

GLOBAL CLIMATE CHANGE

Monserate Winery and Events
Fallbrook, CA

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November 8, 2019

ENV. LOG NO. PDS 2018-ER-18-02-003

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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 (CO₂)

Cubic Yards (CY)

Environmental Protection Agency (EPA)

Green House Gas (GHG)

International Residential Code (IRC)

Low Carbon Fuel Standard (LCFS)

Methane (CH₄)

Nitrous Oxide (N₂O)

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 analysis has been completed in order to quantify Greenhouse Gas (GHG) emissions from the Project and 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). GHGs analyzed in this study are Carbon Dioxide (CO₂), Methane (CH₄), and Nitrous Oxide (N₂O). To simplify GHG calculations, both CH₄ and N₂O are converted to equivalent amounts of CO₂ and are identified as carbon dioxide equivalent (CO₂e).

This Project is located in the community of Fallbrook, California in northwestern San Diego County. The site lies approximately 1.5 miles north of State Route 76 (SR 76) and approximately 1.5 miles west of Interstate 15 (I-15) and was previously used as a golf course and restaurant.

All construction phases of the proposed Project are anticipated to start in late 2019 and full buildout is expected sometime late 2020 with full operations expected in 2020.

During construction of the Project, it's expected that approximately 466.21 Metric Tons (MT) of CO₂e will be generated. Given this, the Project would generate 15.54 MT CO₂e per year over the amortized 30-year life of the Project.

The proposed Project will emit GHGs directly through operations and indirectly from offsite sources such as water conveyance and utilities. The proposed Project would generate approximately 1,244.66 MT of CO₂e each year in 2020 and includes emissions from construction as well as design features to include high efficiency lighting. Also, the Project action would require the removal of an existing golf course and restaurant use. Removal of the existing use would remove 1,998.06 MT CO₂e. Based upon this, the Project action would remove 753.40 MT CO₂e ($-1,998.06 + 1,244.66 = -753.40$) from the existing environment or County of San Diego GHG inventories.

Since the Project generates fewer emissions than an allowed General Plan use for the site, the Project's GHG emissions are assumed to have been anticipated by the Climate Action Plan (CAP) and would therefore result in a less than significant cumulatively considerable increase in GHG emissions. Furthermore, since the project generates fewer emissions than the previous operations for the site, the project's GHG emissions are assumed to have been anticipated by the CAP and would therefore result in a less than significant cumulatively considerable increase in GHG emissions under the CAP.

1.0 INTRODUCTION

1.1 Purpose of this Study

The purpose of this GHG Assessment is to show conformance to the California Global Warming Solutions Act of 2006 – AB32 and SB97. AB32 requires that by 2020 the state's GHG emissions be reduced to 1990 levels and SB97 a "companion" bill directed amendments to the CEQA statute to specifically establish that GHG emissions and their impacts are appropriate subjects for CEQA analysis. Should impacts be determined, the intent of this study would be to recommend suitable mitigation measures to bring the Project to a level considered less than significant.

1.2 Project Location

The proposed Monserate Winery Project site is located in the community of Fallbrook, California in northwestern unincorporated San Diego County. The site lies approximately 1.5 miles north of State Route 76 (SR 76) and approximately 1.5 miles west of Interstate 15 (I-15). The subject property [County Assessor Parcel Numbers (APNs) 107-240-16, -17, and -51; 124-182-01 and -02; 124-330-04, -14, -15, and -20] is approximately 116 acres, located within the Fallbrook Community Plan Area. The Site vicinity map is shown in Figure 1-A.

1.3 Project Description

The Project is a Major Use Permit (MUP) modification to authorize a winery/passive open space with event/venues or similar gathering and/or spa facilities on the site. The land area affected by the proposed MUP modification is comprised of an approximately 23.7-acre portion of the 116-acre property which has a zoning designation of zoned Limited Agricultural A-70 and has an open space (Recreation) General Plan Land Use designation. The remaining land area not affected by the proposed MUP modification will be placed within a dedicated open space/agricultural easement to prohibit future development; however, portions of this land area would be planted with vineyards in support of the proposed use.

Additionally, a portion of the overall 116-acre property (APNs 124-182-01 and -02) located to the east of Gird Road (previously a portion of the former golf course that operated on the subject site) has been planted as a vineyard since 2017. This area is not part of the current Major Use Permit modification authorizing the winery and event center and is being removed from the previous golf course Major Use Permit authority.

The proposed structures would total approximately 56,040 SF. This includes the 17,362 SF main tasting room and restaurant as well as three additional event/venue areas with

supporting facilities which would encompass 38,396 SF, and a 282 SF pump house. A more detailed description of these facilities is further described below. The Project site plan is shown in Figure 1-B below.

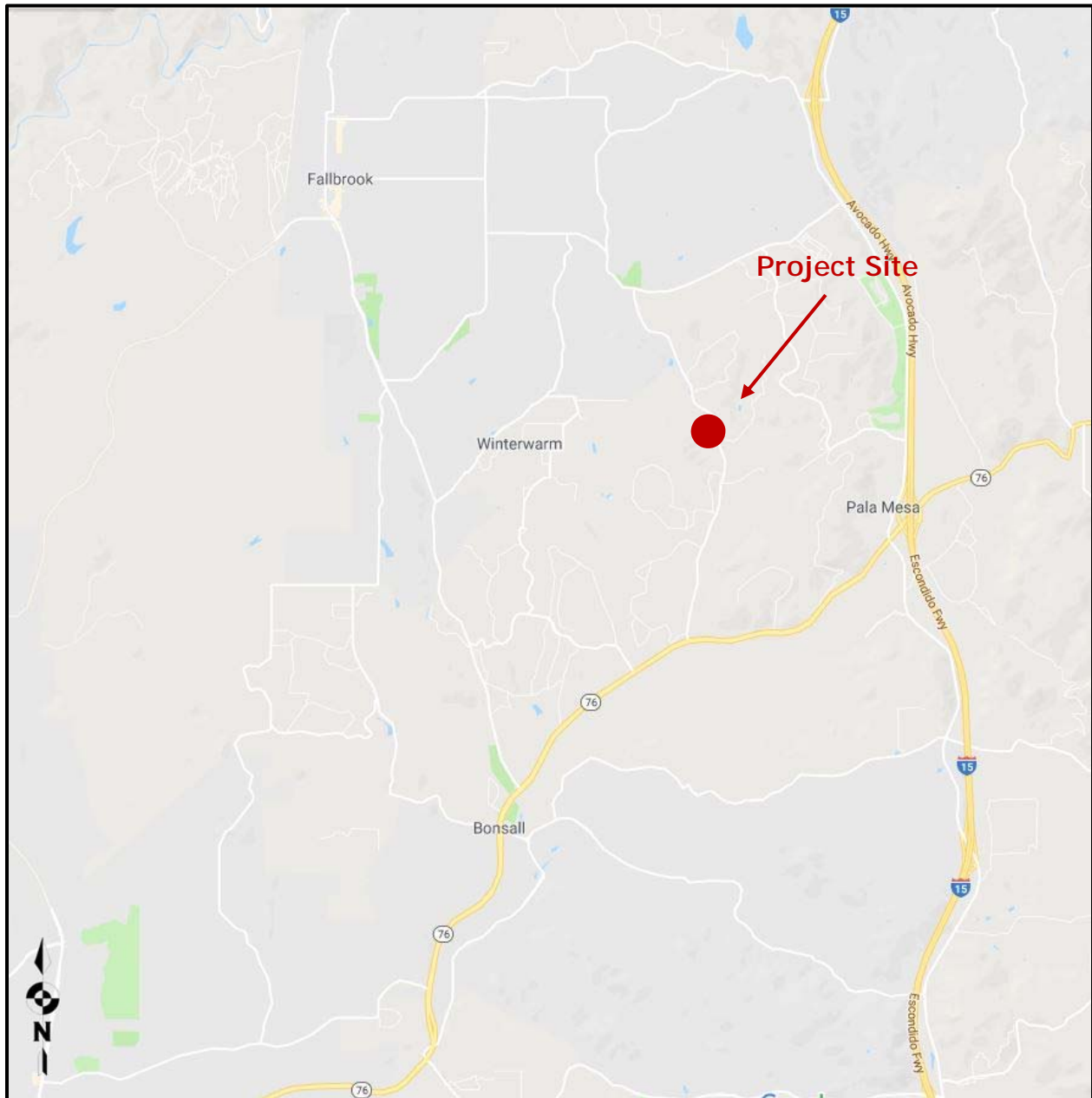
The Wine Tasting facility (17,362 SF) would include a large tasting room and several outdoor patios for use in serving wine tasting guests and members and to support accessory events held at the property. This building would also offer a restaurant for public dining. A commercial catering kitchen, staff lounge, meat curing room, and dish washing room are proposed in support of the wine tasting activities and restaurant. Several offices, restrooms, janitor storage, and storage areas would also be accommodated within this structure.

Venue 1 (22,673 SF) would be located just to the southwest of the tasting room/restaurant building and would consist of the indoor production area (approximately 3,600 SF) with wine making facilities, bottle storage room, barrel room, crushing rooms, and a covered outdoor patio for ingress/egress and initial processing activities, as well as several offices, a break room, a laboratory, storage areas, and restroom. Separate bridal/groom suites (approximately 3,200 SF), each with lockers, restrooms, grooming areas, and patios for the bride and groom and their guests are also proposed. A central courtyard would separate the bridal/groom suites from the wine making facilities. A pavilion is also proposed adjacent to the courtyard for hosting of weddings or other events. Several additional offices, including two sales offices, and a lobby/reception area would also be accommodated within this structure.

Venue 2 (7,349 SF) would be located to the west side of the onsite drainage, west of the main facilities, and would consist of an approximately 3,400 SF barn style building for holding events. A separate building is proposed just to the west of the barn that would offer restrooms, storage and other supporting uses. An open grassy area is proposed to the north of Venue 2 that could potentially be used for hosting periodic special events such as an art show or car show (e.g., combined with wine tasting events).

Venue 3 (8,374 SF) would be located to the northwest of the tasting room building and would offer bride/groom suits similar to those proposed for Venue 1. Separate bride and groom suites, each with a changing/grooming area, lockers, restrooms, janitor storage, and a patio are proposed for this venue. Additional men's/women's restrooms would serve event guests. A central courtyard would separate the bride/groom facilities and would serve to host scheduled events. A second building would adjoin the bride/groom suites to the south, along with men's and women's restrooms, for the hosting of events.

Figure 1-A: Project Vicinity Map



Source: (Google, 2018)

The site plan illustrates the proposed development at 1000 West 10th Avenue. It features three main venues: Venue 1, Venue 2, and Venue 3. Venue 1 is located on the right side of the plan, adjacent to the Lantana Drive. Venue 2 is located in the lower left, and Venue 3 is located in the upper left. A Wine Tasting & Restaurant is situated near Venue 1. The plan also shows various site features including parking areas, landscaping, utility easements, and access easements. A MUP Boundary is indicated by a dashed line. The plan includes a north arrow and a scale bar.

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Operations

Full operations are expected in 2021 though It is anticipated that wine production will commence in the year 2020 depending on vine production. The winery would be capable of producing an estimated 10,000 cases of wine annually in its initial stages, with production ultimately expanding to a maximum of approximately 25,000 cases of wine (annually) over time. Initial production at the winery would be significantly below the 120,000-gallon production limit, as regulated and allowed by County ordinance.

Winery production activities would largely occur during the months of August, September, and October. During these months, the winery would generally operate from morning to later evening to accommodate fruit as it is ready to be used in production. Wine production would generally occur within the interior of the winery building, with occasional crushing and processing occurring outside under the covered patio. Approximately 32,000 gallons of wastewater will be produced in the building would be captured collectively and treated in accordance with applicable County of San Diego Department of Environmental Health (DEH) requirements. In addition, an evaporation pond plan (or other DEH-approved system) for treatment of 32,000 gallons of wastewater generated by winery production activities is proposed and would include aeration systems to reduce odors.

Events and Weddings

It is anticipated that the site would host weddings and/or events on average three times a week, for a total of 170 events per year, per venue. Any event would accommodate a maximum of 250 guests. Most events would be held on Friday, Saturday, or Sunday and would be scheduled to occur when the tasting room is closed so that overlap in the arrival and/or departure of guests and parking with other general visitors of the winery does not occur.

1.4 Project Design Features

Project design features have been incorporated into the Project to reduce emissions associated with operations of this project. This report will define specifically which design features or mitigation measures which were included within the Air Quality report and GHG estimation software and it should be expected that whenever a design feature is included within air quality modeling that those particular design features would be required for the project to implement such that the County can recommend approval. If mitigation measures are required for GHG compliance, they will be identified later in this analysis. A list of design features and mitigation measures identified in the project Air Quality (AQ) report are included within the GHG analysis are shown below:

1. AQ Mitigation Measure: All construction diesel equipment would be Tier IV compliant and shall include Diesel Particulate Filters (DPF).
2. Design Feature: The Project would install 100% LED lighting for both interior and exterior lighting and will install smart meters.

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Understanding GHGs

GHGs such as water vapor and carbon dioxide are abundant in the earth's atmosphere. These gases 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 as human activities require the use of burning fossil fuels stored carbon is released into the air in the form of CO₂ and to a much lesser extent CO. Additionally, over the years scientist have measured this rise in Carbon Dioxide and fear that it may be heating the planet too. Additionally, it is thought that other greenhouse gases such as Methane and Nitrous Oxide are to blame.

GHGs of concern as analyzed in this study are CO₂, CH₄, and N₂O. To simplify GHG calculations, both CH₄ and N₂O can be converted to an equivalent amount of CO₂ or CO₂e. CO₂e is calculated by multiplying the calculated levels of CH₄ and N₂O by a Global Warming Potential (GWP). CalEEMod 2016 uses the Intergovernmental Panel on Climate Change (IPCC) report as source data for GWP factors for both CH₄ and N₂O (CAPCOA, September 2016), using the 100-year period of 25 and 298, respectively (IPCC, 2007).

2.2 Existing Setting

The current site was used as an 18-hole golf course which has been closed and would not be a use included within the MUP modification. The site as it exists today, has an existing vineyard in the southern portion of the site which was established in 2017 and no structures exist onsite. Elevations onsite range from roughly 320 feet on the southern boundary to roughly 380 feet on the northern boundary of the Project. Land uses surrounding the Project site include rural residential uses which are adjacent to the project site.

2.3 Climate and Meteorology

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west heat up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps San Diego 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. It is common for inversion layers to develop

within high-pressure areas, which mostly define pressure patterns over the SDAB. These inversions are caused when a thin layer of the atmosphere increases in temperature with height. An inversion acts like a lid preventing vertical mixing of air through convective overturning.

Meteorological trends within the Fallbrook area generally show daytime highs ranging between 67°F in the winter to approximately 83°F in the summer with August usually being the hottest month. Daytime Low temperatures range from approximately 44°F in the winter to approximately 62°F in the summer. Precipitation is generally about 13 inches per year (WRCC, 2016). Prevailing wind patterns for the area vary during any given month during the year and also vary depending on the time of day or night. The predominant pattern though throughout the year is usually from the west or westerly (WRCC, 2018).

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— CO₂, CH₄, N₂O, Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulfur hexafluoride (SF₆)—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—CO₂, CH₄, N₂O, 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

Executive Order (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 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 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) CO₂e). 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 Team¹ 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

¹ 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 CO₂e) 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 SB 32 (discussed below). The strategy includes continuing the Cap-and-Trade Program through 2030², 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 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 EO 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

² 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.

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 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 CO₂e. 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, 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 version of Title 24 which will continue to improve upon the 2016 Standards for residential and nonresidential buildings. One of the most notable changes is the requirement for the installation of rooftop solar on all residential buildings (California Energy Commission, 2017). The 2019 Standards will go into effect on January 1, 2020. 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 EV 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.

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 CO₂ 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 the state board 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, 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 CO₂e 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.

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, 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 the San Diego Association of Governments (SANDAG) are a 7 percent reduction in emissions per capita by 2020 and a 13 percent reduction by 2035. SANDAG completed and adopted its *2050 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) in October 2011. In November 2011, 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.

After SANDAG's 2050 RTP/SCS was adopted, a lawsuit was filed by the Cleveland National Forest Foundation and others. The matter was recently resolved by the California Supreme Court (Case No. S223603), which held that SANDAG did not abuse its discretion when certifying its EIR by declining to explicitly engage in an analysis of the consistency of the

RTP/SCS' projected 2050 GHG emissions with the GHG reduction goals reflected in EO S-3-05.

In 2015, SANDAG adopted the next iteration of its RTP/SCS in accordance with statutorily mandated timelines and no subsequent litigation challenge was filed. More specifically, in October 2015, SANDAG adopted *San Diego Forward: The Regional Plan*. Like the 2050 RTP/SCS, this planning document meets CARB's 2020 and 2035 reduction targets for the region (SANDAG, 2015). 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.

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 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, 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 (CARB, 2012).

The Zero Emission Vehicle (ZEV) program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric (PHEV) vehicles 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.

EO B-16-12

In January 2018, Governor Brown signed Executive Order B-48-18, setting ambitious targets of 200 hydrogen fueling stations and 250,000 electric vehicle chargers to support 1.5 million zero-emission vehicles (ZEVs) on California roads by 2025, on the path to 5 million ZEVs by 2030. The initiative is designed to focus multi-stakeholder efforts on deploying charging and fueling infrastructure as well as making ZEVs increasingly affordable to own and operate. (Office of Governor Edmund G. Brown Jr., 2018).

AB 1236

AB 1236 (2015), as enacted in California's Planning and Zoning Law, requires local land use jurisdictions to approve applications for the installation of electric vehicle charging stations, as defined, through the issuance of specified permits unless there is substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill requires local land use jurisdictions with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that creates an expedited and streamlined permitting process for electric vehicle charging stations, as specified. In August 2016, the County Board of Supervisors adopted Ordinance No. 10437 adding a section to its County Code related to the expedited processing of electric vehicle charging stations permits consistent with AB 1236.

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 (CO₂ and CH₄) 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.

3.3 Local Regulations

County of San Diego General Plan

The County's General Plan Update (approved in 2011) provides smart growth and land use planning principles designed to reduce GHG emissions. GHG reduction policies are addressed within multiple elements of the General Plan Update. The strategies for reduction of GHG emissions in the General Plan Update are to reduce vehicle miles traveled (VMT), energy consumption, water consumption and solid waste. The General Plan Update also discusses the increased generation and use of renewable energy sources to reduce non-renewable electrical and natural gas energy consumption.

County of San Diego Climate Action Plan (CAP)

The County's CAP is a long-term plan that identifies strategies and measures to meet the County's targets to reduce GHG emissions by 2020 and 2030, consistent with the State's legislative GHG reduction targets, and demonstrates progress towards the State's 2050 GHG reduction goal (County of San Diego, 2017). At the time of preparing this greenhouse gas analysis, the County's CAP represents the currently adopted and applicable plan for CEQA purposes. Though not required to show consistency with the CAP, further analysis was provided within this report to demonstrate the Project's emissions compared to what would be generated by the maximum buildout of the site assumed under the General Plan.

In February 2018, the County's Board of Supervisors adopted a CAP that serves as a long-term programmatic plan that identifies strategies and measures to meet the County's targets to reduce GHG emissions by 2020 and 2030, consistent with the State's legislative GHG reduction targets, and demonstrates progress towards the State's 2050 GHG reduction goal. The Board's adoption of the CAP is the culmination of a multi-year plan development process

that followed from the judicial invalidation (see *Sierra Club v. County of San Diego* (Case No. D064243)) of the County's prior CAP, which was adopted in 2012. In February 2018, the Board also amended General Plan Goal COS-20 and Policy COS-20.1 – both originally adopted as part of the 2011 General Plan Update – to reflect recent changes in State law. (See the County's Final Supplement to the 2011 General Plan Update Program EIR (SCH No. 2016101055), pages 1-13 through 1-16.) When certifying the Environmental Impact Report (EIR) for the CAP last year, the Board also adopted mitigation measure M-GHG-1, establishing a protocol through which GPA projects may meet a portion of their GHG reduction obligation by purchasing offsets, including offsets that are generated by GHG reduction activities located outside of the County.

In March 2018, several petitioners filed a lawsuit against the County, alleging that the CAP and, in particular, M-GHG-1 were inconsistent with General Plan Goal COS-20 and Policy COS-20.1, which in December 2018, the trial court issued a writ ordering the approval of the CAP and its EIR to be set aside. In January 2019, the County appealed the San Diego Superior Court ruling, which stayed the trial court's ruling.

3.4 Project Specific Guidelines

The following discussion provides a generally applicable overview of the pertinent parameters of the CEQA Guidelines amendments that address GHG emissions. It should be noted that the GHG impacts are cumulative in nature, thus all the impact determinations provided in this analysis are related to cumulatively considerable impacts.

Appendix G of the CEQA Guidelines

Appendix G of the CEQA Guidelines was revised December 28, 2018. According to Appendix G of the CEQA Guidelines, a project would have a significant environmental impact related to GHGs if it would:

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

For purposes of this analysis, the two Appendix G checklist questions set forth above are utilized as the thresholds of significance when evaluating the environmental effects of the project's GHG emissions. In applying these thresholds, reference is made to CEQA Guidelines Section 15064.4(b)(1)-(3), as described above.

County of San Diego General Plan

A project's adherence to the County's General Plan can be determined through demonstrating consistency with General Plan land use assumption and policies. If a project would generate fewer GHG emissions than the maximum allowable buildout of the site under the General Plan land use designations, the project would have a less than significant GHG impacts. Further consistency with the General Plan can be demonstrated through compliance with applicable General Plan policies. See Table 5.4 for the project's consistency with applicable General Plan strategies, goals, and policies.

County of San Diego Climate Action Plan (CAP)

Per County guidelines, the thresholds of significance for climate change are:

"A proposed project would have a less than significant cumulatively considerable contribution to climate change impacts if it is found to be consistent with the County's Climate Action Plan; and, would normally have a cumulatively considerable contribution to climate change impacts if it is found to be inconsistent with the County's Climate Action Plan." Consistency with the CAP is determined through the CAP Consistency Review Checklist (Checklist) and provides a streamlined CEQA review process for proposed discretionary development projects. The Checklist is the mechanism that is used to demonstrate consistency with the CAP. If a project does not comply with required actions in the Checklist, it would be determined to be inconsistent with the CAP.

If a project is consistent with the projections in the CAP, 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 land use and/or zoning designation amendment results in a more GHG-intensive project, the project is required to demonstrate consistency with applicable CAP measures and offset the increase in emissions.

Although the CAP and its EIR remain applicable while the County appeals the trial court's decision, the CEQA analysis prepared for the proposed Project did not rely on the CAP to streamline the Project's environmental analysis under CEQA Guidelines Section 15183.5. Rather, the proposed Project's significance determination used the criteria contained in CEQA Guidelines Appendix G, (informed by CEQA Guidelines Section 15064.4) and mitigation strategies (informed by CEQA Guidelines Section 15126.4(c)) that are independent of the

CAP.³ As such, in the event that the CAP does not withstand judicial scrutiny, a project would be required to use a project-specific threshold and analysis for determining whether the Project's GHG emissions would significantly impact the environment.

As explained in the CAP, the Checklist is the mechanism that is used to demonstrate consistency with the CAP. If a project does not comply with required actions in the Checklist, it would be determined to be inconsistent with the CAP. Also, per the County's CAP all projects are required to complete a CAP checklist. It should be noted that regardless of the status of legal proceedings associated with the CAP, the Project has completed the CAP Consistency Review Checklist which is provided as *Attachment A* to this analysis. If a project is consistent with the projections in the CAP, 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. Therefore, the Project would be in compliance with Appendix G of the CEQA Guidelines and would result in a less than significant impact.

³ Individual projects may be approved using thresholds developed on a project-by-project basis. While lead agencies can adopt a significance threshold for general use pursuant to CEQA Guidelines § 15064.7, they can alternately determine a threshold on a project-by-project basis, which is specifically allowed pursuant to CEQA Guidelines § 15064.4(a), case law and several other expert sources. Under the CEQA Guidelines, lead agencies have the discretion to determine the appropriate method for evaluating GHG emissions, based to the extent possible on scientific and factual data.

4.0 METHODOLOGY

4.1 Construction CO₂e Emissions Calculation Methodology

The Project construction dates were estimated based on a construction kickoff starting late 2019 and buildout roughly one year later. The project would include roughly 12,000 SF of demolition activities. Grading operations would be completely balanced and neither import or export are expected. CalEEMod 2016.3.2 was utilized for all calculations. Also, CalEEMod has been updated to reflect SDAPCD Rule 67 paint VOC limits. Table 4.1 shows the expected timeframes for the construction processes for the Project infrastructure, facilities, improvements and commercial structures at the Project location, as well as the expected number of pieces of equipment.

Table 4.1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Complete	Quantity
Demolition	12/01/2019	12/18/2019	
Excavators			1
Site Preparation	12/01/2019	12/13/2019	
Rubber Tired Dozers			3
Tractors/Loaders/Backhoes			4
Grading	12/15/2019	02/14/2020	
Excavators			1
Graders			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			3
Paving	02/15/2020	03/13/2020	
Pavers			2
Paving Equipment			2
Rollers			2
Building Construction	03/14/2020	12/29/2020	
Crane			1
Forklifts			3
Generator Sets			1
Tractors/Loaders/Backhoes			3
Welders			1
Architectural Coating	07/01/2020	12/29/2020	
Air Compressor			1
This equipment list is based upon equipment inventory within CalEEMod.			

GHG impacts related to construction will be calculated using the latest CalEEMod 2016.3.2 model which was developed by BREEZE Software for South Coast Air Quality Management District (SCAQMD). CalEEMod incorporates emission factors from the EMFAC2014 model for

on-road vehicle emissions and the OFFROAD2011 model for off-road vehicle emissions. Based on South Coast Air Quality Management District (SQAQMD) methodology, it is recommended to average the construction emissions over the project life which is assumed to be 30 years (SQAQMD, 2008). During construction, grading activities will remove mostly disturbed vegetation and soils however would replace vegetation with landscaping including trees which would ultimately sequester more carbon during operations than existing site sequestration. Therefore, site specific construction and operational GHG emissions from vegetation is not analyzed within this report and credit for the additional vegetation is not taken under this project. The annual CalEEMod inputs for the Project construction are shown in *Attachment B* at the end of this report.

4.2 Operational Emissions Calculation Methodology

Once construction is completed the proposed Project would generate emissions from operations which would include sources such as Area, Energy, Mobile, Waste and Water uses, which are also calculated within CalEEMod. Full operations are expected in 2021. Area Sources for the proposed uses would not generate significant area source emissions. Energy related GHG sources would be from uses such as natural gas used within the restaurant use as well as electrical usage. It should be noted that the Project would install 100% LED fixtures for all interior and exterior lighting. LED reductions are provided in *Attachment C*. Mobile or transportation related emissions are generated by on-road vehicles, and are calculated in CalEEMod through the use of EMFAC2014. Waste emissions would be from trash generated from the project. Water emissions would be from offsite water sources to the project and would include pumping and wastewater treatment. Emissions ultimately from the MUP modification would be compared to the existing MUP to verify GHG impact significance.

CalEEMod does not have a winery use within the default settings though the Project type and use characteristics are similar to that of a restaurant and a racquet club since the venues are resort like or park like settings with event-based gatherings etc. Based on this energy and solid waste inputs were selected based on these uses. The project applicant estimated water consumption for each of the proposed uses as well as the previous golf course and restaurant operations. The water consumption estimates are shown in Table 4.2.

The Project site when operated as a Golf Course with the previous restaurant consumed 175,000,000 gallons of water each year. The MUP will consume 2,550,000 gallons of water or roughly 172,450,000 fewer gallons than the previous use. For purposes of this GHG analysis only the 2,550,000 Gallons of water or the water from the MUP modification is analyzed.

The Project applicant's traffic engineer estimated that the Project weekend trips would be 1,237 daily trips and weekday trips would be 868 daily trips while the existing golf course

would have generated 1,156 daily weekend trips and 1,070 daily weekday trips (Michael Baker International, 2019b). CalEEMod was updated to reflect the traffic study. Based on these trip generations, the Project would generate approximately 2.68 million VMT per year compared to 3.70 million VMT from the existing golf course or roughly 27% fewer VMT throughout the year under rural settings within CalEEMod. The annual CalEEMod inputs for the original development are shown in *Attachment D* at the end of this report.

Table 4.2: Water Consumption Pervious/Existing/Proposed

Previous Use/Proposed	Use Type	Estimated Outdoor Water (Gallons/Year)	Estimated Indoor Water (Gallons/Year)	Total
Proposed	Wine Tasting/Restaurant	30,000	180,000	210,000
Proposed	Venue 1	200,000	180,000	380,000
Proposed	Venue 2	800,000	180,000	980,000
Proposed	Venue 3	800,000	180,000	980,000
Total Proposed MUP Water Use		1,830,000	720,000	2,550,000
Previous	The Golf Course and Restaurant	100,000,000	75,000,000	175,000,000
Maximum Water Use (Existing Golf Course and Restaurant)		100,000,000	75,000,000	175,000,000
Gross Water Usage (MUP vs Proposed use)		100,000,000 – 1,830,000 = (98,170,000) Reduction	75,000,000 – 720,000 = (74,280,000) Reduction	(172,450,000) Reduction

Electrical energy-intensity factors were updated within CalEEMod to reflect San Diego Gas and Electric's (SDG&E) emissions rate variations from 2009 which is the default rate data used by CalEEMod. In 2009, SDG&E achieved 10.5 percent procurement of renewable energy (California Public Utilities Commission, 2016) and in 2020 will have up to 46% in place. For purposes of analysis however the State's 33% requirement was assumed. After 2020, in 2030, an additional 17% reduction would be required or 1.7% per year. Given this, SDG&E energy-intensity factors for 2021 were calculated and were modeled as such within CalEEMod as shown in Table 4.3 and are shown in *Attachment E* to this report.

Table 4.3: SDG&E Energy Intensity Factors

GHG	2009 Factors (lbs/MWh) w/10.5% RPS	2021 Factors – 34.7% Renewables (lbs/MWh)
Carbon Dioxide (CO ₂)	720.49	525.68
Methane (CH ₄)	0.029	0.021
Nitrous Oxide (N ₂ O)	0.006	0.004

5.0 FINDINGS

5.1 Project Related Construction Emissions

Utilizing the CalEEMod inputs for the model as shown in Table 4.1 above, we find that grading and construction of the Project will produce approximately 466.21 Metric Tons of CO₂e over the construction life of the Project. Based on SQAQMD 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 15.54 MT of CO₂e per year. A summary of the construction emissions is shown in Table 5.1 below. It should be noted that construction emissions assume the use of Tier 4 diesel construction equipment fitted with diesel particulate filters.

Table 5.1: Expected Construction CO₂e Emissions Summary MT/Year

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
2019	0.00	85.00	85.00	0.02	0.00	85.39
2020	0.00	378.74	378.74	0.08	0.00	380.82
Total						466.21
Yearly Average Construction Emissions (Metric Tons/year over 30 years)						15.54
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

The project MUP Modification would be located on what was operated as both a golf course and a restaurant. Under the MUP modification neither the golf course nor the previous restaurant will be operated in the future. It is important however to quantify GHG emissions for both the previous uses under the original MUP and the proposed GHG emissions under the MUP Modification. The proposed MUP Modification is identified specifically in Section 1.3 of this report.

As previously discussed, emissions generated from area, energy, mobile, solid waste and water uses were calculated using CalEEMod with manual updates necessary to reflect the proposed use and are discussed in Section 4.2 above. The calculated operational emissions are identified in Table 5.2.

Adding both annual construction emissions and the expected operational emissions from Area, Energy, Mobile, Waste and Water sources, the project would generate emissions of 1,244.66 MT of CO₂e.

Table 5.2: Estimated GHG emissions Proposed MUP Modification (MT/Year)

Source	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT/Yr)
Area	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.00	120.53	120.53	0.00	0.00	121.01
Mobile	0.00	1,087.56	1,087.56	0.06	0.00	1,089.01
Waste	4.45	0.00	4.45	0.26	0.00	11.01
Water	0.23	7.08	7.31	0.02	0.00	8.09
Project Operations Total (MT)						1,229.12
Project Construction Emissions (MT)						15.54
Total GHG Emissions (MT)						1,244.66
Data is presented in decimal format and may have rounding errors.						

It should be noted that implementation of the following design features will be a condition to the approval of this report.

1. All construction diesel equipment would be Tier IV compliant and shall include Diesel Particulate Filters (DPF).
2. The project would install 100% LED lighting for both interior and exterior lighting and will install smart meters.

Previous Use under the original MUP

The previous development was analyzed using the same buildout year as the proposed project as a means to provide an accurate comparison with respect to GHG emissions. CalEEMod default settings were assumed for solid waste generation and emissions. Within CalEEMod, a golf course land use, by default, does not assume pro shop or ancillary building and therefore does not generate electric usage or emissions. To determine the electrical usage for the pro shop area was assumed to be similar to a racquet club. Area emissions were assumed to be for a golf course and restaurant use with CalEEMod and were therefore default. Traffic and water inputs were manually updated to reflect more accurate inputs from the client and the traffic engineer. Based on the assumptions above, the previous development generated roughly 1,998.06 MT CO₂e annually which is shown in Table 5.3 on the following page.

The proposed MUP Modification would generate 1,244.66 MT CO₂e annually while the original MUP would have generated 1,998.06 MT CO₂e annually. Given this, the MUP Modification would generate fewer emissions by as much as 753.40 MT CO₂e annually compared to the original MUP. Given this, since the Project generates fewer emissions than an allowed General Plan use for the site, the Project's GHG emissions are assumed to have been anticipated by the CAP and would therefore result in a less than significant cumulatively considerable increase in GHG emissions. Furthermore, since the project generates fewer emissions than the previous operations for the site, the project's GHG emissions are assumed to have been anticipated by the CAP and would therefore result in a less than significant cumulatively considerable increase in GHG emissions under the CAP.

Table 5.3: Original MUP Land Use Emissions Summary MT/Year

Source	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT/Yr)
Area	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.00	82.15	82.15	0.00	0.00	82.50
Mobile	0.00	1,484.15	1,484.15	0.08	0.00	1,486.07
Waste	1.04	0.00	1.04	0.06	0.00	2.58
Water	0.29	424.27	424.56	0.05	0.00	426.90
Total Operations (MT/Year)						1,998.06
Data is presented in decimal format and may have rounding errors.						

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7.0 CERTIFICATIONS

The contents of this report represent an accurate depiction of the Projected CO₂e emissions from the Project development based upon the best available information at the time of preparation. The report was prepared by Jeremy Loudon; a County approved CEQA Consultant for Air Quality and GHG.



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Date November 8, 2019

ATTACHMENT A

County of San Diego CAP Checklist



Permit Number: _____

COUNTY OF SAN DIEGO
LAND USE AND ENVIRONMENT GROUP
Department of Planning & Development Services

Appendix A: Final Climate Action Plan

Consistency Review Checklist

Introduction

The County of San Diego (County) Climate Action Plan (CAP), adopted by the Board of Supervisors on February 14, 2018, outlines actions that the County will undertake to meet its greenhouse gas (GHG) emissions reduction targets. Implementation of the CAP will require that new development projects incorporate more sustainable design standards and implement applicable reduction measures consistent with the CAP. To help plan and design projects consistent with the CAP, and to assist County staff in implementing the CAP and determining the consistency of proposed projects with the CAP during development review, the County has prepared a CAP Consistency Review Checklist (Checklist). This Checklist, in conjunction with the CAP, provides a streamlined review process for proposed discretionary projects that require environmental review pursuant to the California Environmental Quality Act (CEQA). Please refer to the County's Guidelines for Determining Significance for Climate Change (Guidelines) for more information on GHG emissions, climate change impact requirements, thresholds of significance, and compliance with CEQA Guidelines Section 15183.5.

The purpose of this Checklist is to implement GHG reduction measures from the CAP that apply to new development projects. The CAP presents the County's comprehensive strategy to reduce GHG emissions to meet its reduction targets. These reductions will be achieved through a combination of County initiatives and reduction actions for both existing and new development. Reduction actions that apply to existing and new development will be implemented through a combination of mandatory requirements and incentives. This Checklist specifically applies to proposed discretionary projects that require environmental review pursuant to CEQA. Therefore, the Checklist represents one implementation tool in the County's overall strategy to implement the CAP. Implementation of measures that do not apply to new development projects will occur through the implementation mechanisms identified in Chapter 5 of the CAP. Implementation of applicable reduction measures in new development projects will help the County achieve incremental reductions towards its targets, with additional reductions occurring through County initiatives and measures related to existing development that are implemented outside of the Checklist process.

The Checklist follows a two-step process to determine if projects are consistent with the CAP and whether they may have a significant cumulative impact under the County's adopted GHG thresholds of significance. The Checklist first assesses a project's consistency with the growth projections and land use assumptions that formed the basis of CAP emissions projections. If a project is consistent with the projections and land use assumptions in the CAP, its associated growth in terms of GHG emissions would have been accounted for in the CAP's projections and project implementation of the CAP reduction measures will contribute towards reducing the County's emissions and meeting the County's reduction targets. Projects that include a land use plan and/or zoning designation amendment that would result in an equivalent or less GHG-intensive project

when compared to existing designation, would also be within the projections assumed in the CAP. Projects responding in the affirmative to Step 1 questions can move forward to Step 2 of the Checklist. If a land use and/or zoning designation amendment results in a more GHG-intensive project, the project is required to demonstrate consistency with applicable CAP measures and offset the increase in emissions as described in the Guidelines. Step 2 of the Checklist contains the CAP GHG reduction measures that projects are required to implement to ensure compliance with the CAP. Implementation of these measures would ensure that new development is consistent with relevant CAP strategies and measures and will contribute towards achieving the identified GHG reduction targets. Projects that are consistent with the CAP, as determined using this Checklist, may rely on the CAP for the cumulative impacts analysis of GHG emissions under CEQA.

A project's incremental contribution to cumulative GHG emissions may be determined to not be cumulatively considerable if it is determined to be consistent with the CAP. As specified in the CEQA Guidelines, the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the project's incremental effects are "cumulatively considerable" (CCR, Title 14, Division 6, Chapter 3, Section 15064[h][4]). Projects requiring discretionary review that cannot demonstrate consistency with the CAP using this Checklist may have a cumulatively considerable contribution to a significant cumulative impact and would be required to prepare a separate, more detailed project-level GHG analysis as part of the CEQA document prepared for the project.

Checklist Applicability

This Checklist only applies to development projects that require discretionary review and are subject to environmental review (i.e., not statutorily or categorically exempt projects) pursuant to CEQA. Projects that are limited to ministerial review and approval (e.g., only building permits) would not be subject to the Checklist. The CAP contains other measures that, when implemented, would apply broadly to all ministerial and discretionary projects. These measures are included for discretionary projects in this Checklist, but could also apply more broadly once the County takes action to codify specific requirements or standards.

Checklist Procedures

General procedures for Checklist compliance and review are described below. Specific guidance is also provided under each of the questions under Steps 1 and 2 of the Checklist in subsequent pages.

1. The County's Department of Planning & Development Services (PDS) reviews development applications and makes determinations regarding environmental review requirements under CEQA. Procedures for CEQA can be found on the County's [Process Guidance & Regulations/Statutes Homepage](#). The Director of PDS will determine whether environmental review is required, and if so, whether completion of the CAP Checklist is required for a proposed project or whether a separate project-level GHG analysis is required.
2. The specific applicable requirements outlined in the Checklist shall be required as a condition of project approval.
3. The project must provide substantial evidence that demonstrates how the proposed project will implement each applicable Checklist requirement described herein to the satisfaction of the Director of PDS.
4. If a question in the Checklist is deemed not applicable (N/A) to a project, substantial evidence shall be provided to the satisfaction of the Director of PDS demonstrating why the Checklist item is not applicable. Feasibility of reduction measures for new projects was assessed in development of the

CAP and measures determined to be feasible were incorporated into the Checklist. Therefore, it is expected that projects would have the ability to comply with all applicable Checklist measures.

5. Development projects requiring discretionary review that cannot demonstrate consistency with the CAP using this Checklist shall prepare a separate, project-level GHG analysis as part of the CEQA document prepared for the project and may be required to prepare an Environmental Impact Report (EIR). Guidance for project-specific GHG Technical Reports is outlined in the Report Format and Content Requirements for Climate Change document, provided under separate cover. The Report Format and Content Requirements document provides guidance on the outline and content of GHG analyses for discretionary projects processed by PDS that cannot show compliance with the CAP Checklist.

Checklist Updates

The Guidelines and Checklist may be administratively updated by the County from time to time to comply with amendments to State laws or court directives, or to remove measures that may become mandatory through future updates to State or local codes. Administrative revisions to the Guidelines and Checklist will be limited to changes that do not trigger a subsequent EIR or a supplement to the SEIR for the CAP pursuant to CEQA Guidelines Section 15162. Administrative revisions, as described above, will not require approval by the Board of Supervisors (Board). All other changes to the Guidelines and Checklist require Board approval.

Comprehensive updates to the Guidelines and Checklist will be coordinated with each CAP update (i.e., every five years beginning in 2025) and would require Board approval. Future updates of the CAP, Guidelines, and Checklist shall comply with CEQA.

Application Information

Contact Information

Project No. and Name: _____
Property Address and
APN: _____

Applicant Name and Co.: _____

Contact Phone: _____ Contact Email: _____

Was a consultant retained to complete this checklist? ☐ Yes ☐ No

If Yes, complete the following:

Consultant Name: _____ Contact
Phone: _____

Company Name: _____ Contact Email: _____

Project Information

1. What is the size of the project site (acres [gross and net])? _____

2. Identify all applicable proposed land uses (indicate square footage [gross and net]):

☐ Residential (indicate # of single-family dwelling units): _____

☐ Residential (indicate # of multi-family dwelling units): _____

☐ Commercial (indicate total square footage [gross and net]): _____

☐ Industrial (indicate total square footage [gross and net]): _____

☐ Agricultural (indicate total acreage [gross and net]): _____

☐ Other (describe): _____

3. Provide a description of the project proposed. This description should match the project description used for the CEQA document. The description may be attached to the Checklist if there are space constraints.

CAP Consistency Checklist Questions

Step 1: Land Use Consistency

For projects that are subject to CAP consistency review, the first step in determining consistency is to assess the project's consistency with the growth projections used in the development of the CAP. This section allows the County to determine a project's consistency with the land use assumptions used in the CAP.

Step 1: Land Use Consistency		
Checklist Item (Check the appropriate box and provide explanation and supporting documentation for your answer)	Yes	No
<p>1. Is the proposed project consistent with the existing General Plan regional category, land use designations, and zoning designations?</p> <p style="margin-top: 20px;">If "Yes," provide substantiation below and then proceed to Step 2 (CAP Measures Consistency) of the Checklist.</p> <p style="margin-top: 20px;">If "No," proceed to question 2 below.</p>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Project Detail: Please substantiate how the project satisfies question 1.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>		
<p>2. Does the project include a land use element and/or zoning designation amendment that would result in an equivalent or less GHG-intensive project when compared to the existing designations?</p> <p style="margin-top: 20px;">If "Yes," the project must provide estimated project GHG emissions under both existing and proposed designation(s) for comparison to substantiate the response and proceed to Step 2 (CAP Measures Consistency) of the Checklist.</p> <p style="margin-top: 20px;">If "No," (i.e., the project proposes an increase in density or intensity above that which is allowed under existing General Plan designations and consequently would not result in an equivalent or less GHG-intensive project when compared to the existing designations), the project must prepare a separate, more detailed project-level GHG analysis. As outlined in the County's Guidelines for Determining Significance for Climate Change and Report Format and Content Requirements for Climate Change, this analysis must demonstrate how the project would offset the increase in GHG emissions over the existing designations or baseline conditions. The project must also incorporate each of the CAP measures identified in Step 2 to mitigate cumulative GHG emissions impacts. Proceed and complete a separate project-specific GHG analysis and Step 2 of the Checklist. Refer to Section 4 of the County's Guidelines for procedures on analyzing General Plan Amendments.</p>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Project Detail: Please substantiate how the project satisfies question 2.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>		

Step 2: CAP Measures Consistency

The second step of the CAP consistency review is to review and evaluate a project's consistency with the applicable measures of the CAP. Each checklist item is associated with a specific GHG reduction measure(s) in the County CAP.

Step 2: CAP Measures Consistency				
Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
Step 2A: Project Operations (All projects with an operational component must fill out this portion of the Checklist)				
Reducing Vehicle Miles Traveled				
<p>1a. Reducing Vehicle Miles Traveled</p> <p><u>Non-Residential:</u> For non-residential projects with anticipated tenant-occupants of 25 or more, will the project achieve a 15% reduction in emissions from commute vehicle miles traveled (VMT), and commit to monitoring and reporting results to demonstrate on-going compliance? VMT reduction may be achieved through a combination of Transportation Demand Management (TDM) and parking strategies, as long as the 15% reduction can be substantiated.</p> <p>VMT reduction actions though TDM may include, but are not limited to:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Telecommuting <input type="checkbox"/> Car Sharing <input type="checkbox"/> Shuttle Service <input type="checkbox"/> Carpools <input type="checkbox"/> Vanpools <input type="checkbox"/> Bicycle Parking Facilities <input type="checkbox"/> Transit Subsidies <p>Shared and reduced parking strategies may include, but are not limited to:¹</p> <ul style="list-style-type: none"> <input type="checkbox"/> Shared parking facilities <input type="checkbox"/> Carpool/vanpool-only parking spaces <input type="checkbox"/> Shuttle facilities <input type="checkbox"/> Electric Vehicle-only parking spaces <p>The project may incorporate the measures listed above, and propose additional trip reduction measures, as long as a 15% reduction in emissions from commute VMT can be demonstrated through substantial evidence.</p> <p>Check "N/A" if the project is a residential project or if the project would not accommodate more than 25 tenant-occupants.</p>	<p>T-2.2 and T-2.4</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>1b. Project Detail:</p> <p>Please substantiate how the project satisfies question 1a.</p> <hr/> <hr/> <hr/>				

¹ Reduction actions and strategies under 1a may be used to achieve a 10% reduction in emissions from commute VMT under 2a

Step 2: CAP Measures Consistency

Step 2: CAP Measures Consistency				
Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
Shared and Reduced Parking				
<p>2a. Shared and Reduced Parking</p> <p><u>Non-Residential:</u> For non-residential projects with anticipated tenant-occupants of 24 or less, will the project implement shared and reduced parking strategies that achieves a 10% reduction in emissions from commute VMT?</p> <p>Shared and reduced parking strategies may include, but are not limited to:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Shared parking facilities <input type="checkbox"/> Carpool/vanpool-only parking spaces <input type="checkbox"/> Shuttle facilities <input type="checkbox"/> Electric Vehicle-only parking spaces <p>Check "N/A" if the project is a residential project or if the project would accommodate 25 or more tenant-occupants.</p>	T-2.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>2b. Project Detail:</p> <p>Please substantiate how the project satisfies question 2a.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>				
Water Heating Systems				
<p>3a. Electric or Alternately-Fueled Water Heating Systems</p> <p><u>Residential:</u> For projects that include residential construction, will the project, as a condition of approval, install the following types of electric or alternately-fueled water heating system(s)? Please check which types of system(s) will be installed:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Solar thermal water heater <input type="checkbox"/> Tankless electric water heater <input type="checkbox"/> Storage electric water heaters <input type="checkbox"/> Electric heat pump water heater <input type="checkbox"/> Tankless gas water heater <input type="checkbox"/> Other <p>Check "N/A" if the project does not contain any residential buildings.</p>	E-1.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>3b. Project Detail:</p> <p>Please substantiate how the project satisfies question 3a.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>				

Step 2: CAP Measures Consistency

Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
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Water-Efficient Appliances and Plumbing Fixtures

4a. Water Efficient Appliances and Plumbing Fixtures

Residential: For new residential projects, will the project comply with all of the following water efficiency and conservation BMPs²?

- ☐ Kitchen Faucets: The maximum flow rate of kitchen faucets shall not exceed 1.5 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.5 gallons per minute at 60 psi³.
- ☐ Energy Efficient Appliances: Install at least one qualified ENERGY STAR dishwasher or clothes washer per unit.

Check "N/A" if the project is a non-residential project.

4b. Project Detail:

Please substantiate how the project satisfies question 4a.

Rain Barrel Installations

5a. Rain Barrel Installations

Residential: For new residential projects, will the project make use of incentives to install one rain barrel per every 500 square feet of available roof area?

Check "N/A" if the project is a non-residential project; if State, regional or local incentives/rebates to purchase rain barrels are not available; or if funding for programs/rebates has been exhausted.

5b. Project Detail:

Please substantiate how the project satisfies question 5a.

² CALGreen Tier 1 residential voluntary measure A4.303 of the [California Green Building Standards Code](#).

³ Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

Step 2: CAP Measures Consistency

Step 2: CAP Measures Consistency				
Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
Reduce Outdoor Water Use				
<p>6a. Reduce Outdoor Water Use</p> <p><u>Residential</u>: Will the project submit a Landscape Document Package that is compliant with the County's Water Conservation in Landscaping Ordinance⁴ and demonstrates a 40% reduction in current Maximum Applied Water Allowance (MAWA) for outdoor use?</p> <p><u>Non-Residential</u>: Will the project submit a Landscape Document Package that is compliant with the County's Water Conservation in Landscaping Ordinance and demonstrates a 40% reduction in current MAWA for outdoor use?</p> <p>Check "N/A" if the project does not propose any landscaping, or if the aggregate landscaped area is between 500 – 2,499 square feet and elects to comply with the Prescriptive Compliance Option within the Water Conservation in Landscaping Ordinance.</p>	W-1.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>6b. Project Detail: Please substantiate how the project satisfies question 6a.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>				
Agricultural and Farming Operations⁵				
<p>7a. Agricultural and Farming Equipment</p> <p>Will the project use the San Diego County Air Pollution Control District's (SDAPCD's) farm equipment incentive program to convert gas- and diesel-powered farm equipment to electric equipment?</p> <p>Check "N/A" if the project does not contain any agricultural or farming operations; if the SDAPCD incentive program is no longer available; or if funding for the incentive program has been exhausted.</p>	A-1.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>7b. Project Detail: Please substantiate how the project satisfies question 7a.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>				

⁴ <http://www.sandiegocounty.gov/content/dam/sdc/cob/ordinances/ord10427.pdf>.

⁵ Existing agricultural operations would not be subject to questions 7 and 8 of the Checklist, unless a proposed expansion is subject to discretionary review and requires environmental review pursuant to CEQA.

Step 2: CAP Measures Consistency

Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
<p>8a. Electric Irrigation Pumps</p> <p>Will the project use SDAPCD's farm equipment incentive program to convert diesel- or gas-powered irrigation pumps to electric irrigation pumps?</p> <p>Check "N/A" if the project does not contain any agricultural or farming operations; if the SDAPCD incentive program is no longer available; or if funding for the incentive program has been exhausted.</p>	A-1.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8b. Project Detail:

Please substantiate how the project satisfies question 8a.

Tree Planting

<p>9a. Tree Planting</p> <p><u>Residential</u>: For residential projects, will the project plant, at a minimum, two trees per every new residential dwelling unit proposed?</p> <p>Check "N/A" if the project is a non-residential project.</p>	A-2.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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9b. Project Detail:

Please substantiate how the project satisfies question 9a.

ATTACHMENT B

CALEEMOD 2016.3.2 (Proposed Project Use MUP Modification)

Monserate Winery - San Diego County, Annual

Monserate Winery
San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	56.00	User Defined Unit	12.37	56,040.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2021
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	525.68	CH4 Intensity (lb/MW hr)	0.021	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Monserate Winery - San Diego County, Annual

Project Characteristics - rps 2021

Land Use - User defined recreational was modeled after the High Quality Restaurant recreational use

Construction Phase - PS

Off-road Equipment - CE

Off-road Equipment - ce

Off-road Equipment -

Trips and VMT -

Demolition -

Grading - ac

Architectural Coating - Rule 67 paint

Vehicle Trips - Mix ratio assumed to be same as restaurant

Area Coating - rule 67 paint

Energy Use - Energy use similar to racquet club

Water And Wastewater - 32,000 gallons of wastewater generated by winery included and generated from indoor water uses

Solid Waste - Solid Waste Generation similar to Restaurant

Construction Off-road Equipment Mitigation - Tier IV Mitigation

Energy 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
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

Monserate Winery - San Diego County, Annual

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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	13.00
tblConstructionPhase	NumDays	30.00	45.00
tblConstructionPhase	NumDays	300.00	207.00
tblConstructionPhase	NumDays	20.00	130.00
tblEnergyUse	LightingElect	0.00	2.91
tblEnergyUse	NT24E	0.00	4.27
tblEnergyUse	NT24NG	0.00	7.00
tblEnergyUse	T24E	0.00	1.27
tblEnergyUse	T24NG	0.00	4.00
tblLandUse	LandUseSquareFeet	0.00	56,040.00
tblLandUse	LotAcreage	0.00	12.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.021
tblProjectCharacteristics	CO2IntensityFactor	720.49	525.68
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.00	21.90
tblTripsAndVMT	WorkerTripNumber	15.00	20.00

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tblVehicleTrips	CC_TL	6.60	7.30
tblVehicleTrips	CC_TTP	0.00	69.00
tblVehicleTrips	CNW_TL	6.60	7.30
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CW_TL	14.70	9.50
tblVehicleTrips	CW_TTP	0.00	12.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	0.00	22.09
tblVehicleTrips	SU_TR	0.00	22.09
tblVehicleTrips	WD_TR	0.00	15.50
tblWater	IndoorWaterUseRate	0.00	720,000.00
tblWater	OutdoorWaterUseRate	0.00	1,830,000.00

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					
2019	0.0453	0.5983	0.2787	9.0000e-004	0.1514	0.0219	0.1733	0.0744	0.0202	0.0945	0.0000	84.9977	84.9977	0.0157	0.0000	85.3899
2020	0.5689	2.7860	2.4287	4.3300e-003	0.1579	0.1521	0.3100	0.0684	0.1429	0.2113	0.0000	378.7402	378.7402	0.0830	0.0000	380.8156
Maximum	0.5689	2.7860	2.4287	4.3300e-003	0.1579	0.1521	0.3100	0.0744	0.1429	0.2113	0.0000	378.7402	378.7402	0.0830	0.0000	380.8156

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					
2019	0.0114	0.2042	0.2857	9.0000e-004	0.1514	8.0000e-004	0.1522	0.0744	7.7000e-004	0.0751	0.0000	84.9977	84.9977	0.0157	0.0000	85.3899
2020	0.3248	0.3926	2.5465	4.3300e-003	0.1579	1.6000e-003	0.1595	0.0684	1.5600e-003	0.0700	0.0000	378.7399	378.7399	0.0830	0.0000	380.8152
Maximum	0.3248	0.3926	2.5465	4.3300e-003	0.1579	1.6000e-003	0.1595	0.0744	1.5600e-003	0.0751	0.0000	378.7399	378.7399	0.0830	0.0000	380.8152

	ROG	NOx	CO	SO2	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	45.27	82.37	-4.61	0.00	0.00	98.62	35.51	0.00	98.57	52.55	0.00	0.00	0.00	0.00	0.00	0.00

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
5	10-1-2019	12-31-2019	0.6242	0.2113
6	1-1-2020	3-31-2020	0.7670	0.0753
7	4-1-2020	6-30-2020	0.7319	0.1227
8	7-1-2020	9-30-2020	0.9359	0.2620
		Highest	0.9359	0.2620

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	0.2449	0.0000	5.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-003	1.0000e-003	0.0000	0.0000	1.0700e-003
Energy	3.3200e-003	0.0302	0.0254	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	145.8081	145.8081	5.1400e-003	1.4600e-003	146.3724
Mobile	0.2926	1.2948	3.5024	0.0118	1.0101	0.0101	1.0201	0.2705	9.4000e-003	0.2799	0.0000	1,087.5553	1,087.5553	0.0580	0.0000	1,089.0056
Waste						0.0000	0.0000		0.0000	0.0000	4.4455	0.0000	4.4455	0.2627	0.0000	11.0135
Water						0.0000	0.0000		0.0000	0.0000	0.2284	7.0833	7.3118	0.0237	6.1000e-004	8.0865
Total	0.5409	1.3251	3.5283	0.0120	1.0101	0.0124	1.0224	0.2705	0.0117	0.2822	4.6739	1,240.4477	1,245.1216	0.3496	2.0700e-003	1,254.4791

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2449	0.0000	5.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-003	1.0000e-003	0.0000	0.0000	1.0700e-003
Energy	3.3200e-003	0.0302	0.0254	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	120.5331	120.5331	4.1300e-003	1.2700e-003	121.0148
Mobile	0.2926	1.2948	3.5024	0.0118	1.0101	0.0101	1.0201	0.2705	9.4000e-003	0.2799	0.0000	1,087.5553	1,087.5553	0.0580	0.0000	1,089.0056
Waste						0.0000	0.0000		0.0000	0.0000	4.4455	0.0000	4.4455	0.2627	0.0000	11.0135
Water						0.0000	0.0000		0.0000	0.0000	0.2284	7.0833	7.3118	0.0237	6.1000e-004	8.0865
Total	0.5409	1.3251	3.5283	0.0120	1.0101	0.0124	1.0224	0.2705	0.0117	0.2822	4.6739	1,215.1727	1,219.8466	0.3486	1.8800e-003	1,229.1215

	ROG	NOx	CO	SO2	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	2.04	2.03	0.29	9.18	2.02

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	Demo Buildings	Demolition	12/1/2019	12/18/2019	5	13	
2	Site Preparation	Site Preparation	12/1/2019	12/13/2019	5	10	
3	Grading	Grading	12/15/2019	2/14/2020	5	45	
4	Paving	Paving	2/15/2020	3/13/2020	5	20	
5	Building Construction	Building Construction	3/14/2020	12/29/2020	5	207	
6	Architectural Coating	Architectural Coating	7/1/2020	12/29/2020	5	130	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 22.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 84,060; Non-Residential Outdoor: 28,020; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demo Buildings	Excavators	1	8.00	158	0.38
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
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

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
Demo Buildings	1	3.00	0.00	1,187.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	24.00	9.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

3.2 Demo Buildings - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6900e-003	0.0174	0.0212	3.0000e-005		8.4000e-004	8.4000e-004		7.7000e-004	7.7000e-004	0.0000	3.0140	3.0140	9.5000e-004	0.0000	3.0378
Total	1.6900e-003	0.0174	0.0212	3.0000e-005		8.4000e-004	8.4000e-004		7.7000e-004	7.7000e-004	0.0000	3.0140	3.0140	9.5000e-004	0.0000	3.0378

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3.2 Demo Buildings - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.2100e-003	0.1819	0.0397	4.7000e-004	0.0102	6.8000e-004	0.0108	2.7900e-003	6.5000e-004	3.4400e-003	0.0000	46.2689	46.2689	4.1900e-003	0.0000	46.3737
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	1.1000e-004	9.0000e-005	8.3000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2248	0.2248	1.0000e-005	0.0000	0.2249
Total	5.3200e-003	0.1820	0.0405	4.7000e-004	0.0104	6.8000e-004	0.0111	2.8500e-003	6.5000e-004	3.5100e-003	0.0000	46.4937	46.4937	4.2000e-003	0.0000	46.5986

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	4.1000e-004	1.7900e-003	0.0255	3.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.0140	3.0140	9.5000e-004	0.0000	3.0378
Total	4.1000e-004	1.7900e-003	0.0255	3.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.0140	3.0140	9.5000e-004	0.0000	3.0378

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3.2 Demo Buildings - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.2100e-003	0.1819	0.0397	4.7000e-004	0.0102	6.8000e-004	0.0108	2.7900e-003	6.5000e-004	3.4400e-003	0.0000	46.2689	46.2689	4.1900e-003	0.0000	46.3737
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	1.1000e-004	9.0000e-005	8.3000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2248	0.2248	1.0000e-005	0.0000	0.2249
Total	5.3200e-003	0.1820	0.0405	4.7000e-004	0.0104	6.8000e-004	0.0111	2.8500e-003	6.5000e-004	3.5100e-003	0.0000	46.4937	46.4937	4.2000e-003	0.0000	46.5986

3.3 Site Preparation - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	0.0217	0.2279	0.1103	1.9000e-004	0.0903	0.0120	0.1023	0.0497	0.0110	0.0607	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195

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3.3 Site Preparation - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	4.0000e-004	3.8100e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0373	1.0373	3.0000e-005	0.0000	1.0381
Total	5.0000e-004	4.0000e-004	3.8100e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0373	1.0373	3.0000e-005	0.0000	1.0381

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3300e-003	0.0101	0.1043	1.9000e-004		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	2.3300e-003	0.0101	0.1043	1.9000e-004	0.0903	5.0000e-005	0.0904	0.0497	5.0000e-005	0.0497	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195

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3.3 Site Preparation - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	4.0000e-004	3.8100e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0373	1.0373	3.0000e-005	0.0000	1.0381
Total	5.0000e-004	4.0000e-004	3.8100e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0373	1.0373	3.0000e-005	0.0000	1.0381

3.4 Grading - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0481	0.0000	0.0481	0.0212	0.0000	0.0212	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0155	0.1701	0.0978	1.8000e-004		8.3800e-003	8.3800e-003		7.7100e-003	7.7100e-003	0.0000	15.9854	15.9854	5.0600e-003	0.0000	16.1118
Total	0.0155	0.1701	0.0978	1.8000e-004	0.0481	8.3800e-003	0.0564	0.0212	7.7100e-003	0.0289	0.0000	15.9854	15.9854	5.0600e-003	0.0000	16.1118

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3.4 Grading - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	5.4000e-004	5.0800e-003	2.0000e-005	1.5000e-003	1.0000e-005	1.5100e-003	4.0000e-004	1.0000e-005	4.1000e-004	0.0000	1.3831	1.3831	4.0000e-005	0.0000	1.3842
Total	6.6000e-004	5.4000e-004	5.0800e-003	2.0000e-005	1.5000e-003	1.0000e-005	1.5100e-003	4.0000e-004	1.0000e-005	4.1000e-004	0.0000	1.3831	1.3831	4.0000e-005	0.0000	1.3842

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					0.0481	0.0000	0.0481	0.0212	0.0000	0.0212	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1800e-003	9.4400e-003	0.1065	1.8000e-004		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	15.9853	15.9853	5.0600e-003	0.0000	16.1118
Total	2.1800e-003	9.4400e-003	0.1065	1.8000e-004	0.0481	4.0000e-005	0.0481	0.0212	4.0000e-005	0.0212	0.0000	15.9853	15.9853	5.0600e-003	0.0000	16.1118

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3.4 Grading - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	5.4000e-004	5.0800e-003	2.0000e-005	1.5000e-003	1.0000e-005	1.5100e-003	4.0000e-004	1.0000e-005	4.1000e-004	0.0000	1.3831	1.3831	4.0000e-005	0.0000	1.3842
Total	6.6000e-004	5.4000e-004	5.0800e-003	2.0000e-005	1.5000e-003	1.0000e-005	1.5100e-003	4.0000e-004	1.0000e-005	4.1000e-004	0.0000	1.3831	1.3831	4.0000e-005	0.0000	1.3842

3.4 Grading - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1113	0.0000	0.1113	0.0559	0.0000	0.0559	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0401	0.4354	0.2649	4.9000e-004		0.0210	0.0210		0.0193	0.0193	0.0000	42.9969	42.9969	0.0139	0.0000	43.3446
Total	0.0401	0.4354	0.2649	4.9000e-004	0.1113	0.0210	0.1323	0.0559	0.0193	0.0752	0.0000	42.9969	42.9969	0.0139	0.0000	43.3446

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3.4 Grading - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7100e-003	1.3400e-003	0.0128	4.0000e-005	4.1100e-003	3.0000e-005	4.1400e-003	1.0900e-003	3.0000e-005	1.1200e-003	0.0000	3.6833	3.6833	1.1000e-004	0.0000	3.6860
Total	1.7100e-003	1.3400e-003	0.0128	4.0000e-005	4.1100e-003	3.0000e-005	4.1400e-003	1.0900e-003	3.0000e-005	1.1200e-003	0.0000	3.6833	3.6833	1.1000e-004	0.0000	3.6860

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					0.1113	0.0000	0.1113	0.0559	0.0000	0.0559	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.9900e-003	0.0260	0.2929	4.9000e-004		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	42.9969	42.9969	0.0139	0.0000	43.3445
Total	5.9900e-003	0.0260	0.2929	4.9000e-004	0.1113	1.2000e-004	0.1114	0.0559	1.2000e-004	0.0560	0.0000	42.9969	42.9969	0.0139	0.0000	43.3445

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3.4 Grading - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7100e-003	1.3400e-003	0.0128	4.0000e-005	4.1100e-003	3.0000e-005	4.1400e-003	1.0900e-003	3.0000e-005	1.1200e-003	0.0000	3.6833	3.6833	1.1000e-004	0.0000	3.6860
Total	1.7100e-003	1.3400e-003	0.0128	4.0000e-005	4.1100e-003	3.0000e-005	4.1400e-003	1.0900e-003	3.0000e-005	1.1200e-003	0.0000	3.6833	3.6833	1.1000e-004	0.0000	3.6860

3.5 Paving - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0136	0.1407	0.1465	2.3000e-004		7.5300e-003	7.5300e-003		6.9300e-003	6.9300e-003	0.0000	20.0282	20.0282	6.4800e-003	0.0000	20.1902
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0136	0.1407	0.1465	2.3000e-004		7.5300e-003	7.5300e-003		6.9300e-003	6.9300e-003	0.0000	20.0282	20.0282	6.4800e-003	0.0000	20.1902

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3.5 Paving - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.8000e-004	6.1000e-004	5.8200e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.6742	1.6742	5.0000e-005	0.0000	1.6755
Total	7.8000e-004	6.1000e-004	5.8200e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.6742	1.6742	5.0000e-005	0.0000	1.6755

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	20.0282	20.0282	6.4800e-003	0.0000	20.1901
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.8000e-003	0.0122	0.1730	2.3000e-004		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	20.0282	20.0282	6.4800e-003	0.0000	20.1901

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3.5 Paving - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.8000e-004	6.1000e-004	5.8200e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.6742	1.6742	5.0000e-005	0.0000	1.6755
Total	7.8000e-004	6.1000e-004	5.8200e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.6742	1.6742	5.0000e-005	0.0000	1.6755

3.6 Building Construction - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2194	1.9858	1.7438	2.7900e-003		0.1156	0.1156		0.1087	0.1087	0.0000	239.7163	239.7163	0.0585	0.0000	241.1784
Total	0.2194	1.9858	1.7438	2.7900e-003		0.1156	0.1156		0.1087	0.1087	0.0000	239.7163	239.7163	0.0585	0.0000	241.1784

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3.6 Building Construction - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3400e-003	0.1015	0.0269	2.3000e-004	5.5900e-003	4.7000e-004	6.0600e-003	1.6100e-003	4.5000e-004	2.0700e-003	0.0000	22.6923	22.6923	1.7900e-003	0.0000	22.7372
Worker	0.0129	0.0101	0.0963	3.1000e-004	0.0310	2.1000e-004	0.0312	8.2300e-003	2.0000e-004	8.4300e-003	0.0000	27.7253	27.7253	8.1000e-004	0.0000	27.7454
Total	0.0162	0.1116	0.1232	5.4000e-004	0.0366	6.8000e-004	0.0373	9.8400e-003	6.5000e-004	0.0105	0.0000	50.4176	50.4176	2.6000e-003	0.0000	50.4826

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	0.0339	0.2313	1.8071	2.7900e-003		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	239.7161	239.7161	0.0585	0.0000	241.1781
Total	0.0339	0.2313	1.8071	2.7900e-003		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	239.7161	239.7161	0.0585	0.0000	241.1781

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3.6 Building Construction - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3400e-003	0.1015	0.0269	2.3000e-004	5.5900e-003	4.7000e-004	6.0600e-003	1.6100e-003	4.5000e-004	2.0700e-003	0.0000	22.6923	22.6923	1.7900e-003	0.0000	22.7372
Worker	0.0129	0.0101	0.0963	3.1000e-004	0.0310	2.1000e-004	0.0312	8.2300e-003	2.0000e-004	8.4300e-003	0.0000	27.7253	27.7253	8.1000e-004	0.0000	27.7454
Total	0.0162	0.1116	0.1232	5.4000e-004	0.0366	6.8000e-004	0.0373	9.8400e-003	6.5000e-004	0.0105	0.0000	50.4176	50.4176	2.6000e-003	0.0000	50.4826

3.7 Architectural Coating - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2598					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0157	0.1095	0.1190	1.9000e-004		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	16.5962	16.5962	1.2800e-003	0.0000	16.6283
Total	0.2755	0.1095	0.1190	1.9000e-004		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	16.5962	16.5962	1.2800e-003	0.0000	16.6283

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3.7 Architectural Coating - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6800e-003	1.3200e-003	0.0126	4.0000e-005	4.0500e-003	3.0000e-005	4.0800e-003	1.0800e-003	3.0000e-005	1.1000e-003	0.0000	3.6275	3.6275	1.1000e-004	0.0000	3.6301
Total	1.6800e-003	1.3200e-003	0.0126	4.0000e-005	4.0500e-003	3.0000e-005	4.0800e-003	1.0800e-003	3.0000e-005	1.1000e-003	0.0000	3.6275	3.6275	1.1000e-004	0.0000	3.6301

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	0.2598					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9300e-003	8.3700e-003	0.1191	1.9000e-004		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	16.5961	16.5961	1.2800e-003	0.0000	16.6283
Total	0.2617	8.3700e-003	0.1191	1.9000e-004		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	16.5961	16.5961	1.2800e-003	0.0000	16.6283

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3.7 Architectural Coating - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6800e-003	1.3200e-003	0.0126	4.0000e-005	4.0500e-003	3.0000e-005	4.0800e-003	1.0800e-003	3.0000e-005	1.1000e-003	0.0000	3.6275	3.6275	1.1000e-004	0.0000	3.6301
Total	1.6800e-003	1.3200e-003	0.0126	4.0000e-005	4.0500e-003	3.0000e-005	4.0800e-003	1.0800e-003	3.0000e-005	1.1000e-003	0.0000	3.6275	3.6275	1.1000e-004	0.0000	3.6301

4.0 Operational Detail - Mobile**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	0.2926	1.2948	3.5024	0.0118	1.0101	0.0101	1.0201	0.2705	9.4000e-003	0.2799	0.0000	1,087.5553	1,087.5553	0.0580	0.0000	1,089.0056
Unmitigated	0.2926	1.2948	3.5024	0.0118	1.0101	0.0101	1.0201	0.2705	9.4000e-003	0.2799	0.0000	1,087.5553	1,087.5553	0.0580	0.0000	1,089.0056

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	868.00	1,237.04	1237.04	2,680,168	2,680,168
Total	868.00	1,237.04	1,237.04	2,680,168	2,680,168

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 Recreational	9.50	7.30	7.30	12.00	69.00	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.593936	0.041843	0.182569	0.108325	0.016436	0.005513	0.015940	0.023523	0.001912	0.001972	0.006090	0.000748	0.001193

5.0 Energy Detail

Historical Energy Use: N

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5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	87.6375	87.6375	3.5000e-003	6.7000e-004	87.9237
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	112.9125	112.9125	4.5100e-003	8.6000e-004	113.2813
NaturalGas Mitigated	3.3200e-003	0.0302	0.0254	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	32.8956	32.8956	6.3000e-004	6.0000e-004	33.0911
NaturalGas Unmitigated	3.3200e-003	0.0302	0.0254	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	32.8956	32.8956	6.3000e-004	6.0000e-004	33.0911

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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					
User Defined Recreational	616440	3.3200e-003	0.0302	0.0254	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	32.8956	32.8956	6.3000e-004	6.0000e-004	33.0911
Total		3.3200e-003	0.0302	0.0254	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	32.8956	32.8956	6.3000e-004	6.0000e-004	33.0911

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					
User Defined Recreational	616440	3.3200e-003	0.0302	0.0254	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	32.8956	32.8956	6.3000e-004	6.0000e-004	33.0911
Total		3.3200e-003	0.0302	0.0254	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	32.8956	32.8956	6.3000e-004	6.0000e-004	33.0911

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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 Recreational	473538	112.9125	4.5100e-003	8.6000e-004	113.2813
Total		112.9125	4.5100e-003	8.6000e-004	113.2813

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	367538	87.6375	3.5000e-003	6.7000e-004	87.9237
Total		87.6375	3.5000e-003	6.7000e-004	87.9237

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	0.2449	0.0000	5.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-003	1.0000e-003	0.0000	0.0000	1.0700e-003
Unmitigated	0.2449	0.0000	5.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-003	1.0000e-003	0.0000	0.0000	1.0700e-003

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	0.0260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2189					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	0.0000	5.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-003	1.0000e-003	0.0000	0.0000	1.0700e-003
Total	0.2449	0.0000	5.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-003	1.0000e-003	0.0000	0.0000	1.0700e-003

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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	0.0260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2189					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	0.0000	5.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-003	1.0000e-003	0.0000	0.0000	1.0700e-003
Total	0.2449	0.0000	5.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-003	1.0000e-003	0.0000	0.0000	1.0700e-003

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7.3118	0.0237	6.1000e-004	8.0865
Unmitigated	7.3118	0.0237	6.1000e-004	8.0865

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0.72 / 1.83	7.3118	0.0237	6.1000e-004	8.0865
Total		7.3118	0.0237	6.1000e-004	8.0865

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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 Recreational	0.72 / 1.83	7.3118	0.0237	6.1000e-004	8.0865
Total		7.3118	0.0237	6.1000e-004	8.0865

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.4455	0.2627	0.0000	11.0135
Unmitigated	4.4455	0.2627	0.0000	11.0135

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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 Recreational	21.9	4.4455	0.2627	0.0000	11.0135
Total		4.4455	0.2627	0.0000	11.0135

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	21.9	4.4455	0.2627	0.0000	11.0135
Total		4.4455	0.2627	0.0000	11.0135

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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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

ATTACHMENT C

High Efficiency Lighting Calculations

High Efficiency Lighting

The lighting intensity in CalEEMod is the same for historical buildings and new developments for residential uses. The lighting intensity for non-residential uses is 20% better in CalEEMod following a requirement that half of the outdoor lighting is High Efficiency (HE) lighting as can be seen in the Default Data Tables within the CalEEMod User Manual Appendix D. The number has not been adjusted or changed in Versions 2011, 2013 or 2016 that would account for better lighting technologies. HE lighting is not required per code with the exception of 50% of the outdoor lighting, as stated above, unless additional lighting is needed to meet an allowable lighting requirement. Based on conversations with Architects and Energy Consultants, it was concluded that no interior high efficiency (HE) lighting would be needed to meet Code compliance. Therefore, the use of high efficiency lighting (LED is one example) would be above and beyond code. The amount of energy needed in the interior of the building is typically higher than the amount of energy needed outdoors. Indoor HE lighting is 75-90% more efficient than standard lighting.

Example: a 10 watt LED bulb replaces a 60 watt standard bulb, which would be 83% more efficient. A 15 watt LED bulb has an equivalent rating of a 100 watt standard bulb. Outdoor HE lighting is 65-80% more efficient than standard lighting. For example: a 70 watt LED bulb replaces a 250 watt standard bulb, which would be 72% more efficient. If the developer installs 100% HE fixtures and bulbs, this would reduce the energy usage from lighting more than 70% as can be seen in the tables below. To be conservative, the lighting intensity in CalEEMod was adjusted 65% with the installation of 100% HE bulbs to account for additional outdoor lighting needs.

100% HE for smaller buildings (i.e., residential and small commercial uses)

	Standard Lights	HE Lights	Standard Wattage	HE Wattage	Energy Use (Standard)	Energy Use (HE)	Total Energy
CalEEMod Lighting	60 ¹	10	100	15	6,000	150	6,150
100% HE Lighting	0	70	--	15	----	1,050	1,050
						Savings	5,000
						% Reduction	81%

¹ All indoor lighting is standard bulbs and half of the outdoor lighting is standard bulbs.

100% HE for larger buildings (i.e., commercial and industrial uses)

	Indoor Lights	Indoor Wattage	Energy Use (Indoor)	Outdoor Lights (50% HE)	Outdoor Wattage (Standard/HE)	Energy Use (Outdoor)	Total Energy
Historical Lighting	100	60	6,000	30	250/70	7,500	13,500
Standard Lighting	100	60	6,000	15/15 ¹	250/70	3,750/1,050	10,800 ²
100% HE Lighting	100	10	1,000	30	0/70	0/2,100	3,100
						Savings	7,700
						% Reduction	71%

¹ All indoor lighting is standard bulbs and half of the outdoor lighting is standard bulbs.

² Assumed 20% reduction within CalEEMod lighting intensity.

ATTACHMENT D

CALEEMOD 2016.3.2 (Previous Development Original MUP)

Monserate Existing Golf Course - San Diego County, Annual

Monserate Existing Golf Course

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Golf Course	18.00	Hole	115.93	9,000.00	0
Quality Restaurant	3.00	1000sqft	0.07	3,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2021
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	525.68	CH4 Intensity (lb/MW hr)	0.021	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Monserate Existing Golf Course - San Diego County, Annual

Project Characteristics - 2021 RPS

Land Use - existing golf course and restaurant usage.

Construction Phase - zero construction

Off-road Equipment - no equipment... necessary to zero out construction since this is a previous use

Trips and VMT -

Grading -

Architectural Coating -

Vehicle Trips - per TS

Area Coating -

Energy Use - Golf Course Facilities do not have Energy Use. Facility used for the previous pro shop etc was assumed to generate emissions similar to a Racquet Club facility and was manually updated.

Water And Wastewater - Total Water usage was 175,000,000 gallons. To correct for the Vineyard usage, 15,000,000 gallons was removed (Total Vineyard Water Demand Annually). Previous use assumed to be 160,000,000

Solid Waste -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	6,000.00	4,000.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	18,000.00	12,000.00
tblAreaCoating	Area_Nonresidential_Exterior	6000	4000
tblAreaCoating	Area_Nonresidential_Interior	18000	12000
tblEnergyUse	LightingElect	0.00	2.91
tblEnergyUse	NT24E	0.00	4.27
tblEnergyUse	NT24NG	0.00	7.00
tblEnergyUse	T24E	0.00	1.27
tblEnergyUse	T24NG	0.00	4.00
tblLandUse	LandUseSquareFeet	0.00	9,000.00
tblLandUse	LotAcreage	125.66	115.93

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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	1.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.021
tblProjectCharacteristics	CO2IntensityFactor	720.49	525.68
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	DV_TP	39.00	0.00
tblVehicleTrips	PB_TP	9.00	0.00
tblVehicleTrips	PR_TP	52.00	100.00
tblVehicleTrips	ST_TR	40.63	64.27
tblVehicleTrips	ST_TR	94.36	0.00
tblVehicleTrips	SU_TR	39.53	64.27
tblVehicleTrips	SU_TR	72.16	0.00
tblVehicleTrips	WD_TR	35.74	59.50
tblVehicleTrips	WD_TR	89.95	0.00
tblWater	OutdoorWaterUseRate	149,721,308.10	159,031,275.38

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					
2018	0.0772	4.6000e-004	4.2800e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0815	1.0815	4.0000e-005	0.0000	1.0824
2019	0.0161	9.0000e-005	8.0000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2190	0.2190	1.0000e-005	0.0000	0.2192
Maximum	0.0772	4.6000e-004	4.2800e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0815	1.0815	4.0000e-005	0.0000	1.0824

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0772	4.6000e-004	4.2800e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0815	1.0815	4.0000e-005	0.0000	1.0824
2019	0.0161	9.0000e-005	8.0000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2190	0.2190	1.0000e-005	0.0000	0.2192
Maximum	0.0772	4.6000e-004	4.2800e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0815	1.0815	4.0000e-005	0.0000	1.0824

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-20-2018	7-19-2018	0.0277	0.0277
2	7-20-2018	10-19-2018	0.0280	0.0280
3	10-20-2018	1-19-2019	0.0281	0.0281
4	1-20-2019	4-19-2019	0.0101	0.0101
		Highest	0.0281	0.0281

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	0.0562	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.8000e-004	3.8000e-004	0.0000	0.0000	4.0000e-004
Energy	3.3900e-003	0.0308	0.0259	1.9000e-004		2.3400e-003	2.3400e-003		2.3400e-003	2.3400e-003	0.0000	82.1455	82.1455	2.5800e-003	9.9000e-004	82.5037
Mobile	0.3606	1.6523	4.6232	0.0161	1.3936	0.0136	1.4072	0.3732	0.0127	0.3859	0.0000	1,484.147 3	1,484.147 3	0.0770	0.0000	1,486.073 2
Waste						0.0000	0.0000		0.0000	0.0000	1.0434	0.0000	1.0434	0.0617	0.0000	2.5849
Water						0.0000	0.0000		0.0000	0.0000	0.2889	424.2738	424.5627	0.0466	3.9300e-003	426.8990
Total	0.4202	1.6831	4.6493	0.0163	1.3936	0.0159	1.4095	0.3732	0.0151	0.3883	1.3323	1,990.566 9	1,991.899 2	0.1879	4.9200e-003	1,998.061 2

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0562	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.8000e-004	3.8000e-004	0.0000	0.0000	4.0000e-004
Energy	3.3900e-003	0.0308	0.0259	1.9000e-004		2.3400e-003	2.3400e-003		2.3400e-003	2.3400e-003	0.0000	82.1455	82.1455	2.5800e-003	9.9000e-004	82.5037
Mobile	0.3606	1.6523	4.6232	0.0161	1.3936	0.0136	1.4072	0.3732	0.0127	0.3859	0.0000	1,484.1473	1,484.1473	0.0770	0.0000	1,486.0732
Waste						0.0000	0.0000		0.0000	0.0000	1.0434	0.0000	1.0434	0.0617	0.0000	2.5849
Water						0.0000	0.0000		0.0000	0.0000	0.2889	424.2738	424.5627	0.0466	3.9300e-003	426.8990
Total	0.4202	1.6831	4.6493	0.0163	1.3936	0.0159	1.4095	0.3732	0.0151	0.3883	1.3323	1,990.5669	1,991.8992	0.1879	4.9200e-003	1,998.0612

	ROG	NOx	CO	SO2	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

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	4/20/2018	2/21/2019	5	220	

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: 12,000; Non-Residential Outdoor: 4,000; Striped Parking Area: 0
(Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	1.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	1.00	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 Architectural Coating - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0767					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
Total	0.0767	0.0000	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 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	5.5000e-004	4.6000e-004	4.2800e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0815	1.0815	4.0000e-005	0.0000	1.0824
Total	5.5000e-004	4.6000e-004	4.2800e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0815	1.0815	4.0000e-005	0.0000	1.0824

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3.2 Architectural Coating - 2018**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	0.0767					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
Total	0.0767	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	5.5000e-004	4.6000e-004	4.2800e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0815	1.0815	4.0000e-005	0.0000	1.0824
Total	5.5000e-004	4.6000e-004	4.2800e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0815	1.0815	4.0000e-005	0.0000	1.0824

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3.2 Architectural Coating - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0160					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
Total	0.0160	0.0000	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 Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	9.0000e-005	8.0000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2190	0.2190	1.0000e-005	0.0000	0.2192
Total	1.1000e-004	9.0000e-005	8.0000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2190	0.2190	1.0000e-005	0.0000	0.2192

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3.2 Architectural Coating - 2019**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	0.0160					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
Total	0.0160	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	9.0000e-005	8.0000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2190	0.2190	1.0000e-005	0.0000	0.2192
Total	1.1000e-004	9.0000e-005	8.0000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2190	0.2190	1.0000e-005	0.0000	0.2192

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	0.3606	1.6523	4.6232	0.0161	1.3936	0.0136	1.4072	0.3732	0.0127	0.3859	0.0000	1,484.147 3	1,484.147 3	0.0770	0.0000	1,486.073 2
Unmitigated	0.3606	1.6523	4.6232	0.0161	1.3936	0.0136	1.4072	0.3732	0.0127	0.3859	0.0000	1,484.147 3	1,484.147 3	0.0770	0.0000	1,486.073 2

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Golf Course	1,071.00	1,156.86	1156.86	3,697,826	3,697,826
Quality Restaurant	0.00	0.00	0.00		
Total	1,071.00	1,156.86	1,156.86	3,697,826	3,697,826

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
Golf Course	14.70	6.60	6.60	33.00	48.00	19.00	100	0	0
Quality Restaurant	14.70	6.60	6.60	12.00	69.00	19.00	38	18	44

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Golf Course	0.593936	0.041843	0.182569	0.108325	0.016436	0.005513	0.015940	0.023523	0.001912	0.001972	0.006090	0.000748	0.001193
Quality Restaurant	0.593936	0.041843	0.182569	0.108325	0.016436	0.005513	0.015940	0.023523	0.001912	0.001972	0.006090	0.000748	0.001193

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	48.5711	48.5711	1.9400e-003	3.7000e-004	48.7298
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	48.5711	48.5711	1.9400e-003	3.7000e-004	48.7298
NaturalGas Mitigated	3.3900e-003	0.0308	0.0259	1.9000e-004		2.3400e-003	2.3400e-003		2.3400e-003	2.3400e-003	0.0000	33.5744	33.5744	6.4000e-004	6.2000e-004	33.7739
NaturalGas Unmitigated	3.3900e-003	0.0308	0.0259	1.9000e-004		2.3400e-003	2.3400e-003		2.3400e-003	2.3400e-003	0.0000	33.5744	33.5744	6.4000e-004	6.2000e-004	33.7739

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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					
Golf Course	99000	5.3000e-004	4.8500e-003	4.0800e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.2830	5.2830	1.0000e-004	1.0000e-004	5.3144
Quality Restaurant	530160	2.8600e-003	0.0260	0.0218	1.6000e-004		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	28.2914	28.2914	5.4000e-004	5.2000e-004	28.4595
Total		3.3900e-003	0.0308	0.0259	1.9000e-004		2.3500e-003	2.3500e-003		2.3500e-003	2.3500e-003	0.0000	33.5744	33.5744	6.4000e-004	6.2000e-004	33.7739

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					
Golf Course	99000	5.3000e-004	4.8500e-003	4.0800e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.2830	5.2830	1.0000e-004	1.0000e-004	5.3144
Quality Restaurant	530160	2.8600e-003	0.0260	0.0218	1.6000e-004		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	28.2914	28.2914	5.4000e-004	5.2000e-004	28.4595
Total		3.3900e-003	0.0308	0.0259	1.9000e-004		2.3500e-003	2.3500e-003		2.3500e-003	2.3500e-003	0.0000	33.5744	33.5744	6.4000e-004	6.2000e-004	33.7739

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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			
Golf Course	76050	18.1337	7.2000e-004	1.4000e-004	18.1929
Quality Restaurant	127650	30.4374	1.2200e-003	2.3000e-004	30.5369
Total		48.5711	1.9400e-003	3.7000e-004	48.7298

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Golf Course	76050	18.1337	7.2000e-004	1.4000e-004	18.1929
Quality Restaurant	127650	30.4374	1.2200e-003	2.3000e-004	30.5369
Total		48.5711	1.9400e-003	3.7000e-004	48.7298

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	0.0562	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.8000e-004	3.8000e-004	0.0000	0.0000	4.0000e-004
Unmitigated	0.0562	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.8000e-004	3.8000e-004	0.0000	0.0000	4.0000e-004

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	9.2700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.8000e-004	3.8000e-004	0.0000	0.0000	4.0000e-004
Total	0.0562	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.8000e-004	3.8000e-004	0.0000	0.0000	4.0000e-004

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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	9.2700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.8000e-004	3.8000e-004	0.0000	0.0000	4.0000e-004
Total	0.0562	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.8000e-004	3.8000e-004	0.0000	0.0000	4.0000e-004

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	424.5627	0.0466	3.9300e-003	426.8990
Unmitigated	424.5627	0.0466	3.9300e-003	426.8990

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Golf Course	0 / 159.031	421.2926	0.0168	3.2100e-003	422.6686
Quality Restaurant	0.910601 / 0.0581235	3.2701	0.0298	7.2000e-004	4.2304
Total		424.5627	0.0466	3.9300e-003	426.8990

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Golf Course	0 / 159.031	421.2926	0.0168	3.2100e-003	422.6686
Quality Restaurant	0.910601 / 0.0581235	3.2701	0.0298	7.2000e-004	4.2304
Total		424.5627	0.0466	3.9300e-003	426.8990

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.0434	0.0617	0.0000	2.5849
Unmitigated	1.0434	0.0617	0.0000	2.5849

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Golf Course	2.4	0.4872	0.0288	0.0000	1.2070
Quality Restaurant	2.74	0.5562	0.0329	0.0000	1.3780
Total		1.0434	0.0617	0.0000	2.5849

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Golf Course	2.4	0.4872	0.0288	0.0000	1.2070
Quality Restaurant	2.74	0.5562	0.0329	0.0000	1.3780
Total		1.0434	0.0617	0.0000	2.5849

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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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

ATTACHMENT E

RPS Calculations

SDG&E GHG Energy Emission Factors with RPS

Year	RPS Achieved	Co2 Intensity	CH4 Intensity	N2O Intensity	
2009	10.50%	720.49	0.0290	0.0060	
2015	20.0%	644.01	0.0259	0.0054	
2020	33.0%	539.36	0.0217	0.0045	33% Required by Law
2021	34.7%	525.68	0.0212	0.0044	
2022	36.4%	511.99	0.0206	0.0043	
2023	38.1%	498.31	0.0201	0.0041	
2024	39.8%	484.62	0.0195	0.0040	
2025	41.5%	470.93	0.0190	0.0039	
2026	43.2%	457.25	0.0184	0.0038	
2027	44.9%	443.56	0.0179	0.0037	
2028	46.6%	429.88	0.0173	0.0036	
2029	48.3%	416.19	0.0168	0.0035	
2030	50.0%	402.51	0.0162	0.0034	50% Required by Law