high efficacy) High efficacy is defined as 40 lumens/watt for 15 watts or less fixtures: 50 lumens/watt for 15-40 watt fixtures, 60 lumens/watt for fixtures >40watt)
Appliances	All multi-family developments will provide Energy Star ceiling fans, refrigerators, dishwashers, and laundry washing machines. Laundry washing machines include those provided for shared or common use.
<b>Miscellaneous Residential Building Efficiencies</b>	
Cal-Green Tier II	Demonstrate compliance with CALGreen Tier II standards.
Building Placement	North/South alignment of building or other building placement such that the orientation of the buildings optimizes natural heating, cooling, and lighting.
Shading	At least 90% of south-facing glazing will be shaded by vegetation or overhangs at noon on June 21.
Energy Star Homes	EPA Energy Star for Homes (version 3 or above).
Independent Energy Efficiency Calculations	Provide point values based upon energy efficiency modeling of the Project. Note that engineering data will be required documenting the energy efficiency and point values based upon the proven efficiency beyond Title 24 Energy Efficiency Standards.
<b>Residential Renewable Energy Generation</b>	
Photovoltaic	Solar Photovoltaic panels installed on individual homes or in collective neighborhood arrangements such that the total power provided augments 25 percent of the power needs of the project.
Off-site renewable energy project	The applicant may submit a proposal to supply an off-site renewable energy project such as renewable energy retrofits of existing homes that will help implement renewable energy within the City. These off- site renewable energy retrofit project proposals will be determined on a case by case basis and must be accompanied by a detailed plan that documents the quantity of renewable energy the proposal will generate. Point values will be determined based upon the energy generated by the proposal.
Other Renewable Energy Generation	The applicant may have innovative designs or unique site circumstances that allow the project to generate electricity from

**Table 3.1: Menu of Potential Project Level GHG Reduction Measures**

<b>GHG-3 TABLE A: Menu of Potential Project-Level GHG Reduction Measures</b>	
<b>Feature</b>	<b>Description</b>
	renewable energy not provided in the table. The ability to supply other renewable energy and the point values allowed will be decided based upon engineering data documenting the ability to generate electricity.
<b>Residential Water Conservation</b>	
<b><i>Irrigation and Landscaping</i></b>	
Water Efficient Landscaping	Limit conventional turf to < 50% of required landscape area Limit conventional turf to < 25% of required landscape area No conventional turf (warm season turf to < 50% of required landscape area and/or low water using plants are allowed). Only California Native Plants that requires no irrigation or some supplemental irrigation.
Water Efficient irrigation systems	Weather based irrigation control systems or moisture sensors (demonstrate 20% reduced water use).
Recycled Water	Recycled connections (purple pipe) to irrigation system on site Water Reuse Graywater Reuse System collects Gray water from clothes washers, showers and faucets for irrigation use, Storm water Reuse Systems On-site storm water collection, filtration and reuse systems that provide supplemental irrigation water.
<b><i>Potable Water</i></b>	
Overall water reduction calculation	Achieve 25 percent reduction
<b>Vehicle Trip Reduction Measures</b>	
Mixed-Use	Mixes of land uses that complement one another in a way that reduces the need for vehicle trips can greatly reduce GHG emissions.
Residential Near Local Retail (Residential only Projects)	Having residential developments within walking and biking distance of local retail helps to reduce vehicle trips and/or vehicle miles traveled.
<b>Bicycle Infrastructure</b>	
Bicycle Infrastructure	Provide onsite bicycle-path linkages between residential and other land uses or a surrounding bicycle path network.
<b>Renewable Fuel/Alternative Fuel Vehicles (Electric Vehicle Infrastructure)</b>	
Electric Vehicle Recharging	Provide circuit and capacity in garages of residential units for use by an electric vehicle. Charging stations are for on-road electric vehicles legally able to drive on all roadways including Interstate Highways and freeways.
Electric Vehicle Charging Stations	Include 1 electric vehicle charging station for every 50 parking spaces.
<b>Construction and Demolition Debris Diversion Program</b>	
Recycling of Construction/ Demolition Debris	All construction debris will be disposed of at a Construction, Debris, and Inert-material Recovery Facility

Alternative Analysis – City of Encinitas Specific Efficiency Threshold

With the release of the 2017 Climate Change Scoping Plan Update, CARB recognized the need to balance population growth with emissions reductions and in doing so, provided a new local

plan level methodology for target setting that provides consistency with state GHG reduction goals using per capita efficiency targets. These statewide per capita targets account for all emissions sectors in the State, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32. The targets are generated by dividing the statewide 2030 GHG emissions targets by the statewide 2030 SP.

As discussed, at this time, the State has codified a target of reducing emissions to 40 percent below 1990 emissions levels by 2030 (SB 32) and has developed a Scoping Plan to demonstrate how the State will achieve the 2030 target and make substantial progress toward the 2050 goal of 80% reduction in 1990 GHG emissions levels set by EO S-3-05. In the recently signed EO B-55-18, which identifies a new goal of carbon neutrality by 2045 and supersedes the goal established by EO S-3-05, CARB has been tasked with including a pathway toward EO B-55-18 goals in the next Scoping Plan update. While state and regional regulatory of energy and transportation systems, along with the State's CAP and Trade Program, are designed to be set at limits to achieve most of the reductions needed to hit the State's long term targets, local government can do their fair share toward meeting the State's targets by siting and approving projects that accommodate population growth with project that are GHG-efficient.

The Association of Environmental Professionals (AEP) Climate Change Committee recommends that CEQA GHG analyses evaluate project emissions in light of the trajectory of state climate change legislation and assess their "substantial progress" toward achieving long-term reduction targets identified in available plans, legislation or EOs (AEP, 2016). Consistent with AEP Climate Change Committee recommendations for projects with horizon years 2021 or later, such as this project, are analyzed in terms of whether the project would impede "substantial progress" toward meeting the reduction goal identified in SB 32 and now EO B-55-18. As SB 32 is considered an interim target toward meeting the 2045 State goal, consistency with SB 32 would be considered contributing substantial progress toward meeting the State's long-term State targets is important as these targets have been set at levels that reduce California's fair share of emissions toward international targets that will stabilize global climate change effects and avoid the adverse environmental consequences described herein (Executive Order B-55-18).

In the Scoping Plan Update, CARB suggested substantial progress could be made if a regional or County-wide GHG reduction plan targeted reducing emissions to 6 MT CO<sub>2</sub>e per capita by 2030 and 2 MTCO<sub>2</sub>e per capita by 2050, but do not necessarily need to be project-specific targets. We note that considering the overall statewide emissions in 1990 and 2014 and the projected statewide population in 2030 and 2050, these per-capita goals would be equivalent

to reducing 2014 emissions by 40 percent by 2030<sup>3</sup>. The per-capita targets were determined to be applicable to the City of Encinitas because the City seeks to achieve State goals and CARB's per-capita metrics provide the means to accomplish that. However, following court guidance in (Golden Door Properties, LLC v. County of San Diego., 2018) and (Center for Biological Diversity v. California Department of Fish and Wildlife and Newhall Ranch, 2015) to make the project-specific efficiency threshold locally appropriate, one must use local data to establish an analytical path between the threshold and a project providing its fair share contribution towards meeting State targets using the project population's efficient generation of GHG.

### Alternative Analysis and Local Data

As identified above, a methodology to balance population growth with emissions has evolved to become a dominant strategy to reduce GHGs with focus on achieving CAP implementation goals using an efficiency metric. This efficiency metric is a limit of GHG emissions each person and employee (combined) would need to achieve to be consistent with the CAP implementation goals. The metric is defined by a certain quantity of CO<sub>2</sub>e in MT per SP per year (MT CO<sub>2</sub>e/year/SP). The SP again is the total number of residents plus the total employment.

The City's baseline emissions inventory, the University of San Diego's Energy Policy Initiatives Center (EPIC) calculated GHG emissions for the City for both community-wide sectors and County government operations for the year 2012, with emissions projections for 2020 and 2030. EPIC concluded that total emissions in the City of Encinitas in 2012 comprised approximately 483,773 MT CO<sub>2</sub>e

To be consistent with SB 32, The City's goal is to have a 41% reduction with the baseline or a reduction to a target of 285,426 MT CO<sub>2</sub>e/year in 2030. The population used in this analysis is the City population, which in 2030 is expected to be 64,938 residents and 27,958 Jobs or an SP of 92,896 SP (EPIC, 2017). Thus, in order to achieve a City emission level of 285,426 MT CO<sub>2</sub>e based on the reductions needed per SB 32, the required per capita efficiency target in 2030 would be approximately 3.1 MT CO<sub>2</sub>e (285,426/92,896) per SP.

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<sup>3</sup> Setting a target with respect to a baseline year, such as 2014, is standard industry practice in climate action planning. The original 2008 Scoping Plan developed by CARB recommended a reduction below baseline levels as a valid reduction target, in recognition of the challenges in developing a 1990 inventory for a local jurisdiction. Data used for developing the 2014 inventory represent the best available data, based on improved inventory methodologies and data collection procedures. The same level of rigor cannot be applied to a 1990 inventory and any attempts to extrapolate activity data (e.g., vehicle miles traveled, energy consumption) for 1990 would introduce a large margin of error and provide an inaccurate accounting of county emissions. Therefore, reliance on State data to determine relative reduction levels that can be applied to local 2014 emissions levels is a valid methodology to determine reduction targets.

Population can be determined for the project using SANDAG Series 13 data. From that data, the average residents per home is 2.51 in 2020 and 2.52 in 2035 and rises to 2.72 residents per home in 2050 (SANDAG, 2020). For purposes of this analysis, the lesser of these predictions is the most conservative and is used within this analysis. Since the project proposes 250 homes, the residential population would be 627.5. Per discussions with the project applicant, employment within Fox Point Farms is expected to be at least 20 employees which would include all employees required for operations onsite. Based on this, the total SP would be 648 persons. This is a conservative estimate in that it uses the lowest potential population and therefore, when the efficiency metric is calculated, would result in the highest, "worst case" potential emissions per service population.

## 4.0 METHODOLOGY

### 4.1 Construction CO<sub>2</sub>e Emissions Calculation Methodology

Project construction dates were estimated based on a construction start date in 2021 with construction ending in 2023. CalEEMod was utilized for all construction calculations and has been manually updated to reflect SDAPCD Rule 67 VOC paint standards and to include Tier 4 construction equipment with DPF per the PDFs identified in Section 1.4 above. Table 4.1 shows the expected timeframes for the construction of all project infrastructure and facilities as well as the expected number of pieces of equipment. Also, it should be noted that data used in Table 4.1 below would be conservative in the event construction began/ended at a later date, as annual code updates and fleet improvements typically have the effect of restricting and limiting emissions on construction equipment over time.

**Table 4.1: Expected Construction Equipment**

Equipment Identification	Proposed Start	Proposed Complete	Quantity
<b>Demolition</b>	06/01/2021	06/30/2021	
Concrete/Industrial Saws			1
Excavators			3
Rubber Tired Dozers			2
<b>Site Preparation</b>	07/01/2021	07/21/2021	
Rubber Tired Dozers			3
Tractors/Loaders/Backhoes			4
<b>Grading</b>	07/22/2021	09/30/2021	
Excavators			2
Graders			1
Rubber Tired Dozers			1
Scrapers			2
Tractors/Loaders/Backhoes			2
<b>Paving</b>	09/01/2021	09/28/2021	
Pavers			2
Paving Equipment			2
Rollers			2
<b>Building Construction</b>	10/01/2021	01/20/2023	
Cranes			1
Forklifts			3
Generator Sets			1
Tractors/Loaders/Backhoes			3
Welders			1
<b>Architectural Coating</b>	10/01/2022	01/13/2023	
Air Compressors			1

This equipment list is based upon equipment inventory within CalEEMod. The quantity and types are based upon assumptions provided by the project applicant.

GHG impacts related to construction are calculated using the latest CalEEMod 2016.3.2 model which was developed by BREEZE Software for South Coast Air Quality Management District (SCAQMD). CalEEMod is the state-wide accepted modeling software for preparing such air quality analysis throughout California and is sensitive to project-specific input including project location, construction schedule, and proposed uses. When project-specific information is not available or known, CalEEMod includes built in default values which are industry-accepted standards to appropriately model and estimate emissions. CalEEMod incorporates emission factors from the EMFAC2014 model for on-road vehicle emissions and the OFFROAD2011 model for off-road vehicle emissions.

Because impacts from construction activities occur over a relatively short-term period of time, they contribute a relatively minimal portion of the overall lifetime project GHG emissions. To adequately include GHG emission from construction in the lifetime/operational GHG estimates, construction emissions are amortized over a 30-year project lifetime (SCAQMD, 2008). During construction, grading activities will remove mostly disturbed vegetation and soils. New vegetation, including trees and other landscaping, planted during building construction would ultimately sequester more carbon during operations than existing, disturbed vegetation. GHG reductions from new sequestration were not taken in this analysis, thus, the project would likely result in fewer MT CO<sub>2</sub>e annually than reported in this analysis.

#### 4.2 Operational Emissions Calculation Methodology

Operational GHG sources for the project would include: area sources such as landscaping and architectural coatings during maintenance; energy sources from electrical usage; mobile sources from vehicular traffic including trucks and passenger vehicles; solid waste from trash generation and decomposition at landfills; and emissions generated through the conveyance and treatment of water. PDFs as defined in Section 1.4 have been included within the analysis. Further, as noted in Section 1.4, this is a conservative analysis because additional PDFs would be implemented which would further reduce GHG emissions; however, because these PDF's are not quantifiable using the best available modeling and other supportable data, they have not been included in the emissions reductions estimates.

GHG emissions for energy, water, and solid waste source emissions were estimated based on default inputs with the exception of mobile source emissions. Mobile source emissions were based on the projected generated traffic volumes of 1,690 average daily trips (ADT) with an average trip distance of 6 miles, based on information provided by SANDAG for the project traffic study (Chen Ryan, 2020).

Energy Intensities as recommended by CalEEMod inputs were assumed within this report. Title 24 efficiencies as modeled within CalEEMod 2016.3.2 utilize Title 24 (2016) as defaults,

though the project will comply with Title 24 (2019) which would further improve upon building efficiency requirements.

Regarding the project’s energy intensity factors, CalEEMod’s default rates from 2009 were updated to reflect project operational year intensity factors for 2023. In 2009, SDG&E achieved 10.5 percent procurement of renewable energy (California Public Utilities Commission, 2016) and in 2030 will have up to 60 percent in place per requirements of SB 100. Given this, SDG&E energy-intensity factors for 2024 were calculated and were modeled as such within CalEEMod as shown in Table 4.2 and are shown in **Attachment A** to this report. It should be noted that SDG&E has already achieved 44 percent as of 2019, though for purposes of this analysis only 43.8% was used (California Public Utilities Commission, 2019).

**Table 4.2: SDG&E Energy Intensity Factors**

<b>GHG</b>	<b>2009 Factors (lbs/MWh) w/10.5% RPS</b>	<b>2023 Factors – 43.8% Renewables (lbs/MWh)</b>
Carbon Dioxide (CO <sub>2</sub> )	720.49	452.42
Methane (CH <sub>4</sub> )	0.029	0.0182
Nitrous Oxide (N <sub>2</sub> O)	0.006	0.0038

#### Project-Installed Solar Panels

The project would implement design features identified in Section 1.4 of this analysis. CalEEMod was updated to include these project-specific design features which would reduce emissions, as described below. For reduction calculations associated with the PV design feature, annual energy estimates were provided by the National Renewable Energy Laboratory (NREL, 2020) and shown as **Attachment B** to this report. Based on this, the project solar commitment (434 kW) would be estimated to generate 688,522 kWh of annual electrical energy. It should be noted that the more solar produced by the project reduces the amount of non-renewable energy added to the grid by offsite utilities. Given this, offsite generation from renewables would not be offset from onsite renewables. Instead it is assumed that non-renewable generation is offset at 100%. Therefore, default GHG intensities or those assumed within CalEEMod are used to determine GHG reductions and are shown in **Attachment C** to this report. The project would be fully consistent with the City’s CAP with respect to solar, which calls for up to 1W per SF for new multifamily homes under City Action RE-2 and 2W per SF for new commercial developments such as the proposed restaurant under RE-3. Combined, the CAP requires 257 kW of solar for the proposed project – the project is providing 434 kW.

## Electric Vehicle Charging Stations

### Garage Based EV Chargers

The proposed project will install 250 Level 2 charging stations in garages, which are 220-volt chargers that can provide between 7.2 and 19.2 kW of power depending on the charging systems amperage rating. It is assumed, however, that not all residents will take advantage of the convenience of having these chargers installed, though the inclusion of the PDF is expected to encourage residents to purchase an electric vehicle. The average amount of cars a typical residential unit has associated with it is a function of how many drivers each home has.

Based on studies conducted by the Federal Highway Administration, there are roughly 639 drivers per 1,000 residents in the State of California (Federal Highway Administration, 2017). Based on Section 3.3 above, the project would have a population of 628 residents. Based on the drivers to resident ratio, the project would have roughly 401 drivers.

CalEEMod incorporates emission factors for on-road mobile sources from the EMFAC2014 model. Based on the EMFAC2014 projections for the year 2030, California would have 32.25 million vehicles on the road; EMFAC2014 assumes that 1.96 million of those vehicles would be electric. This equates to roughly 6 percent of the vehicle fleet in the year 2030 being electric. In January of 2018, EO B-48-18 was signed to “boost the supply of zero-emission vehicles and charging and refueling stations in California.” The EO directs state government to meet a series of milestones toward a long-term target of 1.5 million ZEVs, specifically, on California’s roadways by 2025, and 5 million by 2030 (Governor of California, 2018). This would increase the electric vehicle market to 15.4 percent of the market share, or a 9.4 percent increase over what EMFAC 2014 estimates and is already accounted for in CalEEMod. It should be noted that the year 2030 would be appropriate for EV reductions since the project would be expected to operate for at least 30 years when EV operations are expected to be significantly higher.

Since the project would likely have 401 drivers, roughly 37 of these would have an electric vehicle. Since CalEEMod already assumes some of the vehicles are already electric, only 9.4% of the drivers are assumed to purchase EV cars beyond what is currently assumed in CalEEMod. Given this, roughly 38 EV cars above normal would be expected and assumed within this analysis. The 38 EVs used by onsite drivers would generate 152 ADT and 55,480 trips per year. Based on the 6 miles ADT per trip as identified in the project traffic study, the 38 EVs would account for roughly 332,880 VMT annually.

The project would also install 13 19.2 KW Level II chargers in the common parking areas for visitors and guests to utilize. For purposes of this analysis, it is assumed that each charger will be utilized 3 hours per occurrence, and would be utilized no more than 20 percent of the year, or roughly 73 days per year conservatively. Given this, the guest EV charging stations would be utilized up to 2,847 hours yearly.

To understand EV efficiency it is important to understand how the relationship between energy and mileage is related. For a standard petroleum-based vehicle, miles per gallon (MPG) is used. For EVs, efficiency can be defined as a specific fixed quantity of energy per a distance. Typically, kilowatt hours per 100 miles traveled is used. To simplify this, the U.S. Department of Energy has developed a miles per gallon gasoline equivalent unit (MPGe) which is 0.337 kWh/100 miles traveled (Department of Energy, 2000). For many of the cars on the market today, this efficiency is over 100 MPGe.

The common area EV chargers would consist of 13 - 220V Level 2 charging stations capable of providing 19.2 kW of power. Based on this, for a 100 MPGe vehicle, each hour of charging will provide 56.97 miles of driving storage. Given this, the project-delivered energy would provide 56.97 miles per hour of charge multiplied by the estimated 2,847 charging hours yearly or 162,193.59 VMT per year.<sup>4</sup> Combined with EV chargers within garages, the project would have a combined VMT of 495,073.59 per year from the EV infrastructure.

Based on City Action CET 5 of the CAP, a mixed use development would be required to install enough EV charging stations to cover 8% of all common parking areas. This would equate to 12.48 or 13 EV charging stations for the project. Since the project is installing 13, the project would not conflict with CET 5. The multi-family component of the project would also install EV charging stations in each of the garages which exceeds the requirement of City Action CET 4 designed for single family implementation and goes beyond the EV ready requirement to only include the circuitry for EV chargers. It should be noted that based on the CAP, in 2030, 370 EVCS units would reduce GHG emissions by 1,357 MT CO<sub>2</sub>e annually or roughly 3.67 MT CO<sub>2</sub>e annually per station.

Finally, it should be noted that the project would also include a number of additional PDFs identified in section 1.4 of this report which are not quantified within this analysis. Therefore, it is reasonable to conclude that the total GHG emissions quantified in this analysis is worst case for this project.

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<sup>4</sup> It should be noted that drivers using these chargers would receive power directly from the project so VMT reductions from the entire charge would be applied to the project.

## **5.0 FINDINGS**

### 5.1 Project Related Construction Emissions

Utilizing the CalEEMod inputs for the model as shown in Table 4.1 above, grading and construction of the project would generate approximately 1,133.98 MT CO<sub>2</sub>e over the construction period. Based on SCAQMD methodology, it is recommended to average the construction emissions over the project life, which is assumed to be 30 years. Given this, the annual construction emission would be 37.80 MT CO<sub>2</sub>e per year. A summary of the construction emissions is shown in Table 5.1 below. The analysis of GHG emissions generated during construction activities includes the application of the PDF to include the application of Tier 4 Diesel Equipment with Diesel Particulate Filters attached.

**Table 5.1: Expected Construction CO<sub>2</sub>e Emissions Summary MT/Year**

<b>Year</b>	<b>Bio-CO2</b>	<b>NBio-CO2</b>	<b>Total CO2</b>	<b>CH4</b>	<b>N2O</b>	<b>CO2e</b>
2021	0.00	462.69	462.69	0.10	0.00	465.17
2022	0.00	629.16	629.16	0.09	0.00	631.34
2023	0.00	37.35	37.35	0.01	0.00	37.47
<b>Total</b>						<b>1,133.98</b>
<b>Yearly Average Construction Emissions (Metric Tons/year over 30 years)</b>						<b>37.80</b>
Expected Construction emissions are based upon CalEEMod modeling assumptions for equipment and durations listed in Table 4.1 above.						

### 5.2 Project-Related Operational Emissions

As previously discussed, emissions generated from area, energy, mobile, solid waste and water uses are calculated within CalEEMod. These settings, which are automatically populated throughout the model, are based on the inputted land use and intensities expected at the project site. Unless stated within this report, default values generated within CalEEMod were used. The calculated operational emissions for 2024 are identified in Table 5.2 on the following page. Based on the CalEEMod analysis, the proposed project buildout with annualized construction emissions would generate 1,757.16 MT CO<sub>2</sub>e annually.

Specific reductions from PDF 6 and 7 require separate modeling and calculations. PDF 6 will reduce annual operational emissions through the addition of 434 kW of PV which would generate 688,522 kWh annually. PV is considered 100 percent renewable and once installed

would offset GHG emissions generated from non-renewable energy sources. Based on CalEEMod outputs, the GHG emission reductions from solar are expected to be 225.80 MT CO<sub>2</sub>e annually.

PDF 7 would include the installation of 263 EV chargers and, based on findings in Section 4.2 of this analysis, the project EV would produce 495,074 VMT per year. Based on the CalEEMod files for this project (as shown in Attachment A) typical vehicles generate roughly 0.000377 MT CO<sub>2</sub>e per VMT. Given this, the project would offset roughly 186.64 MT CO<sub>2</sub>e per year. This equates to approximately 0.71 MT CO<sub>2</sub>e per EV charger. For comparison, it should be noted that the City’s CAP estimates roughly 3.67 MT CO<sub>2</sub>e annually. If the City’s estimate per station were to be used, the project’s EV chargers would be expected to reduce 965 MT CO<sub>2</sub>e in 2030; therefore, the analysis presented herein is considered conservative.

Based on the CalEEMod analysis, the proposed project buildout with annualized construction emissions would generate 1,757.16 MT CO<sub>2</sub>e annually, which is shown in Table 5.2. These emissions include PDFs 1-5 shown above. PDFs 6 and 7 reduce emissions by 412.44 MT CO<sub>2</sub>e, reducing project emissions to 1,344.72 MT CO<sub>2</sub>e after all quantifiable PDFs have been implemented.

**Table 5.2: Proposed Project Operational GHG emissions (MT/Year)**

Source	Bio-CO <sub>2</sub>	NBio-CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e (MT/Yr)
Area	0.00	3.04	3.04	0.00	0.00	3.11
Electrical Usage	0.00	209.34	209.34	0.01	0.00	210.10
Natural Gas	0.00	151.34	151.34	0.00	0.00	152.24
Mobile	0.00	1,212.28	1,212.28	0.06	0.00	1,213.87
Waste	13.04	0.00	13.04	0.77	0.00	32.30
Water	7.87	73.72	81.59	0.81	0.02	107.74
Total includes reductions from PDFs 1-5						1,719.36
Amortized Construction Emissions						37.8
PDF 6 – 434 KW of PV						-225.8
PDF 7 – EV Chargers (263 Stations)						-186.64
<b>Project Total GHG Emissions</b>						<b>1,344.72</b>
<b>Residents (628 persons) + Employment (20 persons): Service Population</b>						<b>648</b>
<b>MT/SP</b>						<b>2.08</b>
Data is presented in decimal format and may have rounding errors.						

The proposed project would be consistent with the City’s General Plan and is therefore consistent with the City’s CAP. It should be noted that the design features identified above

have been included to address the requirements of the CAP and will be a requirement of this project. Based on this, a less than significant GHG impact is expected.

### 5.3 Project Specific Efficiency Metric Alternative Analysis

The project was also analyzed using an alternative approach for consistency with SB 32 using a project-specific, locally appropriate efficiency-based threshold based on forecasted population and the allowable emissions which the City must achieve in 2030 to be compliant with SB 32. Based on this approach, the project would be required to generate fewer service population emission than 3.1 MT CO<sub>2</sub>e, as described above in Section 3.3.

The project was found to generate 1,344.72 MT CO<sub>2</sub>e with both annualized construction and annual operations (see Tables 5.1 and 5.2, above), which is considered a conservative estimate for the reasons explained above.

The project's service population was determined to be 648 (628 residents and 20 employees). Given this, the project would have a projected 2.08 MT CO<sub>2</sub>e per SP (1,344.72 MT CO<sub>2</sub>e/648 persons) as can be seen in Table 5.2 above. Based on this, the proposed project would generate fewer emissions than a City-specific localized efficiency metric of 3.1 MT CO<sub>2</sub>e per SP and therefore, generate a less than significant impact.

### 5.4 Consistency with Statewide, Regional, and Local Plan

#### *Consistency with CARB's 2008 and 2017 Scoping Plans*

CARB's 2008 and 2017 Scoping Plans provide a framework for actions to reduce California's GHG emissions in accordance with the statewide 2020, 2030 and 2050 targets, and require CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. The 2008 and 2017 Scoping Plans are not directly applicable to specific projects. In the Final Statement of Reasons for the Amendments to the CEQA Guidelines, the CNRA observed that "[t]he [Scoping Plan] may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA, 2009). However, under the 2008 and 2017 Scoping Plans there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified, most of which focus on area source emissions and changes to the vehicle fleet and associated fuels among others which are not applicable to individual development projects. The proposed project would comply with all applicable regulations adopted in furtherance of the 2008 and 2017 Scoping Plans to the extent required by law.

Table 5.3 highlights measures that have been developed under the 2008 and 2017 Scoping Plans and the proposed project’s consistency with those measures.

**Table 5.3: Project Consistency with CARB Scoping Plan**

Scoping Plan Measure	Measure Number	Project Consistency
<i>Transportation Sector</i>		
1.5 million zero-emission and plug-in hybrid light-duty electric vehicles by 2025 (4.2 million Zero-Emissions Vehicles by 2030)	N/A	The proposed project would include 263 electric vehicle charging stations in exceedance of the City’s requirements.
Regional Transportation-Related GHG Targets	T-3	CARB has adopted its regional transportation-related GHG targets in furtherance of SB 375. Those targets do not apply directly to the proposed project, and instead are considered by MPOs (like SANDAG) when developing their Sustainable Communities Strategies. See below for discussion of the proposed project’s consistency with SANDAG’s RTP/SCS.
Reduction in Vehicle Miles Traveled	N/A	The proposed project is located on an infill site that is in close proximity to multi-modal transportation options. Further, the proposed project would provide needed residential opportunities (including affordable housing units) in the City of Encinitas.
<i>Electricity and Natural Gas Sector</i>		
Energy Efficiency Measures (Electricity)	E-1	The proposed project would comply with Title 24, Part 6, building energy efficiency standards applicable at the time of building permit application. Further, as described above, the proposed project includes numerous design features that would reduce natural gas consumption, promote building electrification, and achieve other efficiencies relative to the consumption of energy.
Energy Efficiency (Natural Gas)	CR-1	The proposed project would comply with Title 24, Part 6, building energy efficiency standards applicable at the time of building permit application. As discussed above, the proposed project also includes other design attributes to reduce natural gas consumption, including the elimination of natural gas fireplaces, from the design of the residential units.
Solar Water Heating (California Solar Initiative Thermal Program)	CR-2	The proposed project would install a solar hot water heater on both the pool and the restaurant.
Renewable Portfolios Standard	E-3	The proposed project would use energy supplied by San Diego Gas and Electric, which is in compliance with the Renewable Portfolio Standard. SDG&E expects an approximate 44% renewables mix in calendar year 2024.
Senate Bill 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and Earlier Solar Programs	E-4	The proposed project would include a 434 kW solar photovoltaic system located on the roof and carports.

**Table 5.3: Project Consistency with CARB Scoping Plan**

Scoping Plan Measure	Measure Number	Project Consistency
<i>Water Sector</i>		
Water Use Efficiency	W-1	The proposed project would utilize water saving features, including low-flow fixtures and water-efficient landscape irrigation.
Water Recycling	W-2	The proposed project would utilize reclaimed water and would include waste piping to permit the reuse of greywater.
Reuse Urban Runoff	W-4	The proposed project would include low impact development measures to the extent feasible to reduce the amount of stormwater runoff from the site.
<i>Green Buildings</i>		
State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	The proposed project would be required to be constructed in compliance with state and local green building standards in effect at the time of building construction.
Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-2	The proposed project's buildings would meet green building standards that are in effect at the time of building permit application.
Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-3	The proposed project would be required to be constructed in compliance with local green building standards in effect at the time of building permit application.
<i>Industry Sector</i>		
<i>Recycling and Waste Management Sector</i>		
Mandatory Commercial Recycling	RW-3	This measure applies to commercial projects. However, during both construction and operation of the proposed project, the proposed project would comply with all state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended. During construction, all waste would be recycled to the maximum extent possible.
<i>Forests Sector</i>		
<i>High Global Warming Potential Gases Sector</i>		
Limit High Global Warming Potential Use in Consumer Products	H-4	The proposed project's residents would use consumer products that would comply with the regulations that are in effect at the time of manufacture.
<i>Agriculture Sector</i>		
Methane Capture at Large Dairies	A-1	This measure does not apply to the proposed project because it applies to capturing methane at large dairies. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
<p><b>Sources:</b> CARB 2008, 2017b.  <b>Notes:</b> GHG = greenhouse gas; Proposed Project = Fox Point Farms Project; CARB = California Air Resources Board; EV = electric vehicle; SF<sub>6</sub> = sulfur hexafluoride.</p>		

Based on this analysis and the items listed in Table 5.3, the proposed project would be consistent with the applicable strategies and measures in the 2008 and 2017 Scoping Plans.

In addition to the measures outlined in the Table 5.3, the 2008 and 2017 Scoping Plans also highlight, in several areas, the goals and importance of infill projects. Specifically, the Scoping Plans encourage infill projects and characterize them as crucial to achieving the State’s long-term climate goals. The Plans encourage accelerating equitable and affordable infill development through enhanced financing and policy incentives and mechanisms.

In addition to the statewide measures presented in Table 5.3, the 2017 Scoping Plan presented a suite of local actions that agencies can take to reduce GHG emissions, as found within Appendix B of the Scoping Plan (CARB 2017). The proposed project’s consistency with the 2017 Scoping Plan’s list of potentially feasible local actions is presented in Table 5.4.

**Table 5.4: Project Consistency with Scoping Plan Local Actions**

Scoping Plan Local Action	Project Consistency
<i>Construction</i>	
Enforce idling time restrictions for construction vehicles	The proposed project will enforce unnecessary idling to 5 minutes, in accordance with CARB’s Off-Road Regulation.
Divert and recycle construction and demolition waste, and use locally-sourced building materials with a high recycled material content to the greatest extent feasible	The proposed project will divert and recycle construction and demolition waste in accordance with all applicable rules and regulations.
Minimize tree removal, and mitigate indirect GHG emissions increases that occur due to vegetation removal, loss of sequestration, and soil disturbance	The proposed project would provide for more trees on-site than exist under existing conditions through landscaping.
Utilize existing grid power for electric energy rather than operating temporary gasoline/diesel powered generators	The proposed project will rely on existing grid power for electric energy to the extent feasible and practical.
<i>Operation</i>	
Require on-site EV charging capabilities for parking spaces serving the project to meet jurisdiction-wide EV proliferation goals	The proposed project will include 263 EV installed spaces, exceeding the City’s requirements.
Provide adequate, safe, convenient, and secure on-site bicycle parking and storage in multi-family residential projects and in non-residential projects	The proposed project will include on-site bicycle parking and storage for residents, as well as a bike-share program.
Require on-site renewable energy generation	The proposed project will include a 434 kW solar photovoltaic system located on rooftop mounted arrays.
Prohibit wood-burning fireplaces in new development, and require replacement of wood-burning fireplaces for renovations over a certain size developments	The proposed project will not include fireplaces or wood-burning stoves.
Require solar-ready roofs	The proposed project will include a 434 kW solar photovoltaic system located on rooftop mounted arrays.
Require low-water landscaping in new developments	The proposed project will include water-efficient landscaping techniques, including drip irrigation.

**Table 5.4: Project Consistency with Scoping Plan Local Actions**

Scoping Plan Local Action	Project Consistency
Expand urban forestry and green infrastructure in new land development	The proposed project would provide for more trees on-site than exist under existing conditions through landscaping.
Require the design of the electric outlets and/or wiring in new residential unit garages to promote electric vehicle usage	The proposed project will include 263 EV installed spaces, exceeding the City's requirements.
Require each residential unit to be "solar ready," including installing the appropriate hardware and proper structural engineering	The proposed project will be designed to include a solar PV rooftop system that would be rated at 434 kW direct current.
Require the installation of energy conserving appliances such as on-demand tank-less water heaters and whole-house fans	The proposed project will include the use of energy conserving appliances, such as ENERGYSTAR labeled.
Require each residential and commercial building equip buildings with energy efficient AC units and heating systems with programmable thermostats/timers	The proposed project will equip each residential unit with programmable thermostats to control the heating and AC system.
Require each residential and commercial building to utilize low flow water fixtures such as low flow toilets and faucets	The proposed project would include low-flow or high-efficiency water fixtures (toilet, showerhead, clothes washer, etc.).
Require the use of energy-efficient lighting for all street, parking, and area lighting	The proposed project will include the use of LED lighting or other efficient lighting for at least 75% of the total luminaires.
Require the landscaping design for parking lots to utilize tree cover and compost/mulch	The proposed project would provide for more trees on-site than exist under existing conditions through landscaping.
<p><b>Source:</b> CARB 2017b.  <b>Notes:</b> GHG = greenhouse gas; Proposed Project = The Fox Point Farms Project; CARB = California Air Resources Board; EV = electric vehicle; SF<sub>6</sub> = sulfur hexafluoride.</p>	

As shown in Table 5.4, the proposed project would be consistent with applicable local actions set forth within Appendix B of the 2017 Scoping Plan.

*Consistency with SANDAG's San Diego Forward: The Regional Plan*

SANDAG's Regional Plan is a regional growth-management strategy that targets per-capita GHG reduction from passenger vehicles and light-duty trucks in the San Diego region. The Regional Plan integrates land use and transportation strategies to meet GHG emissions reduction targets that are forecasted to achieve the state's 2035 and 2050 GHG reduction goals. The Regional Plan incorporates local land use projections and circulation networks in city and county general plans. Typically, a project would be consistent with the Regional Plan if it does not exceed the underlying growth assumptions within the Regional Plan.

Implementation of the proposed project would result in an increase in 249 residential units (250 less the one existing onsite residence). The proposed project is part of the City's

Housing Element Update, and is consistent with the City’s Fifth Cycle Housing Element, adopted in 2019, which anticipated between 246 and 296 units on the project site. As provided for therein, the City of Encinitas was behind in providing for a legally compliant Housing Element to meet the City’s share of the Regional Housing Needs Assessment from SANDAG. Through the 2019 Housing Element Update, the City projected a deficit of 1,062 very-low and low income units and 238 moderate and above moderate income units (City of Encinitas). The City has updated SANDAG with growth projections approved by the City within the Housing Element. Since the project has been designed in accordance with growth projections identified within the Housing Element, the proposed project would not conflict with SANDAG’s regional growth forecast for the City.

The proposed project would include site design elements and project design features developed to support the policy objectives of the RTP/SCS and SB 375. Table 5.5 illustrates the proposed project’s consistency with all applicable goals and policies of SANDAG’s Regional Plan (SANDAG 2015).

**Table 5.5: San Diego Forward: The Regional Plan Consistency Analysis**

Category	Policy Objective or Strategy	Consistency Analysis
<i>The Regional Plan – Policy Objectives</i>		
Mobility Choices	Provide safe, secure, healthy, affordable, and convenient travel choices between the places where people live, work, and play.	<i>Consistent.</i> The proposed project incorporates smart growth and sustainable design principles in its development plan. More specifically, the proposed project’s design puts people in areas that are accessible to public transit. The design and locational attributes of the proposed project positively emphasize particular commuting choices and convenient access to the rest of the City and the region.
Mobility Choices	Take advantage of new technologies to make the transportation system more efficient and environmentally friendly.	<i>Consistent.</i> The proposed project includes 250 garage and 13 visitor EV charging stations to support EV adoption. Additionally, the proposed project would not impair SANDAG’s ability to employ new technologies to make travel more reliable and convenient.
Habitat and Open Space Preservation	Focus growth in areas that are already urbanized, allowing the region to set aside and restore more open space in our less developed areas.	<i>Consistent.</i> The proposed project would be located close to major urban and employment centers. As such, the project proposes to develop future housing opportunities in an infill location that capitalizes on existing infrastructure rather than other non-developed areas—including open space areas, sensitive habitats, or areas otherwise constrained

**Table 5.5: San Diego Forward: The Regional Plan Consistency Analysis**

Category	Policy Objective or Strategy	Consistency Analysis
		due to topography, flooding, or other factors.
Healthy and Complete Communities	Create great places for everyone to live, work, and play.	<i>Consistent.</i> The proposed project proposes new residential development in an infill location that would integrate residents into the existing community. The proposed project's location allows ease of access to regional shopping, entertainment, and employment.
Healthy and Complete Communities	Connect communities through a variety of transportation choices that promote healthy lifestyles, including walking and biking.	<i>Consistent.</i> The proposed project location would provide residents with the opportunity to access employment, recreational, and commercial uses via multiple modes of transportation. The proposed project would also encourage non-vehicular modes of transportation through its proximate location to nearby amenities.
Environmental Stewardship	Make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.	<i>Consistent.</i> While the proposed project does not require a transportation investment from SANDAG, it is noted that the proposed project would include numerous design attributes that reduce natural gas consumption, promote building electrification, enhance the efficiency of energy and water consumption, and facilitate the use of zero emission vehicles.
Environmental Stewardship	Support energy programs that promote sustainability.	<i>Consistent.</i> The proposed project would include numerous design attributes that reduce natural gas consumption, promote building electrification, enhance the efficiency of energy and water consumption, and facilitate the use of zero emission vehicles.
<i>Sustainable Communities Strategy – Strategies</i>		
Strategy #1	Focus housing and job growth in urbanized areas where there is existing and planned transportation infrastructure, including transit.	<i>Consistent.</i> The proposed project would be located on an infill site close to urban and employment centers. The Project site is located along Leucadia Boulevard, which is served by NCTD Bus Route 304. The closest Route 304 stop is located south of the Project site, on Leucadia Boulevard, adjacent to the Project site. Route 304 provides connections to the Coaster's Encinitas station, providing Project residents with transit network opportunities to facilitate their travel.
Strategy #2	Protect the environment and help ensure the success of smart growth land use policies by preserving sensitive habitat, open space, cultural resources, and farmland.	<i>Consistent.</i> The proposed project would be located on an infill site close to major urban and employment centers. As such, the project proposes to develop future housing opportunities in an infill location

**Table 5.5: San Diego Forward: The Regional Plan Consistency Analysis**

Category	Policy Objective or Strategy	Consistency Analysis
		that capitalizes on existing infrastructure rather than other non-developed areas—including open space areas, sensitive habitats, or areas otherwise constrained due to topography, flooding, or other factors.
Strategy #3	Invest in a transportation network that gives people transportation choices and reduces greenhouse gas emissions.	<i>Consistent.</i> The proposed project would help reduce greenhouse gas emissions from vehicles in the region compared to a non-infill project. The closest Route 304 stop is located south of the Project site, on Leucadia Boulevard, adjacent to the Project site. Route 304 provides connections to the Coaster’s Encinitas station, providing Project residents with transit network opportunities to facilitate their travel.
Strategy #4	Address the housing needs of all economic segments of the population.	<i>Consistent.</i> The proposed project includes both market rate and affordable units to support all economic segments of the population.
Strategy #5	Implement the Regional Plan through incentives and collaboration.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to implement the Regional Transportation Plan through incentives and collaborations.
<p><b>Source:</b> SANDAG 2015.  <b>Notes:</b> City = City of Encinitas; Proposed Project = Fox Point Farms Project; VMT = vehicle miles traveled; SANDAG = San Diego Association of Governments; EV = electric vehicle.</p>		

As shown in Table 5.6, the proposed project would be consistent with all applicable Regional Plan policy objectives or strategies. SANDAG worked with the local jurisdictions to identify Regional Housing Needs Assessment allocation options that meet the four goals of housing element law (Government Code Section 65484[d][1]–[4]) within the Regional Plan. The second of the four objectives of the SANDAG Regional Housing Needs Assessment is to promote infill development and socioeconomic equity, the protection of environmental and agricultural resources, and the encouragement of efficient development patterns. Also, one of the key achievements projected for the Regional Plan is for nearly three-quarters of multifamily housing to be built on redevelopment or infill sites. The proposed project would be consistent with that goal as it would be developed on an infill site.

In summary, the proposed project is consistent with the statewide GHG reduction goals addressed in CARB’s 2008 and 2017 Scoping Plans, SANDAG’s Regional Plan, OPR’s Discussion Draft Advisory, and SMAQMD’s GHG Best Management Practices. The proposed project’s consistency stems from its location on an urban, infill site; its numerous design attributes that

serve to reduce natural gas consumption, promote building electrification, and achieve other efficiencies in the consumption of energy, water and transportation fuels; and, its provision of residential opportunities (including affordable units) in a jurisdiction with the need for more housing. Therefore, the proposed project would be consistent with the statewide GHG reduction goals set forth in AB 32, SB 32 and EO S-3-05. Impacts would be **less than significant**.

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## **7.0 CERTIFICATIONS**

The contents of this report represent an accurate depiction of the projected CO<sub>2</sub>e emissions from the project development based upon the best available information at the time of preparation.

### **DRAFT**

Jeremy Louden, Principal  
Ldn Consulting, Inc.  
(760) 473-1253  
jlouden@ldnconsulting.net

Date August 18, 2020

**ATTACHMENT A**

CalEEMod 2016.3.2

Fox Point - San Diego County, Annual

**Fox Point**  
**San Diego County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	156.00	Space	1.40	62,400.00	0
Quality Restaurant	3.50	1000sqft	0.48	3,500.00	0
Recreational Swimming Pool	1.80	1000sqft	0.04	1,800.00	0
Apartments Mid Rise	197.00	Dwelling Unit	13.60	197,000.00	563
Condo/Townhouse	53.00	Dwelling Unit	5.96	53,000.00	152

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2024
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MW hr)</b>	452.42	<b>CH4 Intensity (lb/MW hr)</b>	0.018	<b>N2O Intensity (lb/MW hr)</b>	0.004

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

Fox Point - San Diego County, Annual

Project Characteristics - RPS 2024

Land Use - 21.48 acres

Construction Phase - cs

Trips and VMT -

Demolition -

Grading -

Architectural Coating - Rule 67 Paint

Vehicle Trips - Restaurant trips were modified to reflect the total ADT of 1690 ADT per Traffic Study... VMT per trip is 6 miles based on TS.

Woodstoves - project would not install hearths

Area Coating - Rule 67 Paints

Energy Use -

Water And Wastewater - Corrected Water use per Water Study by Dexter Wilson Engineering Feb 2020-no correction taken for existing water useage 20,269,839 gallons per year. Proposed Use would 49,457,500 gallons per year or 135500 gpd \* 365 d. Ratios based on CalEEMod defaults

Solid Waste -

Construction Off-road Equipment Mitigation - Tier 4 with DPF

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100

Fox Point - San Diego County, Annual

tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
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tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
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Fox Point - San Diego County, Annual

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	75.00
tblConstructionPhase	NumDays	370.00	341.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	35.00	51.00
tblConstructionPhase	NumDays	10.00	15.00
tblFireplaces	NumberGas	108.35	0.00
tblFireplaces	NumberGas	29.15	0.00
tblFireplaces	NumberNoFireplace	19.70	197.00
tblFireplaces	NumberNoFireplace	5.30	53.00

## Fox Point - San Diego County, Annual

tblFireplaces	NumberWood	68.95	0.00
tblFireplaces	NumberWood	18.55	0.00
tblGrading	MaterialImported	0.00	10,000.00
tblLandUse	LotAcreage	0.08	0.48
tblLandUse	LotAcreage	5.18	13.60
tblLandUse	LotAcreage	3.31	5.96
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	720.49	452.42
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblVehicleTrips	HO_TL	7.50	6.00
tblVehicleTrips	HO_TL	7.50	6.00
tblVehicleTrips	HO_TTP	39.60	40.00
tblVehicleTrips	HO_TTP	39.60	40.00
tblVehicleTrips	HS_TL	7.30	6.00
tblVehicleTrips	HS_TL	7.30	6.00
tblVehicleTrips	HS_TTP	18.80	18.00
tblVehicleTrips	HS_TTP	18.80	18.00
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tblVehicleTrips	HW_TTP	41.60	42.00
tblVehicleTrips	ST_TR	6.39	6.00
tblVehicleTrips	ST_TR	5.67	8.00
tblVehicleTrips	ST_TR	94.36	24.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	5.86	6.00
tblVehicleTrips	SU_TR	4.84	8.00

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tblVehicleTrips	SU_TR	72.16	24.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	6.65	6.00
tblVehicleTrips	WD_TR	5.81	8.00
tblVehicleTrips	WD_TR	89.95	24.00
tblVehicleTrips	WD_TR	33.82	0.00
tblWater	IndoorWaterUseRate	12,835,343.05	22,786,126.00
tblWater	IndoorWaterUseRate	3,453,163.36	6,130,278.00
tblWater	IndoorWaterUseRate	1,062,367.99	1,885,984.00
tblWater	IndoorWaterUseRate	106,457.66	188,990.00
tblWater	OutdoorWaterUseRate	8,091,846.70	14,365,167.00
tblWater	OutdoorWaterUseRate	2,176,994.29	3,864,740.00
tblWater	OutdoorWaterUseRate	67,810.72	120,382.00
tblWater	OutdoorWaterUseRate	65,248.24	115,833.00
tblWoodstoves	NumberCatalytic	9.85	0.00
tblWoodstoves	NumberCatalytic	2.65	0.00
tblWoodstoves	NumberNoncatalytic	9.85	0.00
tblWoodstoves	NumberNoncatalytic	2.65	0.00

## 2.0 Emissions Summary

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**2.1 Overall Construction**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2867	2.9502	2.1719	5.1300e-003	0.5588	0.1230	0.6818	0.2073	0.1140	0.3212	0.0000	462.6874	462.6874	0.0995	0.0000	465.1741
2022	1.7134	2.6194	2.9732	7.0300e-003	0.2606	0.1103	0.3709	0.0700	0.1039	0.1739	0.0000	629.1584	629.1584	0.0872	0.0000	631.3388
2023	0.2308	0.1398	0.1757	4.2000e-004	0.0161	5.7200e-003	0.0218	4.3200e-003	5.4100e-003	9.7200e-003	0.0000	37.3451	37.3451	5.0000e-003	0.0000	37.4701
<b>Maximum</b>	<b>1.7134</b>	<b>2.9502</b>	<b>2.9732</b>	<b>7.0300e-003</b>	<b>0.5588</b>	<b>0.1230</b>	<b>0.6818</b>	<b>0.2073</b>	<b>0.1140</b>	<b>0.3212</b>	<b>0.0000</b>	<b>629.1584</b>	<b>629.1584</b>	<b>0.0995</b>	<b>0.0000</b>	<b>631.3388</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0821	0.6202	2.2983	5.1300e-003	0.5588	2.3300e-003	0.5612	0.2073	2.2500e-003	0.2095	0.0000	462.6871	462.6871	0.0995	0.0000	465.1738
2022	1.5285	0.8383	3.1164	7.0300e-003	0.2606	3.3200e-003	0.2639	0.0700	3.1500e-003	0.0732	0.0000	629.1580	629.1580	0.0872	0.0000	631.3385
2023	0.2207	0.0428	0.1849	4.2000e-004	0.0161	1.7000e-004	0.0163	4.3200e-003	1.6000e-004	4.4800e-003	0.0000	37.3451	37.3451	5.0000e-003	0.0000	37.4701
<b>Maximum</b>	<b>1.5285</b>	<b>0.8383</b>	<b>3.1164</b>	<b>7.0300e-003</b>	<b>0.5588</b>	<b>3.3200e-003</b>	<b>0.5612</b>	<b>0.2073</b>	<b>3.1500e-003</b>	<b>0.2095</b>	<b>0.0000</b>	<b>629.1580</b>	<b>629.1580</b>	<b>0.0995</b>	<b>0.0000</b>	<b>631.3385</b>

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	17.91	73.70	-5.24	0.00	0.00	97.56	21.70	0.00	97.51	43.12	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	6-1-2021	8-31-2021	1.6561	0.3161
2	9-1-2021	11-30-2021	1.2796	0.2889
3	12-1-2021	2-28-2022	0.7435	0.2468
4	3-1-2022	5-31-2022	0.7307	0.2457
5	6-1-2022	8-31-2022	0.7292	0.2442
6	9-1-2022	11-30-2022	1.6882	1.1768
7	12-1-2022	2-28-2023	1.0853	0.8039
		Highest	1.6882	1.1768

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**2.2 Overall Operational**  
**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2089	0.0214	1.8570	1.0000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	3.0351	3.0351	2.9200e-003	0.0000	3.1080
Energy	0.0153	0.1325	0.0688	8.3000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	400.1660	400.1660	0.0128	4.9700e-003	401.9684
Mobile	0.3603	1.4095	3.7924	0.0131	1.2111	0.0105	1.2216	0.3243	9.7300e-003	0.3340	0.0000	1,212.2790	1,212.2790	0.0635	0.0000	1,213.8658
Waste						0.0000	0.0000		0.0000	0.0000	26.0742	0.0000	26.0742	1.5409	0.0000	64.5977
Water						0.0000	0.0000		0.0000	0.0000	9.8321	124.9134	134.7455	1.0148	0.0250	167.5510
<b>Total</b>	<b>1.5845</b>	<b>1.5634</b>	<b>5.7182</b>	<b>0.0140</b>	<b>1.2111</b>	<b>0.0313</b>	<b>1.2424</b>	<b>0.3243</b>	<b>0.0306</b>	<b>0.3549</b>	<b>35.9063</b>	<b>1,740.3935</b>	<b>1,776.2998</b>	<b>2.6350</b>	<b>0.0299</b>	<b>1,851.0910</b>

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**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2089	0.0214	1.8570	1.0000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	3.0351	3.0351	2.9200e-003	0.0000	3.1080
Energy	0.0153	0.1325	0.0688	8.3000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	360.6885	360.6885	0.0112	4.6300e-003	362.3476
Mobile	0.3603	1.4095	3.7924	0.0131	1.2111	0.0105	1.2216	0.3243	9.7300e-003	0.3340	0.0000	1,212.2790	1,212.2790	0.0635	0.0000	1,213.8658
Waste						0.0000	0.0000		0.0000	0.0000	13.0371	0.0000	13.0371	0.7705	0.0000	32.2989
Water						0.0000	0.0000		0.0000	0.0000	7.8657	73.7221	81.5878	0.8108	0.0197	107.7370
<b>Total</b>	<b>1.5845</b>	<b>1.5634</b>	<b>5.7182</b>	<b>0.0140</b>	<b>1.2111</b>	<b>0.0313</b>	<b>1.2424</b>	<b>0.3243</b>	<b>0.0306</b>	<b>0.3549</b>	<b>20.9028</b>	<b>1,649.7246</b>	<b>1,670.6274</b>	<b>1.6589</b>	<b>0.0244</b>	<b>1,719.3573</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>41.79</b>	<b>5.21</b>	<b>5.95</b>	<b>37.04</b>	<b>18.58</b>	<b>7.12</b>

**3.0 Construction Detail**

**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2021	6/30/2021	5	22	
2	Site Preparation	Site Preparation	7/1/2021	7/21/2021	5	15	
3	Grading	Grading	7/22/2021	9/30/2021	5	51	
4	Paving	Paving	9/1/2021	9/28/2021	5	20	
5	Building Construction	Building Construction	10/1/2021	1/20/2023	5	341	
6	Architectural Coating	Architectural Coating	10/1/2022	1/13/2023	5	75	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 127.5**

**Acres of Paving: 1.4**

**Residential Indoor: 506,250; Residential Outdoor: 168,750; Non-Residential Indoor: 5,250; Non-Residential Outdoor: 1,750; Striped Parking Area: 3,744 (Architectural Coating – sqft)**

**OffRoad Equipment**

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	1,038.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	989.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	208.00	38.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	42.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

**3.2 Demolition - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1138	0.0000	0.1138	0.0172	0.0000	0.0172	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0348	0.3459	0.2372	4.3000e-004		0.0171	0.0171		0.0159	0.0159	0.0000	37.4009	37.4009	0.0105	0.0000	37.6640
<b>Total</b>	<b>0.0348</b>	<b>0.3459</b>	<b>0.2372</b>	<b>4.3000e-004</b>	<b>0.1138</b>	<b>0.0171</b>	<b>0.1308</b>	<b>0.0172</b>	<b>0.0159</b>	<b>0.0331</b>	<b>0.0000</b>	<b>37.4009</b>	<b>37.4009</b>	<b>0.0105</b>	<b>0.0000</b>	<b>37.6640</b>

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**3.2 Demolition - 2021**

**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	3.9000e-003	0.1355	0.0334	4.0000e-004	8.8800e-003	4.1000e-004	9.2900e-003	2.4400e-003	3.9000e-004	2.8300e-003	0.0000	39.5281	39.5281	3.5700e-003	0.0000	39.6173
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	4.1000e-004	4.1200e-003	1.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1559	1.1559	3.0000e-005	0.0000	1.1567
<b>Total</b>	<b>4.4700e-003</b>	<b>0.1360</b>	<b>0.0376</b>	<b>4.1000e-004</b>	<b>0.0102</b>	<b>4.2000e-004</b>	<b>0.0106</b>	<b>2.7900e-003</b>	<b>4.0000e-004</b>	<b>3.1900e-003</b>	<b>0.0000</b>	<b>40.6840</b>	<b>40.6840</b>	<b>3.6000e-003</b>	<b>0.0000</b>	<b>40.7740</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1138	0.0000	0.1138	0.0172	0.0000	0.0172	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.0900e-003	0.0220	0.2561	4.3000e-004		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	37.4008	37.4008	0.0105	0.0000	37.6640
<b>Total</b>	<b>5.0900e-003</b>	<b>0.0220</b>	<b>0.2561</b>	<b>4.3000e-004</b>	<b>0.1138</b>	<b>1.0000e-004</b>	<b>0.1139</b>	<b>0.0172</b>	<b>1.0000e-004</b>	<b>0.0173</b>	<b>0.0000</b>	<b>37.4008</b>	<b>37.4008</b>	<b>0.0105</b>	<b>0.0000</b>	<b>37.6640</b>

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**3.2 Demolition - 2021**

**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	3.9000e-003	0.1355	0.0334	4.0000e-004	8.8800e-003	4.1000e-004	9.2900e-003	2.4400e-003	3.9000e-004	2.8300e-003	0.0000	39.5281	39.5281	3.5700e-003	0.0000	39.6173
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	4.1000e-004	4.1200e-003	1.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1559	1.1559	3.0000e-005	0.0000	1.1567
<b>Total</b>	<b>4.4700e-003</b>	<b>0.1360</b>	<b>0.0376</b>	<b>4.1000e-004</b>	<b>0.0102</b>	<b>4.2000e-004</b>	<b>0.0106</b>	<b>2.7900e-003</b>	<b>4.0000e-004</b>	<b>3.1900e-003</b>	<b>0.0000</b>	<b>40.6840</b>	<b>40.6840</b>	<b>3.6000e-003</b>	<b>0.0000</b>	<b>40.7740</b>

**3.3 Site Preparation - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1355	0.0000	0.1355	0.0745	0.0000	0.0745	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0292	0.3037	0.1587	2.9000e-004		0.0153	0.0153		0.0141	0.0141	0.0000	25.0768	25.0768	8.1100e-003	0.0000	25.2796
<b>Total</b>	<b>0.0292</b>	<b>0.3037</b>	<b>0.1587</b>	<b>2.9000e-004</b>	<b>0.1355</b>	<b>0.0153</b>	<b>0.1508</b>	<b>0.0745</b>	<b>0.0141</b>	<b>0.0886</b>	<b>0.0000</b>	<b>25.0768</b>	<b>25.0768</b>	<b>8.1100e-003</b>	<b>0.0000</b>	<b>25.2796</b>

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**3.3 Site Preparation - 2021**

**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	4.7000e-004	3.3000e-004	3.3700e-003	1.0000e-005	1.0800e-003	1.0000e-005	1.0900e-003	2.9000e-004	1.0000e-005	2.9000e-004	0.0000	0.9457	0.9457	3.0000e-005	0.0000	0.9464
<b>Total</b>	<b>4.7000e-004</b>	<b>3.3000e-004</b>	<b>3.3700e-003</b>	<b>1.0000e-005</b>	<b>1.0800e-003</b>	<b>1.0000e-005</b>	<b>1.0900e-003</b>	<b>2.9000e-004</b>	<b>1.0000e-005</b>	<b>2.9000e-004</b>	<b>0.0000</b>	<b>0.9457</b>	<b>0.9457</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.9464</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1355	0.0000	0.1355	0.0745	0.0000	0.0745	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4900e-003	0.0151	0.1565	2.9000e-004		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	25.0768	25.0768	8.1100e-003	0.0000	25.2795
<b>Total</b>	<b>3.4900e-003</b>	<b>0.0151</b>	<b>0.1565</b>	<b>2.9000e-004</b>	<b>0.1355</b>	<b>7.0000e-005</b>	<b>0.1356</b>	<b>0.0745</b>	<b>7.0000e-005</b>	<b>0.0746</b>	<b>0.0000</b>	<b>25.0768</b>	<b>25.0768</b>	<b>8.1100e-003</b>	<b>0.0000</b>	<b>25.2795</b>

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**3.3 Site Preparation - 2021**

**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	4.7000e-004	3.3000e-004	3.3700e-003	1.0000e-005	1.0800e-003	1.0000e-005	1.0900e-003	2.9000e-004	1.0000e-005	2.9000e-004	0.0000	0.9457	0.9457	3.0000e-005	0.0000	0.9464
<b>Total</b>	<b>4.7000e-004</b>	<b>3.3000e-004</b>	<b>3.3700e-003</b>	<b>1.0000e-005</b>	<b>1.0800e-003</b>	<b>1.0000e-005</b>	<b>1.0900e-003</b>	<b>2.9000e-004</b>	<b>1.0000e-005</b>	<b>2.9000e-004</b>	<b>0.0000</b>	<b>0.9457</b>	<b>0.9457</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.9464</b>

**3.4 Grading - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2212	0.0000	0.2212	0.0917	0.0000	0.0917	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1069	1.1832	0.7874	1.5800e-003		0.0506	0.0506		0.0466	0.0466	0.0000	138.9622	138.9622	0.0449	0.0000	140.0858
<b>Total</b>	<b>0.1069</b>	<b>1.1832</b>	<b>0.7874</b>	<b>1.5800e-003</b>	<b>0.2212</b>	<b>0.0506</b>	<b>0.2718</b>	<b>0.0917</b>	<b>0.0466</b>	<b>0.1383</b>	<b>0.0000</b>	<b>138.9622</b>	<b>138.9622</b>	<b>0.0449</b>	<b>0.0000</b>	<b>140.0858</b>

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**3.4 Grading - 2021**

**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	3.7100e-003	0.1292	0.0319	3.8000e-004	8.4600e-003	3.9000e-004	8.8500e-003	2.3200e-003	3.7000e-004	2.7000e-003	0.0000	37.6622	37.6622	3.4000e-003	0.0000	37.7471
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	1.7700e-003	1.2600e-003	0.0127	4.0000e-005	4.0900e-003	3.0000e-005	4.1200e-003	1.0900e-003	3.0000e-005	1.1100e-003	0.0000	3.5727	3.5727	1.0000e-004	0.0000	3.5752
<b>Total</b>	<b>5.4800e-003</b>	<b>0.1304</b>	<b>0.0446</b>	<b>4.2000e-004</b>	<b>0.0126</b>	<b>4.2000e-004</b>	<b>0.0130</b>	<b>3.4100e-003</b>	<b>4.0000e-004</b>	<b>3.8100e-003</b>	<b>0.0000</b>	<b>41.2348</b>	<b>41.2348</b>	<b>3.5000e-003</b>	<b>0.0000</b>	<b>41.3224</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2212	0.0000	0.2212	0.0917	0.0000	0.0917	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.0842	0.8415	1.5800e-003		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	138.9620	138.9620	0.0449	0.0000	140.0856
<b>Total</b>	<b>0.0194</b>	<b>0.0842</b>	<b>0.8415</b>	<b>1.5800e-003</b>	<b>0.2212</b>	<b>3.9000e-004</b>	<b>0.2216</b>	<b>0.0917</b>	<b>3.9000e-004</b>	<b>0.0921</b>	<b>0.0000</b>	<b>138.9620</b>	<b>138.9620</b>	<b>0.0449</b>	<b>0.0000</b>	<b>140.0856</b>

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**3.4 Grading - 2021**

**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	3.7100e-003	0.1292	0.0319	3.8000e-004	8.4600e-003	3.9000e-004	8.8500e-003	2.3200e-003	3.7000e-004	2.7000e-003	0.0000	37.6622	37.6622	3.4000e-003	0.0000	37.7471
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	1.7700e-003	1.2600e-003	0.0127	4.0000e-005	4.0900e-003	3.0000e-005	4.1200e-003	1.0900e-003	3.0000e-005	1.1100e-003	0.0000	3.5727	3.5727	1.0000e-004	0.0000	3.5752
<b>Total</b>	<b>5.4800e-003</b>	<b>0.1304</b>	<b>0.0446</b>	<b>4.2000e-004</b>	<b>0.0126</b>	<b>4.2000e-004</b>	<b>0.0130</b>	<b>3.4100e-003</b>	<b>4.0000e-004</b>	<b>3.8100e-003</b>	<b>0.0000</b>	<b>41.2348</b>	<b>41.2348</b>	<b>3.5000e-003</b>	<b>0.0000</b>	<b>41.3224</b>

**3.5 Paving - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	1.8300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0144</b>	<b>0.1292</b>	<b>0.1465</b>	<b>2.3000e-004</b>		<b>6.7800e-003</b>	<b>6.7800e-003</b>		<b>6.2400e-003</b>	<b>6.2400e-003</b>	<b>0.0000</b>	<b>20.0235</b>	<b>20.0235</b>	<b>6.4800e-003</b>	<b>0.0000</b>	<b>20.1854</b>

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**3.5 Paving - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0508	1.0508	3.0000e-005	0.0000	1.0515
<b>Total</b>	<b>5.2000e-004</b>	<b>3.7000e-004</b>	<b>3.7500e-003</b>	<b>1.0000e-005</b>	<b>1.2000e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-003</b>	<b>3.2000e-004</b>	<b>1.0000e-005</b>	<b>3.3000e-004</b>	<b>0.0000</b>	<b>1.0508</b>	<b>1.0508</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>1.0515</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8000e-003	0.0122	0.1730	2.3000e-004		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	1.8300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>4.6300e-003</b>	<b>0.0122</b>	<b>0.1730</b>	<b>2.3000e-004</b>		<b>6.0000e-005</b>	<b>6.0000e-005</b>		<b>6.0000e-005</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>20.0235</b>	<b>20.0235</b>	<b>6.4800e-003</b>	<b>0.0000</b>	<b>20.1854</b>

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**3.5 Paving - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0508	1.0508	3.0000e-005	0.0000	1.0515
<b>Total</b>	<b>5.2000e-004</b>	<b>3.7000e-004</b>	<b>3.7500e-003</b>	<b>1.0000e-005</b>	<b>1.2000e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-003</b>	<b>3.2000e-004</b>	<b>1.0000e-005</b>	<b>3.3000e-004</b>	<b>0.0000</b>	<b>1.0508</b>	<b>1.0508</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>1.0515</b>

**3.6 Building Construction - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0627	0.5753	0.5470	8.9000e-004		0.0316	0.0316		0.0297	0.0297	0.0000	76.4403	76.4403	0.0184	0.0000	76.9013
<b>Total</b>	<b>0.0627</b>	<b>0.5753</b>	<b>0.5470</b>	<b>8.9000e-004</b>		<b>0.0316</b>	<b>0.0316</b>		<b>0.0297</b>	<b>0.0297</b>	<b>0.0000</b>	<b>76.4403</b>	<b>76.4403</b>	<b>0.0184</b>	<b>0.0000</b>	<b>76.9013</b>

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**3.6 Building Construction - 2021**

**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	3.8800e-003	0.1289	0.0344	3.4000e-004	8.3200e-003	2.7000e-004	8.6000e-003	2.4000e-003	2.6000e-004	2.6600e-003	0.0000	32.7846	32.7846	2.4300e-003	0.0000	32.8454
Worker	0.0239	0.0170	0.1715	5.3000e-004	0.0550	3.9000e-004	0.0554	0.0146	3.6000e-004	0.0150	0.0000	48.0839	48.0839	1.3800e-003	0.0000	48.1183
<b>Total</b>	<b>0.0277</b>	<b>0.1459</b>	<b>0.2059</b>	<b>8.7000e-004</b>	<b>0.0634</b>	<b>6.6000e-004</b>	<b>0.0640</b>	<b>0.0170</b>	<b>6.2000e-004</b>	<b>0.0177</b>	<b>0.0000</b>	<b>80.8685</b>	<b>80.8685</b>	<b>3.8100e-003</b>	<b>0.0000</b>	<b>80.9637</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0108	0.0738	0.5762	8.9000e-004		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	76.4402	76.4402	0.0184	0.0000	76.9013
<b>Total</b>	<b>0.0108</b>	<b>0.0738</b>	<b>0.5762</b>	<b>8.9000e-004</b>		<b>2.0000e-004</b>	<b>2.0000e-004</b>		<b>2.0000e-004</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>76.4402</b>	<b>76.4402</b>	<b>0.0184</b>	<b>0.0000</b>	<b>76.9013</b>

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**3.6 Building Construction - 2021**

**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	3.8800e-003	0.1289	0.0344	3.4000e-004	8.3200e-003	2.7000e-004	8.6000e-003	2.4000e-003	2.6000e-004	2.6600e-003	0.0000	32.7846	32.7846	2.4300e-003	0.0000	32.8454
Worker	0.0239	0.0170	0.1715	5.3000e-004	0.0550	3.9000e-004	0.0554	0.0146	3.6000e-004	0.0150	0.0000	48.0839	48.0839	1.3800e-003	0.0000	48.1183
<b>Total</b>	<b>0.0277</b>	<b>0.1459</b>	<b>0.2059</b>	<b>8.7000e-004</b>	<b>0.0634</b>	<b>6.6000e-004</b>	<b>0.0640</b>	<b>0.0170</b>	<b>6.2000e-004</b>	<b>0.0177</b>	<b>0.0000</b>	<b>80.8685</b>	<b>80.8685</b>	<b>3.8100e-003</b>	<b>0.0000</b>	<b>80.9637</b>

**3.6 Building Construction - 2022**

**Unmitigated Construction On-Site**

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

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**3.6 Building Construction - 2022**

**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	0.0142	0.4794	0.1282	1.3100e-003	0.0328	9.3000e-004	0.0337	9.4700e-003	8.8000e-004	0.0104	0.0000	127.9283	127.9283	9.2900e-003	0.0000	128.1605
Worker	0.0890	0.0611	0.6272	2.0200e-003	0.2168	1.5000e-003	0.2183	0.0576	1.3800e-003	0.0590	0.0000	182.4776	182.4776	4.9700e-003	0.0000	182.6019
<b>Total</b>	<b>0.1032</b>	<b>0.5406</b>	<b>0.7554</b>	<b>3.3300e-003</b>	<b>0.2496</b>	<b>2.4300e-003</b>	<b>0.2521</b>	<b>0.0671</b>	<b>2.2600e-003</b>	<b>0.0694</b>	<b>0.0000</b>	<b>310.4059</b>	<b>310.4059</b>	<b>0.0143</b>	<b>0.0000</b>	<b>310.7623</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0426	0.2905	2.2698	3.5000e-003		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	301.2425	301.2425	0.0722	0.0000	303.0467
<b>Total</b>	<b>0.0426</b>	<b>0.2905</b>	<b>2.2698</b>	<b>3.5000e-003</b>		<b>8.0000e-004</b>	<b>8.0000e-004</b>		<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>301.2425</b>	<b>301.2425</b>	<b>0.0722</b>	<b>0.0000</b>	<b>303.0467</b>

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**3.6 Building Construction - 2022**

**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	0.0142	0.4794	0.1282	1.3100e-003	0.0328	9.3000e-004	0.0337	9.4700e-003	8.8000e-004	0.0104	0.0000	127.9283	127.9283	9.2900e-003	0.0000	128.1605
Worker	0.0890	0.0611	0.6272	2.0200e-003	0.2168	1.5000e-003	0.2183	0.0576	1.3800e-003	0.0590	0.0000	182.4776	182.4776	4.9700e-003	0.0000	182.6019
<b>Total</b>	<b>0.1032</b>	<b>0.5406</b>	<b>0.7554</b>	<b>3.3300e-003</b>	<b>0.2496</b>	<b>2.4300e-003</b>	<b>0.2521</b>	<b>0.0671</b>	<b>2.2600e-003</b>	<b>0.0694</b>	<b>0.0000</b>	<b>310.4059</b>	<b>310.4059</b>	<b>0.0143</b>	<b>0.0000</b>	<b>310.7623</b>

**3.6 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	0.0118	0.1079	0.1218	2.0000e-004		5.2500e-003	5.2500e-003		4.9400e-003	4.9400e-003	0.0000	17.3854	17.3854	4.1400e-003	0.0000	17.4888
<b>Total</b>	<b>0.0118</b>	<b>0.1079</b>	<b>0.1218</b>	<b>2.0000e-004</b>		<b>5.2500e-003</b>	<b>5.2500e-003</b>		<b>4.9400e-003</b>	<b>4.9400e-003</b>	<b>0.0000</b>	<b>17.3854</b>	<b>17.3854</b>	<b>4.1400e-003</b>	<b>0.0000</b>	<b>17.4888</b>

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**3.6 Building Construction - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.3000e-004	0.0217	6.7300e-003	7.0000e-005	1.8900e-003	3.0000e-005	1.9200e-003	5.5000e-004	2.0000e-005	5.7000e-004	0.0000	7.1947	7.1947	4.9000e-004	0.0000	7.2069
Worker	4.8600e-003	3.2200e-003	0.0336	1.1000e-004	0.0125	8.0000e-005	0.0126	3.3200e-003	8.0000e-005	3.4000e-003	0.0000	10.1254	10.1254	2.6000e-004	0.0000	10.1320
<b>Total</b>	<b>5.4900e-003</b>	<b>0.0250</b>	<b>0.0403</b>	<b>1.8000e-004</b>	<b>0.0144</b>	<b>1.1000e-004</b>	<b>0.0145</b>	<b>3.8700e-003</b>	<b>1.0000e-004</b>	<b>3.9700e-003</b>	<b>0.0000</b>	<b>17.3201</b>	<b>17.3201</b>	<b>7.5000e-004</b>	<b>0.0000</b>	<b>17.3389</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.4600e-003	0.0168	0.1310	2.0000e-004		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	17.3853	17.3853	4.1400e-003	0.0000	17.4887
<b>Total</b>	<b>2.4600e-003</b>	<b>0.0168</b>	<b>0.1310</b>	<b>2.0000e-004</b>		<b>5.0000e-005</b>	<b>5.0000e-005</b>		<b>5.0000e-005</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>17.3853</b>	<b>17.3853</b>	<b>4.1400e-003</b>	<b>0.0000</b>	<b>17.4887</b>

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**3.6 Building Construction - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.3000e-004	0.0217	6.7300e-003	7.0000e-005	1.8900e-003	3.0000e-005	1.9200e-003	5.5000e-004	2.0000e-005	5.7000e-004	0.0000	7.1947	7.1947	4.9000e-004	0.0000	7.2069
Worker	4.8600e-003	3.2200e-003	0.0336	1.1000e-004	0.0125	8.0000e-005	0.0126	3.3200e-003	8.0000e-005	3.4000e-003	0.0000	10.1254	10.1254	2.6000e-004	0.0000	10.1320
<b>Total</b>	<b>5.4900e-003</b>	<b>0.0250</b>	<b>0.0403</b>	<b>1.8000e-004</b>	<b>0.0144</b>	<b>1.1000e-004</b>	<b>0.0145</b>	<b>3.8700e-003</b>	<b>1.0000e-004</b>	<b>3.9700e-003</b>	<b>0.0000</b>	<b>17.3201</b>	<b>17.3201</b>	<b>7.5000e-004</b>	<b>0.0000</b>	<b>17.3389</b>

**3.7 Architectural Coating - 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					
Archit. Coating	1.3773					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6500e-003	0.0458	0.0589	1.0000e-004		2.6600e-003	2.6600e-003		2.6600e-003	2.6600e-003	0.0000	8.2981	8.2981	5.4000e-004	0.0000	8.3116
<b>Total</b>	<b>1.3840</b>	<b>0.0458</b>	<b>0.0589</b>	<b>1.0000e-004</b>		<b>2.6600e-003</b>	<b>2.6600e-003</b>		<b>2.6600e-003</b>	<b>2.6600e-003</b>	<b>0.0000</b>	<b>8.2981</b>	<b>8.2981</b>	<b>5.4000e-004</b>	<b>0.0000</b>	<b>8.3116</b>

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**3.7 Architectural Coating - 2022**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4900e-003	3.0900e-003	0.0317	1.0000e-004	0.0110	8.0000e-005	0.0110	2.9100e-003	7.0000e-005	2.9800e-003	0.0000	9.2116	9.2116	2.5000e-004	0.0000	9.2179
<b>Total</b>	<b>4.4900e-003</b>	<b>3.0900e-003</b>	<b>0.0317</b>	<b>1.0000e-004</b>	<b>0.0110</b>	<b>8.0000e-005</b>	<b>0.0110</b>	<b>2.9100e-003</b>	<b>7.0000e-005</b>	<b>2.9800e-003</b>	<b>0.0000</b>	<b>9.2116</b>	<b>9.2116</b>	<b>2.5000e-004</b>	<b>0.0000</b>	<b>9.2179</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.3773					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7000e-004	4.1800e-003	0.0596	1.0000e-004		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.2981	8.2981	5.4000e-004	0.0000	8.3116
<b>Total</b>	<b>1.3783</b>	<b>4.1800e-003</b>	<b>0.0596</b>	<b>1.0000e-004</b>		<b>2.0000e-005</b>	<b>2.0000e-005</b>		<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>8.2981</b>	<b>8.2981</b>	<b>5.4000e-004</b>	<b>0.0000</b>	<b>8.3116</b>

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**3.7 Architectural Coating - 2022**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4900e-003	3.0900e-003	0.0317	1.0000e-004	0.0110	8.0000e-005	0.0110	2.9100e-003	7.0000e-005	2.9800e-003	0.0000	9.2116	9.2116	2.5000e-004	0.0000	9.2179
<b>Total</b>	<b>4.4900e-003</b>	<b>3.0900e-003</b>	<b>0.0317</b>	<b>1.0000e-004</b>	<b>0.0110</b>	<b>8.0000e-005</b>	<b>0.0110</b>	<b>2.9100e-003</b>	<b>7.0000e-005</b>	<b>2.9800e-003</b>	<b>0.0000</b>	<b>9.2116</b>	<b>9.2116</b>	<b>2.5000e-004</b>	<b>0.0000</b>	<b>9.2179</b>

**3.7 Architectural Coating - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2119					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
<b>Total</b>	<b>0.2129</b>	<b>6.5100e-003</b>	<b>9.0600e-003</b>	<b>1.0000e-005</b>		<b>3.5000e-004</b>	<b>3.5000e-004</b>		<b>3.5000e-004</b>	<b>3.5000e-004</b>	<b>0.0000</b>	<b>1.2766</b>	<b>1.2766</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>1.2785</b>

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**3.7 Architectural Coating - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	4.3000e-004	4.5200e-003	2.0000e-005	1.6800e-003	1.0000e-005	1.7000e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.3630	1.3630	4.0000e-005	0.0000	1.3639
<b>Total</b>	<b>6.5000e-004</b>	<b>4.3000e-004</b>	<b>4.5200e-003</b>	<b>2.0000e-005</b>	<b>1.6800e-003</b>	<b>1.0000e-005</b>	<b>1.7000e-003</b>	<b>4.5000e-004</b>	<b>1.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>1.3630</b>	<b>1.3630</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.3639</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2119					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-004	6.4000e-004	9.1600e-003	1.0000e-005		0.0000	0.0000		0.0000	0.0000	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
<b>Total</b>	<b>0.2120</b>	<b>6.4000e-004</b>	<b>9.1600e-003</b>	<b>1.0000e-005</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.2766</b>	<b>1.2766</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>1.2785</b>

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**3.7 Architectural Coating - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	4.3000e-004	4.5200e-003	2.0000e-005	1.6800e-003	1.0000e-005	1.7000e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.3630	1.3630	4.0000e-005	0.0000	1.3639
<b>Total</b>	<b>6.5000e-004</b>	<b>4.3000e-004</b>	<b>4.5200e-003</b>	<b>2.0000e-005</b>	<b>1.6800e-003</b>	<b>1.0000e-005</b>	<b>1.7000e-003</b>	<b>4.5000e-004</b>	<b>1.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>1.3630</b>	<b>1.3630</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.3639</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3603	1.4095	3.7924	0.0131	1.2111	0.0105	1.2216	0.3243	9.7300e-003	0.3340	0.0000	1,212.2790	1,212.2790	0.0635	0.0000	1,213.8658
Unmitigated	0.3603	1.4095	3.7924	0.0131	1.2111	0.0105	1.2216	0.3243	9.7300e-003	0.3340	0.0000	1,212.2790	1,212.2790	0.0635	0.0000	1,213.8658

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,182.00	1,182.00	1182.00	2,292,361	2,292,361
Condo/Townhouse	424.00	424.00	424.00	822,302	822,302
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	84.00	84.00	84.00	99,638	99,638
Recreational Swimming Pool	0.00	0.00	0.00		
<b>Total</b>	<b>1,690.00</b>	<b>1,690.00</b>	<b>1,690.00</b>	<b>3,214,302</b>	<b>3,214,302</b>

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	6.00	6.00	6.00	42.00	18.00	40.00	86	11	3
Condo/Townhouse	6.00	6.00	6.00	42.00	18.00	40.00	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Recreational Swimming Pool	9.50	7.30	7.30	33.00	48.00	19.00	52	39	9

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**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.606234	0.039465	0.179154	0.102641	0.014368	0.005395	0.016820	0.024508	0.001929	0.001857	0.005869	0.000761	0.000998
Condo/Townhouse	0.606234	0.039465	0.179154	0.102641	0.014368	0.005395	0.016820	0.024508	0.001929	0.001857	0.005869	0.000761	0.000998
Parking Lot	0.606234	0.039465	0.179154	0.102641	0.014368	0.005395	0.016820	0.024508	0.001929	0.001857	0.005869	0.000761	0.000998
Quality Restaurant	0.606234	0.039465	0.179154	0.102641	0.014368	0.005395	0.016820	0.024508	0.001929	0.001857	0.005869	0.000761	0.000998
Recreational Swimming Pool	0.606234	0.039465	0.179154	0.102641	0.014368	0.005395	0.016820	0.024508	0.001929	0.001857	0.005869	0.000761	0.000998

**5.0 Energy Detail**

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Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Install High Efficiency Lighting

Install Energy Efficient Appliances

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated							0.0000	0.0000		0.0000	0.0000	209.3443	209.3443	8.3300e-003	1.8500e-003	210.1041
Electricity Unmitigated							0.0000	0.0000		0.0000	0.0000	248.8218	248.8218	9.9000e-003	2.2000e-003	249.7249
NaturalGas Mitigated	0.0153	0.1325	0.0688	8.3000e-004			0.0106	0.0106		0.0106	0.0000	151.3442	151.3442	2.9000e-003	2.7700e-003	152.2435
NaturalGas Unmitigated	0.0153	0.1325	0.0688	8.3000e-004			0.0106	0.0106		0.0106	0.0000	151.3442	151.3442	2.9000e-003	2.7700e-003	152.2435

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**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	1.46346e+006	7.8900e-003	0.0674	0.0287	4.3000e-004		5.4500e-003	5.4500e-003		5.4500e-003	5.4500e-003	0.0000	78.0959	78.0959	1.5000e-003	1.4300e-003	78.5600
Condo/Townhouse	762291	4.1100e-003	0.0351	0.0150	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003	0.0000	40.6788	40.6788	7.8000e-004	7.5000e-004	40.9205
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	610330	3.2900e-003	0.0299	0.0251	1.8000e-004		2.2700e-003	2.2700e-003		2.2700e-003	2.2700e-003	0.0000	32.5695	32.5695	6.2000e-004	6.0000e-004	32.7631
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0153</b>	<b>0.1325</b>	<b>0.0688</b>	<b>8.3000e-004</b>		<b>0.0106</b>	<b>0.0106</b>		<b>0.0106</b>	<b>0.0106</b>	<b>0.0000</b>	<b>151.3442</b>	<b>151.3442</b>	<b>2.9000e-003</b>	<b>2.7800e-003</b>	<b>152.2436</b>

Fox Point - San Diego County, Annual

**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	1.46346e+006	7.8900e-003	0.0674	0.0287	4.3000e-004		5.4500e-003	5.4500e-003		5.4500e-003	5.4500e-003	0.0000	78.0959	78.0959	1.5000e-003	1.4300e-003	78.5600
Condo/Townhouse	762291	4.1100e-003	0.0351	0.0150	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003	0.0000	40.6788	40.6788	7.8000e-004	7.5000e-004	40.9205
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	610330	3.2900e-003	0.0299	0.0251	1.8000e-004		2.2700e-003	2.2700e-003		2.2700e-003	2.2700e-003	0.0000	32.5695	32.5695	6.2000e-004	6.0000e-004	32.7631
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0153</b>	<b>0.1325</b>	<b>0.0688</b>	<b>8.3000e-004</b>		<b>0.0106</b>	<b>0.0106</b>		<b>0.0106</b>	<b>0.0106</b>	<b>0.0000</b>	<b>151.3442</b>	<b>151.3442</b>	<b>2.9000e-003</b>	<b>2.7800e-003</b>	<b>152.2436</b>

Fox Point - San Diego County, Annual

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	788971	161.9081	6.4400e-003	1.4300e-003	162.4958
Condo/Townhouse	266236	54.6355	2.1700e-003	4.8000e-004	54.8338
Parking Lot	21840	4.4819	1.8000e-004	4.0000e-005	4.4982
Quality Restaurant	135450	27.7963	1.1100e-003	2.5000e-004	27.8972
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>248.8218</b>	<b>9.9000e-003</b>	<b>2.2000e-003</b>	<b>249.7249</b>

## Fox Point - San Diego County, Annual

**5.3 Energy by Land Use - Electricity****Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	673117	138.1331	5.5000e-003	1.2200e-003	138.6345
Condo/Townhouse	224773	46.1266	1.8400e-003	4.1000e-004	46.2940
Parking Lot	7644	1.5687	6.0000e-005	1.0000e-005	1.5744
Quality Restaurant	114592	23.5159	9.4000e-004	2.1000e-004	23.6012
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>209.3443</b>	<b>8.3400e-003</b>	<b>1.8500e-003</b>	<b>210.1041</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

Fox Point - San Diego County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2089	0.0214	1.8570	1.0000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	3.0351	3.0351	2.9200e-003	0.0000	3.1080
Unmitigated	1.2089	0.0214	1.8570	1.0000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	3.0351	3.0351	2.9200e-003	0.0000	3.1080

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	0.1589					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9941					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0559	0.0214	1.8570	1.0000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	3.0351	3.0351	2.9200e-003	0.0000	3.1080
<b>Total</b>	<b>1.2089</b>	<b>0.0214</b>	<b>1.8570</b>	<b>1.0000e-004</b>		<b>0.0103</b>	<b>0.0103</b>		<b>0.0103</b>	<b>0.0103</b>	<b>0.0000</b>	<b>3.0351</b>	<b>3.0351</b>	<b>2.9200e-003</b>	<b>0.0000</b>	<b>3.1080</b>

Fox Point - San Diego County, Annual

**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	0.1589					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9941					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0559	0.0214	1.8570	1.0000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	3.0351	3.0351	2.9200e-003	0.0000	3.1080
<b>Total</b>	<b>1.2089</b>	<b>0.0214</b>	<b>1.8570</b>	<b>1.0000e-004</b>		<b>0.0103</b>	<b>0.0103</b>		<b>0.0103</b>	<b>0.0103</b>	<b>0.0000</b>	<b>3.0351</b>	<b>3.0351</b>	<b>2.9200e-003</b>	<b>0.0000</b>	<b>3.1080</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

- Use Reclaimed Water
- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

Fox Point - San Diego County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	81.5878	0.8108	0.0197	107.7370
Unmitigated	134.7455	1.0148	0.0250	167.5510

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	22.7861 / 14.3652	100.8673	0.7462	0.0184	124.9937
Condo/Townhouse	6.13028 / 3.86474	27.1369	0.2008	4.9400e-003	33.6278
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	1.88598 / 0.120382	5.9123	0.0617	1.5000e-003	7.9004
Recreational Swimming Pool	0.18899 / 0.115833	0.8291	6.1900e-003	1.5000e-004	1.0291
<b>Total</b>		<b>134.7455</b>	<b>1.0148</b>	<b>0.0250</b>	<b>167.5510</b>

Fox Point - San Diego County, Annual

**7.2 Water by Land Use**

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	18.2289 / 2.54966	60.3056	0.5962	0.0145	79.5328
Condo/Townhouse	4.90422 / 0.685948	16.2243	0.1604	3.9000e-003	21.3971
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	1.50879 / 0.0213665	4.5590	0.0493	1.2000e-003	6.1489
Recreational Swimming Pool	0.151192 / 0.0205591	0.4988	4.9400e-003	1.2000e-004	0.6583
<b>Total</b>		<b>81.5878</b>	<b>0.8108</b>	<b>0.0197</b>	<b>107.7371</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

Fox Point - San Diego County, Annual

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.0371	0.7705	0.0000	32.2989
Unmitigated	26.0742	1.5409	0.0000	64.5977

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	90.62	18.3950	1.0871	0.0000	45.5729
Condo/Townhouse	24.38	4.9489	0.2925	0.0000	12.2607
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	3.19	0.6475	0.0383	0.0000	1.6043
Recreational Swimming Pool	10.26	2.0827	0.1231	0.0000	5.1598
<b>Total</b>		<b>26.0742</b>	<b>1.5409</b>	<b>0.0000</b>	<b>64.5977</b>

Fox Point - San Diego County, Annual

**8.2 Waste by Land Use**

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	45.31	9.1975	0.5436	0.0000	22.7865
Condo/Townhouse	12.19	2.4745	0.1462	0.0000	6.1304
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	1.595	0.3238	0.0191	0.0000	0.8021
Recreational Swimming Pool	5.13	1.0413	0.0615	0.0000	2.5799
<b>Total</b>		<b>13.0371</b>	<b>0.7705</b>	<b>0.0000</b>	<b>32.2989</b>

**9.0 Operational Offroad**

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

**Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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Fox Point - San Diego County, Annual

**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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**ATTACHMENT B**

NREL PV Watts 434 kW Energy Output Calculations



Caution: Photovoltaic system performance predictions calculated by PVWatts® include many inherent assumptions and uncertainties and do not reflect variations between PV technologies nor site-specific characteristics except as represented by PVWatts® inputs. For example, PV modules with better performance are not differentiated within PVWatts® from lesser performing modules. Both NREL and private companies provide more sophisticated PV modeling tools (such as the System Advisor Model at <https://sam.nrel.gov>) that allow for more precise and complex modeling of PV systems.

The expected range is based on 30 years of actual weather data at the given location and is intended to provide an indication of the variation you might see. For more information, please refer to this NREL report: The Error Report.

Disclaimer: The PVWatts® Model ("Model") is provided by the National Renewable Energy Laboratory ("NREL"), which is operated by the Alliance for Sustainable Energy, LLC ("Alliance") for the U.S. Department Of Energy ("DOE") and may be used for any purpose whatsoever.

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The energy output range is based on analysis of 30 years of historical weather data for nearby , and is intended to provide an indication of the possible interannual variability in generation for a Fixed (open rack) PV system at this location.

## RESULTS

# 688,522 kWh/Year\*

System output may range from 661,808 to 692,860 kWh per year near this location.

Month	Solar Radiation ( kWh / m <sup>2</sup> / day )	AC Energy ( kWh )	Value ( \$ )
January	4.51	45,981	7,518
February	5.21	48,506	7,931
March	6.03	61,334	10,028
April	6.81	66,078	10,804
May	6.53	66,279	10,837
June	6.54	63,874	10,443
July	6.63	64,804	10,596
August	6.74	66,161	10,817
September	6.29	59,424	9,716
October	5.40	52,981	8,662
November	4.93	48,461	7,923
December	4.30	44,640	7,299
<b>Annual</b>	<b>5.83</b>	<b>688,523</b>	<b>\$ 112,574</b>

### Location and Station Identification

Requested Location	encinitas
Weather Data Source	Lat, Lon: 33.05, -117.3 0.6 mi
Latitude	33.05° N
Longitude	117.3° W

### PV System Specifications (Residential)

DC System Size	434 kW
Module Type	Standard
Array Type	Fixed (roof mount)
Array Tilt	20°
Array Azimuth	180°
System Losses	14.08%
Inverter Efficiency	96%
DC to AC Size Ratio	1.2

### Economics

Average Retail Electricity Rate	0.164 \$/kWh
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### Performance Metrics

Capacity Factor	18.1%
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**ATTACHMENT C**

CalEEMod PV Solar Panels

Quail Meadows Solar - San Diego County, Annual

**Quail Meadows Solar**  
**San Diego County, Annual**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Rural	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2025
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	720.49	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

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

Quail Meadows Solar - San Diego County, Annual

Project Characteristics - Project would install 434kw solar

Land Use - Rooftop Solar

Construction Phase -

Off-road Equipment -

Off-road Equipment - zero hours

Trips and VMT - zero

Grading -

Architectural Coating -

Vehicle Trips -

Woodstoves - 0

Area Coating -

Landscape Equipment - zero

Energy Use -

Water And Wastewater -

Construction Off-road Equipment Mitigation -

Energy Mitigation - Based on PVWatts, 434 kw of solar would generate 688,522 kWh per year.

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	250	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	0
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripNumber	3.00	0.00

**2.0 Emissions Summary**



Quail Meadows Solar - San Diego County, Annual

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

Quail Meadows Solar - San Diego County, Annual

**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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	-225.0150	-225.0150	-0.0091	-0.0019	-225.7999
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>-225.0150</b>	<b>-225.0150</b>	<b>-0.0091</b>	<b>-0.0019</b>	<b>-225.7998</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1,125,075,150.00</b>	<b>1,125,075,150.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1,128,999,300.00</b>

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2022	1/1/2022	5	1	

**Acres of Grading (Site Preparation Phase): 0**

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**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	0.00	174	0.41

**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	1	0.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**



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**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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>							

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>							

**4.0 Operational Detail - Mobile**

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**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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.609162	0.038894	0.178600	0.101308	0.013823	0.005356	0.016956	0.024628	0.001928	0.001823	0.005807	0.000764	0.000950





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**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	-688522	-225.0150	-0.0091	-0.0019	-225.7999
<b>Total</b>		<b>-225.0150</b>	<b>-0.0091</b>	<b>-0.0019</b>	<b>-225.7999</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

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**6.2 Area by SubCategory**

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

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**7.2 Water by Land Use**

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

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

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**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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