

Sweetwater Vistas Project

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Greenhouse Gas Analyses Report

July 2017

Prepared for:

County of San Diego
Planning & Development Services

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San Diego, CA 92123

Prepared by:

HELIX Environmental Planning, Inc.

7578 El Cajon Boulevard
La Mesa, CA 91942

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GLOSSARY OF TERMS AND ACRONYMS

AB	Assembly Bill
ADT	average daily trips
AEP	Association of Environmental Professionals
AQMD	Air Quality Management District
BACT	Best Available Control Technology
BAU	Business-as-Usual
BMPs	best management practices
CAA	Clean Air Act
CAFE	Corporate Average Fuel Economy
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building
CalRecycle	California Department of Resources Recycling and Recovery
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAS	California Climate Adaptation Strategy
CAT	Climate Action Team
CBSC	California Building Standards Code
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CEUS	California Commercial End Use Survey
CF	chlorofluoride
CFC	chlorofluorocarbon
CH ₄	methane
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO ₂	carbon dioxide
CO _{2e}	carbon dioxide equivalent
County	County of San Diego
DU	dwelling unit
EIR	Environmental Impact Report
EO	Executive Order
EPIC	Energy Policy Initiative Center
F	Fahrenheit

GLOSSARY OF TERMS AND ACRONYMS (cont.)

GHG	greenhouse gas
GWP	global warming potential
HFC	hydrofluorocarbon
HVAC	heating, ventilation, and air conditioning
I-	Interstate
ICLEI	International Council on Local Environment Initiatives
IPCC	Intergovernmental Panel on Climate Change
kBTU	kiloBritish Thermal Units
kWh	kilowatt-hours
LCFS	Low Carbon Fuel Standard
LEED	Leadership in Energy and Environmental Design
LLG	Linscott, Law & Greenspan Engineers
MMT	million metric tons
mpg	miles per gallon
mph	miles per hour
MPOs	Metropolitan Planning Organizations
MT	metric ton
N ₂ O	nitrous oxide
NHTSA	National Highway Traffic Safety Administration
NO ₂	nitrogen dioxide
NO _x	oxides of nitrogen
ODC	ozone-depleting substance
OPR	Office of Planning and Research
PDS	Planning & Development Services (County of San Diego)
PFC	perfluorocarbon
PM	particulate matter
ppm	parts per million
Protocol	California Climate Action Registry General Reporting Protocol
PSD	Prevention of Significant Deterioration
PV	photovoltaic

GLOSSARY OF TERMS AND ACRONYMS (cont.)

RASS	Residential Appliance Saturation Survey
RCP	Regional Comprehensive Plan
RPS	Renewable Portfolios Standard
RTAC	Regional Targets Advisory Committee
RTP	Regional Transportation Plan
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDG&E	San Diego Gas and Electric
SF ₆	hexafluoride
SP	service population
SR	State Route
TIA	Traffic Impact Analysis
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
U.S.	United States
USEPA	U.S. Environmental Protection Agency
VMT	vehicle miles traveled
VOC	volatile organic compound

EXECUTIVE SUMMARY

This report evaluates the potential greenhouse gas (GHG) emission impacts associated with the Sweetwater Vistas Project (“Project” or “Proposed Project”). An assessment was made to estimate the total GHG emissions that would be emitted as a result of construction and operation of the Proposed Project. Construction sources of GHG emissions include heavy construction equipment, worker vehicle miles traveled (VMT), and water use. Operational sources of GHG emissions sources include energy, transportation, and solid waste.

Project buildout is anticipated to be in 2022; therefore, it would be required to comply with the 2016 Title 24 Energy Code (which goes into effect January 1, 2017); the 2016 CALGreen Building Code; Assembly Bill (AB) 341, which targets 75 percent diversion of operational waste; reduction of potable water use by 20 percent; low-flow water and bathroom fixtures; reduction of wastewater generation by 20 percent; weather-based irrigation systems; provide areas for storage and collection of recyclables and yard waste; roof anchors and pre-wiring to allow for the installation of photovoltaic (PV) systems; and preparation of a Construction and Demolition Debris Management Plan in compliance with Sections 68.508 through 68.518 of the County of San Diego Municipal Code that requires 90 percent of inerts and 70 percent of all other materials to be recycled.

In addition to the regulatory requirements listed above, the Project would incorporate several design features and best management practices to reduce construction and operational GHG emissions. The energy features would also be verified in the Title 24 Compliance Report submitted during the building permit process. These features include:

- High-efficiency window glazing;
- Energy Star™ or equivalent appliances and energy-efficient lighting;
- Drought-tolerant landscaping plan;
- High efficiency drip irrigation systems;
- Electric car re-charging outlets in garages;
- Programmable thermostat timers;
- High efficiency water heaters;
- Renewable energy would supply 100 percent of Project electricity needs through rooftop solar to the extent feasible and supplemented with mandatory continued enrollment in SDG&E’s EcoChoice, or equivalent, renewables program;
- Increased transit accessibility; and
- Increased density of development.

The Project-related construction activities are estimated to generate approximately 2,077 metric tons (MT) of carbon dioxide equivalent (CO₂e). The Project-related operational GHG emissions are estimated to generate approximately 1,712 MT CO₂e per year.

After analyzing and requiring all reasonable and feasible on-site measures for avoiding or reducing GHG emissions, the applicant has voluntarily agreed to condition the proposed Sweetwater Vistas project to achieve a net-zero level of GHG emissions (i.e., carbon neutrality) through the purchase of carbon offset credits. With the purchase of offsets required in the voluntary conditions, the Project would result in a net-zero increase in GHG emissions and impacts would be less than significant.

1.0 INTRODUCTION AND PROJECT DESCRIPTION

This report evaluates the significance of the Sweetwater Vistas Project's ("Project" or "Proposed Project") contribution of greenhouse gas (GHG) emissions to statewide GHG emissions and GHG emissions reduction targets. To evaluate the incremental effect of Project development on statewide and global climate change, it is important to have a basic understanding of the nature of the global climate change problem.

1.1 Understanding Global Climate Change

Global climate change is a change in the average weather of the earth, which can be measured by wind patterns, storms, precipitation, and temperature. The earth's climate is in a state of constant flux with periodic warming and cooling cycles. Extreme periods of cooling are termed "ice ages," which may then be followed by extended periods of warmth. For most of the earth's geologic history, these periods of warming and cooling have been the result of many complicated, interacting natural factors that include: volcanic eruptions which spew gases and particles (dust) into the atmosphere; the amount of water, vegetation, and ice covering the earth's surface; subtle changes in the earth's orbit; and the amount of energy released by the sun (sun cycles). However, since the beginning of the Industrial Revolution around 1750, the average temperature of the earth has been increasing at a rate that is faster than can be explained by natural climate cycles alone.

With the Industrial Revolution came an increase in the combustion of carbon-based fuels such as wood, coal, oil, natural gas, and biomass. Industrial processes have also created emissions of substances that are not found in nature. This in turn has led to a marked increase in the emissions of gases that have been shown to influence the world's climate. These gases, termed "greenhouse" gases, influence the amount of heat that is trapped in the earth's atmosphere. Because recently observed increased concentrations of GHGs in the atmosphere are related to increased emissions resulting from human activity, the current cycle of "global warming" is generally believed to be largely due to human activity. Of late, the issue of global warming or global climate change has arguably become the most important and widely debated environmental issue in the United States (U.S.) and the world. Because climate change is caused by the collective of human actions taking place throughout the world, it is quintessentially a global or cumulative issue.

1.2 Greenhouse Gases of Primary Concern

Global climate change refers to changes in Earth's temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by naturally occurring atmospheric gases, including water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs, such as HFC-23), perfluorocarbons (PFCs; such as CF₄), and sulfur hexafluoride (SF₆), which are known as GHGs. The potential of a gas to trap heat and warm the atmosphere is measured by its global warming potential (GWP). GHGs either break down or are absorbed over time. Thus, the potential of a gas to contribute to global warming is limited by the time it is in the atmosphere, or its "atmospheric lifetime." To account for these effects, GWPs are calculated over a 100-year time horizon (U.S. Environmental Protection Agency [USEPA] 2010a). Because of its relative abundance in the atmosphere and its relatively long atmospheric lifetime, carbon

dioxide has been designated the reference gas for comparing GWPs. Thus, the 100-year GWP of CO₂ is equal to one (see Table 1, *Global Warming Potential and Atmospheric Lifetimes*).

Table 1 GLOBAL WARMING POTENTIAL AND ATMOSPHERIC LIFETIMES		
Gas	Atmospheric Lifetime (Years)	100-year GWP^a
Carbon Dioxide (CO ₂)	50-200	1
Methane (CH ₄) ^b	9-15	21
Nitrous oxide (N ₂ O)	120	310
HFC-23	264	11,700
HFC-125	32.6	2,800
HFC-134a	14.6	1,300
HFC-143a	48.3	3,800
HFC-152a	1.5	140
HFC-227ea	36.5	2,900
HFC-236fa	209	6,300
HFC-4310mee	17.1	1,300
CF ₄	50,000	6,500
C ₂ F ₆	10,000	9,200
C ₄ F ₁₀	2,600	7,000
C ₆ F ₁₄	3,200	7,400
SF ₆	3,200	23,900

Source: USEPA 2010a.

^a Global warming potential (GWPs) used here are calculated over 100-year time horizon.

^b The methane GWP includes the direct effects and those indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO₂ is not included.

1.2.1 Types of GHGs

Water vapor is the most abundant and variable GHG in the atmosphere. It is not considered a pollutant; it maintains a climate necessary for life. The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from ice and snow, and transpiration from plant leaves (Association of Environmental Professionals; [AEP] 2007).

CO₂ is an odorless, colorless GHG. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human-caused) sources of CO₂ include the burning of fuels such as coal, oil, natural gas, and wood. Concentrations are currently around 379 parts per million (ppm); some scientists say that concentrations may increase to 1,130 CO₂ equivalent (CO₂e) ppm by 2100 as a direct result of anthropogenic sources (Intergovernmental Panel on Climate Change; [IPCC] 2007). Some predict that this will result in an average global temperature rise of at least 7.2°Fahrenheit (°F) (IPCC 2007). The GWP of CO₂ is defined as one; the GWP of other GHGs is expressed as multiples of the GWP of CO₂.

CH₄ is a gas and is the main component of natural gas used in homes. It has a GWP of about 21, or 21 times the GWP of CO₂. A natural source of CH₄ is from the decay of organic matter. Geological deposits known as natural gas fields contain CH₄, which is extracted for fuel. Other sources are from decay of organic material in landfills, fermentation of manure, and cattle digestion.

N₂O, also known as laughing gas, is a colorless gas and has a GWP of about 310. N₂O is produced by microbial processes in soil and water, including reactions that occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (e.g., nylon and nitric acid production) also emit N₂O. It is used in rocket engines, as an aerosol spray propellant, and in race cars. During combustion, NO_x (NO_x is a generic term for mono-nitrogen oxides, NO and NO₂) is produced as a criteria pollutant and is not the same as N₂O. Very small quantities of N₂O may be formed during fuel combustion by nitrogen and oxygen (American Petroleum Institute [API] 2004).

Fluorocarbons are gases formed synthetically by replacing all hydrogen atoms in CH₄ or ethane with chlorine and/or fluorine atoms. Chlorofluorocarbons (CFCs) are nontoxic, nonflammable, insoluble, and chemically nonreactive in the troposphere (the level of air at earth's surface). Chlorofluorocarbons were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone; therefore, their production was stopped by requirements of the Montreal Protocol (as described in Section 1.1.1). Fluorocarbons have a GWP of between 140 and 11,700, with the lower end being for HFC-152a and the higher end being for HFC-23.

SF₆ is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It has the highest GWP of any gas (23,900). SF₆ is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Ozone is a GHG, although unlike the other GHGs, it is relatively short-lived in the troposphere and, therefore, is not global in nature. According to the California Air Resources Board (CARB), it is difficult to make an accurate determination of the contribution of ozone precursors (NO_x and volatile organic compounds [VOCs]) to global warming (CARB 2006).

A summary of the most common naturally occurring and artificial GHGs is provided in Table 1.

Of the gases listed in Table 1, CO₂, CH₄ and N₂O, are produced by both natural and anthropogenic (human) sources. The remaining gases, HFCs, chlorofluorides (CFs), and SF₆, are the result of solely human processes.

The increase in the earth's temperature is expected to have wide-ranging effects on the environment. Although global climate change is anticipated to affect all areas of the globe, there are numerous implications of direct importance to California. Statewide average temperatures are anticipated to increase by between 3 and 10.5°F by 2100. Some climate models indicate that this warming may be greater in the summer than in the winter. This could result in widespread adverse impacts to ecosystem health, agricultural production, water use and supply, and energy demand. Increased temperatures could reduce the Sierra Nevada snowpack and put additional

strain on the state's water supply. In addition, increased temperatures would be conducive to the formation of air pollutants, resulting in poor air quality.

It is also important to note that even if GHG emissions were to be eliminated or dramatically reduced, it is projected that the effect of those emissions would continue to affect global climate for centuries.

1.3 Project Location and Description

The Project consists of 52.0 acres and is located in the unincorporated area of Spring Valley (see Figure 1, *Regional Location Map*). Approximately 43 acres of the project are located at the northwest corner of Jamacha Boulevard and Sweetwater Springs Boulevard (the Western Parcel). Approximately 8.6 acres of the project are located at the southeast corner of Jamacha Boulevard and Sweetwater Springs Boulevard, directly west of the Otay Water District offices (the Eastern Parcel). These sites are bisected by Jamacha Boulevard and are depicted in Figure 2, *Project Vicinity*.

The applicant and former lender of this property acquired it through foreclosure on September 5, 2014. These 52.0 acres are part of the 653-acre Pointe San Diego Specific Plan and related permits initially approved August 1, 1990 and subsequently amended October 22, 2003. The previously approved permits have all expired.

The current project includes the development of a new master planned community consisting of 218 multi-family residential units and approximately 27.9 acres of biological open space. The residential development would include 218 multi-family units on 20.25 acres of the 43.4-acre Western Parcel. The residential development would be divided into three planning areas as reflected in Figure 3, *Site Plan*. Lots 1 and 2 would be developed with a total of 143 residential condominium units and Lot 3 would be developed with 75 residential condominium units. Hansen's Creek, which bisects the Western Parcel, will be preserved. The 8.6-acre Eastern Parcel (previously approved for office development) containing high quality habitat would be placed in Biological Open Space. Earthwork is estimated to consist of 129,000 cubic yards of balanced cut and fill.

The Project will require a General Plan Amendment, Specific Plan Amendment, Rezone, Multiple Species Conservation Program (MSCP) Boundary Line Adjustment and Tentative Map. In addition, in November 2014, the applicant made a formal request with the Department of Public Works for the vacation of the right-of-way for State Route 54 dedicated on Subdivision Map No. 12924.

The General Plan Amendment would update the Spring Valley Community Plan map and text. The proposed amendment would change the land use designation from Specific Plan to Village Residential and Open Space-Conservation (OS-C) and would delete language related to the "promised resort, restaurants and businesses" in the text of the Spring Valley Community Plan. The Specific Plan Amendment would update the Pointe San Diego Specific Plan to delete language related to the resort. The proposed land use designation for the Western Parcel would be Village Residential 15 (VR-15) and the proposed land use designation for the Eastern Parcel would be OS-C.



Regional Location Map

SWEETWATER VISTAS

Figure 1



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Project Vicinity

SWEETWATER VISTAS



Site Plan

SWEETWATER VISTAS

Figure 3

Based on a trip generation estimate prepared by Linscott, Law & Greenspan, Engineers (LLG) dated July 2016, average daily trips (ADT) generated by the proposed 218 residential units total 1,744.

1.4 Regulatory Requirements and Project Design Features that Reduce GHG Emissions

1.4.1 Regulatory Requirements

Energy Efficiencies

- The Project will be designed to meet current Title 24 energy efficiency standards. In accordance with the requirements of 2013 Title 24, the Project will:
 - Install enhanced ceiling, attic, and wall insulation,
 - Install high efficiency window glazing,
 - Install whole house fans,
 - Have the installation of all heating, ventilation, and air conditioning (HVAC) units verified by a third party, and
 - Include roof anchors and pre-wiring to allow for the installation of photovoltaic systems.

Water Conservation

- In accordance with 2013 CALGreen mandatory measures the Project will:
 - Reduce potable water use by 20 percent,
 - Install low-flow water fixtures,
 - Reduce wastewater generation by 20 percent,
 - Install low-flow bathroom fixtures, and
 - Install weather-based smart irrigation control systems.

Solid Waste Reduction

- A Construction and Demolition Debris Management Plan will be developed to divert debris from construction and demolition away from landfills. In accordance with County Ordinance Sections 68.508 through 68.518, 90 percent of inerts and 70 percent of all other construction materials from the Project will be recycled.
- In accordance with AB 341, at least 75 percent of operational waste would be diverted from landfills through reuse and recycling.
- Provide areas for storage and collection of recyclables and yard waste in accordance with 2013 CALGreen.

1.4.2 Project Design Features

The Project proposes sustainability and efficiency features which would reduce the operational GHG emissions associated with the Proposed Project. These design features would be included as building permit conditions and verified prior to the issuance of final certificate of occupancy. These include, but are not limited to, the following:

Energy Efficiencies

- Electric car re-charging outlets in garages.
- Installation of programmable thermostat timers.
- Installation of energy efficient appliances (Energy Star™ or equivalent).
- Installation of high efficiency water heaters.
- Renewable energy would supply 100 percent of Project electricity needs through rooftop solar to the extent feasible supplemented with mandatory continued enrollment in SDG&E's EcoChoice, or equivalent, renewables program.

Vehicle Miles Traveled Reduction Measures

The Project would be built in such a way as to include features that work to minimize vehicle miles traveled (VMT) by increasing housing density and facilitating the use of local transit. This includes the following measures as described in the California Air Pollution Control Officers Association (CAPCOA) *Quantifying Greenhouse Gas Mitigation Measures*:

- **LUT-1 Increased Density** – Designing a project with increased densities affect the distance people travel and provide greater options for the mode of travel they choose. The percent increase in housing is based on a 7.6 dwelling unit per acre baseline, the blended average density of residential development in the US in 2003. The Project results in increased housing density (218 dwelling units on 20.25 acres results in 10.77 dwelling units per acre).
- **LUT-5 Increased Transit Accessibility** – Locating a project near transit will facilitate the use of transit by people traveling to or from the project site. The use of transit results in a mode shift and therefore reduced VMT. The Project site is located adjacent to San Diego Metropolitan Transit System Lines 855 and 856 with stops at the intersection of Sweetwater Springs Boulevard and Jamacha Boulevard (see Figure 3).

Water Conservation

- Outdoor landscaping plan will minimize turf, maximize drought-tolerant plants, and incorporate weather-based irrigation controllers, multi-programmable irrigation clocks, and high efficiency drip irrigation systems.

2.0 ENVIRONMENTAL SETTING

2.1 Worldwide GHG Inventory

The United Nations IPCC constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The IPCC concluded that a stabilization of GHGs at 400 to 450 ppm CO₂e concentration is required to keep global mean warming below 3.6°F, which is assumed to be necessary to avoid dangerous climate change (AEP 2007).

In 2004, total GHG emissions worldwide were estimated at 20,135 million metric tons (MMT) CO₂e emissions (United Nations Framework Convention on Climate Change [UNFCCC] 2006a). The U.S. contributed the largest portion (35 percent) of global GHG emissions in 2004. The California Energy Commission (CEC 2006) identifies the following breakdown of GHG emissions in California: CO₂, approximately 84 percent; CH₄, approximately 5.7 percent; N₂O, approximately 6.8 percent; and other pollutants, approximately 2.9 percent. As noted above, the transportation sector is the single largest category of California's GHG emissions, accounting for 41 percent of emissions statewide. CARB estimates that the year 1990 statewide CO₂e emissions level was 427 MMT (CARB 2007a). In year 2004, California produced 492 MMT of total CO₂e emissions. The total U.S. GHG emissions was 7,260 MMT of CO₂e emissions in 2005, of which 84 percent was CO₂ emission (USEPA 2006). On a national level, approximately 33 percent of GHG emissions were associated with transportation and about 41 percent were associated with electricity generation (USEPA 2006).

2.2 State and Regional GHG Inventories

CARB performed statewide inventories for the years 1990 to 2008 (Table 2). The inventory is divided into nine broad sectors of economic activity: agriculture, commercial, electricity generation, forestry, high GWP emitters, industrial, recycling and waste, residential, and transportation. Emissions are quantified in million metric tons of CO₂ equivalent (MMT CO₂e).

Table 2 CALIFORNIA GHG EMISSIONS BY SECTOR IN 1990, 2000, 2004, AND 2008				
Sector	1990 Emissions in MMT CO₂e (% total)¹	2000 Emissions in MMT CO₂e (% total)¹	2004 Emissions in MMT CO₂e (% total)¹	2008 Emissions in MMT CO₂e (% total)¹
Sources				
Agriculture	23.4 (5%)	25.44 (6%)	28.82 (6%)	28.06 (6%)
Commercial	14.4 (3%)	12.80 (3%)	13.20 (3%)	14.68 (3%)
Electricity Generation	110.6 (26%)	103.92 (23%)	119.96 (25%)	116.35 (24%)
Forestry (excluding sinks)	0.2 (<1%)	0.19 (<1%)	0.19 (<1%)	0.19 (<1%)
High GWP	--	10.95 (2%)	13.57 (3%)	15.65 (3%)
Industrial	103.0 (24%)	97.27 (21%)	90.87 (19%)	92.66 (19%)
Recycling and Waste	--	6.20 (1%)	6.23 (1%)	6.71 (1%)

**Table 2 (cont.)
CALIFORNIA GHG EMISSIONS BY SECTOR IN 1990, 2000, 2004, AND 2008**

Sector	1990 Emissions in MMT CO₂e (% total)¹	2000 Emissions in MMT CO₂e (% total)¹	2004 Emissions in MMT CO₂e (% total)¹	2008 Emissions in MMT CO₂e (% total)¹
Sources				
Residential	29.7 (7%)	30.13 (7%)	29.34 (6%)	28.45 (6%)
Transportation	150.7 (35%)	171.13 (37%)	181.71 (38%)	174.99 (37%)
Unspecified Remaining ²	1.3 (<1%)	--	--	--
<i>Subtotal</i>	<i>433.3</i>	<i>458.03</i>	<i>483.89</i>	<i>477.74</i>
Sinks				
Forestry Sinks	-6.7 (--)	-4.72 (--)	-4.32 (--)	-3.98 (--)
TOTAL	426.6	453.31	479.57	473.76

Source: CARB 2007b, 2010a

¹ Percentages may not total 100 due to rounding.

² Unspecified fuel combustion and ozone depleting substance (ODS) substitute use, which could not be attributed to an individual sector.

As shown in Table 2, statewide GHG source emissions totaled 433 MMT CO₂e in 1990, 458 MMT CO₂e in 2000, 484 MMT CO₂e in 2004, and 478 MMT CO₂e in 2008. According to data from the CARB, it appears that statewide GHG emissions peaked in 2004, and are now beginning to decrease (CARB 2010a). Transportation-related emissions consistently contribute the most GHG emissions, followed by electricity generation and industrial emissions.

The forestry sector is unique because it not only includes emissions associated with harvest, fire, and land use conversion (sources), but it also includes removals of atmospheric CO₂ (sinks) by photosynthesis, which is then bound (sequestered) in plant tissues. As seen in Table 2, the forestry sector consistently removes more CO₂ from the atmosphere statewide than it emits. As a result, although decreasing over time, this sector represents a net sink, removing a net 6.7 MMT CO₂e from the atmosphere in 1990, a net 4.7 MMT CO₂e in 2000, a net 4.3 MMT CO₂e in 2004, and a net 4.0 MMT CO₂e in 2008.

A San Diego regional emissions inventory was prepared by the University of San Diego School of Law, Energy Policy Initiative Center (EPIC) that took into account the unique characteristics of the region. Their 2006 emissions inventory for San Diego is duplicated below in Table 3. The sectors included in this inventory are somewhat different from those in the statewide inventory.

According to the San Diego County GHG Inventory prepared by the EPIC in 2008, San Diego County emitted 34 MMT of CO₂e emissions in 2006. The largest contributor of GHGs in San Diego County was the on-road transportation category, which comprised 45 percent (16 MMT CO₂e) of the total amount. The second highest contributor was the electricity category, which contributed 9 MMT CO₂e, or 25 percent of the total. Together, the on-road transportation and electricity categories comprised 70 percent of the total GHG emissions for the County. The remaining amount was contributed by natural gas consumption, civil aviation, industrial processes, off-road equipment, waste, agriculture, rail, water-borne navigation, and other fuels. By 2020, regional GHG emissions are expected to be 43 MMT of CO₂e.

Table 3 SAN DIEGO COUNTY GHG EMISSIONS BY SECTOR IN 2006	
Sector	2006 Emissions in MMT CO₂e (% total)¹
Agriculture/Forestry/Land Use	0.7 (2%)
Waste	0.7 (2%)
Electricity	9 (25%)
Natural Gas Consumption	3 (8%)
Industrial Processes & Products	1.6 (5%)
On-Road Transportation	16 (45%)
Off-Road Equipment & Vehicles	1.3 (4%)
Civil Aviation	1.7 (5%)
Rail	0.3 (<1%)
Water-Borne Navigation	0.127 (<0.5%)
Other Fuels/Other	1.1 (3%)
TOTAL	35.5

Source: USD EPIC 2008. San Diego County Greenhouse Gas Inventory: An Analysis of Regional Emissions and Strategies to Achieve (Assembly Bill) AB 32 Targets. Prepared by the University of San Diego School of Law, Energy Policy Initiative Center (EPIC), and available online at <http://www.sandiego.edu/epic/ghginventory>.

¹ Percentages may not total 100 due to rounding.

Similar to the statewide emissions, transportation-related GHG emissions contributed the most countywide, followed by emissions associated with energy use.

2.3 On-site GHG Inventory

The existing Project site is currently vacant. There are no current significant sources of on-site GHG emissions. Natural vegetation and soils temporarily store carbon as part of the terrestrial carbon cycle. Carbon is assimilated into plants as they grow and then dispersed back into the environment when they die. Soil carbon accumulates from inputs of plants, roots, and other living components of the soil ecosystem (i.e., bacteria, worms, etc.). Soil carbon is lost through biological respiration, erosion, and other forms of disturbance. The existing GHG emissions are likely to be negligible.

2.4 Consequences of Global Climate Change

CARB projects a future statewide GHG emissions increase of more than 23 percent (from 2004) by 2020 given current trends (CARB 2008a). The 2008 EPIC study predicts a countywide increase to 43 MMT CO₂e, or roughly 20 percent (from 2006) by 2020, given a business-as-usual (BAU) trajectory. Global GHG emissions forecasts also predict similar substantial increases, given a BAU trajectory.

The anticipated consequences of global climate change have the potential to result in adverse impacts. Any increase in statewide average temperatures could result in widespread adverse impacts to ecosystem health, agricultural production, water use and supply, and energy demand. Increased temperatures could also reduce the Sierra Nevada snowpack and put additional strain

on the region's water supply. In addition, increased temperatures would be conducive to the formation of air pollutants resulting in poor air quality.

To effectively address the challenges that a changing climate will bring, the State of California strengthened its commitment to climate adaptation and mitigation (i.e., reducing state GHG emissions) policies when Governor Arnold Schwarzenegger signed Executive Order (EO) S-13-08 on November 14, 2008. The order called on state agencies to develop California's first ever strategy to identify and prepare for these expected climate impacts. The California Natural Resources Agency (CNRA) has taken the lead in developing this adaptation strategy, working through the Climate Action Team (CAT). Seven sector-specific working groups led by 12 state agencies, boards and commissions, and numerous stakeholders were convened for this effort. Adaptation is a relatively new concept in California policy. The 2009 California Climate Adaptation Strategy (CAS) report summarizes the best-known science on climate change impacts in the state to assess vulnerability and outline possible solutions that can be implemented within and across state agencies to promote resiliency (CNRA 2009). This is the first step in an ongoing, evolving process to reduce California's vulnerability to climate impacts.

Future residents of the Proposed Project site could be exposed to increased risk of dehydration, heat stroke, heat exhaustion, heart attack, stroke, and respiratory disease. These risks, however, would be no different from those experienced by the San Diego region as a whole under the described scenario. Increased temperatures would result in more frequent use of air conditioning that would increase energy costs to residents, and could put a strain on the area's energy supplies. Because the Proposed Project is located inland well above sea level, no impacts related to sea level rise are anticipated.

3.0 REGULATORY SETTING

All levels of government have some responsibility for the protection of air quality, and each level (international, federal, state, and regional/local) has specific responsibilities relating to air quality regulation. GHG emissions and the regulation of GHGs is a relatively new component of air quality.

3.1 International Greenhouse Gas Legislation

3.1.1 Montreal Protocol

The Coordinating Committee on the Ozone Layer was established by the United Nations Environment Program (UNEP) in 1977, and UNEP's Governing Council adopted the World Plan of Action on the Ozone Layer in 1977. Continuing efforts led to the signing of the Vienna Convention on the Protection of the Ozone Layer in 1985. This in turn led to the creation of the Montreal Protocol on Substances That Deplete the Ozone Layer (Montreal Protocol), an international treaty designed to protect the stratospheric ozone layer by phasing out production of ozone-depleting substances (ODCs). The Montreal Protocol was adopted on September 16, 1987 and became effective on January 1, 1989.

By the end of 2006, the 191 parties to the treaty had phased out over 96 percent of ODCs (UNEP 2007a). Because of this success, scientists are now predicting that the ozone hole will “heal” later this century (UNEP 2007b). The substantial reduction of ODCs also has benefits relative to global climate change, because these substances are potent GHGs. As noted, however, the phasing out of the ODCs has led to increased use of non-ozone depleting substances, such as HFCs, which, although not detrimental to the ozone layer, are also potent GHGs.

3.1.2 United Nations Framework Convention on Climate Change

The U.S. participates in the United Nations Framework Convention on Climate Change, which was signed on March 21, 1994. The Kyoto Protocol is a treaty adopted under the UNFCCC and was the first-ever international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced by an estimated five percent from 1990 levels during the first commitment period of 2008-2012. Notably, while the United States is a signatory to the Kyoto Protocol, Congress has not ratified the Protocol and the United States is not bound by the Protocol’s commitments.

In December 2012, the United Nations representatives met in Doha, Qatar to attempt to develop a framework for addressing global climate change issues in the future. Doha Conference produced a package of documents collectively titled *The Doha Climate Gateway*. The documents collectively contained an amendment of the Kyoto Protocol (to be ratified before entering into force) featuring a second commitment period running from 2012 until 2020 limited in scope to 15 percent of the global carbon dioxide emissions due to the lack of commitments of Japan, Russia, Belarus, Ukraine, New Zealand (nor the U.S. and Canada, who are not parties to the Protocol in that period) and due to the fact that developing countries like China (the world’s largest emitter), India and Brazil are not subject to emissions reductions under the Kyoto Protocol.

3.2 Federal Greenhouse Gas Regulations

3.2.1 Federal Clean Air Act

The U.S. Supreme Court ruled on April 2, 2007, in *Massachusetts v. U.S. Environmental Protection Agency*, that CO₂ is an air pollutant, as defined under the Clean Air Act (CAA), and that the USEPA has the authority to regulate emissions of GHGs. The USEPA announced that GHGs (including CO₂, CH₄, N₂O, HFC, PFC, and SF₆) threaten the public health and welfare of the American people. This action was a prerequisite to finalizing the USEPA’s GHG emissions standards for light-duty vehicles, which were jointly proposed by the USEPA and the U.S. Department of Transportation’s National Highway Traffic Safety Administration (NHTSA). The standards were established on April 1, 2010 for 2012 through 2016 model year vehicles and on October 15, 2012 for 2017 through 2025 model year vehicles (USEPA 2011; USEPA and NHTSA 2012).

3.2.2 Corporate Average Fuel Economy Standards

The USEPA and the NHTSA have been working together on developing a national program of regulations to reduce GHG emissions and to improve fuel economy of light-duty vehicles. The USEPA is finalizing the first-ever national GHG emissions standards under the CAA, and the

NHTSA is finalizing Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. On April 1, 2010, the USEPA and NHTSA announced a joint Final Rulemaking that established standards for 2012 through 2016 model year vehicles. This was followed up on October 15, 2012, when the agencies issued a Final Rulemaking with standards for model years 2017 through 2025. The rules require these vehicles to meet an estimated combined average emissions level of 250 grams per mile by 2016, decreasing to an average industry fleet-wide level of 163 grams per mile in model year 2025. The 2016 standard is equivalent to 35.5 miles per gallon (mpg), and the 2025 standard is equivalent to 54.5 mpg if the levels were achieved solely through improvements in fuel efficiency. The agencies expect, however, that a portion of these improvements will be made through improvements in air conditioning leakage and the use of alternative refrigerants that would not contribute to fuel economy. These standards would cut GHG emissions by an estimated 2 billion metric tons (MT) and 4 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2017–2025). The combined USEPA GHG standards and NHTSA CAFE standards resolve previously conflicting requirements under both federal programs and the standards of the State of California and other states that have adopted the California standards (USEPA 2011; USEPA and NHTSA 2012).

3.2.3 Prevention of Significant Deterioration/Title V Greenhouse Gas Tailoring Rule

The USEPA will apply a tailored approach to the applicability major source thresholds for GHGs under the Prevention of Significant Deterioration (PSD) and Title V programs of the CAA by temporarily raising those thresholds and setting a PSD significance level for greenhouse gases. USEPA is anticipating that GHG emissions may soon be subject to regulation pursuant to the CAA. One consequence of subjecting GHG emissions to regulatory controls is that the requirements of existing air permit programs, namely the PSD preconstruction permitting program for major stationary sources and the Title V operating permits program, would be triggered for GHG emission sources. At the current applicability levels under the CAA, tens of thousands of projects every year would need permits under the PSD program, and millions of sources would become subject to the Title V program. These numbers of permits are orders of magnitude greater than the current number of permits under these permitting programs and would vastly exceed the administrative capacity of the permitting authorities. By tailoring the applicability thresholds, actions can be taken by the USEPA and states to build capacity and streamline permitting.

3.3 California Greenhouse Gas Regulations

3.3.1 California Code of Regulations, Title 24, Part 6

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

The Title 24 standards are updated approximately every three years to allow consideration and possible incorporation of new energy efficiency technologies and methods. The latest update to

the Title 24 standards occurred in 2013 and went into effect July 2014. This update increases energy efficiency requirements by 25 to 30 percent compared to the 2008 Title 24 standards. The next scheduled update in 2016 will continue to improve upon the current 2013 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2016 Standards will go into effect on January 1, 2017 (CEC 2016).

3.3.2 California Code of Regulations, Title 24, Part 11, California Green Building Standards Code

The California Green Building Standards Code (CALGreen Code; 24 CCR, Part 11) is a code with mandatory requirements for new residential and nonresidential buildings (including buildings for retail, office, public schools, and hospitals) throughout California. The current version of the code went into effect on July 1, 2014, and includes energy efficiency updates resulting in energy usage reductions of 25 percent for residential buildings and 30 percent for nonresidential building (CEC 2012). The code is Part 11 of the California Building Standards Code (CBSC) in Title 24 of the CCR (CBSC 2014). Workshops are currently being held for the next triennial update of the CALGreen Code.

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

The CALGreen Code contains requirements for storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for the verification that all building systems, like heating and cooling equipment and lighting systems, are functioning at their maximum efficiency.

3.3.3 Executive Order S-3-05

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

3.3.4 Assembly Bill 32 – Global Warming Solutions Act of 2006

The California Global Warming Solutions Act of 2006, widely known as AB 32, requires that the CARB develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed to set a GHG emission limit, based on 1990 levels, to be achieved

by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

3.3.5 Executive Order B-30-15

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

3.3.6 Senate Bill 32

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

3.3.7 Assembly Bill 197

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

3.3.8 Assembly Bill 1493 – Vehicular Emissions of Greenhouse Gases

AB 1493 (Pavley) requires that CARB develop and adopt regulations that achieve “the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State.” On September 24, 2009, CARB adopted amendments to the Pavley regulations that intend to reduce GHG emissions in new passenger vehicles from 2009 through 2016. The amendments bind California's enforcement of AB 1493 (starting in 2009), while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to merge its rules with the federal CAFE rules for passenger vehicles (CARB 2013). In January 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single packet of standards called Advanced Clean Cars (CARB 2013).

3.3.9 Assembly Bill 75

AB 75 was passed in 1999 and mandates state agencies to develop and implement an integrated waste management plan to reduce GHG emissions related to solid waste disposal and diversion (recycling). In addition, the bill mandates that community service districts providing solid waste

services report the disposal and diversion information to the appropriate city, county, or regional jurisdiction. Since 2004, the bill requires diversion of at least 50 percent of the solid waste from landfills and transformation facilities, and submission to the California Integrated Waste Management Board of an annual report describing the diversion rates.

3.3.10 Assembly Bill 341

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

3.3.11 Executive Order S-01-07

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

3.3.12 Senate Bill 97 – CEQA: Greenhouse Gas Emissions

In August 2007, Governor Schwarzenegger signed into law SB 97 – CEQA: Greenhouse Gas Emissions, stating, “This bill advances a coordinated policy for reducing GHG emissions by directing the Office of Planning and Research (OPR) and the Resources Agency to develop CEQA guidelines on how state and local agencies should analyze, and when necessary, mitigate GHG emissions.” Specifically, SB 97 requires the OPR to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, including but not limited to, effects associated with transportation or energy consumption. The Resources Agency certified and adopted the guidelines on December 31, 2009. The new CEQA guidelines provide the lead agency with broad discretion in determining what methodology is used in assessing the impacts of GHG emissions in the context of a particular project. This guidance is provided because the methodology for assessing GHG emissions is expected to evolve over time. The OPR guidance also states that the lead agency can rely on qualitative or other performance based standards for estimating the significance of GHG emissions, although the new CEQA Guidelines did not establish a threshold of significance.

3.3.13 Senate Bill 375

Senate Bill (SB) 375 aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations. Metropolitan Planning Organizations (MPOs) are

required to adopt a Sustainable Communities Strategy (SCS), which allocates land uses in the MPOs Regional Transportation Plan (RTP). Qualified projects consistent with an approved SCS or Alternative Planning Strategy categorized as “transit priority projects” would receive incentives to streamline CEQA processing.

3.4 California Greenhouse Gas Programs and Plans

3.4.1 California Air Resources Board: Scoping Plan

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

The CARB released the First Update to the Climate Change Scoping Plan in May 2014 to provide information on the development of measure-specific regulations and to adjust projections in consideration of the economic recession (CARB 2014a). To determine the amount of GHG emission reductions needed to achieve the goal of AB 32 (i.e., 1990 levels by 2020) CARB developed a forecast of the AB 32 Baseline 2020 emissions, which is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented.

CARB estimated the AB 32 Baseline 2020 to be 509 MMT CO₂e. The Scoping Plan’s current estimate of the necessary GHG emission reductions is 78 MMT CO₂e (CARB 2014b). This represents an approximately 15.32 percent reduction. The CARB is forecasting that this would be achieved through the following reductions by sector: 25 MMT CO₂e for energy; 23 MMT CO₂e for transportation; 5 MMT CO₂e for high-GWP GHGs, and 2 MMT CO₂e for waste. The remaining 23 MMT CO₂e would be achieved through Cap-and-Trade Program reductions. This reduction is flexible; if CARB receives new information and changes the other sectors’ reductions to be less than expected, the agency can increase the Cap-and-Trade reduction (and vice versa).

3.5 Local Policies and Plans: County of San Diego

3.5.1 County of San Diego General Plan

The County General Plan, as updated in 2011, includes a plan to balance population growth and development with infrastructure needs and resource protection. The current General Plan is based on smart growth and land planning principles that will reduce VMT and, thus, result in a reduction of GHGs. This will be accomplished by locating future development within and near existing infrastructure. The General Plan includes a number of policies in the Conservation Element that encourage the design of new buildings that incorporate principles of sustainability and reduce vehicle and utility usage.

3.5.2 San Diego County Green Building Incentive Program

The County has a Green Building Incentive Program designed to promote the use of resource efficient construction materials, water conservation, and energy efficiency in new and remodeled residential and commercial buildings. The program offers incentives of reduced plan check turnaround time and a 7.5 percent reduction in plan check and building permit fees for projects meeting minimum program requirements, which include options for natural resource conservation, water conservation, and energy conservation.

3.5.3 County of San Diego Construction and Demolition Recycling Ordinance

The County has a construction and demolition recycling ordinance that is designed to divert debris from construction and demolition projects away from landfill disposal in the unincorporated County of San Diego. The ordinance requires that 90 percent of inerts and 70 percent of all other construction materials from a project be recycled. In order to comply with the ordinance, applicants must submit a Construction and Demolition Debris Management Plan and a fully refundable Performance Guarantee prior to building permit issuance.

3.5.4 San Diego Association of Governments: San Diego Forward: The Regional Plan

The Regional Plan (SANDAG 2015) is the long-range planning document developed to address the region's housing, economic, transportation, environmental, and overall quality-of-life needs. The Regional Plan establishes a planning framework and implementation actions that increase the region's sustainability and encourage "smart growth while preserving natural resources and limiting urban sprawl." The Regional Plan encourages the regions and the County to increase residential and employment concentrations in areas with the best existing and future transit connections, and to preserve important open spaces. The focus is on implementation of basic smart growth principles designed to strengthen the integration of land use and transportation.

4.0 GUIDELINES FOR DETERMINING SIGNIFICANCE

The assessment of climate change impacts is by its nature a cumulative impact, as no individual project has the ability to affect the climate on a global scale. Based on Appendix G.VII of the State CEQA Guidelines, a project would have a significant environmental impact if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

The determination of significance is governed by CEQA Guidelines 15064.4, entitled "Determining the Significance of Impacts from Greenhouse Gas Emissions." CEQA Guidelines 15064.4(a) states, "[t]he determination of the significance of greenhouse gas emissions calls for *a careful judgment by the lead agency consistent with the provisions in section 15064*. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual

data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, *in the context of a particular project*, whether to ... [use a quantitative model or qualitative model]” (emphasis added). In turn, CEQA Guidelines 15064.4(b) clarifies that a lead agency should consider “The extent to which the project may increase or reduce greenhouse gas emission as compared to the existing environmental setting.”

5.0 IMPACT ANALYSIS

Emission estimates were calculated for the three GHGs of primary concern (CO₂, CH₄, and N₂O) that would be emitted from Project construction and from the Project’s five sources of operational emissions including on-road vehicular traffic, electricity generation, natural gas consumption, water usage, and solid waste disposal.

5.1 Methodology and Assumptions

GHG emissions from Project construction and operation are assessed using the California Emission Estimator Model (CalEEMod), Version 2013.2.2 (SCAQMD 2013). CalEEMod is a computer model developed by SCAQMD with the input of several air quality management and pollution control districts to estimate criteria air pollutant emissions from various urban land uses (SCAQMD 2013). CalEEMod has the ability to calculate mobile (i.e., vehicular), energy, and area source emissions. CalEEMod allows land use selections that include project land use types, sizes, and metric specifics.

5.1.1 Construction Analysis Assumptions

CalEEMod incorporates CARB’s EMFAC2011 model for on-road vehicle emissions and the OFFROAD2011 model for off-road vehicle emissions (CARB 2012 and 2011). CalEEMod is designed to model construction emissions for land development projects and allows for the input of project-specific information, such as the number of equipment, hours of operations, duration of construction activities, and selection of emission control measures. The analysis assessed maximum daily emissions from individual construction activities, including site preparation, grading, backbone infrastructure, building construction, paving, and architectural coating.

Construction would require heavy equipment during site preparation, mass grading, building construction, and paving. Construction equipment estimates are based on default values in CalEEMod, Version 2013.2.2 model and input from the Project Applicant. Table 4, *Construction Equipment Assumptions*, presents a summary of the assumed equipment that would be involved in each stage of construction.

Table 4 CONSTRUCTION EQUIPMENT ASSUMPTIONS		
Construction Phase	Equipment	Number
Site Preparation	Rubber Tired Dozers	1
	Tractors/Loaders/Backhoes	1
Grading Lots 1 and 2	Air Compressors	4
	Graders	1
	Off-Highway Trucks	2
	Plate Compactors	1
	Rubber Tired Dozers	2
	Scrapers	4
	Tractors/Loaders/Backhoes	1
Grading Lot 3	Graders	1
	Off-Highway Trucks	8
	Plate Compactors	1
	Rubber Tired Dozers	2
	Scrapers	4
	Tractors/Loaders/Backhoes	1
Underground Utilities	Excavators	1
	Tractors/Loaders/Backhoes	1
Paving	Pavers	1
	Paving Equipment	1
	Rollers	1
	Tractors/Loaders/Backhoes	1
Lot 1 Construction	Cranes	1
	Forklifts	1
	Generator Sets	1
	Tractors/Loaders/Backhoes	1
	Welders	3
Lot 2 Construction	Cranes	1
	Forklifts	2
	Tractors/Loaders/Backhoes	2
Lot 3 Construction	Cranes	1
	Forklifts	3
	Generator Sets	1
	Tractors/Loaders/Backhoes	3
	Welders	1
Architectural Coating	Air Compressors	1

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

The construction schedule was determined by using CalEEMod defaults, input from the Project Applicant, and standard assumptions for similarly sized projects, taking into consideration the size of the Project in order to estimate necessary construction activities and length of days per construction activity. For example, an underground utilities phase was added to the model to account for necessary Project trenching and utility installation. As shown in Table 5, *Anticipated Construction Schedule*, Project development was assumed to start in August 2018 and is

projected to end late 2021. A complete listing of the assumptions used in the analysis and model output is provided in Appendix A of this report.

Table 5
ANTICIPATED CONSTRUCTION SCHEDULE

Construction Activity	Construction Period		
	Start	End	Number of Working Days
Site Preparation	08/01/2018	08/07/2018	5
Blasting and Grading Lots 1 and 2	08/08/2018	09/26/2018	36
Blasting and Grading Lot 3	08/08/2018	08/21/2018	10
Underground Utilities	10/01/2018	11/09/2018	30
Paving	11/10/2018	11/14/2018	3
Lot 1 Construction ^a	11/15/2018	05/14/2021	520
Lot 2 Construction ^b	08/15/2019	12/14/2021	523
Lot 3 Construction ^c	11/15/2018	03/21/2021	522
Architectural Coating ^d	07/15/2019	12/27/2021	81

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

^a Lot 1 Construction will occur over 3 sub-phases, each 8 months in duration with 3 months' downtime between phases.

^b Lot 2 Construction will occur over 3 sub-phases, each 8 months in duration with 2 months' downtime between phases.

^c Lot 3 Construction will occur over 3 sub-phases, each 8 months in duration with 2 months' downtime between phases.

^d Architectural Coating will occur in sub-phases, each lasting 9 working days, with each sub-phase immediately following the end of a construction sub-phase.

Blasting may be required at the site during initial grading activity. Blasting operations would be conducted through the use of drilling and blasting to fracture rocks. It is assumed that a total of three blasting events may occur with not more than one blast occurring on any given day. Blasting operations would be conducted by a licensed blasting contractor, in strict compliance with pertinent federal, state, and county requirements. All blasting materials would be transported to the site for each blasting sequence and no explosives would be stored at the site. A single drill rig would be used to drill a pattern of boreholes each with a 3- to 6-inch diameter. A contractor then loads the holes with carefully metered explosives. The "shot" is timed to detonate each of the holes in sequence. This minimizes the ground vibration and noise of the blast, while maximizing fracture of the rock. Some dust is created as a result of the blast. However, the dust would be fully dissipated within 30 to 60 seconds following the shot. The rock would be broken up to sizes less than 18 inches in diameter.

Following blasting, the rock resource would be fractured and can be moved with conventional earthmoving equipment. A front-end loader would be used to spread the fractured rocks around the site for balanced cut/fill grading.

The Project would utilize ammonium nitrate/fuel oil (ANFO) explosives to conduct blasting on site. Uncontrolled CO₂, CH₄, and N₂O emissions are calculated using the emission factors of 73.96 kilograms (kg) per million British thermal unit (MMBtu), 3x10⁻³ kg/MMBtu, and 6x10⁻⁴ kg/MMBtu, respectively, from 40 CFR 98, Tables C-1 and C-2 for distillate fuel oil No. 2. A diesel fuel oil to ammonium nitrate ratio of 9 percent and a diesel heating value of 19,300 Btu/pound of diesel fuel were used to express the CO₂, CH₄, and N₂O emission factors in terms of pound/ton of ANFO.

Development under the Project would also result in changes in CO₂ sequestration from the atmosphere. By removing existing vegetation, the Project will also result in a one-time carbon exchange. GHG emissions from this land use change have been estimated according to the IPCC protocol for vegetation.

5.1.2 Operation Analysis Assumptions

Operational emission estimates of the Project with design features take into account the following assumptions for the Project:

- Energy efficiency in accordance with 2013 Title 24 (the Project will be required to comply with 2016 Title 24; however, 2013 Title 24 was used in this analysis in order to be conservative);
- Renewable energy would supply 100 percent of Project electricity needs through roof solar to the extent feasible and supplemented with mandatory continued enrollment in SDG&E's EcoChoice, or equivalent, renewables program;
- The Project results in increased housing density (218 dwelling units on 20.25 acres results in 10.77 dwelling units per acre);
- The Project site is located adjacent to San Diego Metropolitan Transit System Lines 855 and 856 with stops at the intersection of Sweetwater Springs Boulevard and Jamacha Boulevard (see Figure 3);
- Water conservation strategies to reduce water usage by a minimum of 20 percent compared to statewide averages; and
- Operational solid waste diversion in accordance with AB 341.

5.2 Construction Emissions

Construction activities emit GHGs primarily through the combustion of fuels (mostly diesel) in the engines of off-road construction equipment and through the combustion of diesel and gasoline in the on-road construction vehicles and in the commute vehicles of the construction workers. Smaller amounts of GHGs are also emitted through the energy use embodied in any water use (for fugitive dust control) and lighting for the construction activity. Every phase of the construction process, including grading, building, and paving emits GHG emissions, in volumes proportional to the quantity and type of construction equipment used. The heavier equipment typically emits more GHGs per hour of use than the lighter equipment because of their greater fuel consumption and engine design.

Emissions of GHGs related to the construction of the Project would be temporary. As shown in Table 6, *Estimated Construction Emissions*, total GHG emissions associated with construction are estimated at 2,077 MT CO₂e for the duration of construction.

<p style="text-align: center;">Table 6 ESTIMATED CONSTRUCTION EMISSIONS</p>	
Source	Emissions (MT CO₂e)
Site Preparation	3
Grading Lots 1 and 2 with Blasting	190
Grading Lot 3 with Blasting	79
Underground Utilities	12
Paving	2
Construction Lot 1	561
Architectural Coatings Lot 1	4
Construction Lot 2	349
Architectural Coatings Lot 2	4
Construction Lot 3	656
Architectural Coatings Lot 3	4
Vegetation – Land Use Change	213
TOTAL	2,077

Notes:

Model output data is provided in Appendix A and blasting calculations are provided in Appendix B.

Totals may not add up exactly due to rounding.

5.3 Operational Emissions

Operational sources of GHG emissions include: (1) vehicle use; (2) energy use (electricity and natural gas) and area sources (landscaping equipment; (3) solid waste generation; and (4) water conveyance and treatment.

5.3.1 Vehicle Emissions

Mobile-source GHG emissions were based on the projected trip generation rates. Using the projected ADTs and CalEEMod defaults for trip lengths, the total annual VMT was estimated to be 4.98 million miles. The VMT reducing measures identified in Section 1.4.2 were then applied to the CalEEMod results. As discussed previously, by increasing housing density and facilitating the use of local transit the Project would reduce the distance people travel and provide greater options for the mode of travel they choose. The Project would result in 10.77 dwelling units per acre and is located adjacent to San Diego Metropolitan Transit System Lines 855 and 856. VMT reductions from these measures were estimated using the methods described in CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*. Detailed calculations are provided in Appendix A. With inclusion of these VMT reducing features, the Project would result in vehicle-related GHG emissions of 1,458 MT CO₂e per year.

5.3.2 Area Source Emissions

Area sources included emissions from landscaping equipment, architectural coatings, and household consumer products. GHG emissions associated with area sources were estimated using the CalEEMod default values for the Proposed Project. The annual GHG emissions from area sources are estimated to be 3 MT CO₂e per year.

5.3.3 Energy Emissions

Buildings use electricity for lighting, heating, and cooling. Electricity generation entails the combustion of fossil fuels, including natural gas and coal, which are then stored and transported to end users. A building's electricity use is thus associated with the off-site or indirect emission of GHGs at the source of electricity generation (power plant). Due to the nature of the electrical grid, it is not possible to say with certainty where energy consumed will be generated. Therefore, GHG emissions resulting from electricity generation were estimated using the CalEEMod default values for the San Diego Gas and Electric (SDG&E) region. The electricity energy use is in kilowatt-hours per size metric for each land use subtype and natural gas use is in kiloBritish Thermal Units (kBtu) per size metric for each land use subtype. The CalEEMod model default values are based on the CEC-sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies (SCAQMD 2013).

As discussed above, this analysis incorporates energy-efficiency features that would meet 2013 Title 24 Standards. Note that based on the anticipated construction schedule, the Project would need to comply with the 2016 California Title 24 Energy Code (which goes into effect on January 1, 2017). These standards exceed the current 2013 efficiency standards by 28 percent. Therefore the analysis in this report is conservative.

The Project would also include the use of renewable energy, which would provide 100 percent of the Project's electricity needs. Renewable energy would be provided through rooftop solar to the extent feasible and supplemented with mandatory continued enrollment in SDG&E's EcoChoice, or equivalent, renewables program. Using renewable energy displaces electricity demand which would ordinarily be supplied by the local utility. Since zero GHG emissions are associated with renewable energy, the GHG emissions reductions from this measure are equivalent to the emissions that would have been produced had electricity been supplied by the local utility.

With implementation of energy-reducing project design features, the Project would result in emissions of 130 MT CO_{2e} per year from natural gas consumption.

5.3.4 Water Use and Wastewater Treatment Emissions

Water-related GHG emissions are from the conveyance of potable water and treatment of wastewater. The California Energy Commission's 2006 Refining Estimates of Water-Related Energy Use in California defines average energy values for water in Southern California. These values are used in CalEEMod to establish default water-related emission factors.

As described in Section 1.3.2, Project design features, the Project includes several water conservation measures including the 2013 CALGreen mandate to reduce water consumption by 20 percent, the installation of the low flow water features, and the use of drought tolerant landscape. These measures result in water-related GHG emissions of 87 MT CO_{2e} per year.

5.3.5 Solid Waste Emissions

Solid waste generated by the Project would also contribute to GHG emissions. Treatment and disposal of solid waste produces significant amounts of methane. Through mandatory compliance with AB 341, the Project would achieve an average 75 percent diversion of waste

during operations. Because San Diego County already achieves high diversion rates (assumed to be 50 percent), a conservative 25 percent reduction was attributed to AB 341. This 25 percent reduction would result in solid waste-related emissions of 34 MT CO₂e per year.

5.3.6 Summary

Table 7, *Estimated Operational Emissions with Project Design Features and State Mandated Measures*, includes the annual emissions for the Project. Appendix A contains the Operational CalEEMod output files for the Proposed Project. As shown in Table 7, the Project would result in GHG emissions of 1,712 MT CO₂e per year.

Table 7 ESTIMATED OPERATIONAL EMISSIONS WITH PROJECT DESIGN FEATURES AND STATE MANDATED MEASURES				
Source	CO ₂	CH ₄	N ₂ O	CO ₂ e
	MT/yr			
Area	3	0	-	3
Energy	129	0	0	130
Mobile	1,457	0	-	1,458
Solid Waste	15	1	-	34
Water Usage (including Wastewater Treatment)	76	0	0	87
TOTAL	1,680	1	0	1,712

Source: HELIX 2016 – Operational CalEEMod results are provided in Appendix A

Note: Emissions for the following sources were adjusted to include state-mandated reductions (as described above and in Appendix C of this report): energy, mobile, and water.

5.3.7 Voluntary Conditions

After analyzing and requiring all reasonable and feasible on-site measures for avoiding or reducing GHG emissions, the applicant has voluntarily agreed to condition the proposed Sweetwater Vistas project to achieve a net-zero level of GHG emissions (i.e., carbon neutrality) through the purchase of carbon offset credits.

Construction-Related Emissions Carbon Credit Purchase

Prior to issuance of the first grading permit, the applicant or its designee shall provide evidence to the County of San Diego (County) Planning and Development Services (PDS) that they have obtained a one-time purchase of carbon credits in the amount of 2,077 MT CO₂e, which would reduce the entire contribution of construction-related GHG emissions to zero. Construction emissions include all grading, site preparation, building construction, architectural coatings related emissions, and the one-time loss of carbon sequestered in existing on-site vegetation (see Table 6).

Carbon credits shall be purchased through either (i) a CARB-approved registry, such as the Climate Action Reserve, the American Carbon Registry, and the Verified Carbon Standard; (ii) through CAPCOA GHG Rx; or (iii) if no registry is in existence as identified above, then any other reputable registry or entity that issues carbon offsets, to the satisfaction of the Director of

PDS. Evidence that offset credits sufficient to offset all GHG emissions from construction shall be provided to PDS to the satisfaction of the Director of PDS.

Operational Emissions Carbon Credit Purchase

Prior to the recordation of the first building permit, the applicant shall provide evidence to County PDS that they have obtained, or entered into an agreement to obtain, carbon credits in the amount of 51,360 MT CO₂e (1,712 MT CO₂e per year for a minimum of 30 years¹). Evidence that offset credits sufficient to offset all GHG emissions from operation shall be provided to PDS to the satisfaction of the Director of PDS and shall consist of documentation from the issuing registry or a County approved third party verifier that the carbon credits have been obtained and meet the requirements stated herein.

Carbon credits shall be purchased through either (i) a CARB-approved registry, such as the Climate Action Reserve, the American Carbon Registry, and the Verified Carbon Standard; (ii) through CAPCOA GHG Rx; or (iii) if no registry is in existence as identified above, then any other reputable registry or entity that issues carbon offsets, to the satisfaction of the Director of PDS. Evidence that offset credits sufficient to offset all GHG emissions from construction shall be provided to PDS to the satisfaction of the Director of PDS.

Off-site measures, including offsets that are not otherwise required, to mitigate a project's GHG emissions are expressly authorized by CEQA Guidelines 15126.4(c)(3). The purchase of carbon offsets to reduce GHG emissions shall achieve real, permanent, quantifiable, verifiable, and enforceable reductions (Cal. Health & Saf. Code section 38562(d)(1)).

The County of San Diego PDS requires that all feasible project design features are provided prior to off-site mitigation to reduce GHG emissions. All of the project design features described above will be conditions of approval for the project.

5.4 Significance of Impacts

Through incorporation of all reasonable and feasible on-site measures to avoid or reduce GHG emissions and purchase of carbon offsets as described above in the voluntary conditions, construction and operation of the Sweetwater Vistas project would result in a net-zero increase in GHG emissions. Construction and operational related GHG emissions from the proposed Sweetwater Vistas project would be reduced to zero and GHG emission impacts would be less than significant.

¹ A "project life" is 30 years. This methodology is consistent with the 30-year project life time frame used by the South Coast Air Quality Management District's GHG guidance (SCAQMD 2008).

6.0 PROJECT CONSISTENCY WITH ADOPTED PLANS, POLICIES, AND REGULATIONS

The regulatory plans and policies discussed extensively in Section 3.0 above aim to reduce national, state, and local GHG emissions by primarily targeting the largest emitters of GHGs: the transportation and energy sectors. Plan goals and regulatory standards are thus largely focused on the automobile industry and public utilities. For the transportation sector, the reduction strategy is generally three-pronged: to reduce GHG emissions from vehicles by improving engine design; to reduce the carbon content of transportation fuels through research, funding, and incentives to fuel suppliers; and to reduce the miles these vehicles travel through land use change and infrastructure investments.

The regulatory plans and policies discussed extensively in Section 3.0 above aim to reduce national, state, and local GHG emissions by primarily targeting the largest emitters of GHGs: the transportation and energy sectors. Plan goals and regulatory standards are thus largely focused on the automobile industry and public utilities. For the transportation sector, the reduction strategy is generally three-pronged: to reduce GHG emissions from vehicles by improving engine design; to reduce the carbon content of transportation fuels through research, funding, and incentives to fuel suppliers; and to reduce the miles these vehicles travel through land use change and infrastructure investments.

For the energy sector, the reduction strategies aim to reduce energy demand; impose emission caps on energy providers; establish minimum building energy and green building standards; transition to renewable non-fossil fuels; incentivize homeowners and builders; fully recover landfill gas for energy; expand research and development; and so forth.

6.1 State Plans

SB 32 and EO S-3-05 established GHG emission reduction targets for the state, and AB 32 launched the Climate Change Scoping Plan that outlined the reduction measures needed to reach these targets. Through the purchase of carbon credits, the Project would result in a net zero increase in GHG emissions, which would be considered consistent with the AB 32's 2020 reduction target, and on track for meeting the SB 32 and EO S-3-05 reduction targets.

6.2 Local Plans

As discussed above in Section 1, the Project would achieve some GHG reductions through green building design that includes improved energy efficiency, water conservation, sustainable materials use, and waste reduction. Verification and commissioning of these features would occur through independent third-party inspection and diagnostics.

As a condition of building permit approval, however, the Proposed Project is required to comply with 2016 Title 24 standards (which surpass the 2013 Title 24 Energy Efficiency Standards assumed in this report by 28 percent), and reduce indoor water consumption by up to 20 percent. Verification of increased water and energy efficiencies will be demonstrated based on a performance approach, using a CEC-approved water and energy compliance software program,

in the Title 24 Compliance Reports provided by the Project applicant to the County prior to issuance of the building permit.

Through the purchase of carbon credits, the Project would result in a net zero increase in GHG emissions, which would be consistent with statewide GHG reduction targets established by AB 32 and EO S-3-05. The Project's consistency with specific General Plan Conservation Element policies is analyzed in Table 8, *County General Plan Policies*.

Table 8 COUNTY GENERAL PLAN POLICIES	
Policy	Project Consistency
<i>COS14.3 Sustainable Development.</i> Require design of residential subdivisions and nonresidential development through “green” and sustainable land development practices to conserve energy, water, open space, and natural resources.	<i>Consistent.</i> As discussed in the Project description (Section 1.3 of this report), the Project includes many design features to reduce energy and water use.
<i>COS14.7 Alternative Energy Sources for Development Projects.</i> Encourage development projects that use energy recovery, photovoltaic, and wind energy.	<i>Consistent.</i> The Project proposes to supply 100 percent of electricity needs through renewable sources.
<i>COS15.1 Design and Construction of New Buildings.</i> Require that new buildings be designed and constructed in accordance with “green building” programs that incorporate techniques and materials that maximize energy efficiency, incorporate the use of sustainable resources and recycled materials, and reduce emissions of GHGs and toxic air contaminants.	<i>Consistent.</i> The Project proposes sustainability and efficiency features consistent with the CALGreen Building Code. The Project proposes to supply 100 percent of electricity needs through renewable sources. The Project proposes implementing energy efficiency features that would achieve 2013 Title 24 requirements.
<i>COS15.4 Title 24 Energy Standards.</i> Require development to minimize energy impacts from new buildings in accordance with or exceeding Title 24 energy standards.	<i>Consistent.</i> The Project proposes implementing energy efficiency features that would achieve 2013 Title 24 requirements.
<i>COS17.2 Construction and Demolition Waste.</i> Require recycling, reduction and reuse of construction and demolition debris.	<i>Consistent.</i> The Project would prepare a Construction Debris Management Plan that complies with Section 68.508-68.518 of the County Municipal Code, and would divert at least 90 percent of inerts and 70 percent of construction waste from landfills through reuse and recycling.
<i>COS17.6 Recycling Containers.</i> Require that all new land development projects include space for recycling containers.	<i>Consistent.</i> The Project would provide areas for storage and collection of recyclables and yard waste.
<i>COS19.1 Sustainable Development Practices.</i> Require land development, building design, landscaping, and operational practices that minimize water consumption.	<i>Consistent.</i> The Project proposes implementing water conservation strategies to reduce water usage by installing low-flow water features.

7.0 RESIDUAL IMPACTS AND CONCLUSIONS

As discussed in Section 5.6, implementation of the Project including design features and voluntary conditions would result in a net zero GHG increase. The Project would be consistent with the policies within the General Plan intended for the reduction of GHGs. Therefore, the Proposed Project GHG emission impacts would be less than significant.

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Appendix A

CALEEMOD EMISSION CALCULATIONS



Sweetwater Vistas
San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	64.94	1000sqft	1.49	64,938.00	0
Condo/Townhouse High Rise	218.00	Dwelling Unit	3.41	218,000.00	623

1.2 Other Project Characteristics

Urbanization	Urban	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)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Based on input from JT Kruer & Co

Off-road Equipment - Based on input from JT Kruer & Co

Off-road Equipment - Based on input from JT Kruer & Co

Off-road Equipment - Based on input from JT Kruer & Co

Off-road Equipment -

Off-road Equipment - CalEEMod defaults based on active acreage.

Off-road Equipment -

Off-road Equipment - CalEEMod defaults based on active acreage.

Off-road Equipment -

Off-road Equipment - CalEEMod defaults based on active acreage.

Off-road Equipment -

Off-road Equipment - CalEEMod defaults based on active acreage.

Off-road Equipment -

Off-road Equipment - CalEEMod defaults based on active acreage.

Off-road Equipment -

Off-road Equipment - CalEEMod defaults based on active acreage.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - CalEEMod defaults based on active acreage.

Off-road Equipment - CalEEMod defaults based on active acreage.

Off-road Equipment - CalEEMod defaults based on active acreage.

Off-road Equipment - CalEEMod defaults based on active acreage.

Off-road Equipment - Based on input from JT Kruer & Co

Off-road Equipment - Based on input from JT Kruer & Co

Trips and VMT - Trip rates changed using CalEEMod defaults per active land area.

Grading -

Architectural Coating - Low-VOC Coatings. Area to be coated divided by planning areas.

Vehicle Trips - LLG 2016

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No Woodburning Devices

Area Coating - no non-residential area

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - Tier 4 equipment

Mobile Land Use Mitigation -

Area Mitigation - Low-VOC Coatings

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	32,469.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	32,469.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	32,469.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	32,469.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	32,469.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	32,469.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	32,469.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	32,469.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	32,469.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	32,469.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	97,407.00	0.00
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tblArchitecturalCoating	ConstArea_Nonresidential_Interior	97,407.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	97,407.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	97,407.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	97,407.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	97,407.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	97,407.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	97,407.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	147,150.00	16,350.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	147,150.00	16,350.00

[illegible]

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tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
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tblAreaCoating	Area_Nonresidential_Exterior	32469	0
tblAreaCoating	Area_Nonresidential_Interior	97407	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValu e	250	50
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValu e	250	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	13.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
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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
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tblConstructionPhase	NumDays	18.00	9.00
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tblConstructionPhase	NumDays	230.00	175.00
tblConstructionPhase	NumDays	230.00	174.00
tblConstructionPhase	NumDays	230.00	175.00

tblConstructionPhase	NumDays	230.00	175.00
tblConstructionPhase	NumDays	230.00	174.00
tblConstructionPhase	NumDays	230.00	174.00
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tblConstructionPhase	NumDays	8.00	10.00
tblConstructionPhase	NumDays	18.00	3.00
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tblConstructionPhase	PhaseEndDate	5/8/2020	5/28/2020
tblConstructionPhase	PhaseEndDate	2/25/2021	6/25/2020
tblConstructionPhase	PhaseEndDate	5/27/2021	2/25/2021
tblConstructionPhase	PhaseEndDate	3/10/2021	4/1/2021
tblConstructionPhase	PhaseEndDate	12/27/2021	5/27/2021
tblConstructionPhase	PhaseEndDate	6/9/2021	12/27/2021
tblConstructionPhase	PhaseEndDate	8/7/2019	7/25/2019
tblConstructionPhase	PhaseEndDate	3/25/2020	4/14/2020
tblConstructionPhase	PhaseEndDate	12/15/2020	5/15/2020
tblConstructionPhase	PhaseEndDate	1/14/2021	6/14/2020
tblConstructionPhase	PhaseEndDate	1/28/2021	2/14/2021
tblConstructionPhase	PhaseEndDate	2/25/2021	3/21/2021
tblConstructionPhase	PhaseEndDate	11/18/2021	5/14/2021
tblConstructionPhase	PhaseEndDate	12/1/2021	12/14/2021
tblConstructionPhase	PhaseEndDate	7/12/2019	7/14/2019
tblConstructionPhase	PhaseEndDate	3/10/2020	7/14/2019
tblConstructionPhase	PhaseEndDate	10/10/2018	8/21/2018
tblConstructionPhase	PhaseEndDate	10/2/2018	11/9/2018
tblConstructionPhase	PhaseStartDate	6/15/2020	4/15/2020

tblConstructionPhase	PhaseStartDate	4/28/2020	5/18/2020
tblConstructionPhase	PhaseStartDate	2/15/2021	6/15/2020
tblConstructionPhase	PhaseStartDate	5/15/2021	2/15/2021
tblConstructionPhase	PhaseStartDate	2/26/2021	3/22/2021
tblConstructionPhase	PhaseStartDate	12/15/2021	5/15/2021
tblConstructionPhase	PhaseStartDate	5/28/2021	12/15/2021
tblConstructionPhase	PhaseStartDate	7/26/2019	7/15/2019
tblConstructionPhase	PhaseStartDate	7/26/2019	8/15/2019
tblConstructionPhase	PhaseStartDate	4/15/2020	9/16/2019
tblConstructionPhase	PhaseStartDate	5/16/2020	10/15/2019
tblConstructionPhase	PhaseStartDate	5/29/2020	6/15/2020
tblConstructionPhase	PhaseStartDate	6/26/2020	7/20/2020
tblConstructionPhase	PhaseStartDate	3/22/2021	9/15/2020
tblConstructionPhase	PhaseStartDate	4/2/2021	4/15/2021
tblConstructionPhase	PhaseStartDate	7/15/2019	11/15/2018
tblConstructionPhase	PhaseStartDate	9/27/2018	8/8/2018
tblConstructionPhase	PhaseStartDate	8/22/2018	10/1/2018
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	119.90	0.00
tblFireplaces	NumberNoFireplace	21.80	218.00
tblFireplaces	NumberWood	76.30	0.00
tblGrading	MaterialExported	0.00	9,800.00
tblGrading	MaterialExported	0.00	6,300.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	8.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00
tblOffRoadEquipment	PhaseName		Grading Planning Areas A&B
tblOffRoadEquipment	PhaseName		Grading Planning Areas A&B
tblOffRoadEquipment	PhaseName		Grading Planning Area C
tblOffRoadEquipment	PhaseName		Grading Planning Areas A&B
tblOffRoadEquipment	PhaseName		Grading Planning Area C
tblOffRoadEquipment	PhaseName		Grading Planning Areas A&B
tblOffRoadEquipment	PhaseName		Grading Planning Area C
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2021
tblTripsAndVMT	VendorTripNumber	34.00	2.00
tblTripsAndVMT	VendorTripNumber	34.00	3.00
tblTripsAndVMT	VendorTripNumber	34.00	3.00
tblTripsAndVMT	VendorTripNumber	34.00	2.00
tblTripsAndVMT	VendorTripNumber	34.00	3.00
tblTripsAndVMT	VendorTripNumber	34.00	3.00
tblTripsAndVMT	VendorTripNumber	34.00	2.00
tblTripsAndVMT	VendorTripNumber	34.00	3.00
tblTripsAndVMT	VendorTripNumber	34.00	3.00
tblTripsAndVMT	WorkerTripNumber	184.00	16.00
tblTripsAndVMT	WorkerTripNumber	184.00	18.00
tblTripsAndVMT	WorkerTripNumber	184.00	22.00
tblTripsAndVMT	WorkerTripNumber	37.00	3.00

tblTripsAndVMT	WorkerTripNumber	37.00	4.00
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tblTripsAndVMT	WorkerTripNumber	37.00	4.00
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tblTripsAndVMT	WorkerTripNumber	184.00	22.00
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tblTripsAndVMT	WorkerTripNumber	37.00	4.00
tblTripsAndVMT	WorkerTripNumber	184.00	16.00
tblTripsAndVMT	WorkerTripNumber	37.00	4.00
tblTripsAndVMT	WorkerTripNumber	37.00	3.00
tblTripsAndVMT	WorkerTripNumber	15.00	10.00
tblTripsAndVMT	WorkerTripNumber	184.00	22.00
tblTripsAndVMT	WorkerTripNumber	184.00	18.00
tblTripsAndVMT	WorkerTripNumber	37.00	4.00
tblTripsAndVMT	WorkerTripNumber	37.00	4.00
tblVehicleTrips	ST_TR	7.16	8.00
tblVehicleTrips	SU_TR	6.07	8.00
tblVehicleTrips	WD_TR	6.59	8.00
tblWoodstoves	NumberCatalytic	10.90	0.00
tblWoodstoves	NumberNoncatalytic	10.90	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018											0.0000	363.0258	363.0258	0.0847	0.0000	364.8046
2019											0.0000	552.8945	552.8945	0.1204	0.0000	555.4236
2020											0.0000	627.3165	627.3165	0.1418	0.0000	630.2948
2021											0.0000	312.3045	312.3045	0.0735	0.0000	313.8472
Total											0.0000	1,855.541 3	1,855.541 3	0.4204	0.0000	1,864.370 1

2.1 Overall Construction

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											0.0000	363.0254	363.0254	0.0847	0.0000	364.8042
2019											0.0000	552.8939	552.8939	0.1204	0.0000	555.4230
2020											0.0000	627.3158	627.3158	0.1418	0.0000	630.2941
2021											0.0000	312.3042	312.3042	0.0735	0.0000	313.8468
Total											0.0000	1,855.5393	1,855.5393	0.4204	0.0000	1,864.3681

[illegible]

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	2.6452	2.6452	2.5700e-003	0.0000	2.6991
Energy											0.0000	469.2227	469.2227	0.0155	5.5100e-003	471.2572
Mobile											0.0000	1,865.178 2	1,865.178 2	0.0700	0.0000	1,866.647 6
Waste											20.3559	0.0000	20.3559	1.2030	0.0000	45.6190
Water											4.5061	92.9537	97.4599	0.4666	0.0117	110.8855
Total											24.8621	2,429.999 9	2,454.861 9	1.7576	0.0172	2,497.108 4

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	2.6452	2.6452	2.5700e-003	0.0000	2.6991
Energy											0.0000	434.1619	434.1619	0.0148	4.9100e-003	435.9929
Mobile											0.0000	1,865.178 2	1,865.178 2	0.0700	0.0000	1,866.647 6
Waste											15.2670	0.0000	15.2670	0.9023	0.0000	34.2142
Water											3.6049	72.6847	76.2896	0.3732	9.3500e-003	87.0244
Total											18.8719	2,374.670 1	2,393.542 0	1.3627	0.0143	2,426.578 2

	ROG	NOx	CO	SO2	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	24.09	2.28	2.50	22.47	17.14	2.82

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	8/1/2018	8/7/2018	5	5	
2	Grading Planning Areas A&B	Grading	8/8/2018	9/26/2018	5	36	
3	Grading Planning Area C	Grading	8/8/2018	8/21/2018	5	10	

4	Underground Utilities	Trenching	10/1/2018	11/9/2018	5	30
5	Paving	Paving	11/10/2018	11/14/2018	5	3
6	Planning Area A Phase 1 Construction	Building Construction	11/15/2018	7/14/2019	5	172
7	Planning Area C Phase 1 Construction	Building Construction	11/15/2018	7/14/2019	5	172
8	Planning Area A Phase 1 Coatings	Architectural Coating	7/15/2019	7/25/2019	5	9
9	Planning Area C Phase 1 Coatings	Architectural Coating	7/15/2019	7/25/2019	5	9
10	Planning Area B Phase 1 Construction	Building Construction	8/15/2019	4/14/2020	5	174
11	Planning Area C Phase 2 Construction	Building Construction	9/16/2019	5/15/2020	5	175
12	Planning Area A Phase 2 Construction	Building Construction	10/15/2019	6/14/2020	5	174
13	Planning Area B Phase 1 Coatings	Architectural Coating	4/15/2020	4/27/2020	5	9
14	Planning Area C Phase 2 Coatings	Architectural Coating	5/18/2020	5/28/2020	5	9
15	Planning Area B Phase 2 Construction	Building Construction	6/15/2020	2/14/2021	5	175
16	Planning Area A Phase 2 Coatings	Architectural Coating	6/15/2020	6/25/2020	5	9
17	Planning Area C Phase 3 Construction	Building Construction	7/20/2020	3/21/2021	5	175
18	Planning Area A Phase 3 Construction	Building Construction	9/15/2020	5/14/2021	5	174
19	Planning Area B Phase 2 Coatings	Architectural Coating	2/15/2021	2/25/2021	5	9
20	Planning Area C Phase 3 Coatings	Architectural Coating	3/22/2021	4/1/2021	5	9
21	Planning Area B Phase 3 Construction	Building Construction	4/15/2021	12/14/2021	5	174
22	Planning Area A Phase 3 Coatings	Architectural Coating	5/15/2021	5/27/2021	5	9
23	Planning Area B Phase 3 Coatings	Architectural Coating	12/15/2021	12/27/2021	5	9

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 49,050; Residential Outdoor: 16,350; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	1	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading Planning Areas A&B	Air Compressors	4	4.00	78	0.48
Grading Planning Areas A&B	Excavators	0	8.00	162	0.38
Grading Planning Areas A&B	Graders	1	8.00	174	0.41
Grading Planning Areas A&B	Off-Highway Trucks	2	4.00	400	0.38
Grading Planning Areas A&B	Plate Compactors	1	4.00	8	0.43
Grading Planning Areas A&B	Rubber Tired Dozers	2	8.00	255	0.40
Grading Planning Areas A&B	Scrapers	4	6.00	361	0.48
Grading Planning Areas A&B	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading Planning Area C	Excavators	0	8.00	162	0.38
Grading Planning Area C	Graders	1	8.00	174	0.41
Grading Planning Area C	Off-Highway Trucks	8	4.00	400	0.38
Grading Planning Area C	Plate Compactors	1	4.00	8	0.43
Grading Planning Area C	Rubber Tired Dozers	2	8.00	255	0.40
Grading Planning Area C	Scrapers	4	6.00	361	0.48
Grading Planning Area C	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Underground Utilities	Excavators	1	8.00	162	0.38
Underground Utilities	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38

Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Planning Area A Phase 1 Construction	Cranes	1	7.00	226	0.29
Planning Area A Phase 1 Construction	Forklifts	1	8.00	89	0.20
Planning Area A Phase 1 Construction	Generator Sets	1	8.00	84	0.74
Planning Area A Phase 1 Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Planning Area A Phase 1 Construction	Welders	3	8.00	46	0.45
Planning Area C Phase 1 Construction	Cranes	1	7.00	226	0.29
Planning Area C Phase 1 Construction	Forklifts	3	8.00	89	0.20
Planning Area C Phase 1 Construction	Generator Sets	1	8.00	84	0.74
Planning Area C Phase 1 Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Planning Area C Phase 1 Construction	Welders	1	8.00	46	0.45
Planning Area A Phase 1 Coatings	Air Compressors	1	6.00	78	0.48
Planning Area C Phase 1 Coatings	Air Compressors	1	6.00	78	0.48
Planning Area B Phase 1 Construction	Cranes	1	7.00	226	0.29
Planning Area B Phase 1 Construction	Forklifts	2	8.00	89	0.20
Planning Area B Phase 1 Construction	Generator Sets	0	8.00	84	0.74
Planning Area B Phase 1 Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Planning Area B Phase 1 Construction	Welders	0	8.00	46	0.45
Planning Area C Phase 2 Construction	Cranes	1	7.00	226	0.29
Planning Area C Phase 2 Construction	Forklifts	3	8.00	89	0.20
Planning Area C Phase 2 Construction	Generator Sets	1	8.00	84	0.74
Planning Area C Phase 2 Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Planning Area C Phase 2 Construction	Welders	1	8.00	46	0.45
Planning Area A Phase 2 Construction	Cranes	1	7.00	226	0.29
Planning Area A Phase 2 Construction	Forklifts	1	8.00	89	0.20
Planning Area A Phase 2 Construction	Generator Sets	1	8.00	84	0.74
Planning Area A Phase 2 Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Planning Area A Phase 2 Construction	Welders	3	8.00	46	0.45

Planning Area B Phase 1 Coatings	Air Compressors	1	6.00	78	0.48
Planning Area C Phase 2 Coatings	Air Compressors	1	6.00	78	0.48
Planning Area B Phase 2 Construction	Cranes	1	7.00	226	0.29
Planning Area B Phase 2 Construction	Forklifts	2	8.00	89	0.20
Planning Area B Phase 2 Construction	Generator Sets	0	8.00	84	0.74
Planning Area B Phase 2 Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Planning Area B Phase 2 Construction	Welders	0	8.00	46	0.45
Planning Area A Phase 2 Coatings	Air Compressors	1	6.00	78	0.48
Planning Area C Phase 3 Construction	Cranes	1	7.00	226	0.29
Planning Area C Phase 3 Construction	Forklifts	3	8.00	89	0.20
Planning Area C Phase 3 Construction	Generator Sets	1	8.00	84	0.74
Planning Area C Phase 3 Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Planning Area C Phase 3 Construction	Welders	1	8.00	46	0.45
Planning Area A Phase 3 Construction	Cranes	1	7.00	226	0.29
Planning Area A Phase 3 Construction	Forklifts	1	8.00	89	0.20
Planning Area A Phase 3 Construction	Generator Sets	1	8.00	84	0.74
Planning Area A Phase 3 Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Planning Area A Phase 3 Construction	Welders	3	8.00	46	0.45
Planning Area B Phase 2 Coatings	Air Compressors	1	6.00	78	0.48
Planning Area C Phase 3 Coatings	Air Compressors	1	6.00	78	0.48
Planning Area B Phase 3 Construction	Cranes	1	7.00	226	0.29
Planning Area B Phase 3 Construction	Forklifts	2	8.00	89	0.20
Planning Area B Phase 3 Construction	Generator Sets	0	8.00	84	0.74
Planning Area B Phase 3 Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Planning Area B Phase 3 Construction	Welders	0	8.00	46	0.45
Planning Area A Phase 3 Coatings	Air Compressors	1	6.00	78	0.48
Planning Area B Phase 3 Coatings	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading Planning Areas A&B	15	38.00	0.00	969.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading Planning Area C	17	43.00	0.00	623.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Underground Utilities	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area A Phase 1 Construction	7	22.00	3.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area C Phase 1 Construction	9	18.00	3.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area A Phase 1 Coatings	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area C Phase 1 Coatings	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area B Phase 1 Construction	5	16.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area C Phase 2 Construction	9	18.00	3.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area A Phase 2 Construction	7	22.00	3.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area B Phase 1 Coatings	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area C Phase 2 Coatings	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area B Phase 2 Construction	5	16.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area A Phase 2 Coatings	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area C Phase 3 Construction	9	18.00	3.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area A Phase 3 Construction	7	22.00	3.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area B Phase 2 Coatings	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area C Phase 3 Coatings	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area B Phase 3 Construction	5	16.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area A Phase 3 Coatings	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Planning Area B Phase 3 Coatings	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	2.7420	2.7420	8.5000e-004	0.0000	2.7599
Total											0.0000	2.7420	2.7420	8.5000e-004	0.0000	2.7599

3.2 Site Preparation - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.0864	0.0864	0.0000	0.0000	0.0865
Total											0.0000	0.0864	0.0864	0.0000	0.0000	0.0865

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	2.7420	2.7420	8.5000e-004	0.0000	2.7599
Total											0.0000	2.7420	2.7420	8.5000e-004	0.0000	2.7599

3.2 Site Preparation - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.0864	0.0864	0.0000	0.0000	0.0865
Total											0.0000	0.0864	0.0864	0.0000	0.0000	0.0865

3.3 Grading Planning Areas A&B - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	152.2124	152.2124	0.0447	0.0000	153.1506
Total											0.0000	152.2124	152.2124	0.0447	0.0000	153.1506

3.3 Grading Planning Areas A&B - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	31.9728	31.9728	2.3000e-004	0.0000	31.9775
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	4.7296	4.7296	2.3000e-004	0.0000	4.7345
Total											0.0000	36.7023	36.7023	4.6000e-004	0.0000	36.7120

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	152.2122	152.2122	0.0447	0.0000	153.1504
Total											0.0000	152.2122	152.2122	0.0447	0.0000	153.1504

3.3 Grading Planning Areas A&B - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	31.9728	31.9728	2.3000e-004	0.0000	31.9775
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	4.7296	4.7296	2.3000e-004	0.0000	4.7345
Total											0.0000	36.7023	36.7023	4.6000e-004	0.0000	36.7120

3.4 Grading Planning Area C - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	56.8800	56.8800	0.0177	0.0000	57.2515
Total											0.0000	56.8800	56.8800	0.0177	0.0000	57.2515

3.4 Grading Planning Area C - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	20.5563	20.5563	1.5000e-004	0.0000	20.5593
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	1.4866	1.4866	7.0000e-005	0.0000	1.4882
Total											0.0000	22.0429	22.0429	2.2000e-004	0.0000	22.0475

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	56.8799	56.8799	0.0177	0.0000	57.2514
Total											0.0000	56.8799	56.8799	0.0177	0.0000	57.2514

3.4 Grading Planning Area C - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	20.5563	20.5563	1.5000e-004	0.0000	20.5593
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	1.4866	1.4866	7.0000e-005	0.0000	1.4882
Total											0.0000	22.0429	22.0429	2.2000e-004	0.0000	22.0475

3.5 Underground Utilities - 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					
Off-Road											0.0000	11.5056	11.5056	3.5800e-003	0.0000	11.5808
Total											0.0000	11.5056	11.5056	3.5800e-003	0.0000	11.5808

3.5 Underground Utilities - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.5186	0.5186	3.0000e-005	0.0000	0.5191
Total											0.0000	0.5186	0.5186	3.0000e-005	0.0000	0.5191

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											0.0000	11.5056	11.5056	3.5800e-003	0.0000	11.5808
Total											0.0000	11.5056	11.5056	3.5800e-003	0.0000	11.5808

3.5 Underground Utilities - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.5186	0.5186	3.0000e-005	0.0000	0.5191
Total											0.0000	0.5186	0.5186	3.0000e-005	0.0000	0.5191

3.6 Paving - 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					
Off-Road											0.0000	2.0564	2.0564	6.2000e-004	0.0000	2.0694
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											0.0000	2.0564	2.0564	6.2000e-004	0.0000	2.0694

3.6 Paving - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.1037	0.1037	1.0000e-005	0.0000	0.1038
Total											0.0000	0.1037	0.1037	1.0000e-005	0.0000	0.1038

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											0.0000	2.0564	2.0564	6.2000e-004	0.0000	2.0694
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											0.0000	2.0564	2.0564	6.2000e-004	0.0000	2.0694

3.6 Paving - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.1037	0.1037	1.0000e-005	0.0000	0.1038
Total											0.0000	0.1037	0.1037	1.0000e-005	0.0000	0.1038

3.7 Planning Area A Phase 1 Construction - 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					
Off-Road											0.0000	32.4812	32.4812	6.7700e-003	0.0000	32.6233
Total											0.0000	32.4812	32.4812	6.7700e-003	0.0000	32.6233

3.7 Planning Area A Phase 1 Construction - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1.0319	1.0319	1.0000e-005	0.0000	1.0320
Worker											0.0000	2.5100	2.5100	1.2000e-004	0.0000	2.5126
Total											0.0000	3.5419	3.5419	1.3000e-004	0.0000	3.5446

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											0.0000	32.4811	32.4811	6.7700e-003	0.0000	32.6233
Total											0.0000	32.4811	32.4811	6.7700e-003	0.0000	32.6233

3.7 Planning Area A Phase 1 Construction - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1.0319	1.0319	1.0000e-005	0.0000	1.0320
Worker											0.0000	2.5100	2.5100	1.2000e-004	0.0000	2.5126
Total											0.0000	3.5419	3.5419	1.3000e-004	0.0000	3.5446

3.7 Planning Area A Phase 1 Construction - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	135.8636	135.8636	0.0272	0.0000	136.4346
Total											0.0000	135.8636	135.8636	0.0272	0.0000	136.4346

3.7 Planning Area A Phase 1 Construction - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	4.2714	4.2714	3.0000e-005	0.0000	4.2721
Worker											0.0000	10.1899	10.1899	4.9000e-004	0.0000	10.2002
Total											0.0000	14.4613	14.4613	5.2000e-004	0.0000	14.4723

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											0.0000	135.8635	135.8635	0.0272	0.0000	136.4345
Total											0.0000	135.8635	135.8635	0.0272	0.0000	136.4345

3.7 Planning Area A Phase 1 Construction - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	4.2714	4.2714	3.0000e-005	0.0000	4.2721
Worker											0.0000	10.1899	10.1899	4.9000e-004	0.0000	10.2002
Total											0.0000	14.4613	14.4613	5.2000e-004	0.0000	14.4723

3.8 Planning Area C Phase 1 Construction - 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					
Off-Road											0.0000	39.0670	39.0670	9.5600e-003	0.0000	39.2678
Total											0.0000	39.0670	39.0670	9.5600e-003	0.0000	39.2678

3.8 Planning Area C Phase 1 Construction - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1.0319	1.0319	1.0000e-005	0.0000	1.0320
Worker											0.0000	2.0536	2.0536	1.0000e-004	0.0000	2.0558
Total											0.0000	3.0855	3.0855	1.1000e-004	0.0000	3.0878

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											0.0000	39.0670	39.0670	9.5600e-003	0.0000	39.2677
Total											0.0000	39.0670	39.0670	9.5600e-003	0.0000	39.2677

3.8 Planning Area C Phase 1 Construction - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1.0319	1.0319	1.0000e-005	0.0000	1.0320
Worker											0.0000	2.0536	2.0536	1.0000e-004	0.0000	2.0558
Total											0.0000	3.0855	3.0855	1.1000e-004	0.0000	3.0878

3.8 Planning Area C Phase 1 Construction - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	162.7153	162.7153	0.0396	0.0000	163.5467
Total											0.0000	162.7153	162.7153	0.0396	0.0000	163.5467

3.8 Planning Area C Phase 1 Construction - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	4.2714	4.2714	3.0000e-005	0.0000	4.2721
Worker											0.0000	8.3372	8.3372	4.0000e-004	0.0000	8.3456
Total											0.0000	12.6086	12.6086	4.3000e-004	0.0000	12.6177

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											0.0000	162.7151	162.7151	0.0396	0.0000	163.5465
Total											0.0000	162.7151	162.7151	0.0396	0.0000	163.5465

3.8 Planning Area C Phase 1 Construction - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	4.2714	4.2714	3.0000e-005	0.0000	4.2721
Worker											0.0000	8.3372	8.3372	4.0000e-004	0.0000	8.3456
Total											0.0000	12.6086	12.6086	4.3000e-004	0.0000	12.6177

3.9 Planning Area A Phase 1 Coatings - 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	1.0000e-004	0.0000	1.1510
Total											0.0000	1.1490	1.1490	1.0000e-004	0.0000	1.1510

3.9 Planning Area A Phase 1 Coatings - 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.1200	0.1200	1.0000e-005	0.0000	0.1201
Total											0.0000	0.1200	0.1200	1.0000e-005	0.0000	0.1201

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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	1.0000e-004	0.0000	1.1510
Total											0.0000	1.1490	1.1490	1.0000e-004	0.0000	1.1510

3.9 Planning Area A Phase 1 Coatings - 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.1200	0.1200	1.0000e-005	0.0000	0.1201
Total											0.0000	0.1200	0.1200	1.0000e-005	0.0000	0.1201

3.10 Planning Area C Phase 1 Coatings - 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	1.0000e-004	0.0000	1.1510
Total											0.0000	1.1490	1.1490	1.0000e-004	0.0000	1.1510

3.10 Planning Area C Phase 1 Coatings - 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.1200	0.1200	1.0000e-005	0.0000	0.1201
Total											0.0000	0.1200	0.1200	1.0000e-005	0.0000	0.1201

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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	1.0000e-004	0.0000	1.1510
Total											0.0000	1.1490	1.1490	1.0000e-004	0.0000	1.1510

3.10 Planning Area C Phase 1 Coatings - 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.1200	0.1200	1.0000e-005	0.0000	0.1201
Total											0.0000	0.1200	0.1200	1.0000e-005	0.0000	0.1201

3.11 Planning Area B Phase 1 Construction - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	59.7169	59.7169	0.0189	0.0000	60.1136
Total											0.0000	59.7169	59.7169	0.0189	0.0000	60.1136

3.11 Planning Area B Phase 1 Construction - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2.0282	2.0282	2.0000e-005	0.0000	2.0285
Worker											0.0000	5.2782	5.2782	2.5000e-004	0.0000	5.2836
Total											0.0000	7.3064	7.3064	2.7000e-004	0.0000	7.3120

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											0.0000	59.7168	59.7168	0.0189	0.0000	60.1136
Total											0.0000	59.7168	59.7168	0.0189	0.0000	60.1136

3.11 Planning Area B Phase 1 Construction - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2.0282	2.0282	2.0000e-005	0.0000	2.0285
Worker											0.0000	5.2782	5.2782	2.5000e-004	0.0000	5.2836
Total											0.0000	7.3064	7.3064	2.7000e-004	0.0000	7.3120

3.11 Planning Area B Phase 1 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											0.0000	44.2513	44.2513	0.0143	0.0000	44.5518
Total											0.0000	44.2513	44.2513	0.0143	0.0000	44.5518

3.11 Planning Area B Phase 1 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
Vendor											0.0000	1.5014	1.5014	1.0000e-005	0.0000	1.5016
Worker											0.0000	3.8375	3.8375	1.8000e-004	0.0000	3.8414
Total											0.0000	5.3389	5.3389	1.9000e-004	0.0000	5.3429

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											0.0000	44.2512	44.2512	0.0143	0.0000	44.5518
Total											0.0000	44.2512	44.2512	0.0143	0.0000	44.5518

3.11 Planning Area B Phase 1 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
Vendor											0.0000	1.5014	1.5014	1.0000e-005	0.0000	1.5016
Worker											0.0000	3.8375	3.8375	1.8000e-004	0.0000	3.8414
Total											0.0000	5.3389	5.3389	1.9000e-004	0.0000	5.3429

3.12 Planning Area C Phase 2 Construction - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	90.1373	90.1373	0.0219	0.0000	90.5978
Total											0.0000	90.1373	90.1373	0.0219	0.0000	90.5978

3.12 Planning Area C Phase 2 Construction - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2.3662	2.3662	2.0000e-005	0.0000	2.3666
Worker											0.0000	4.6185	4.6185	2.2000e-004	0.0000	4.6231
Total											0.0000	6.9846	6.9846	2.4000e-004	0.0000	6.9897

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											0.0000	90.1372	90.1372	0.0219	0.0000	90.5977
Total											0.0000	90.1372	90.1372	0.0219	0.0000	90.5977

3.12 Planning Area C Phase 2 Construction - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2.3662	2.3662	2.0000e-005	0.0000	2.3666
Worker											0.0000	4.6185	4.6185	2.2000e-004	0.0000	4.6231
Total											0.0000	6.9846	6.9846	2.4000e-004	0.0000	6.9897

3.12 Planning Area C Phase 2 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											0.0000	113.0185	113.0185	0.0275	0.0000	113.5967
Total											0.0000	113.0185	113.0185	0.0275	0.0000	113.5967

3.12 Planning Area C Phase 2 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
Vendor											0.0000	2.9426	2.9426	2.0000e-005	0.0000	2.9431
Worker											0.0000	5.6412	5.6412	2.7000e-004	0.0000	5.6468
Total											0.0000	8.5838	8.5838	2.9000e-004	0.0000	8.5899

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											0.0000	113.0183	113.0183	0.0275	0.0000	113.5966
Total											0.0000	113.0183	113.0183	0.0275	0.0000	113.5966

3.12 Planning Area C Phase 2 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
Vendor											0.0000	2.9426	2.9426	2.0000e-005	0.0000	2.9431
Worker											0.0000	5.6412	5.6412	2.7000e-004	0.0000	5.6468
Total											0.0000	8.5838	8.5838	2.9000e-004	0.0000	8.5899

3.13 Planning Area A Phase 2 Construction - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	54.7364	54.7364	0.0110	0.0000	54.9665
Total											0.0000	54.7364	54.7364	0.0110	0.0000	54.9665

3.13 Planning Area A Phase 2 Construction - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1.7209	1.7209	1.0000e-005	0.0000	1.7211
Worker											0.0000	4.1053	4.1053	2.0000e-004	0.0000	4.1094
Total											0.0000	5.8262	5.8262	2.1000e-004	0.0000	5.8306

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											0.0000	54.7364	54.7364	0.0110	0.0000	54.9664
Total											0.0000	54.7364	54.7364	0.0110	0.0000	54.9664

3.13 Planning Area A Phase 2 Construction - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1.7209	1.7209	1.0000e-005	0.0000	1.7211
Worker											0.0000	4.1053	4.1053	2.0000e-004	0.0000	4.1094
Total											0.0000	5.8262	5.8262	2.1000e-004	0.0000	5.8306

3.13 Planning Area A Phase 2 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											0.0000	114.2751	114.2751	0.0222	0.0000	114.7413
Total											0.0000	114.2751	114.2751	0.0222	0.0000	114.7413

3.13 Planning Area A Phase 2 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
Vendor											0.0000	3.5432	3.5432	3.0000e-005	0.0000	3.5437
Worker											0.0000	8.3019	8.3019	3.9000e-004	0.0000	8.3101
Total											0.0000	11.8450	11.8450	4.2000e-004	0.0000	11.8539

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											0.0000	114.2749	114.2749	0.0222	0.0000	114.7412
Total											0.0000	114.2749	114.2749	0.0222	0.0000	114.7412

3.13 Planning Area A Phase 2 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
Vendor											0.0000	3.5432	3.5432	3.0000e-005	0.0000	3.5437
Worker											0.0000	8.3019	8.3019	3.9000e-004	0.0000	8.3101
Total											0.0000	11.8450	11.8450	4.2000e-004	0.0000	11.8539

3.14 Planning Area B Phase 1 Coatings - 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	9.0000e-005	0.0000	1.1508
Total											0.0000	1.1490	1.1490	9.0000e-005	0.0000	1.1508

3.14 Planning Area B Phase 1 Coatings - 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.0863	0.0863	0.0000	0.0000	0.0864
Total											0.0000	0.0863	0.0863	0.0000	0.0000	0.0864

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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	9.0000e-005	0.0000	1.1508
Total											0.0000	1.1490	1.1490	9.0000e-005	0.0000	1.1508

3.14 Planning Area B Phase 1 Coatings - 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.0863	0.0863	0.0000	0.0000	0.0864
Total											0.0000	0.0863	0.0863	0.0000	0.0000	0.0864

3.15 Planning Area C Phase 2 Coatings - 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	9.0000e-005	0.0000	1.1508
Total											0.0000	1.1490	1.1490	9.0000e-005	0.0000	1.1508

3.15 Planning Area C Phase 2 Coatings - 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.1151	0.1151	1.0000e-005	0.0000	0.1152
Total											0.0000	0.1151	0.1151	1.0000e-005	0.0000	0.1152

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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	9.0000e-005	0.0000	1.1508
Total											0.0000	1.1490	1.1490	9.0000e-005	0.0000	1.1508

3.15 Planning Area C Phase 2 Coatings - 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.1151	0.1151	1.0000e-005	0.0000	0.1152
Total											0.0000	0.1151	0.1151	1.0000e-005	0.0000	0.1152

3.16 Planning Area B Phase 2 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											0.0000	84.9624	84.9624	0.0275	0.0000	85.5395
Total											0.0000	84.9624	84.9624	0.0275	0.0000	85.5395

3.16 Planning Area B Phase 2 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
Vendor											0.0000	2.8826	2.8826	2.0000e-005	0.0000	2.8830
Worker											0.0000	7.3681	7.3681	3.5000e-004	0.0000	7.3754
Total											0.0000	10.2507	10.2507	3.7000e-004	0.0000	10.2584

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											0.0000	84.9623	84.9623	0.0275	0.0000	85.5394
Total											0.0000	84.9623	84.9623	0.0275	0.0000	85.5394

3.16 Planning Area B Phase 2 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
Vendor											0.0000	2.8826	2.8826	2.0000e-005	0.0000	2.8830
Worker											0.0000	7.3681	7.3681	3.5000e-004	0.0000	7.3754
Total											0.0000	10.2507	10.2507	3.7000e-004	0.0000	10.2584

3.16 Planning Area B Phase 2 Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	18.2932	18.2932	5.9200e-003	0.0000	18.4174
Total											0.0000	18.2932	18.2932	5.9200e-003	0.0000	18.4174

3.16 Planning Area B Phase 2 Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.6196	0.6196	0.0000	0.0000	0.6197
Worker											0.0000	1.5597	1.5597	7.0000e-005	0.0000	1.5612
Total											0.0000	2.1793	2.1793	7.0000e-005	0.0000	2.1809

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											0.0000	18.2931	18.2931	5.9200e-003	0.0000	18.4174
Total											0.0000	18.2931	18.2931	5.9200e-003	0.0000	18.4174

3.16 Planning Area B Phase 2 Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.6196	0.6196	0.0000	0.0000	0.6197
Worker											0.0000	1.5597	1.5597	7.0000e-005	0.0000	1.5612
Total											0.0000	2.1793	2.1793	7.0000e-005	0.0000	2.1809

3.17 Planning Area A Phase 2 Coatings - 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	9.0000e-005	0.0000	1.1508
Total											0.0000	1.1490	1.1490	9.0000e-005	0.0000	1.1508

3.17 Planning Area A Phase 2 Coatings - 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.1151	0.1151	1.0000e-005	0.0000	0.1152
Total											0.0000	0.1151	0.1151	1.0000e-005	0.0000	0.1152

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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	9.0000e-005	0.0000	1.1508
Total											0.0000	1.1490	1.1490	9.0000e-005	0.0000	1.1508

3.17 Planning Area A Phase 2 Coatings - 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.1151	0.1151	1.0000e-005	0.0000	0.1152
Total											0.0000	0.1151	0.1151	1.0000e-005	0.0000	0.1152

3.18 Planning Area C Phase 3 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											0.0000	137.2367	137.2367	0.0334	0.0000	137.9388
Total											0.0000	137.2367	137.2367	0.0334	0.0000	137.9388

3.18 Planning Area C Phase 3 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
Vendor											0.0000	3.5732	3.5732	3.0000e-005	0.0000	3.5738
Worker											0.0000	6.8500	6.8500	3.3000e-004	0.0000	6.8568
Total											0.0000	10.4232	10.4232	3.6000e-004	0.0000	10.4306

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											0.0000	137.2365	137.2365	0.0334	0.0000	137.9387
Total											0.0000	137.2365	137.2365	0.0334	0.0000	137.9387

3.18 Planning Area C Phase 3 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
Vendor											0.0000	3.5732	3.5732	3.0000e-005	0.0000	3.5738
Worker											0.0000	6.8500	6.8500	3.3000e-004	0.0000	6.8568
Total											0.0000	10.4232	10.4232	3.6000e-004	0.0000	10.4306

3.18 Planning Area C Phase 3 Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	64.5896	64.5896	0.0156	0.0000	64.9164
Total											0.0000	64.5896	64.5896	0.0156	0.0000	64.9164

3.18 Planning Area C Phase 3 Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1.6788	1.6788	1.0000e-005	0.0000	1.6791
Worker											0.0000	3.1698	3.1698	1.5000e-004	0.0000	3.1728
Total											0.0000	4.8486	4.8486	1.6000e-004	0.0000	4.8519

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											0.0000	64.5896	64.5896	0.0156	0.0000	64.9163
Total											0.0000	64.5896	64.5896	0.0156	0.0000	64.9163

3.18 Planning Area C Phase 3 Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1.6788	1.6788	1.0000e-005	0.0000	1.6791
Worker											0.0000	3.1698	3.1698	1.5000e-004	0.0000	3.1728
Total											0.0000	4.8486	4.8486	1.6000e-004	0.0000	4.8519

3.19 Planning Area A Phase 3 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											0.0000	75.5378	75.5378	0.0147	0.0000	75.8459
Total											0.0000	75.5378	75.5378	0.0147	0.0000	75.8459

3.19 Planning Area A Phase 3 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
Vendor											0.0000	2.3421	2.3421	2.0000e-005	0.0000	2.3425
Worker											0.0000	5.4877	5.4877	2.6000e-004	0.0000	5.4931
Total											0.0000	7.8298	7.8298	2.8000e-004	0.0000	7.8356

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											0.0000	75.5377	75.5377	0.0147	0.0000	75.8459
Total											0.0000	75.5377	75.5377	0.0147	0.0000	75.8459

3.19 Planning Area A Phase 3 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
Vendor											0.0000	2.3421	2.3421	2.0000e-005	0.0000	2.3425
Worker											0.0000	5.4877	5.4877	2.6000e-004	0.0000	5.4931
Total											0.0000	7.8298	7.8298	2.8000e-004	0.0000	7.8356

3.19 Planning Area A Phase 3 Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	92.9727	92.9727	0.0174	0.0000	93.3390
Total											0.0000	92.9727	92.9727	0.0174	0.0000	93.3390

3.19 Planning Area A Phase 3 Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2.8780	2.8780	2.0000e-005	0.0000	2.8784
Worker											0.0000	6.6414	6.6414	3.1000e-004	0.0000	6.6479
Total											0.0000	9.5194	9.5194	3.3000e-004	0.0000	9.5263

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											0.0000	92.9726	92.9726	0.0174	0.0000	93.3389
Total											0.0000	92.9726	92.9726	0.0174	0.0000	93.3389

3.19 Planning Area A Phase 3 Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2.8780	2.8780	2.0000e-005	0.0000	2.8784
Worker											0.0000	6.6414	6.6414	3.1000e-004	0.0000	6.6479
Total											0.0000	9.5194	9.5194	3.3000e-004	0.0000	9.5263

3.20 Planning Area B Phase 2 Coatings - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1506
Total											0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1506

3.20 Planning Area B Phase 2 Coatings - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.0849	0.0849	0.0000	0.0000	0.0850
Total											0.0000	0.0849	0.0849	0.0000	0.0000	0.0850

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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1506
Total											0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1506

3.20 Planning Area B Phase 2 Coatings - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.0849	0.0849	0.0000	0.0000	0.0850
Total											0.0000	0.0849	0.0849	0.0000	0.0000	0.0850

3.21 Planning Area C Phase 3 Coatings - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1506
Total											0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1506

3.21 Planning Area C Phase 3 Coatings - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.1132	0.1132	1.0000e-005	0.0000	0.1133
Total											0.0000	0.1132	0.1132	1.0000e-005	0.0000	0.1133

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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1506
Total											0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1506

3.21 Planning Area C Phase 3 Coatings - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.1132	0.1132	1.0000e-005	0.0000	0.1133
Total											0.0000	0.1132	0.1132	1.0000e-005	0.0000	0.1133

3.22 Planning Area B Phase 3 Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	102.6777	102.6777	0.0332	0.0000	103.3750
Total											0.0000	102.6777	102.6777	0.0332	0.0000	103.3750

3.22 Planning Area B Phase 3 Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	3.4776	3.4776	3.0000e-005	0.0000	3.4781
Worker											0.0000	8.7545	8.7545	4.1000e-004	0.0000	8.7631
Total											0.0000	12.2321	12.2321	4.4000e-004	0.0000	12.2412

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											0.0000	102.6775	102.6775	0.0332	0.0000	103.3749
Total											0.0000	102.6775	102.6775	0.0332	0.0000	103.3749

3.22 Planning Area B Phase 3 Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	3.4776	3.4776	3.0000e-005	0.0000	3.4781
Worker											0.0000	8.7545	8.7545	4.1000e-004	0.0000	8.7631
Total											0.0000	12.2321	12.2321	4.4000e-004	0.0000	12.2412

3.23 Planning Area A Phase 3 Coatings - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1506
Total											0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1506

3.23 Planning Area A Phase 3 Coatings - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.1132	0.1132	1.0000e-005	0.0000	0.1133
Total											0.0000	0.1132	0.1132	1.0000e-005	0.0000	0.1133

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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1506
Total											0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1506

3.23 Planning Area A Phase 3 Coatings - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.1132	0.1132	1.0000e-005	0.0000	0.1133
Total											0.0000	0.1132	0.1132	1.0000e-005	0.0000	0.1133

3.24 Planning Area B Phase 3 Coatings - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1506
Total											0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1506

3.24 Planning Area B Phase 3 Coatings - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.0849	0.0849	0.0000	0.0000	0.0850
Total											0.0000	0.0849	0.0849	0.0000	0.0000	0.0850

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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1506
Total											0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1506

3.24 Planning Area B Phase 3 Coatings - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.0849	0.0849	0.0000	0.0000	0.0850
Total											0.0000	0.0849	0.0849	0.0000	0.0000	0.0850

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	1,865.178 2	1,865.178 2	0.0700	0.0000	1,866.647 6
Unmitigated											0.0000	1,865.178 2	1,865.178 2	0.0700	0.0000	1,866.647 6

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	1,744.00	1,744.00	1,744.00	4,979,649	4,979,649
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	1,744.00	1,744.00	1,744.00	4,979,649	4,979,649

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
Condo/Townhouse High Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512811	0.073496	0.191363	0.130940	0.036084	0.005147	0.012550	0.023118	0.001871	0.002053	0.006546	0.000576	0.003444

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	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	305.1057	305.1057	0.0123	2.5400e-003	306.1513
Electricity Unmitigated											0.0000	308.7871	308.7871	0.0124	2.5700e-003	309.8453
NaturalGas Mitigated											0.0000	129.0562	129.0562	2.4700e-003	2.3700e-003	129.8416
NaturalGas Unmitigated											0.0000	160.4356	160.4356	3.0800e-003	2.9400e-003	161.4120

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					
Other Asphalt Surfaces	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse High Rise	3.00645e+006											0.0000	160.4356	160.4356	3.0800e-003	2.9400e-003	161.4120
Total												0.0000	160.4356	160.4356	3.0800e-003	2.9400e-003	161.4120

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse High Rise	2.41842e+006											0.0000	129.0562	129.0562	2.4700e-003	2.3700e-003	129.8416
Other Asphalt Surfaces	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total												0.0000	129.0562	129.0562	2.4700e-003	2.3700e-003	129.8416

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse High Rise	944856	308.7871	0.0124	2.5700e-003	309.8453
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		308.7871	0.0124	2.5700e-003	309.8453

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse High Rise	933591	305.1057	0.0123	2.5400e-003	306.1513
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		305.1057	0.0123	2.5400e-003	306.1513

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	2.6452	2.6452	2.5700e-003	0.0000	2.6991
Unmitigated											0.0000	2.6452	2.6452	2.5700e-003	0.0000	2.6991

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	2.6452	2.6452	2.5700e-003	0.0000	2.6991
Total											0.0000	2.6452	2.6452	2.5700e-003	0.0000	2.6991

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	2.6452	2.6452	2.5700e-003	0.0000	2.6991
Total											0.0000	2.6452	2.6452	2.5700e-003	0.0000	2.6991

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	76.2896	0.3732	9.3500e-003	87.0244
Unmitigated	97.4599	0.4666	0.0117	110.8855

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse High Rise	14.2036 / 8.95443	97.4599	0.4666	0.0117	110.8855
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		97.4599	0.4666	0.0117	110.8855

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse High Rise	11.3629 / 7.16354	76.2896	0.3732	9.3500e-003	87.0244
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		76.2896	0.3732	9.3500e-003	87.0244

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	15.2670	0.9023	0.0000	34.2142
Unmitigated	20.3559	1.2030	0.0000	45.6190

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse High Rise	100.28	20.3559	1.2030	0.0000	45.6190
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		20.3559	1.2030	0.0000	45.6190

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse High Rise	75.21	15.2670	0.9023	0.0000	34.2142
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		15.2670	0.9023	0.0000	34.2142

9.0 Operational Offroad

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



Appendix B

DRILLING AND BLASTING EMISSION CALCULATION DATA



Drilling and Blasting

			Blast Frequency			
ID	Source	holes/blast	blasts/day	blasts/month	blasts/ year	Tons ANFO/ Blast
B-1	Blasting Activity	36	1	3	3	3

Blasting Gases - ANFO Emission Factors

ID	Source	CO EF lb/ton	NOX EF lb/ton	SOx EF lb/ton	CO2 EF lb/ton	CH4 EF lb/ton	N2O EF lb/ton
B-1	Blasting Activity	67	17	2	566	0.02	0.005

Blasting Gases - ANFO Emission Rates Greenhouse Gases

ID	Emissions	CO2 (lb/hr)	CO2 (lb/day)	CO2 (TPY)	CH4 (lb/hr)	CH4 (lb/day)	CH4 (TPY)	N2O (lb/hr)	N2O (lb/day)	N2O (TPY)	Source Type
B-1	Blasting Activity	1,698.00	1,698.00	2.55	0.06	0.06	0.0001	0.0150	0.0150	0.0450	Area

Notes:

1. Emission Factor Source: AP-42 5th Edition, Section 13.3, Table 13.3-1, February 1980, ND = no data.

Uncontrolled CO₂, CH₄, and N₂O emissions are calculated using the emission factors of 73.96 kg/MMBtu, 3*10⁻³ kg/MMBtu, and 6*10⁻⁴ kg/MMBtu, respectively, from 40 CFR 98, Tables C-1 and C-2 for distillate fuel oil No. 2. A diesel fuel oil to ammonium nitrate ratio of 9% and a diesel heating value of 19,300 Btu/pound of diesel fuel were used to express the CO₂, CH₄, and N₂O emission factors in terms of lb/ton of ANFO.



Appendix C

EMISSION REDUCTION ADJUSTMENTS



Appendix C

EMISSION REDUCTION ADJUSTMENTS FOR SWEETWATER VISTAS PROJECT

Methodology for Calculating Reduction Credits for the Project with Design Features

Transportation-related emissions reductions would be achieved partly through state regulations, goals, and policies. Per the County of San Diego's (County's) Guidelines, it is acceptable to apply the reductions from these measures to the Project.

As summarized in Table C-1, reduction credits are based on the California Air Resources Board (CARB) Scoping Plan reductions for sector-specific activity. As shown, Pavley II reductions counted towards the 2020 target is 4 million metric tons (MMT) of carbon dioxide equivalent (CO₂e), and projected 2020 unmitigated transportation-related emissions is 168.2 MMT CO₂e. Therefore, the reduction is 2.38 percent (4 MMT CO₂e/168.2 MMT CO₂e). This percentage reduction can be applied to the Project's transportation emissions.

Table C-1 SCOPING PLAN GHG EMISSION REDUCTIONS (ANNUAL MMT CO₂e)				
Statewide Land Use-Adjusted 2020 GHG Emissions Inventory¹		AB 32 Scoping Plan GHG Emission Reductions²		Percent Reduction
Sector	Emissions	Measure	Emissions Reduction	
Transportation	168.2	Pavley II	4.0	2.38

Source: CARB 2014

¹ From CARB's 2020 BAU Forecast, available:

http://www.arb.ca.gov/cc/inventory/data/tables/2020_bau_forecast_by_scoping_category_2014-05-22.pdf

² From CARB's Greenhouse Gas Reductions from Ongoing, Adopted and Foreseeable Scoping Plan Measures: available

http://www.arb.ca.gov/cc/inventory/data/tables/ar4_first_update_to_scoping_plan_2014-05-22.pdf

Methodology for Calculating Unmitigated and Mitigated Mobile Emissions

The County allows the Project to apply greenhouse gas (GHG) reduction credits for Pavley II towards the Project. Therefore, adjustments were made to the CalEEMod model outputs to account for the allowable reduction as shown in Table C-2.

Table C-2 UNCORRECTED AND CORRECTED CALEEMOD OUTPUTS FOR PROJECT EMISSIONS – MOBILE (ANNUAL MT CO₂e)		
Source	Project Emissions (uncorrected)	Project Emissions (corrected)¹
Mobile Emissions	1,866.65	1,822.22

All model results include built in emission reductions for Pavley I regulations (model default).

¹ Includes reduction of 2.38% for Pavley II regulations



Appendix D

CAPCOA VMT REDUCING FEATURES



CAPCOA VMT Reducing Features

Increase Density (LUT-1)			
% Density Increase	=	100 X	$\frac{\text{Project DU/acre} - 7.6}{7.6}$
% VMT Reduction	=	0.07 X % Density Increase	
% GHG Reduction	=	% VMT Reduction	
Project DU/Acre	=	10.77	
% Density Increase	=	42% (not to exceed 500%)	
% VMT Reduction	=	3% (not to exceed 30%)	
% GHG Reduction	=	3%	
Increase Transit Accessibility (LUT-5)			
% VMT Reduction	=	$((-50 \times \text{Project Distance} + 38) - 1.3) \times 0.67$	
% GHG Reduction	=	% VMT Reduction	
Project Distance	=	0	
% VMT Reduction	=	25% (not to exceed 30%)	
% GHG Reduction	=	25%	
Caluated Benefits			
GHG Reduction	=	% GHG Reduction X Mobile Source GHG Emissions	
Mobile Source GHG Emissions	=	1,822.22 MT CO ₂ e per year	
LUT1 GHG Reduction	=	3%	
LUT5 GHG Reduction	=	25%	
Total LUT Reduction	=	20% (not to exceed 20%)	
Total GHG Reduction	=	364	