

Concar Passage at San Mateo

Greenhouse Gas Emissions Assessment

San Mateo, California

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Attachment A – CalEEMod Output File for Greenhouse Gas Emissions

LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ABAG	Association of Bay Area Governments
BAAQMD	Bay Area Air Quality Management District
CalEEMod	California Emissions Estimator Model
CAP	Climate Action Plan
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CH ₄	methane
City	City of San Mateo

LIST OF ACRONYMS AND ABBREVIATIONS

Corridor Plan	Rail Corridor Transit-Oriented Development Plan
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalents
EIR	Environmental Impact Report
EO	Executive Order
GHG	greenhouse gas
IPPC	Intergovernmental Panel on Climate Change
kW	kilowatt
N ₂ O	nitrous oxide
PRC	Public Resources Code
Project	Concar Passage Project
RTP	Regional Transportation Plan
SB	Senate Bill
SCS	Sustainable Communities Strategy
TDM	Transportation Demand Management
TOD	Transit-Oriented Development
USEPA	U.S. Environmental Protection Agency
VMT	vehicle miles traveled

1.0 INTRODUCTION

This report documents the results of an assessment of greenhouse gas (GHG) emissions completed for the Concar Passage Project (Project), which includes the demolition of an existing 165,000-square-foot retail strip center and adjoining surface parking that currently occupy the site to allow for the construction of 961 residences and mixed-use buildings to be located in the Rail Corridor Transit-Oriented Development Plan (Corridor Plan). The Corridor Plan is a policy document that provides a framework for the long-term development of the Corridor Plan Area. The Plan identifies goals and objectives intended to facilitate Transit-Oriented Development (TOD) in the Corridor Plan Area, creating an integrated pattern of land use, urban design, and circulation that is compact, pedestrian-friendly, and promotes reliance on forms of transportation other than the automobile. The Corridor Plan has resulted in the creation of two TOD zones, Hayward Park Station and Hillsdale Station. The Proposed Project is a subcomponent of the Hayward Park Station.

The original Environmental Impact Report (EIR) for the Corridor Plan was certified in 2004 yet does not evaluate the effects of GHG emissions generated, as such analysis was not required at the time. On March 18, 2010, amendments to the California Environmental Quality Act (CEQA) Guidelines took effect, which set forth requirements for the analysis of GHG emissions under CEQA. Since the EIR has already been approved, the determination of whether the Project GHG emissions would result in a significant impact is contained in this analysis. This assessment is based on the methodology recommended by the Bay Area Air Quality Management District (BAAQMD) for project-level review and was prepared with consideration of the emissions reduction actions proposed by the Project. GHG emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. Emissions modeling results are included in Attachment A.

1.1 Project Location

The Proposed Project site is located on approximately 14.5 acres in what is now the Concar Shopping Center in San Mateo. It is bounded by Concar Drive to the north, S. Grant Street to the east, Passage Way (currently an unnamed road) and State Route 92 to the south, and S. Delaware Street to the west. The Project site is surrounded by residential uses to the north along Concar Drive, office uses to the west, and retail uses and a YMCA to the east along S. Grant Street.

The Concar Shopping Center currently accommodates a Trader Joe's supermarket, 7-Eleven convenience store, Shane Company retail store, a ballet studio, TJ Max retail store, Rite Aid drug store, Ross clothing store, a small sit-down restaurant, and existing onsite parking. These can be accessed by entrances on S. Delaware Street, S. Grant Street and Concar Drive. The site is surrounded by urban development and is within walking distance to the San Mateo Caltrans station and several bus-transit stops.

1.2 Project Description

The Project site is located in "Area 2" of the Hayward Park Station TOD Overlay Zone of the Rail Corridor Plan. The Project proposes to demolish all the existing buildings and surface parking on the site to construct a new, five building, multi-story mixed-use TOD referred to as the Passage. This will include 961 residential units, 73 of which are proposed as "affordable housing" (below market cost); 31,080 square

feet of residential amenities (including lounge areas, fitness centers, swimming pools, and bike depots); 40,000 square feet of retail (including a SEED food hall, grocery store, restaurant, ballet theater, and administrative space); plazas; and residential and nonresidential parking spaces (in the form of both surface parking lots and a subterranean parking garage). The centerpiece for the Project is a public/private mobility hub called “The Depot” that will facilitate a non-auto dependent style of living for the residents of the Project and for all the surrounding neighborhoods.

Construction of the Project will commence with the demolition of the existing buildings and parking onsite. Excavation of the Project site will be required for the one-level underground parking garage.

2.0 GREENHOUSE GAS EMISSIONS

2.1 Greenhouse Gas Setting

Certain gases in the earth’s atmosphere, classified as GHGs, play a critical role in determining the earth’s surface temperature. Solar radiation enters the earth’s atmosphere from space. A portion of the radiation is absorbed by the earth’s surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead “trapped,” resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth’s climate, known as global climate change or global warming. It is “extremely likely” that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors together (Intergovernmental Panel on Climate Change [IPCC] 2014).

Table 1 describes the primary GHGs attributed to global climate change, including their physical properties, primary sources, and contributions to the greenhouse effect. Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH₄ traps over 25 times more heat per molecule than CO₂, and N₂O absorbs 298 times more heat per molecule than CO₂ (IPCC 2014). Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO₂e), which weight each gas by its global warming potential. Expressing GHG emissions in CO₂e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO₂ emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remains stored in the atmosphere (IPCC 2013).

Table 1. Greenhouse Gases	
Greenhouse Gas	Description
CO ₂	CO ₂ is a colorless, odorless gas. CO ₂ is emitted in a number of ways, both naturally and through human activities. The largest source of CO ₂ emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO ₂ emissions. The atmospheric lifetime of CO ₂ is variable because it is so readily exchanged in the atmosphere. ¹
CH ₄	CH ₄ is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. CH ₄ is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH ₄ to the atmosphere. Natural sources of CH ₄ include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH ₄ is about 12 years. ²
N ₂ O	N ₂ O oxide is a clear, colorless gas with a slightly sweet odor. N ₂ O is produced by both natural and human-related sources. Primary human-related sources of N ₂ O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N ₂ O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N ₂ O is approximately 120 years. ³

Sources: ¹ U.S. Environmental Protection Agency (USEPA) 2016a, ² USEPA 2016b, ³ USEPA 2016c

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; suffice it to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

2.1.1 Sources of Greenhouse Gas Emissions

In June 2017, the California Air Resources Board (CARB) released the 2017 edition of the California GHG inventory covering calendar year 2015 emissions. In 2015, California emitted 440.4 million gross metric tons of CO₂e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California’s GHG emissions in 2015, accounting for approximately 37

percent of total GHG emissions in the state. This sector was followed by the industrial sector (21 percent) and the electric power sector (including both in-state and out-of-state sources; 19 percent) (CARB 2017).

Emissions of CO₂ are by-products of fossil fuel combustion. CH₄, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N₂O is also largely attributable to agricultural practices and soil management. CO₂ sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution (CO₂ dissolving into the water), respectively, two of the most common processes for removing CO₂ from the atmosphere.

2.2 Regulatory Framework

2.2.1 State

Executive Order (EO) S-3-05

EO S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the State. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

While dated, this executive order remains relevant because a more recent California Appellate Court decision, *Cleveland National Forest Foundation v. San Diego Association of Governments* (November 24, 2014) 231 Cal.App.4th 1056, examined whether it should be viewed as having the equivalent force of a legislative mandate for specific emissions reductions. While the California Supreme Court ruled that the San Diego Association of Governments did not abuse its discretion by declining to adopt the 2050 goal as a measure of significance in light of the fact that the EO does not specify any plan or implementation measures to achieve its goal, the decision also recognized that the goal of a 40-percent reduction in 1990 GHG levels by 2030 is "widely acknowledged" as a "necessary interim target to ensure that California meets its longer-range goal of reducing GHGs 80 percent below 1990 levels by the year 2050."

Assembly Bill (AB) 32 Climate Change Scoping Plan and Updates

In 2006, the California legislature passed AB 32 (Health and Safety Code §38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25-percent reduction in emissions). AB 32 anticipates that the GHG reduction goals will be met, in part, through local government actions. CARB has identified a GHG reduction target of 15 percent from current levels for local governments and notes that successful implementation relies on local governments' land use planning and urban growth decisions.

Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which was re-approved by CARB on August 24, 2011, that outlines measures to meet the 2020 GHG reduction goals. To meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual

emissions levels or about 15 percent from today's levels. The Scoping Plan recommends measures for further study and possible State implementation, such as new fuel regulations. It estimates that a reduction of 174 million metric tons of CO₂e (about 191 million U.S. tons) from the transportation, energy, agriculture, and forestry sectors and other sources could be achieved should the State implement all of the measures in the Scoping Plan.

The Scoping Plan is required by AB 32 to be updated at least every five years. The first update to the AB 32 Scoping Plan was approved on May 22, 2014 by CARB. The 2017 Scoping Plan Update was adopted on December 14, 2017. The Scoping Plan Update addresses the 2030 target established by Senate Bill (SB) 32 as discussed below and establishes a proposed framework of action for California to meet a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. The key programs that the Scoping Plan Update builds on include increasing the use of renewable energy in the state, the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and reduction of methane emissions from agricultural and other wastes.

EO B-30-15

On April 20, 2015 Governor Brown signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments such as the 28-nation European Union, which adopted the same target in October 2014. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32, discussed above). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

SB 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

SB X1-2 of 2011, SB 350 of 2015, and SB 100 of 2018

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB X1-2 sets a three-stage compliance period requiring all California utilities, including independently owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewables by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. SB X1-2 also requires the renewable electricity standard to be met

increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California.

In October 2015, SB 350 was signed by Governor Brown, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from renewable resources by 2030. In 2018, SB 100 was signed by Governor Brown, codifying a goal of 60-percent renewable procurement by 2030 and 100 percent by 2045 RPS.

2.2.2 Local

BAAQMD

To provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, BAAQMD CEQA Guidelines include guidance on assessing GHGs and climate change impacts as required under CEQA Section 15183.5(b) and establish thresholds of significance for impacts related to GHG emissions. These guidelines are based on substantial evidence to “attribute an appropriate share of GHG reductions necessary to reach AB 32 goals to new land use development projects in the BAAQMD’s jurisdiction that are evaluated pursuant to CEQA” (BAAQMD 2017a).

The BAAQMD project-level operational threshold of significance for GHG emissions is the project generation of 1,100 metric tons of CO₂e per year during operations (bright-line numeric threshold); **or** the project generation of 4.6 metric tons of CO₂e per service population (employees + patrons + residents) per year during operations (efficiency-based threshold); **or** compliance with a Qualified GHG Reduction Strategy.

Association of Bay Area Governments (ABAG) Final Plan Bay Area 2040

The ABAG Plan Bay Area is the Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) for the San Francisco Bay Area. ABAG was tasked by CARB to achieve a seven percent per capita reduction in mobile-source GHG emissions compared to 2005 vehicle emissions by 2020 and a 15 percent per capita reduction by 2035. Plan Bay Area 2040 establishes an overall mechanism to achieve these GHG targets for the Project region consistent with both the target date of AB 32 (2020) and the post-2020 GHG reduction goals of SB 32. CARB has confirmed the Project region will achieve its GHG reduction targets by implementing Plan Bay Area (CARB 2018).

BAAQMD 2017 Clean Air Plan

The 2017 Clean Air Plan (BAAQMD 2017b) provides a regional strategy to protect public health and protect the climate. To protect the climate, the 2017 Clean Air Plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious greenhouse gas reduction targets for 2030 and 2050, and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction targets.

The 2017 Clean Air Plan includes a wide range of control measures designed to reduce emissions of methane and other “super GHGs” that are potent climate pollutants in the near term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

The City of San Mateo (City) Climate Action Plan

The City adopted a community-wide Climate Action Plan (CAP) on April 6, 2015, which updates and consolidates the City's existing GHG Emissions Reduction Plan, CAP for Municipal Operations and Facilities, and Sustainable Initiatives Plan based on the vision of San Mateo residents, businesses, and local government. The goal was to prepare a CAP that serves as an updated and Qualified GHG Reduction Strategy consistent with BAAQMD GHG Plan Level Guidance and CEQA Guidelines Section 15183.5. The CAP was developed through a robust public process that engaged the San Mateo Sustainability Commission, staff, and the community.

A CAP is a comprehensive strategy for a community to reduce emissions of GHGs, which, according to scientific consensus, are primarily responsible for causing climate change. The City CAP includes five key pieces:

1. An inventory of the annual GHG emissions attributable to San Mateo based on the types of activities occurring within the community and guidance from various protocols and agencies. The City has inventories of emissions for 2005 and 2010.
2. A forecast of what GHG emissions are likely to look like in 2020 and 2030, based on expected population and economic growth adopted in the City's General Plan.
3. A reduction target, which identifies a goal for reducing GHG emissions by 2020 and 2030.
4. Reduction strategies, which describe the actions the community intends to take to achieve the reduction target. Each strategy identifies the amount of GHGs that will be reduced once the strategy is implemented. The CAP also estimates benefits of existing programs.
5. An implementation and monitoring program to track progress toward the reduction target and the status of the reduction strategies. A CAP consistency checklist for future development projects is included in the implementation program.

City CAP Consistency Checklist

As part of the CAP, the City developed a CAP consistency checklist for land use projects. The checklist is a streamlined tool that identifies the CAP's mandatory requirements and provides an opportunity for project applicants to demonstrate project consistency with GHG reduction measures and actions in the CAP. The checklist is also an opportunity to identify additional project characteristics that support the GHG reduction targets and programs in the CAP.

2.3 Greenhouse Gas Emissions Impact Assessment

2.3.1 Thresholds of Significance

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to GHGs if it would:

- 1) generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and

- 2) conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

BAAQMD Thresholds

The assessment of GHG emissions below is based on guidance from the BAAQMD. The BAAQMD CEQA Guidelines include guidance on assessing GHGs and climate change impacts as required under CEQA Section 15183.5(b) and establish thresholds of significance for impacts related to GHG emissions. The City has determined, in its discretion, that the guidelines are based on substantial evidence to “attribute an appropriate share of GHG reductions necessary to reach AB 32 goals to new land use development projects in the BAAQMD’s jurisdiction that are evaluated pursuant to CEQA” (BAAQMD 2017a). Therefore, the City uses the BAAQMD CEQA Guidelines to determine the level of impact from the project contributions of GHG emissions.

The BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions; however, the air district recommends the quantification and disclosure of construction-generated GHG emissions.

The BAAQMD project-level operational threshold of significance for GHG emissions is the project generation of 1,100 metric tons of CO₂e per year during operations (bright-line numeric threshold); **or** the project generation of 4.6 metric tons of CO₂e per service population (employees + residents) per year during operations (efficiency-based threshold); **or** compliance with a Qualified GHG Reduction Strategy. For the purposes of this assessment, the Project is evaluated for compliance with the City CAP, as well as the BAAQMD efficiency-based service population threshold.

As previously described, statewide goals for GHG reductions in the years beyond 2020 have been recently codified into State law with the passage of SB 32. The California Cap-and-Trade Program is the centerpiece of the current Scoping Plan as it allows the State to put a firm limit on overall carbon emissions. Under Cap-and-Trade, an overall limit on GHG emissions from capped sectors is established and facilities subject to the cap would be able to trade permits to emit GHG emissions. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. The program also covers fuel suppliers (natural gas and propane fuel providers as well as transportation fuel providers). Accordingly, GHG emissions associated with the Project’s electricity and natural gas usage are covered by the Cap-and-Trade Program, as are GHG emission associated with the combustion of transportation fuels in the state, whether refined in-state or imported. Therefore, while Project design can contribute to reducing potential GHG emissions from the Proposed Project, achievement of future GHG efficiency standards is also dependent, and primarily driven, on regulatory controls applied to all sectors of the California economy. Thus, the ability of this Project—and all land use development—to achieve GHG reduction goals beyond 2020 is partially out of the control of the Project and its proponents and is being addressed by the State of California.

Nonetheless, even though the City CAP was drafted before SB 32, the CAP addresses estimate emissions beyond 2020 as informed by the post-2020 GHG reduction targets of EO S-3-05. Specifically, the City set an additional goal of a 35-percent reduction from 2005 levels by 2030. Therefore, Project compliance with

the CAP adequately establishes Project compliance not only with statewide GHG reduction goals for the year 2020 associated with AB 32, but also with statewide GHG reduction goals for the years beyond 2020.

Additionally, the Project is compared to ABAG's Plan Bay Area, the RTP/SCS for the San Francisco Bay Area, which establishes an overall GHG target for the Project region consistent with both the target date of AB 32 (2020) and the post-2020 GHG reduction goals of SB 32. The Project is also compared to the BAAQMD 2017 Clean Air Plan, which defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050 and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG emissions reduction targets.

Lastly, given that the Project would be built and operational after 2020, the BAAQMD efficiency-based threshold of 4.6 metric tons of CO₂e per service population per year during operations is adjusted based on the SB 32 statewide target, which is 40 percent below the 2020 target. This equates to 2.8 metric tons of CO₂e per service population per year.

2.3.2 Methodology

GHG-related impacts were assessed in accordance with methodologies recommended by CARB and the BAAQMD. Where GHG quantification was required, emissions were modeled using CalEEMod version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Project construction-generated GHG emissions were primarily calculated using CalEEMod model defaults. Operational GHG emissions were modeled with CalEEMod based on the Project site plans and automobile trip rates identified in the Passage Transportation Demand Management (TDM) Plan prepared by Hexagon Transportation Consultants (2019). For the purposes of this analysis, projected operational emissions associated with proposed operations are compared to the existing baseline, which includes a Trader Joe's supermarket, 7-Eleven convenience store, Shane Company retail store, a ballet studio, TJ Max retail store, Rite Aid drug store, Ross clothing store, a small sit-down restaurant, and existing onsite parking.

2.3.3 Impact Analysis

Conflict with any Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

City of San Mateo Climate Action Plan

The City CAP (2015) is a strategic planning document that identifies sources of GHG emissions within the city's boundaries, presents current and future emissions estimates, identifies a GHG reduction target for future years, and presents strategic programs, policies, and projects to reduce emissions from the energy, transportation, land use, water use, and waste sectors. The GHG reduction programs, policies, projects, and strategies are referred to as "reduction measures" in the CAP. The emissions reduction program developed by the City follows the BAAQMD's CEQA Guidelines (2017a) and the corresponding criteria for a Qualified Greenhouse Gas Emissions Reduction Program as defined by the BAAQMD, which in turn were

developed to comply with the requirements of AB 32 and achieve the goals of the AB 32 Scoping Plan. A Qualified Greenhouse Gas Emissions Reduction Program adopted by a local jurisdiction should include the elements below, as described in CEQA Guidelines Section 15183.5. The BAAQMD's CEQA Guidelines outline the methodology to determine whether a GHG reduction program meets these requirements.

- Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area.
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable.
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specify measures or a group of measures, including performance standards, which substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels.
- Be adopted in a public process following environmental review.

The City CAP meets BAAQMD guidelines as follows:

- The CAP quantifies citywide GHG emissions, both existing and projected over the specified time period, resulting from activities in the city as defined by the City's General Plan.
- The CAP establishes a level, based on substantial evidence, below which the contribution of emissions from activities covered by the plan would not be cumulatively considerable.
- CAP policy provisions reduce emissions to 15 percent below 2005 levels by 2020.
- CAP policy provisions reduce emissions to 35 percent below 2005 levels by 2030.
- CAP policy provisions provide a foundation for the City to reach the goal of reducing emissions to 80 percent below 1990 levels by 2050.
- The CAP identifies and analyzes the emissions resulting from specific actions or categories of actions anticipated within the city.
- The CAP specifies measures or a group of measures, including performance standards.
- The CAP establishes a mechanism to monitor its progress toward achieving the level and to require amendment if the plan is not achieving specific levels.

The reduction measures proposed in the CAP build on inventory results and key opportunities prioritized by City staff, members of the San Mateo Sustainability Commission, and members of the public. The CAP strategies consist of measures and actions that identify the steps the City will take to support reductions in GHG emissions. The City will achieve these reductions in GHG emissions through a mix of voluntary programs and new strategic standards. All standards presented in the CAP respond to the needs of

development, avoiding unnecessary regulation, streamlining new development, and achieving more efficient use of resources.

The Project is consistent with the GHG inventory and forecast in the CAP. Both the existing and the projected GHG inventories in the CAP were derived based on the land use designations and associated densities defined in the City's General Plan (2010). The City's General Plan designates the Project site as Transit Oriented Development. The Proposed Project is consistent with this land use designation, and is thereby consistent with the GHG inventory and forecast in the CAP.

In addition, a specific Project proposal is considered consistent with the City CAP if it complies with the "required" GHG reduction measures in the adopted CAP. The required GHG reduction measures applicable to the proposed Project include the following:

- Reduction Measure RE 3: Renewable energy system for new residences. The recently amended Section 23.24.030 of the City Municipal Code requires the addition of small-scale renewable energy systems to new single- and multi single-family residences. The Project proposes that 15 percent of the total rooftop area be dedicated to solar panels.
- Reduction Measure RE 5: Renewable energy systems for new nonresidential buildings. New nonresidential buildings with greater than or equal to 10,000 square feet of gross floor area are to provide a minimum of a five-kilowatt (kW) photovoltaic system. The Project is required to adhere to the San Mateo Municipal Code as a condition of Project approval. As previously stated, the Project proposes that 15 percent of the total Project rooftop area be dedicated to solar panels. This proposed solar energy generation system will be required to be a five-kW system.
- Reduction Measure AT 2: Implement TDM strategies to comply with the appropriate trip-reduction target identified by the City. TDM is a combination of services, incentives, facilities, and actions that reduce single-occupant vehicle trips to help relieve traffic congestion, parking demand, and air pollutants, including GHG emissions. The purpose of TDM is to promote more efficient utilization of existing transportation facilities, and to ensure that new developments are designed to maximize the potential for sustainable transportation usage. A TDM Plan has been prepared for the Proposed Project. The Project TDM Plan includes trip-reduction strategies with the goal of reducing overall vehicular trip-making activity in the Project area. Under the Project TDM Plan, the Project is expected to reduce vehicle trips by 25 percent compared to existing conditions. The Project is located within walking distance to the Hayward Park Caltrain station and five bus-transit stops. The Project is also located near downtown San Mateo, and thus within easy access to restaurants, retail stores, and other services in the vicinity of the Project site. These services are conveniently located for future residents of the Proposed Project, which will further reduce the number of vehicle trips. Additionally, the Project would include onsite jobs and residential land uses and would be located within an area surrounded by other offsite office/commercial and residential uses. The Project is also proposing a bike-share hub, high-quality pedestrian spaces, guaranteed ride home, secure bicycle storage, ride-hailing credits, a public/private shuttle program, and transportation Information Center.

- Reduction Measure AT4: Increase bicycle mode share by implementing the Bicycle Master Plan to reduce vehicle trips. Efforts for this include dedicated bicycle parking, new bike lanes, and improvements to existing bicycle infrastructure. The Project would implement strategies for this measure by including a bike depot that contains 2,340 square feet of bike storage for residents as well as improvements to bike lanes.
- Reduction Measure SW 1: Provide an area of sufficient space to store and allow access to a compost bin and/or participate in a composting program. The Project is required, as a condition of Project approval, to either implement composting facilities onsite, or participate in a composting program with the Recology integrated resource recovery company.

All development in the City, including the Project, is required to adhere to all City-adopted policy provisions, including those contained in the adopted CAP. The Project applicant must complete a checklist to confirm consistency with the CAP to the satisfaction of City staff. The City ensures all provisions of the CAP are incorporated into projects and their permits through development review and applications of conditions of approval as applicable.

BAAQMD Plan 2017 Clean Air Plan

The 2017 Clean Air Plan (BAAQMD 2017b) provides a regional strategy to protect public health and protect the climate. The 2017 Clean Air Plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050, and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG emissions reduction targets. The 2017 Clean Air Plan includes a wide range of control measures designed to reduce emissions of CH₄ and other super GHGs that are potent climate pollutants in the near term, and to decrease emissions of CO₂ by reducing fossil-fuel combustion.

The 2017 Clean Air Plan includes a diverse range of control measures designed to decrease GHG emissions. Consistency of the Proposed Project with 2017 Clean Air Plan is demonstrated by assessing whether the Project supports all of the Project-applicable Clean Air Plan control measures for GHG emissions. The GHG-related control strategies of the Clean Air Plan include *Mobile Source Measures*, *Transportation Control Measures* and *Energy and Climate Measures*. (The *Land Use and Local Impact Measures* address the exposure of sensitive receptors to toxic air contaminants and is thereby not applicable to this impact discussion of GHG emissions. Additionally, the Stationary Source Measures in the Clean Air Plan such as those implemented to control emissions from metal melting facilities, cement kilns, refineries, and glass furnaces are not applicable to the Proposed Project.)

Transportation and Mobile Source Control Measures

The BAAQMD identifies transportation and mobile source control measures as part of the Clean Air Plan to reduce ozone precursor emissions from these sources. The transportation control measures are designed to reduce emissions from motor vehicles by reducing vehicle trips and vehicle miles traveled (VMT) in addition to vehicle idling and traffic congestion. The Proposed Project is consistent with the Clean Air Plan's transportation and mobile source control measures in that it is the redevelopment of an existing urban environment. The Project is considered "infill development" as it proposes to redevelop a

build-out property and enhance the physical design of the urban environment. Under Public Resources Code (PRC) section 21061.3, an “infill site” is defined as a site that “has been previously developed for qualified urban uses.” In turn, a “qualified urban use” is defined, pursuant to PRC section 21072, as “a residential, commercial, or public institutional, transit or transportation passenger facility, or retail use, or any combination of those uses.” Additionally, the Project site is located in an “urbanized area,” which is defined under PRC section 21071 as “an incorporated city” that meets the criteria of having a population of at least 100,000 persons.

The Proposed Project would provide a convenient proximity to transit options for its residents. For instance, the Project is located approximately 1,140 feet from the Hayward Park Caltrans Station, which is approximately a 10- to 15-minute walk. Sidewalks exist between the Project site and the Caltrans station for easy accessibility. Additionally, there are six bus transit stops in close proximity (<800 feet). Access between these bus stops and the Project site is provided via sidewalk located along both sides of S. Delaware Street and S. Grant Street. The Project site is served by bus routes 53 and 292 as well as access to Carpool 2.0 Rewards Program. These routes and programs run throughout the day and provide frequent and reliable transit service to and from the Project area. The increased transit accessibility would result in fewer vehicle trips and VMT compared to the statewide average and encourage walking and non-automotive forms of transportation, thus resulting in reductions of transportation-related emissions.

The Project would also provide a Bike Depot with 2,340 square feet of bike storage for residents as well as additional nonresidential bike parking located through the Project. Bicycle and pedestrian improvements in the surrounding neighborhoods are being proposed as well in order to not only reduce VMT but also greatly benefit the needs of the surrounding neighborhoods.

The Proposed Project would also provide convenient accessibility to work space and various retail shops to its residents. One could work, live, and shop on the Project site while never having to leave the Project area. These services are conveniently located for the residents and surrounding neighborhoods of the Proposed Project to access via walking, which will further reduce the number of vehicle trips.

These aspects of the Project would result in the generation of a reduced amount of GHG. According to the USEPA, redevelopments produce 32 to 57 percent less emissions per capita relative to conventional developments; this is because the number of daily vehicle trips and daily VMT associated with the redevelopment tend to be lower compared with development on vacant land. As a result, the Proposed Project would not conflict with the identified transportation and mobile source control measures of the Clean Air Plan.

Land Use and Local Impact Measures

The BAAQMD Clean Air Plan includes Land Use and Local Impact Measures to ensure that planned growth is focused in a way that protects the people and environment from exposure of emissions associated with stationary and mobile sources and to promote mixed-use, compact development to reduce motor vehicle travel. The Land Use and Local Impact Measures identified by the BAAQMD are not specifically applicable to the Proposed Project as they relate to actions the BAAQMD will take to reduce impacts from goods movement and health risks in affected communities at the plan level. The measures also detail new

regulatory actions the BAAQMD will undertake related to land use, including updates to the CEQA Air Quality Guidelines, and indirect source review.

However, the Proposed Project would be a redevelopment infill Project in support of these measures. For instance, the Project can be identified for its “location efficiency.” Location efficiency describes the location of the Project relative to the type of urban landscape its proposed to fit within, such as an “urban area,” “compact infill,” or “suburban center.” The Project site represents an urban/compact infill location within the central portion of the city. The Project site is served by existing public transportation as previously described; it is within an active urban center surrounded with many existing offsite office/commercial and residential buildings. The Project would co-locate complementary office, retail, and residential land uses in close proximity to existing offsite office/commercial and residential uses; therefore, in addition to providing future Project residents with the potential work opportunities and commercial service options both in the Project site and in close proximity to the site, the Project would also provide job options to existing residents living near the site. The location efficiency of the Project site would result in synergistic benefits that would reduce vehicle trips and VMT compared to the statewide average and would result in corresponding reduction of transport-related GHG emissions.

The Project would increase density in the vicinity over current conditions. Increased density measured in terms of persons, jobs, and dwelling units per area, reduce emissions associated with transportation as it reduces the distance people travel for work or services, and provides a foundation for the implementation of other strategies to reduce GHG emissions.

Energy and Climate Control Measures

The Clean Air Plan also includes Energy and Climate Control Measures, which are designed to reduce ambient concentrations of emissions of CO₂. Implementation of these measures is intended to promote energy conservation and efficiency in buildings throughout the community, promote renewable forms of energy production, reduce the “urban heat island” effect by increasing reflectivity of roofs and parking lots, promote the planting of (low volatile organic compound-emitting) trees to reduce biogenic emissions, lower air temperatures, provide shade, and absorb air pollutants. The measures include voluntary approaches to reduce the heat-island effect by increasing shade in urban and suburban areas through the planting of trees. The Proposed Project would increase landscaping through the Project site and is estimated to plant 319 trees, which would help reduce the urban heat-island effect. In addition, the Proposed Project would include solar panels on 15 percent of the total rooftop area in compliance with the City Municipal Code. Furthermore, the proposed buildings would be built to the 2016 Title 24 Building Energy Efficiency Standards. The 2016 Building Efficiency Standards are 28 percent more efficient than previous 2013 Standards for residential construction and five percent better for nonresidential construction. The 2103 Standards were 25 percent more efficient than the 2010 Standards. Energy-efficient buildings require less electricity, and increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

The Project is consistent with the 2017 Clean Air Plan. The Proposed Project would conform to the Project-applicable control measures in the Clean Air Plan and would not disrupt or hinder the implementation of any other control measures.

ABAG Final Plan Bay Area 2040

ABAG's Plan Bay Area is the RTP/SCS for the San Francisco Bay Area. Plan Bay Area establishes GHG emissions goals for automobiles and light-duty trucks, a potent source of GHG emissions attributable to land use development. As previously described, ABAG was tasked by CARB to achieve a seven percent per capita reduction in mobile-source GHG emissions compared to 2005 vehicle emissions by 2020 and a 15 percent per capita reduction by 2035. Plan Bay Area 2013-2040 establishes an overall mechanism to achieve these GHG targets for the Project region consistent with both the target date of AB 32 (2020) and the post-2020 GHG reduction goals of SB 32. CARB has confirmed the Project region will achieve its GHG reduction targets by implementing Plan Bay Area (CARB 2018). The RTP/SCS contains thousands of individual transportation projects, including highway improvements, railway electrification, bicycle lanes, new transit hubs, and replacement bridges. These future investments seek to reduce traffic bottlenecks, improve the efficiency of the region's network, and expand mobility choices. The RTP/SCS is an important planning document for the region, allowing project sponsors to qualify for federal funding. In addition, the RTP/SCS is supported by a combination of transportation and land use strategies that help the region achieve State GHG emission reduction goals and federal Clean Air Act requirements, preserve open space areas, improve public health and roadway safety, support the vital goods movement industry, and use resources more efficiently.

Plan Bay Area 2040's core strategy is "focused growth" in existing communities along the existing transportation network. This strategy allows the best "bang for the buck" in achieving key regional economic, environmental, and equity goals: it builds upon existing community characteristics, efficiently leverages existing infrastructure, and mitigates impacts on areas with less development. The RTP/SCS identifies 200 "Priority Development Areas," which are areas focused for growth and development. Priority Development Areas are defined by the RTP/SCS as existing neighborhoods that are served by public transit and have been identified as appropriate for additional, compact development.

The Project site is located in an area identified as a Priority Development Area in the RTP/SCS. Because the Project site is a Priority Development Area in the RTP/SCS planning period as opposed to "Priority Conservation Area," it is included in an area where urban development is both predicted and encouraged by ABAG. Furthermore, the Project is a modernization of land uses within a built environment (infill development), resulting in an increase of land use densification on the Project site. The Project will increase density and land use diversity in the vicinity over current conditions. Increased density, measured in terms of persons, jobs, or building square footage, as well as increased land use diversity, potentially reduces emissions associated with transportation as it reduces the distance people travel for work or services and provides a foundation for the implementation of other strategies such as enhanced transit services. The Project would increase the site density to 961 dwelling units on top of an additional 40,000 square feet of retail space.

For these reasons, the Project is consistent with Plan Bay Area and it can be assumed that regional mobile emissions will decrease in line with the goals of Plan Bay Area with implementation of the proposed Project. Implementing ABAG's RTP/SCS will greatly reduce the regional GHG emissions from transportation, and the proposed Project will not obstruct the achievement of Plan Bay Area's emission reduction targets.

Contribution of Greenhouse Gas Emissions

Construction

Construction-related activities that would generate GHGs include worker commute trips, haul trucks carrying supplies and materials to and from the Project site, and off-road construction equipment (e.g., dozers, loaders, excavators). Table 2 illustrates the specific construction-generated GHG emissions that would result from construction of the Project.

Emissions Source	CO₂e (Metric Tons/Year)
Project Construction Total	3,011

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

Notes: Emissions estimates account for the demolition of 165,000 square feet of structures and 7,174 tons of asphalt associated with the existing surface parking lot. Emissions also account for the export of 117,820 cubic yards and import of 970 cubic yards of soil. Building construction, paving, and architectural coating assumed to occur simultaneously.

As shown in Table 2, Project construction (including demolition activities) would result in the generation of approximately 3,011 metric tons of CO₂e over the course of construction. Once construction is complete, the generation of these GHG emissions would cease. As previously stated, the BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. GHG emissions generated by the construction sector have been declining in recent years. For instance, construction equipment engine efficiency has continued to improve year after year. The first federal standards (Tier 1) for new off-road diesel engines were adopted in 1994 for engines over 50 horsepower (hp) and were phased in from 1996 to 2000. In 1996, a Statement of Principles pertaining to off-road diesel engines was signed between the USEPA, CARB, and engine makers (including Caterpillar, Cummins, Deere, Detroit Diesel, Deutz, Isuzu, Komatsu, Kubota, Mitsubishi, Navistar, New Holland, Wis-Con, and Yanmar). On August 27, 1998, the USEPA signed the final rule reflecting the provisions of the Statement of Principles. The 1998 regulation introduced Tier 1 standards for equipment under 50 hp and increasingly more stringent Tier 2 and Tier 3 standards for all equipment with phase-in schedules from 2000 to 2008. As a result, all off-road, diesel-fueled construction equipment manufactured in 2006 or later has been manufactured to Tier 3 standards. Tier 3 engine standards reduce precursor and subset GHG emissions such as nitrogen oxide by as much as 60 percent. On May 11, 2004, the USEPA signed the final rule introducing Tier 4 emission standards, which were phased in over the period of 2008-2015. The Tier 4 standards require that emissions of nitrogen oxide be further reduced by about 90 percent. All off-road, diesel-fueled construction equipment manufactured in 2015 or later will be manufactured to Tier 4 standards.

In addition, the California Energy Commission recently adopted changes to the 2016 Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 6 (also known as the California Energy Code). The 2016 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions, and alterations to existing buildings. For instance, effective January 1, 2017, owners/builders of construction projects have been required to divert (recycle) 65 percent of construction waste materials generated during the project.

This requirement greatly reduces the generation of GHG emissions by reducing decomposition at landfills, which is a source of CH₄, and reducing demand for natural resources.

Operations

Operation of the Project would result in GHG emissions. Projected GHG emissions associated with proposed operations are quantified and compared to the existing baseline, which as previously stated includes a Trader Joe’s supermarket, 7-Eleven convenience store, Shane Company retail store, a ballet studio, TJ Max retail store, Rite Aid drug store, Ross clothing store, a small sit-down restaurant, and existing onsite parking. Table 3 summarizes all the direct and indirect annual GHG emissions associated with the Project.

Table 3. Operational Greenhouse Gas Emissions	
Emission Source	CO₂e (Metric Tons/Year)
Proposed Project	
Area Source (landscaping, hearth)	10
Energy	1,116
Mobile	5,656
Waste	324
Water	145
Total	7,247
Existing Onsite Land Uses	
Area Source (landscaping, hearth)	0
Energy	409
Mobile	2,322
Waste	285
Water	28
Total	3,044
Difference	
Area Source (landscaping, hearth)	+10
Energy	+1,525
Mobile	+3,334
Waste	+39
Water	+117
Total	4,203

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

Notes: Emissions projections account for a trip generation rate identified by Hexagon Transportation Consultants (2019). Proposed Project CO₂e emissions does not account for the 15 percent of the total rooftop that will be dedicated to solar energy generation.

As shown in Table 3, the new Project would result in an increase of operational emissions by 4,203 metric tons of CO₂e per year. This is largely due to the increase in mobile-source emissions that can be attributed to an increase in vehicle trips.

The Project is compared with the adjusted efficiency-based threshold of 2.8 metric tons of CO₂e per Project service population (Project employees + residents). The BAAQMD’s approach is to identify the emission level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions.

The majority of people that would be visiting the Project would be residents and patrons followed by a small number of employees. In order to estimate the service population of the Project site, the following steps are considered:

- The Project proposes 961 residential units and according to the California Department of Finance (2019), households in the City average 2.62 occupants. Thus, 2,518 Project residents are estimated (961 x 2.62 = 2,518).
- The Project proposes 40,000 square feet of retail and according to the U.S. Green Building Council (2008), retail uses can be expected to employ one person per 588 square feet of building space. Thus, 68 Project employees are estimated (40,000 ÷ 588 = 68).

As demonstrated, the Project is estimated to house 2,518 residents based on demographic data provided by the Department of Finance and employ 68 employees daily per generic employee generation rates identified by the U.S. Green Building Council. Therefore, the Project service population is 2,586.

As shown in Table 4, dividing the GHG emissions attributable to Project buildout yields a metric ton per service population ratio of 2.8.

Table 4. Greenhouse Gas Emissions per Service Population				
Project Buildout Emissions	Service Population Increase	Metric Tons of CO₂e/SP/Year (Project Buildout)	BAAQMD Threshold	Exceed Threshold?
7,247	2,586	2.8	2.8	No

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

As shown in Table 4, the Proposed Project would not surpass the BAAQMD efficiency-based significance threshold. BAAQMD thresholds were developed based on substantial evidence that such thresholds represent quantitative levels of GHG emissions, compliance with which means that the environmental impact of the GHG emissions will normally not be cumulatively considerable under CEQA (BAAQMD 2017a). Compliance with such thresholds will be part of the solution to the cumulative GHG emissions problem, rather than hinder the State’s ability to meet its goals of reduced statewide GHG emissions under AB 32.

Cumulative GHG Impacts

Climate change is a global problem, and GHGs are global pollutants unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have much longer atmospheric lifetimes of one year to several thousand years that allow them to be dispersed around the globe.

It is generally the case that an individual project of this size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. The additive effect of Project-related GHGs would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. As previously discussed, the Proposed Project would not conflict with the City CAP, the BAAQMD 2017 Clean Air Plan, or Plan Bay Area, the RTP/SCS for the Bay Area. As a result, the Project would not conflict with any GHG reduction plans. Therefore, the Project's cumulative contribution of GHG emissions would be less than significant and the Project's cumulative GHG impacts would also be less than cumulatively considerable.

3.0 REFERENCES

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MEMORANDUM

TO: Pooja Nagrath, Project Manager, David J Powers & Associates, Inc.

FROM: Seth Myers, ECORP Consulting, Inc.

DATE: March 13, 2020

RE: CEQA Greenhouse Gas Assessment for the Passage at San Mateo project, San Mateo, California

ECORP Consulting (ECORP) conducted a California Environmental Quality Act (CEQA) analysis of greenhouse gases (GHGs) from construction and operations for the proposed Passage at San Mateo development ("the Project") located in San Mateo, California. ECORP has previously submitted the results of this analysis, which were partially based on a "Preliminary Traffic Analysis," in a report dated January 24, 2019. David J Powers supplied updated data to ECORP concerning the Project's predicted trip generation on July 29, 2019, and ECORP revised the GHG Assessment to reflect this new data. ECORP submitted the revised GHG Assessment to David J Powers on September 20, 2019. David J Powers responded with a list of suggested edits to this report on September 25, 2019, after which ECORP incorporated the edits into the GHG Assessment and resubmitted to David J Powers on the same day.

Since the September 25, 2019 GHG Assessment, ECORP understands that the Project site plan and traffic analysis were revised. Though ECORP has not seen the updated Project site plan or traffic analysis, ECORP assumes the revisions include following based correspondence with David J Powers:

- A reduction in the net number of daily trips associated with the Project, from 5,780 to 2,471; and
- An increase in the daycare center square footage from 4,600 square feet to 5,060 square feet.

As construction inputs informing the predicted generation of GHG emissions are based on site acreage, the increase in daycare square footage does not affect construction assumptions or results.

For operational emissions, the daycare square footage increase represents a 0.04% increase in net new square footage at the site, which would result in a corresponding increase in non-traffic related operational emissions of roughly the same fraction. However, this slight increase would be more than offset by the reduction in traffic emissions. Traffic emissions make up 78% of operational GHG emissions. The reduction of daily trips of over 57% would decrease the operational traffic emissions by a similar fraction. The overall effect on operational emissions would be a net reduction from emissions reported in the original analysis.

Based on the reduction of operational emissions and lack of change to the construction emissions, ECORP has not updated the original GHG emissions modeling effort. The conclusion that the Project would not result in any significant GHG-related impacts remains unchanged.

CalEEMod Output Files –Greenhouse Gas Emissions

Concar Passage-Project - San Mateo County, Annual

Concar Passage-Project
San Mateo County, Annual

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	4.29	1000sqft	0.10	4,290.00	0
General Office Building	3.80	1000sqft	1.00	3,800.00	0
General Office Building	2.39	1000sqft	0.05	2,390.00	0
General Office Building	1.46	1000sqft	0.50	1,460.00	0
Day-Care Center	70.00	Student	1.00	4,600.00	0
Library	4.50	1000sqft	0.10	4,500.00	0
General Light Industry	2.34	1000sqft	0.05	2,340.00	0
Enclosed Parking Structure	1.03	1000sqft	0.00	1,026.00	0
Other Non-Asphalt Surfaces	4.80	1000sqft	0.09	4,800.00	0
Parking Lot	0.57	1000sqft	0.50	572.00	0
Arena	3.10	1000sqft	1.00	3,100.00	0
City Park	6.83	Acre	6.83	297,514.80	0
Health Club	10.52	1000sqft	1.00	10,520.00	0
High Turnover (Sit Down Restaurant)	2.40	1000sqft	0.06	2,400.00	0
High Turnover (Sit Down Restaurant)	5.00	1000sqft	0.80	5,000.00	0
Recreational Swimming Pool	2.81	1000sqft	0.06	2,806.00	0
Condo/Townhouse High Rise	778.45	Dwelling Unit	0.00	778,447.00	2226
Convenience Market (24 Hour)	3.13	1000sqft	0.07	3,130.00	0
Strip Mall	3.10	1000sqft	1.00	3,100.00	0
Supermarket	13.70	1000sqft	0.29	13,700.00	0

Concar Passage-Project - San Mateo County, Annual

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity factor changed to 290 per PG&E.

Land Use - Lot acreage and square feet adjusted to match the project description.

Construction Phase - Building, paving and coating will happen at the same time.

Demolition -

Grading -

Vehicle Trips - Trips updated per the TDM plan

Woodstoves - No fireplaces or woodstoves will be included.

Energy Use -

Land Use Change -

Sequestration - number of trees per the project description.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	300.00

Concar Passage-Project - San Mateo County, Annual

tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	NumDays	10.00	20.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	116.77	0.00
tblFireplaces	NumberNoFireplace	31.14	0.00
tblFireplaces	NumberWood	132.34	0.00
tblGrading	MaterialExported	0.00	117,820.00
tblGrading	MaterialImported	0.00	970.00
tblLandUse	LandUseSquareFeet	3,956.60	4,600.00
tblLandUse	LandUseSquareFeet	1,030.00	1,026.00
tblLandUse	LandUseSquareFeet	570.00	572.00
tblLandUse	LandUseSquareFeet	2,810.00	2,806.00
tblLandUse	LandUseSquareFeet	778,450.00	778,447.00
tblLandUse	LotAcreage	0.03	0.50
tblLandUse	LotAcreage	0.09	1.00
tblLandUse	LotAcreage	0.09	1.00
tblLandUse	LotAcreage	0.02	0.00
tblLandUse	LotAcreage	0.11	0.09
tblLandUse	LotAcreage	0.01	0.50
tblLandUse	LotAcreage	0.24	1.00
tblLandUse	LotAcreage	0.11	0.80
tblLandUse	LotAcreage	12.16	0.00
tblLandUse	LotAcreage	0.07	1.00
tblLandUse	LotAcreage	0.31	0.29

Concar Passage-Project - San Mateo County, Annual

tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblSequestration	NumberOfNewTrees	0.00	290.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	16.74	22.75
tblVehicleTrips	SU_TR	3.43	4.31
tblVehicleTrips	SU_TR	758.45	863.10
tblVehicleTrips	SU_TR	0.37	0.39
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	SU_TR	131.84	158.37
tblVehicleTrips	SU_TR	25.49	46.55
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	SU_TR	20.43	42.04
tblVehicleTrips	SU_TR	166.44	177.59
tblVehicleTrips	WD_TR	1.89	22.75
tblVehicleTrips	WD_TR	4.18	4.31
tblVehicleTrips	WD_TR	737.99	863.10
tblVehicleTrips	WD_TR	4.38	0.39
tblVehicleTrips	WD_TR	6.97	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	127.15	158.37
tblVehicleTrips	WD_TR	56.24	46.55

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tblVehicleTrips	WD_TR	33.82	0.00
tblVehicleTrips	WD_TR	44.32	42.04
tblVehicleTrips	WD_TR	102.24	177.59
tblWoodstoves	NumberCatalytic	15.57	0.00
tblWoodstoves	NumberNoncatalytic	15.57	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-17-2019	4-16-2019	1.4091	1.4091
2	4-17-2019	7-16-2019	4.4050	4.4050
3	7-17-2019	10-16-2019	3.4222	3.4222
4	10-17-2019	1-16-2020	3.4162	3.4162
5	1-17-2020	4-16-2020	3.2167	3.2167
6	4-17-2020	7-16-2020	3.1928	3.1928
7	7-17-2020	9-30-2020	0.9824	0.9824
		Highest	4.4050	4.4050

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	4.0520	0.0669	5.7940	3.1000e-004		0.0319	0.0319		0.0319	0.0319	0.0000	9.4443	9.4443	9.1600e-003	0.0000	9.6732
Energy	0.0506	0.4403	0.2401	2.7600e-003		0.0350	0.0350		0.0350	0.0350	0.0000	1,107.6061	1,107.6061	0.0703	0.0217	1,115.8395
Mobile	2.1441	5.8761	20.7367	0.0618	5.5303	0.0554	5.5857	1.4861	0.0517	1.5378	0.0000	5,650.5736	5,650.5736	0.2208	0.0000	5,656.0925
Waste						0.0000	0.0000		0.0000	0.0000	130.6592	0.0000	130.6592	7.7217	0.0000	323.7026
Water						0.0000	0.0000		0.0000	0.0000	19.1028	62.7090	81.8118	1.9683	0.0476	145.2121
Total	6.2467	6.3833	26.7708	0.0649	5.5303	0.1223	5.6526	1.4861	0.1186	1.6047	149.7620	6,830.3329	6,980.0949	9.9902	0.0694	7,250.5199

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.0520	0.0669	5.7940	3.1000e-004		0.0319	0.0319		0.0319	0.0319	0.0000	9.4443	9.4443	9.1600e-003	0.0000	9.6732
Energy	0.0506	0.4403	0.2401	2.7600e-003		0.0350	0.0350		0.0350	0.0350	0.0000	1,107.6061	1,107.6061	0.0703	0.0217	1,115.8395
Mobile	1.9416	4.8605	16.4567	0.0428	3.7162	0.0406	3.7568	0.9986	0.0378	1.0365	0.0000	3,911.4489	3,911.4489	0.1647	0.0000	3,915.5664
Waste						0.0000	0.0000		0.0000	0.0000	130.6592	0.0000	130.6592	7.7217	0.0000	323.7026
Water						0.0000	0.0000		0.0000	0.0000	15.2823	52.9264	68.2087	1.5749	0.0382	118.9528
Total	6.0442	5.3677	22.4908	0.0459	3.7162	0.1075	3.8237	0.9986	0.1048	1.1034	145.9415	5,081.4257	5,227.3671	9.5408	0.0599	5,483.7345

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	3.24	15.91	15.99	29.28	32.80	12.11	32.35	32.80	11.68	31.24	2.55	25.61	25.11	4.50	13.65	24.37

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2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	70.1800
Total	70.1800

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2019	4/11/2019	5	30	
2	Site Preparation	Site Preparation	4/12/2019	5/9/2019	5	20	
3	Grading	Grading	5/10/2019	6/20/2019	5	30	
4	Building Construction	Building Construction	6/21/2019	8/13/2020	5	300	
5	Paving	Paving	6/21/2019	8/13/2020	5	300	
6	Architectural Coating	Architectural Coating	6/21/2019	8/13/2020	5	300	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0.59

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Residential Indoor: 1,576,355; Residential Outdoor: 525,452; Non-Residential Indoor: 96,495; Non-Residential Outdoor: 32,165; Striped Parking Area: 384 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	1,473.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	14,849.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	713.00	144.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	143.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1593	0.0000	0.1593	0.0241	0.0000	0.0241	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0527	0.5367	0.3309	5.8000e-004		0.0269	0.0269		0.0250	0.0250	0.0000	51.9395	51.9395	0.0145	0.0000	52.3007
Total	0.0527	0.5367	0.3309	5.8000e-004	0.1593	0.0269	0.1863	0.0241	0.0250	0.0492	0.0000	51.9395	51.9395	0.0145	0.0000	52.3007

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3.2 Demolition - 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	7.3800e-003	0.2572	0.0989	6.1000e-004	0.0123	1.0200e-003	0.0133	3.3800e-003	9.8000e-004	4.3700e-003	0.0000	62.3963	62.3963	7.6200e-003	0.0000	62.5867
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	4.7000e-004	4.8300e-003	2.0000e-005	1.7700e-003	1.0000e-005	1.7800e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.5233	1.5233	3.0000e-005	0.0000	1.5241
Total	8.0500e-003	0.2577	0.1037	6.3000e-004	0.0141	1.0300e-003	0.0151	3.8500e-003	9.9000e-004	4.8500e-003	0.0000	63.9196	63.9196	7.6500e-003	0.0000	64.1108

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					0.0717	0.0000	0.0717	0.0109	0.0000	0.0109	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0527	0.5367	0.3309	5.8000e-004		0.0269	0.0269		0.0250	0.0250	0.0000	51.9394	51.9394	0.0145	0.0000	52.3007
Total	0.0527	0.5367	0.3309	5.8000e-004	0.0717	0.0269	0.0986	0.0109	0.0250	0.0359	0.0000	51.9394	51.9394	0.0145	0.0000	52.3007

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3.2 Demolition - 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	7.3800e-003	0.2572	0.0989	6.1000e-004	0.0123	1.0200e-003	0.0133	3.3800e-003	9.8000e-004	4.3700e-003	0.0000	62.3963	62.3963	7.6200e-003	0.0000	62.5867
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	4.7000e-004	4.8300e-003	2.0000e-005	1.7700e-003	1.0000e-005	1.7800e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.5233	1.5233	3.0000e-005	0.0000	1.5241
Total	8.0500e-003	0.2577	0.1037	6.3000e-004	0.0141	1.0300e-003	0.0151	3.8500e-003	9.9000e-004	4.8500e-003	0.0000	63.9196	63.9196	7.6500e-003	0.0000	64.1108

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1874	0.0000	0.1874	0.1003	0.0000	0.1003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0434	0.4557	0.2206	3.8000e-004		0.0239	0.0239		0.0220	0.0220	0.0000	34.1687	34.1687	0.0108	0.0000	34.4390
Total	0.0434	0.4557	0.2206	3.8000e-004	0.1874	0.0239	0.2113	0.1003	0.0220	0.1223	0.0000	34.1687	34.1687	0.0108	0.0000	34.4390

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3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0744	2.5929	0.9971	6.1500e-003	0.1242	0.0103	0.1345	0.0341	9.8800e-003	0.0440	0.0000	629.0036	629.0036	0.0768	0.0000	630.9228
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-004	3.7000e-004	3.8600e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2187	1.2187	3.0000e-005	0.0000	1.2193
Total	0.0749	2.5933	1.0010	6.1600e-003	0.1256	0.0103	0.1360	0.0345	9.8900e-003	0.0444	0.0000	630.2222	630.2222	0.0768	0.0000	632.1422

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					0.0843	0.0000	0.0843	0.0452	0.0000	0.0452	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0434	0.4557	0.2206	3.8000e-004		0.0239	0.0239		0.0220	0.0220	0.0000	34.1687	34.1687	0.0108	0.0000	34.4389
Total	0.0434	0.4557	0.2206	3.8000e-004	0.0843	0.0239	0.1082	0.0452	0.0220	0.0671	0.0000	34.1687	34.1687	0.0108	0.0000	34.4389

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3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0744	2.5929	0.9971	6.1500e-003	0.1242	0.0103	0.1345	0.0341	9.8800e-003	0.0440	0.0000	629.0036	629.0036	0.0768	0.0000	630.9228
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-004	3.7000e-004	3.8600e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2187	1.2187	3.0000e-005	0.0000	1.2193
Total	0.0749	2.5933	1.0010	6.1600e-003	0.1256	0.0103	0.1360	0.0345	9.8900e-003	0.0444	0.0000	630.2222	630.2222	0.0768	0.0000	632.1422

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0711	0.8178	0.5007	9.3000e-004		0.0357	0.0357		0.0329	0.0329	0.0000	83.5520	83.5520	0.0264	0.0000	84.2129
Total	0.0711	0.8178	0.5007	9.3000e-004	0.1301	0.0357	0.1658	0.0540	0.0329	0.0868	0.0000	83.5520	83.5520	0.0264	0.0000	84.2129

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3.4 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.9000e-004	6.2000e-004	6.4400e-003	2.0000e-005	2.3600e-003	2.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	2.0311	2.0311	4.0000e-005	0.0000	2.0322
Total	8.9000e-004	6.2000e-004	6.4400e-003	2.0000e-005	2.3600e-003	2.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	2.0311	2.0311	4.0000e-005	0.0000	2.0322

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					0.0586	0.0000	0.0586	0.0243	0.0000	0.0243	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0711	0.8178	0.5007	9.3000e-004		0.0357	0.0357		0.0329	0.0329	0.0000	83.5519	83.5519	0.0264	0.0000	84.2128
Total	0.0711	0.8178	0.5007	9.3000e-004	0.0586	0.0357	0.0943	0.0243	0.0329	0.0572	0.0000	83.5519	83.5519	0.0264	0.0000	84.2128

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3.4 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.9000e-004	6.2000e-004	6.4400e-003	2.0000e-005	2.3600e-003	2.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	2.0311	2.0311	4.0000e-005	0.0000	2.0322
Total	8.9000e-004	6.2000e-004	6.4400e-003	2.0000e-005	2.3600e-003	2.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	2.0311	2.0311	4.0000e-005	0.0000	2.0322

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1629	1.4544	1.1843	1.8600e-003		0.0890	0.0890		0.0837	0.0837	0.0000	162.2219	162.2219	0.0395	0.0000	163.2099
Total	0.1629	1.4544	1.1843	1.8600e-003		0.0890	0.0890		0.0837	0.0837	0.0000	162.2219	162.2219	0.0395	0.0000	163.2099

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3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0472	1.2687	0.4872	2.6800e-003	0.0648	8.7600e-003	0.0735	0.0187	8.3800e-003	0.0271	0.0000	265.7928	265.7928	0.0235	0.0000	266.3796
Worker	0.1455	0.1025	1.0556	3.6800e-003	0.3873	2.4800e-003	0.3898	0.1031	2.2900e-003	0.1054	0.0000	333.0795	333.0795	7.1300e-003	0.0000	333.2578
Total	0.1927	1.3711	1.5428	6.3600e-003	0.4521	0.0112	0.4633	0.1218	0.0107	0.1325	0.0000	598.8724	598.8724	0.0306	0.0000	599.6374

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	0.1629	1.4544	1.1843	1.8600e-003		0.0890	0.0890		0.0837	0.0837	0.0000	162.2217	162.2217	0.0395	0.0000	163.2097
Total	0.1629	1.4544	1.1843	1.8600e-003		0.0890	0.0890		0.0837	0.0837	0.0000	162.2217	162.2217	0.0395	0.0000	163.2097

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3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0472	1.2687	0.4872	2.6800e-003	0.0648	8.7600e-003	0.0735	0.0187	8.3800e-003	0.0271	0.0000	265.7928	265.7928	0.0235	0.0000	266.3796
Worker	0.1455	0.1025	1.0556	3.6800e-003	0.3873	2.4800e-003	0.3898	0.1031	2.2900e-003	0.1054	0.0000	333.0795	333.0795	7.1300e-003	0.0000	333.2578
Total	0.1927	1.3711	1.5428	6.3600e-003	0.4521	0.0112	0.4633	0.1218	0.0107	0.1325	0.0000	598.8724	598.8724	0.0306	0.0000	599.6374

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1717	1.5541	1.3647	2.1800e-003		0.0905	0.0905		0.0851	0.0851	0.0000	187.6041	187.6041	0.0458	0.0000	188.7483
Total	0.1717	1.5541	1.3647	2.1800e-003		0.0905	0.0905		0.0851	0.0851	0.0000	187.6041	187.6041	0.0458	0.0000	188.7483

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3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0452	1.3526	0.5385	3.1000e-003	0.0760	6.7400e-003	0.0828	0.0220	6.4500e-003	0.0284	0.0000	309.0888	309.0888	0.0269	0.0000	309.7602
Worker	0.1575	0.1067	1.1239	4.1800e-003	0.4547	2.8600e-003	0.4575	0.1210	2.6300e-003	0.1236	0.0000	378.5878	378.5878	7.3800e-003	0.0000	378.7723
Total	0.2027	1.4593	1.6623	7.2800e-003	0.5307	9.6000e-003	0.5403	0.1430	9.0800e-003	0.1521	0.0000	687.6766	687.6766	0.0342	0.0000	688.5325

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	0.1717	1.5541	1.3647	2.1800e-003		0.0905	0.0905		0.0851	0.0851	0.0000	187.6039	187.6039	0.0458	0.0000	188.7481
Total	0.1717	1.5541	1.3647	2.1800e-003		0.0905	0.0905		0.0851	0.0851	0.0000	187.6039	187.6039	0.0458	0.0000	188.7481

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3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0452	1.3526	0.5385	3.1000e-003	0.0760	6.7400e-003	0.0828	0.0220	6.4500e-003	0.0284	0.0000	309.0888	309.0888	0.0269	0.0000	309.7602
Worker	0.1575	0.1067	1.1239	4.1800e-003	0.4547	2.8600e-003	0.4575	0.1210	2.6300e-003	0.1236	0.0000	378.5878	378.5878	7.3800e-003	0.0000	378.7723
Total	0.2027	1.4593	1.6623	7.2800e-003	0.5307	9.6000e-003	0.5403	0.1430	9.0800e-003	0.1521	0.0000	687.6766	687.6766	0.0342	0.0000	688.5325

3.6 Paving - 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	0.1004	1.0518	1.0119	1.5700e-003		0.0569	0.0569		0.0523	0.0523	0.0000	141.2788	141.2788	0.0447	0.0000	142.3962
Paving	3.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1007	1.0518	1.0119	1.5700e-003		0.0569	0.0569		0.0523	0.0523	0.0000	141.2788	141.2788	0.0447	0.0000	142.3962

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3.6 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0600e-003	2.1600e-003	0.0222	8.0000e-005	8.1500e-003	5.0000e-005	8.2000e-003	2.1700e-003	5.0000e-005	2.2200e-003	0.0000	7.0073	7.0073	1.5000e-004	0.0000	7.0110
Total	3.0600e-003	2.1600e-003	0.0222	8.0000e-005	8.1500e-003	5.0000e-005	8.2000e-003	2.1700e-003	5.0000e-005	2.2200e-003	0.0000	7.0073	7.0073	1.5000e-004	0.0000	7.0110

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	0.1004	1.0518	1.0119	1.5700e-003		0.0569	0.0569		0.0523	0.0523	0.0000	141.2786	141.2786	0.0447	0.0000	142.3961
Paving	3.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1007	1.0518	1.0119	1.5700e-003		0.0569	0.0569		0.0523	0.0523	0.0000	141.2786	141.2786	0.0447	0.0000	142.3961

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3.6 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0600e-003	2.1600e-003	0.0222	8.0000e-005	8.1500e-003	5.0000e-005	8.2000e-003	2.1700e-003	5.0000e-005	2.2200e-003	0.0000	7.0073	7.0073	1.5000e-004	0.0000	7.0110
Total	3.0600e-003	2.1600e-003	0.0222	8.0000e-005	8.1500e-003	5.0000e-005	8.2000e-003	2.1700e-003	5.0000e-005	2.2200e-003	0.0000	7.0073	7.0073	1.5000e-004	0.0000	7.0110

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1099	1.1393	1.1868	1.8500e-003		0.0610	0.0610		0.0561	0.0561	0.0000	162.2286	162.2286	0.0525	0.0000	163.5403
Paving	3.5000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1102	1.1393	1.1868	1.8500e-003		0.0610	0.0610		0.0561	0.0561	0.0000	162.2286	162.2286	0.0525	0.0000	163.5403

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3.6 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3100e-003	2.2500e-003	0.0236	9.0000e-005	9.5700e-003	6.0000e-005	9.6300e-003	2.5500e-003	6.0000e-005	2.6000e-003	0.0000	7.9647	7.9647	1.6000e-004	0.0000	7.9686
Total	3.3100e-003	2.2500e-003	0.0236	9.0000e-005	9.5700e-003	6.0000e-005	9.6300e-003	2.5500e-003	6.0000e-005	2.6000e-003	0.0000	7.9647	7.9647	1.6000e-004	0.0000	7.9686

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	0.1099	1.1393	1.1868	1.8500e-003		0.0610	0.0610		0.0561	0.0561	0.0000	162.2284	162.2284	0.0525	0.0000	163.5401
Paving	3.5000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1102	1.1393	1.1868	1.8500e-003		0.0610	0.0610		0.0561	0.0561	0.0000	162.2284	162.2284	0.0525	0.0000	163.5401

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3.6 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3100e-003	2.2500e-003	0.0236	9.0000e-005	9.5700e-003	6.0000e-005	9.6300e-003	2.5500e-003	6.0000e-005	2.6000e-003	0.0000	7.9647	7.9647	1.6000e-004	0.0000	7.9686
Total	3.3100e-003	2.2500e-003	0.0236	9.0000e-005	9.5700e-003	6.0000e-005	9.6300e-003	2.5500e-003	6.0000e-005	2.6000e-003	0.0000	7.9647	7.9647	1.6000e-004	0.0000	7.9686

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.6756					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0184	0.1266	0.1271	2.1000e-004		8.8800e-003	8.8800e-003		8.8800e-003	8.8800e-003	0.0000	17.6175	17.6175	1.4900e-003	0.0000	17.6547
Total	2.6940	0.1266	0.1271	2.1000e-004		8.8800e-003	8.8800e-003		8.8800e-003	8.8800e-003	0.0000	17.6175	17.6175	1.4900e-003	0.0000	17.6547

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3.7 Architectural Coating - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0292	0.0206	0.2117	7.4000e-004	0.0777	5.0000e-004	0.0782	0.0207	4.6000e-004	0.0211	0.0000	66.8028	66.8028	1.4300e-003	0.0000	66.8385
Total	0.0292	0.0206	0.2117	7.4000e-004	0.0777	5.0000e-004	0.0782	0.0207	4.6000e-004	0.0211	0.0000	66.8028	66.8028	1.4300e-003	0.0000	66.8385

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	2.6756					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0184	0.1266	0.1271	2.1000e-004		8.8800e-003	8.8800e-003		8.8800e-003	8.8800e-003	0.0000	17.6174	17.6174	1.4900e-003	0.0000	17.6546
Total	2.6940	0.1266	0.1271	2.1000e-004		8.8800e-003	8.8800e-003		8.8800e-003	8.8800e-003	0.0000	17.6174	17.6174	1.4900e-003	0.0000	17.6546

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3.7 Architectural Coating - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0292	0.0206	0.2117	7.4000e-004	0.0777	5.0000e-004	0.0782	0.0207	4.6000e-004	0.0211	0.0000	66.8028	66.8028	1.4300e-003	0.0000	66.8385
Total	0.0292	0.0206	0.2117	7.4000e-004	0.0777	5.0000e-004	0.0782	0.0207	4.6000e-004	0.0211	0.0000	66.8028	66.8028	1.4300e-003	0.0000	66.8385

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.1410					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0196	0.1364	0.1484	2.4000e-004		8.9900e-003	8.9900e-003		8.9900e-003	8.9900e-003	0.0000	20.6814	20.6814	1.6000e-003	0.0000	20.7214
Total	3.1606	0.1364	0.1484	2.4000e-004		8.9900e-003	8.9900e-003		8.9900e-003	8.9900e-003	0.0000	20.6814	20.6814	1.6000e-003	0.0000	20.7214

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3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0316	0.0214	0.2254	8.4000e-004	0.0912	5.7000e-004	0.0918	0.0243	5.3000e-004	0.0248	0.0000	75.9299	75.9299	1.4800e-003	0.0000	75.9670
Total	0.0316	0.0214	0.2254	8.4000e-004	0.0912	5.7000e-004	0.0918	0.0243	5.3000e-004	0.0248	0.0000	75.9299	75.9299	1.4800e-003	0.0000	75.9670

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	3.1410					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0196	0.1364	0.1483	2.4000e-004		8.9900e-003	8.9900e-003		8.9900e-003	8.9900e-003	0.0000	20.6813	20.6813	1.6000e-003	0.0000	20.7214
Total	3.1606	0.1364	0.1483	2.4000e-004		8.9900e-003	8.9900e-003		8.9900e-003	8.9900e-003	0.0000	20.6813	20.6813	1.6000e-003	0.0000	20.7214

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3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0316	0.0214	0.2254	8.4000e-004	0.0912	5.7000e-004	0.0918	0.0243	5.3000e-004	0.0248	0.0000	75.9299	75.9299	1.4800e-003	0.0000	75.9670
Total	0.0316	0.0214	0.2254	8.4000e-004	0.0912	5.7000e-004	0.0918	0.0243	5.3000e-004	0.0248	0.0000	75.9299	75.9299	1.4800e-003	0.0000	75.9670

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Increase Transit Accessibility

Integrate Below Market Rate Housing

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.9416	4.8605	16.4567	0.0428	3.7162	0.0406	3.7568	0.9986	0.0378	1.0365	0.0000	3,911.4489	3,911.4489	0.1647	0.0000	3,915.5664
Unmitigated	2.1441	5.8761	20.7367	0.0618	5.5303	0.0554	5.5857	1.4861	0.0517	1.5378	0.0000	5,650.5736	5,650.5736	0.2208	0.0000	5,656.0925

4.2 Trip Summary Information

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Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	33.20	33.20	33.20	64,474	43,325
City Park	155.38	155.38	155.38	331,719	222,908
Condo/Townhouse High Rise	3,355.12	3,355.12	3,355.12	7,749,008	5,207,179
Convenience Market (24 Hour)	2,701.50	2,701.50	2,701.50	2,057,403	1,382,533
Day-Care Center	27.30	27.30	27.30	32,149	21,604
Enclosed Parking Structure	0.00	0.00	0.00		
General Light Industry	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Health Club	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	380.09	380.09	380.09	441,003	296,345
High Turnover (Sit Down Restaurant)	791.85	791.85	791.85	918,755	617,385
Library	209.48	209.48	209.48	355,030	238,573
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Strip Mall	130.32	130.32	130.32	200,703	134,869
Supermarket	2,432.98	2,432.98	2,432.98	2,767,381	1,859,625
Total	10,217.23	10,217.23	10,217.23	14,917,626	10,024,346

4.3 Trip Type Information

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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
Arena	9.50	7.30	7.30	0.00	81.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Condo/Townhouse High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Convenience Market (24 Hour)	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61
Day-Care Center	9.50	7.30	7.30	12.70	82.30	5.00	28	58	14
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
High Turnover (Sit Down)	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
High Turnover (Sit Down)	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Library	9.50	7.30	7.30	52.00	43.00	5.00	44	44	12
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	9.50	7.30	7.30	33.00	48.00	19.00	52	39	9
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Arena	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
City Park	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Condo/Townhouse High Rise	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Convenience Market (24 Hour)	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Day-Care Center	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Enclosed Parking Structure	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
General Light Industry	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
General Office Building	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Health Club	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
High Turnover (Sit Down Restaurant)	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Library	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Other Non-Asphalt Surfaces	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Parking Lot	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Recreational Swimming Pool	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Strip Mall	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Supermarket	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	606.5023	606.5023	0.0607	0.0126	611.7579
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	606.5023	606.5023	0.0607	0.0126	611.7579
NaturalGas Mitigated	0.0506	0.4403	0.2401	2.7600e-003		0.0350	0.0350		0.0350	0.0350	0.0000	501.1038	501.1038	9.6000e-003	9.1900e-003	504.0816
NaturalGas Unmitigated	0.0506	0.4403	0.2401	2.7600e-003		0.0350	0.0350		0.0350	0.0350	0.0000	501.1038	501.1038	9.6000e-003	9.1900e-003	504.0816

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					
Arena	76725	4.1000e-004	3.7600e-003	3.1600e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.0943	4.0943	8.0000e-005	8.0000e-005	4.1187
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse High Rise	6.7962e+006	0.0367	0.3132	0.1333	2.0000e-003		0.0253	0.0253		0.0253	0.0253	0.0000	362.6713	362.6713	6.9500e-003	6.6500e-003	364.8265
Convenience Market (24 Hour)	14398	8.0000e-005	7.1000e-004	5.9000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7683	0.7683	1.0000e-005	1.0000e-005	0.7729
Day-Care Center	75762	4.1000e-004	3.7100e-003	3.1200e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0430	4.0430	8.0000e-005	7.0000e-005	4.0670

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	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					
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	57915	3.1000e-004	2.8400e-003	2.3800e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	3.0906	3.0906	6.0000e-005	6.0000e-005	3.1089
General Office Building	28221.8	1.5000e-004	1.3800e-003	1.1600e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5060	1.5060	3.0000e-005	3.0000e-005	1.5150
General Office Building	46198.7	2.5000e-004	2.2600e-003	1.9000e-003	1.0000e-005		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	2.4653	2.4653	5.0000e-005	5.0000e-005	2.4800
General Office Building	73454	4.0000e-004	3.6000e-003	3.0200e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	3.9198	3.9198	8.0000e-005	7.0000e-005	3.9431
General Office Building	82925.7	4.5000e-004	4.0600e-003	3.4100e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.4252	4.4252	8.0000e-005	8.0000e-005	4.4515
Health Club	260370	1.4000e-003	0.0128	0.0107	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	13.8943	13.8943	2.7000e-004	2.5000e-004	13.9769
High Turnover (Sit Down Restaurant)	403008	2.1700e-003	0.0198	0.0166	1.2000e-004		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003	0.0000	21.5060	21.5060	4.1000e-004	3.9000e-004	21.6338
High Turnover (Sit Down Restaurant)	839600	4.5300e-003	0.0412	0.0346	2.5000e-004		3.1300e-003	3.1300e-003		3.1300e-003	3.1300e-003	0.0000	44.8043	44.8043	8.6000e-004	8.2000e-004	45.0705
Library	111375	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.9434	5.9434	1.1000e-004	1.1000e-004	5.9787
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	14260	8.0000e-005	7.0000e-004	5.9000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7610	0.7610	1.0000e-005	1.0000e-005	0.7655
Supermarket	509914	2.7500e-003	0.0250	0.0210	1.5000e-004		1.9000e-003	1.9000e-003		1.9000e-003	1.9000e-003	0.0000	27.2110	27.2110	5.2000e-004	5.0000e-004	27.3727
Total		0.0506	0.4403	0.2401	2.7500e-003		0.0350	0.0350		0.0350	0.0350	0.0000	501.1038	501.1038	9.6000e-003	9.1800e-003	504.0816

5.2 Energy by Land Use - NaturalGas Mitigated

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	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	14260	8.0000e-005	7.0000e-004	5.9000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7610	0.7610	1.0000e-005	1.0000e-005	0.7655
Supermarket	509914	2.7500e-003	0.0250	0.0210	1.5000e-004		1.9000e-003	1.9000e-003		1.9000e-003	1.9000e-003	0.0000	27.2110	27.2110	5.2000e-004	5.0000e-004	27.3727
Total		0.0506	0.4403	0.2401	2.7500e-003		0.0350	0.0350		0.0350	0.0350	0.0000	501.1038	501.1038	9.6000e-003	9.1800e-003	504.0816

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	23436	3.0828	3.1000e-004	6.0000e-005	3.1095
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse High Rise	3.48874e+006	458.9152	0.0459	9.4900e-003	462.8919
Convenience Market (24 Hour)	32802.4	4.3149	4.3000e-004	9.0000e-005	4.3523
Day-Care Center	20424	2.6866	2.7000e-004	6.0000e-005	2.7099
Enclosed Parking Structure	5817.42	0.7652	8.0000e-005	2.0000e-005	0.7719
General Light Industry	17690.4	2.3270	2.3000e-004	5.0000e-005	2.3472
General Office Building	18220.8	2.3968	2.4000e-004	5.0000e-005	2.4176

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	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	29827.2	3.9235	3.9000e-004	8.0000e-005	3.9575
General Office Building	47424	6.2382	6.2000e-004	1.3000e-004	6.2923
General Office Building	53539.2	7.0426	7.0000e-004	1.5000e-004	7.1037
Health Club	79531.2	10.4617	1.0500e-003	2.2000e-004	10.5523
High Turnover (Sit Down Restaurant)	144900	19.0604	1.9100e-003	3.9000e-004	19.2256
High Turnover (Sit Down Restaurant)	69552	9.1490	9.1000e-004	1.9000e-004	9.2283
Library	34020	4.4751	4.5000e-004	9.0000e-005	4.5138
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	200.2	0.0263	0.0000	0.0000	0.0266
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	32488	4.2735	4.3000e-004	9.0000e-005	4.3106
Supermarket	512106	67.3633	6.7400e-003	1.3900e-003	67.9471
Total		606.5022	0.0607	0.0126	611.7579

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

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	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	23436	3.0828	3.1000e-004	6.0000e-005	3.1095
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse High Rise	3.48874e+006	458.9152	0.0459	9.4900e-003	462.8919
Convenience Market (24 Hour)	32802.4	4.3149	4.3000e-004	9.0000e-005	4.3523
Day-Care Center	20424	2.6866	2.7000e-004	6.0000e-005	2.7099
Enclosed Parking Structure	5817.42	0.7652	8.0000e-005	2.0000e-005	0.7719
General Light Industry	17690.4	2.3270	2.3000e-004	5.0000e-005	2.3472
General Office Building	18220.8	2.3968	2.4000e-004	5.0000e-005	2.4176
General Office Building	29827.2	3.9235	3.9000e-004	8.0000e-005	3.9575
General Office Building	47424	6.2382	6.2000e-004	1.3000e-004	6.2923
General Office Building	53539.2	7.0426	7.0000e-004	1.5000e-004	7.1037
Health Club	79531.2	10.4617	1.0500e-003	2.2000e-004	10.5523
High Turnover (Sit Down Restaurant)	144900	19.0604	1.9100e-003	3.9000e-004	19.2256
High Turnover (Sit Down Restaurant)	69552	9.1490	9.1000e-004	1.9000e-004	9.2283
Library	34020	4.4751	4.5000e-004	9.0000e-005	4.5138
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	200.2	0.0263	0.0000	0.0000	0.0266
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000

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	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	32488	4.2735	4.3000e-004	9.0000e-005	4.3106
Supermarket	512106	67.3633	6.7400e-003	1.3900e-003	67.9471
Total		606.5022	0.0607	0.0126	611.7579

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.0520	0.0669	5.7940	3.1000e-004		0.0319	0.0319		0.0319	0.0319	0.0000	9.4443	9.4443	9.1600e-003	0.0000	9.6732
Unmitigated	4.0520	0.0669	5.7940	3.1000e-004		0.0319	0.0319		0.0319	0.0319	0.0000	9.4443	9.4443	9.1600e-003	0.0000	9.6732

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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	0.5817					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.2947					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1756	0.0669	5.7940	3.1000e-004		0.0319	0.0319		0.0319	0.0319	0.0000	9.4443	9.4443	9.1600e-003	0.0000	9.6732
Total	4.0520	0.0669	5.7940	3.1000e-004		0.0319	0.0319		0.0319	0.0319	0.0000	9.4443	9.4443	9.1600e-003	0.0000	9.6732

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.5817					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.2947					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1756	0.0669	5.7940	3.1000e-004		0.0319	0.0319		0.0319	0.0319	0.0000	9.4443	9.4443	9.1600e-003	0.0000	9.6732
Total	4.0520	0.0669	5.7940	3.1000e-004		0.0319	0.0319		0.0319	0.0319	0.0000	9.4443	9.4443	9.1600e-003	0.0000	9.6732

7.0 Water Detail

7.1 Mitigation Measures Water

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

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	68.2087	1.5749	0.0382	118.9528
Unmitigated	81.8118	1.9683	0.0476	145.2121

7.2 Water by Land Use

Unmitigated

Concar Passage-Project - San Mateo County, Annual

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	1.33539 / 0.0852375	1.4134	0.0436	1.0500e-003	2.8160
City Park	0 / 8.13782	3.7466	3.7000e-004	8.0000e-005	3.7791
Condo/Townhouse High Rise	50.7192 / 31.9751	66.9126	1.6578	0.0401	120.2991
Convenience Market (24 Hour)	0.231847 / 0.1421	0.3040	7.5800e-003	1.8000e-004	0.5480
Day-Care Center	0.169697 / 0.436363	0.3755	5.5600e-003	1.4000e-004	0.5555
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
General Light Industry	0.541125 / 0	0.5568	0.0177	4.2000e-004	1.1251
General Office Building	2.12214 / 1.30067	2.7826	0.0694	1.6800e-003	5.0162
Health Club	0.622186 / 0.38134	0.8158	0.0203	4.9000e-004	1.4707
High Turnover (Sit Down Restaurant)	2.24615 / 0.143371	2.3774	0.0734	1.7600e-003	4.7366
Library	0.1408 / 0.220226	0.2463	4.6100e-003	1.1000e-004	0.3950
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.166192 / 0.10186	0.2179	5.4300e-003	1.3000e-004	0.3928
Strip Mall	0.229625 / 0.140738	0.3011	7.5100e-003	1.8000e-004	0.5428
Supermarket	1.68877 / 0.0522301	1.7618	0.0552	1.3200e-003	3.5354
Total		81.8118	1.9683	0.0476	145.2121

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7.2 Water by Land Use

Mitigated

Concar Passage-Project - San Mateo County, Annual

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	1.06831 / 0.080038	1.1362	0.0349	8.4000e-004	2.2583
City Park	0 / 7.64141	3.5181	3.5000e-004	7.0000e-005	3.5486
Condo/Townhouse High Rise	40.5753 / 30.0246	55.5763	1.3264	0.0321	98.3032
Convenience Market (24 Hour)	0.185478 / 0.133432	0.2523	6.0600e-003	1.5000e-004	0.4476
Day-Care Center	0.135757 / 0.409745	0.3283	4.4500e-003	1.1000e-004	0.4725
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
General Light Industry	0.4329 / 0	0.4455	0.0141	3.4000e-004	0.9000
General Office Building	1.69771 / 1.22133	2.3093	0.0555	1.3400e-003	4.0969
Health Club	0.497749 / 0.358078	0.6771	0.0163	3.9000e-004	1.2012
High Turnover (Sit Down Restaurant)	1.79692 / 0.134626	1.9111	0.0587	1.4100e-003	3.7985
Library	0.11264 / 0.206792	0.2111	3.6900e-003	9.0000e-005	0.3302
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.132954 / 0.0956463	0.1809	4.3500e-003	1.1000e-004	0.3208
Strip Mall	0.1837 / 0.132153	0.2499	6.0100e-003	1.5000e-004	0.4433
Supermarket	1.35102 / 0.0490441	1.4128	0.0441	1.0600e-003	2.8317
Total		68.2087	1.5749	0.0382	118.9528

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8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	130.6592	7.7217	0.0000	323.7026
Unmitigated	130.6592	7.7217	0.0000	323.7026

8.2 Waste by Land Use

Unmitigated

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	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0.09	0.0183	1.0800e-003	0.0000	0.0453
City Park	0.59	0.1198	7.0800e-003	0.0000	0.2967
Condo/Townhouse High Rise	358.09	72.6890	4.2958	0.0000	180.0840
Convenience Market (24 Hour)	9.41	1.9101	0.1129	0.0000	4.7323
Day-Care Center	12.78	2.5942	0.1533	0.0000	6.4271
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
General Light Industry	2.9	0.5887	0.0348	0.0000	1.4584
General Office Building	11.1	2.2532	0.1332	0.0000	5.5822
Health Club	59.96	12.1713	0.7193	0.0000	30.1540
High Turnover (Sit Down Restaurant)	88.06	17.8754	1.0564	0.0000	44.2855
Library	4.14	0.8404	0.0497	0.0000	2.0820
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	16.02	3.2519	0.1922	0.0000	8.0565
Strip Mall	3.26	0.6618	0.0391	0.0000	1.6395
Supermarket	77.27	15.6851	0.9270	0.0000	38.8592
Total		130.6592	7.7217	0.0000	323.7026

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8.2 Waste by Land Use

Mitigated

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	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0.09	0.0183	1.0800e-003	0.0000	0.0453
City Park	0.59	0.1198	7.0800e-003	0.0000	0.2967
Condo/Townhouse High Rise	358.09	72.6890	4.2958	0.0000	180.0840
Convenience Market (24 Hour)	9.41	1.9101	0.1129	0.0000	4.7323
Day-Care Center	12.78	2.5942	0.1533	0.0000	6.4271
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
General Light Industry	2.9	0.5887	0.0348	0.0000	1.4584
General Office Building	11.1	2.2532	0.1332	0.0000	5.5822
Health Club	59.96	12.1713	0.7193	0.0000	30.1540
High Turnover (Sit Down Restaurant)	88.06	17.8754	1.0564	0.0000	44.2855
Library	4.14	0.8404	0.0497	0.0000	2.0820
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	16.02	3.2519	0.1922	0.0000	8.0565
Strip Mall	3.26	0.6618	0.0391	0.0000	1.6395
Supermarket	77.27	15.6851	0.9270	0.0000	38.8592
Total		130.6592	7.7217	0.0000	323.7026

9.0 Operational Offroad

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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11.0 Vegetation

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	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	70.1800	0.0000	0.0000	70.1800

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Juniper	290	70.1800	0.0000	0.0000	70.1800
Total		70.1800	0.0000	0.0000	70.1800

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**Concar Passage- Baseline
San Mateo County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Pharmacy/Drugstore w/o Drive Thru	66.24	1000sqft	1.52	66,240.00	0
Library	30.40	1000sqft	1.20	30,400.00	0
Parking Lot	745.00	Space	6.70	298,000.00	0
High Turnover (Sit Down Restaurant)	3.53	1000sqft	1.30	3,528.00	0
Convenience Market (24 Hour)	2.40	1000sqft	1.00	2,400.00	0
Electronic Superstore	3.55	1000sqft	1.00	3,551.00	0
Free-Standing Discount Store	24.60	1000sqft	0.56	24,600.00	0
Free-Standing Discount Store	25.89	1000sqft	0.59	25,885.00	0
Supermarket	11.18	1000sqft	0.63	11,178.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - CO2 Emission factor updated to 290 per PG&E

Land Use - Lot acreage and square feet adjusted to fit that of the Project Description.

Construction Phase - Baseline study, no construction is occurring.

Off-road Equipment - Baseline study, no construction is occurring.

Trips and VMT - Baseline study, no construction is occurring.

Vehicle Trips - Traffic report provided, 4,357 weekday daily trips.

Woodstoves -

Energy Use - Baseline study, historical data used.

Sequestration -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblEnergyUse	LightingElect	5.88	4.88
tblEnergyUse	LightingElect	5.88	4.88
tblEnergyUse	LightingElect	5.88	4.88
tblEnergyUse	LightingElect	6.45	5.34
tblEnergyUse	LightingElect	3.70	2.99
tblEnergyUse	LightingElect	0.88	0.35
tblEnergyUse	LightingElect	5.88	4.88
tblEnergyUse	LightingElect	8.88	7.42
tblEnergyUse	T24E	2.90	2.24
tblEnergyUse	T24E	2.90	2.24
tblEnergyUse	T24E	2.90	2.24
tblEnergyUse	T24E	3.42	2.67
tblEnergyUse	T24E	1.59	1.21
tblEnergyUse	T24E	2.90	2.24

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tblEnergyUse	T24E	3.43	2.72
tblEnergyUse	T24NG	4.68	3.90
tblEnergyUse	T24NG	4.68	3.90
tblEnergyUse	T24NG	4.68	3.90
tblEnergyUse	T24NG	42.87	39.90
tblEnergyUse	T24NG	20.06	17.85
tblEnergyUse	T24NG	4.68	3.90
tblEnergyUse	T24NG	28.18	24.53
tblLandUse	LandUseSquareFeet	3,530.00	3,528.00
tblLandUse	LandUseSquareFeet	3,550.00	3,551.00
tblLandUse	LandUseSquareFeet	25,890.00	25,885.00
tblLandUse	LandUseSquareFeet	11,180.00	11,178.00
tblLandUse	LotAcreage	0.70	1.20
tblLandUse	LotAcreage	0.08	1.30
tblLandUse	LotAcreage	0.06	1.00
tblLandUse	LotAcreage	0.08	1.00
tblLandUse	LotAcreage	0.26	0.63
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	WorkerTripNumber	36.00	0.00
tblVehicleTrips	ST_TR	863.10	26.50
tblVehicleTrips	ST_TR	45.04	26.50
tblVehicleTrips	ST_TR	71.07	26.50
tblVehicleTrips	ST_TR	158.37	26.50
tblVehicleTrips	ST_TR	46.55	26.50
tblVehicleTrips	ST_TR	90.06	26.50

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tblVehicleTrips	ST_TR	177.59	26.50
tblVehicleTrips	SU_TR	758.45	26.50
tblVehicleTrips	SU_TR	45.04	26.50
tblVehicleTrips	SU_TR	56.36	26.50
tblVehicleTrips	SU_TR	131.84	26.50
tblVehicleTrips	SU_TR	25.49	26.50
tblVehicleTrips	SU_TR	90.06	26.50
tblVehicleTrips	SU_TR	166.44	26.50
tblVehicleTrips	WD_TR	737.99	26.50
tblVehicleTrips	WD_TR	45.04	26.50
tblVehicleTrips	WD_TR	57.24	26.50
tblVehicleTrips	WD_TR	127.15	26.50
tblVehicleTrips	WD_TR	56.24	26.50
tblVehicleTrips	WD_TR	90.06	26.50
tblVehicleTrips	WD_TR	102.24	26.50

2.0 Emissions Summary

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7690	8.0000e-005	8.4200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0163	0.0163	4.0000e-005	0.0000	0.0174
Energy	0.0125	0.1140	0.0957	6.8000e-004		8.6600e-003	8.6600e-003		8.6600e-003	8.6600e-003	0.0000	405.5591	405.5591	0.0305	8.1000e-003	408.7356
Mobile	0.9169	2.4758	8.6812	0.0254	2.2613	0.0229	2.2842	0.6077	0.0214	0.6290	0.0000	2,319.6201	2,319.6201	0.0916	0.0000	2,321.9095
Waste						0.0000	0.0000		0.0000	0.0000	115.1507	0.0000	115.1507	6.8052	0.0000	285.2809
Water						0.0000	0.0000		0.0000	0.0000	3.8857	11.9502	15.8359	0.4003	9.6700e-003	28.7252
Total	1.6984	2.5898	8.7854	0.0260	2.2613	0.0316	2.2929	0.6077	0.0301	0.6377	119.0364	2,737.1458	2,856.1822	7.3277	0.0178	3,044.6686

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7690	8.0000e-005	8.4200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0163	0.0163	4.0000e-005	0.0000	0.0174
Energy	0.0125	0.1140	0.0957	6.8000e-004		8.6600e-003	8.6600e-003		8.6600e-003	8.6600e-003	0.0000	405.5591	405.5591	0.0305	8.1000e-003	408.7356
Mobile	0.9169	2.4758	8.6812	0.0254	2.2613	0.0229	2.2842	0.6077	0.0214	0.6290	0.0000	2,319.6201	2,319.6201	0.0916	0.0000	2,321.9095
Waste						0.0000	0.0000		0.0000	0.0000	115.1507	0.0000	115.1507	6.8052	0.0000	285.2809
Water						0.0000	0.0000		0.0000	0.0000	3.4054	10.8727	14.2782	0.3509	8.4800e-003	25.5777
Total	1.6984	2.5898	8.7854	0.0260	2.2613	0.0316	2.2929	0.6077	0.0301	0.6377	118.5561	2,736.0683	2,854.6244	7.2782	0.0166	3,041.5212

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.04	0.05	0.67	6.70	0.10

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/16/2019	1/15/2019	5	0	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 6.7

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 251,673; Non-Residential Outdoor: 83,891; Striped Parking Area: 17,880 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	0.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Concar Passage- Baseline - San Mateo County, Annual

3.2 Architectural Coating - 2019

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

Concar Passage- Baseline - San Mateo County, Annual

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	0.9169	2.4758	8.6812	0.0254	2.2613	0.0229	2.2842	0.6077	0.0214	0.6290	0.0000	2,319.6201	2,319.6201	0.0916	0.0000	2,321.9095
Unmitigated	0.9169	2.4758	8.6812	0.0254	2.2613	0.0229	2.2842	0.6077	0.0214	0.6290	0.0000	2,319.6201	2,319.6201	0.0916	0.0000	2,321.9095

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market (24 Hour)	63.60	63.60	63.60	48,436	48,436
Electronic Superstore	94.08	94.08	94.08	93,602	93,602
Free-Standing Discount Store	651.90	651.90	651.90	1,016,483	1,016,483
Free-Standing Discount Store	686.09	686.09	686.09	1,069,786	1,069,786
High Turnover (Sit Down Restaurant)	93.55	93.55	93.55	108,537	108,537
Library	805.60	805.60	805.60	1,365,377	1,365,377
Parking Lot	0.00	0.00	0.00		
Pharmacy/Drugstore w/o Drive Thru	1,755.36	1,755.36	1,755.36	2,060,419	2,060,419
Supermarket	296.27	296.27	296.27	336,990	336,990
Total	4,446.44	4,446.44	4,446.44	6,099,630	6,099,630

4.3 Trip Type Information

Concar Passage- Baseline - San Mateo County, Annual

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
Convenience Market (24 Hour)	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61
Electronic Superstore	9.50	7.30	7.30	15.50	65.50	19.00	27	33	40
Free-Standing Discount Store	9.50	7.30	7.30	12.20	68.80	19.00	47.5	35.5	17
Free-Standing Discount Store	9.50	7.30	7.30	12.20	68.80	19.00	47.5	35.5	17
High Turnover (Sit Down)	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Library	9.50	7.30	7.30	52.00	43.00	5.00	44	44	12
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Pharmacy/Drugstore w/o Drive	9.50	7.30	7.30	7.40	73.60	19.00	41	6	53
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market (24 Hour)	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Electronic Superstore	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Free-Standing Discount Store	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
High Turnover (Sit Down Restaurant)	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Library	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Parking Lot	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Pharmacy/Drugstore w/o Drive Thru	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Supermarket	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

Concar Passage- Baseline - San Mateo County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	281.4789	281.4789	0.0282	5.8200e-003	283.9180
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	281.4789	281.4789	0.0282	5.8200e-003	283.9180
NaturalGas Mitigated	0.0125	0.1140	0.0957	6.8000e-004		8.6600e-003	8.6600e-003		8.6600e-003	8.6600e-003	0.0000	124.0803	124.0803	2.3800e-003	2.2700e-003	124.8176
NaturalGas Unmitigated	0.0125	0.1140	0.0957	6.8000e-004		8.6600e-003	8.6600e-003		8.6600e-003	8.6600e-003	0.0000	124.0803	124.0803	2.3800e-003	2.2700e-003	124.8176

Concar Passage- Baseline - San Mateo County, Annual

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					
Convenience Market (24 Hour)	11040	6.0000e-005	5.4000e-004	4.5000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5891	0.5891	1.0000e-005	1.0000e-005	0.5926
Electronic Superstore	16334.6	9.0000e-005	8.0000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8717	0.8717	2.0000e-005	2.0000e-005	0.8769
Free-Standing Discount Store	113160	6.1000e-004	5.5500e-003	4.6600e-003	3.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	6.0387	6.0387	1.2000e-004	1.1000e-004	6.0745
Free-Standing Discount Store	119071	6.4000e-004	5.8400e-003	4.9000e-003	4.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3541	6.3541	1.2000e-004	1.2000e-004	6.3918
High Turnover (Sit Down Restaurant)	592422	3.1900e-003	0.0290	0.0244	1.7000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003	0.0000	31.6139	31.6139	6.1000e-004	5.8000e-004	31.8018
Library	752400	4.0600e-003	0.0369	0.0310	2.2000e-004		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	40.1509	40.1509	7.7000e-004	7.4000e-004	40.3895
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pharmacy/Drugstore w/o Drive Thru	304704	1.6400e-003	0.0149	0.0126	9.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	16.2602	16.2602	3.1000e-004	3.0000e-004	16.3568
Supermarket	416045	2.2400e-003	0.0204	0.0171	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003	0.0000	22.2018	22.2018	4.3000e-004	4.1000e-004	22.3337
Total		0.0125	0.1140	0.0957	6.7000e-004		8.6600e-003	8.6600e-003		8.6600e-003	8.6600e-003	0.0000	124.0803	124.0803	2.3900e-003	2.2900e-003	124.8176

Concar Passage- Baseline - San Mateo County, Annual

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market (24 Hour)	11040	6.0000e-005	5.4000e-004	4.5000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5891	0.5891	1.0000e-005	1.0000e-005	0.5926
Electronic Superstore	16334.6	9.0000e-005	8.0000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8717	0.8717	2.0000e-005	2.0000e-005	0.8769
Free-Standing Discount Store	113160	6.1000e-004	5.5500e-003	4.6600e-003	3.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	6.0387	6.0387	1.2000e-004	1.1000e-004	6.0745
Free-Standing Discount Store	119071	6.4000e-004	5.8400e-003	4.9000e-003	4.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3541	6.3541	1.2000e-004	1.2000e-004	6.3918
High Turnover (Sit Down Restaurant)	592422	3.1900e-003	0.0290	0.0244	1.7000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003	0.0000	31.6139	31.6139	6.1000e-004	5.8000e-004	31.8018
Library	752400	4.0600e-003	0.0369	0.0310	2.2000e-004		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	40.1509	40.1509	7.7000e-004	7.4000e-004	40.3895
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pharmacy/Drugstore w/o Drive Thru	304704	1.6400e-003	0.0149	0.0126	9.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	16.2602	16.2602	3.1000e-004	3.0000e-004	16.3568
Supermarket	416045	2.2400e-003	0.0204	0.0171	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003	0.0000	22.2018	22.2018	4.3000e-004	4.1000e-004	22.3337
Total		0.0125	0.1140	0.0957	6.7000e-004		8.6600e-003	8.6600e-003		8.6600e-003	8.6600e-003	0.0000	124.0803	124.0803	2.3900e-003	2.2900e-003	124.8176

Concar Passage- Baseline - San Mateo County, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market (24 Hour)	25152	3.3085	3.3000e-004	7.0000e-005	3.3372
Electronic Superstore	37214.5	4.8953	4.9000e-004	1.0000e-004	4.9377
Free-Standing Discount Store	257808	33.9125	3.3900e-003	7.0000e-004	34.2064
Free-Standing Discount Store	271275	35.6840	3.5700e-003	7.4000e-004	35.9932
High Turnover (Sit Down Restaurant)	102241	13.4490	1.3400e-003	2.8000e-004	13.5656
Library	229824	30.2315	3.0200e-003	6.3000e-004	30.4934
Parking Lot	104300	13.7198	1.3700e-003	2.8000e-004	13.8387
Pharmacy/Drugstore w/o Drive Thru	694195	91.3157	9.1300e-003	1.8900e-003	92.1070
Supermarket	417834	54.9626	5.5000e-003	1.1400e-003	55.4389
Total		281.4789	0.0281	5.8300e-003	283.9180

Concar Passage- Baseline - San Mateo County, Annual

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market (24 Hour)	25152	3.3085	3.3000e-004	7.0000e-005	3.3372
Electronic Superstore	37214.5	4.8953	4.9000e-004	1.0000e-004	4.9377
Free-Standing Discount Store	257808	33.9125	3.3900e-003	7.0000e-004	34.2064
Free-Standing Discount Store	271275	35.6840	3.5700e-003	7.4000e-004	35.9932
High Turnover (Sit Down Restaurant)	102241	13.4490	1.3400e-003	2.8000e-004	13.5656
Library	229824	30.2315	3.0200e-003	6.3000e-004	30.4934
Parking Lot	104300	13.7198	1.3700e-003	2.8000e-004	13.8387
Pharmacy/Drugstore w/o Drive Thru	694195	91.3157	9.1300e-003	1.8900e-003	92.1070
Supermarket	417834	54.9626	5.5000e-003	1.1400e-003	55.4389
Total		281.4789	0.0281	5.8300e-003	283.9180

6.0 Area Detail

6.1 Mitigation Measures Area

Concar Passage- Baseline - San Mateo County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7690	8.0000e-005	8.4200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0163	0.0163	4.0000e-005	0.0000	0.0174
Unmitigated	0.7690	8.0000e-005	8.4200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0163	0.0163	4.0000e-005	0.0000	0.0174

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	0.0937					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6745					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.9000e-004	8.0000e-005	8.4200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0163	0.0163	4.0000e-005	0.0000	0.0174
Total	0.7690	8.0000e-005	8.4200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0163	0.0163	4.0000e-005	0.0000	0.0174

Concar Passage- Baseline - San Mateo County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0937					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6745					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.9000e-004	8.0000e-005	8.4200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0163	0.0163	4.0000e-005	0.0000	0.0174
Total	0.7690	8.0000e-005	8.4200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0163	0.0163	4.0000e-005	0.0000	0.0174

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

Concar Passage- Baseline - San Mateo County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	14.2782	0.3509	8.4800e-003	25.5777
Unmitigated	15.8359	0.4003	9.6700e-003	28.7252

Concar Passage- Baseline - San Mateo County, Annual

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market (24 Hour)	0.177774 / 0.108958	0.2331	5.8100e-003	1.4000e-004	0.4202
Electronic Superstore	0.262957 / 0.161167	0.3448	8.5900e-003	2.1000e-004	0.6216
Free-Standing Discount Store	3.73992 / 2.29221	4.9038	0.1222	2.9500e-003	8.8402
High Turnover (Sit Down Restaurant)	1.07147 / 0.068392	1.1341	0.0350	8.4000e-004	2.2595
Library	0.951183 / 1.48775	1.6638	0.0311	7.6000e-004	2.6685
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Pharmacy/Drugstore w/o Drive Thru	4.66644 / 2.86008	6.1187	0.1525	3.6900e-003	11.0302
Supermarket	1.37814 / 0.0426228	1.4378	0.0450	1.0800e-003	2.8851
Total		15.8359	0.4003	9.6700e-003	28.7251

Concar Passage- Baseline - San Mateo County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market (24 Hour)	0.155801 / 0.108958	0.2105	5.0900e-003	1.2000e-004	0.3745
Electronic Superstore	0.230456 / 0.161167	0.3114	7.5300e-003	1.8000e-004	0.5540
Free-Standing Discount Store	3.27767 / 2.29221	4.4281	0.1071	2.5900e-003	7.8791
High Turnover (Sit Down Restaurant)	0.93904 / 0.068392	0.9978	0.0307	7.4000e-004	1.9841
Library	0.833617 / 1.48775	1.5428	0.0273	6.7000e-004	2.4241
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Pharmacy/Drugstore w/o Drive Thru	4.08967 / 2.86008	5.5252	0.1337	3.2300e-003	9.8310
Supermarket	1.2078 / 0.0426228	1.2625	0.0394	9.5000e-004	2.5309
Total		14.2782	0.3508	8.4800e-003	25.5777

8.0 Waste Detail

8.1 Mitigation Measures Waste

Concar Passage- Baseline - San Mateo County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	115.1507	6.8052	0.0000	285.2809
Unmitigated	115.1507	6.8052	0.0000	285.2809

Concar Passage- Baseline - San Mateo County, Annual

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market (24 Hour)	7.21	1.4636	0.0865	0.0000	3.6259
Electronic Superstore	10.67	2.1659	0.1280	0.0000	5.3660
Free-Standing Discount Store	217.14	44.0775	2.6049	0.0000	109.2000
High Turnover (Sit Down Restaurant)	42.01	8.5277	0.5040	0.0000	21.1269
Library	28	5.6838	0.3359	0.0000	14.0812
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Pharmacy/Drugstore w/o Drive Thru	199.18	40.4317	2.3895	0.0000	100.1679
Supermarket	63.06	12.8006	0.7565	0.0000	31.7130
Total		115.1507	6.8052	0.0000	285.2809

Concar Passage- Baseline - San Mateo County, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market (24 Hour)	7.21	1.4636	0.0865	0.0000	3.6259
Electronic Superstore	10.67	2.1659	0.1280	0.0000	5.3660
Free-Standing Discount Store	217.14	44.0775	2.6049	0.0000	109.2000
High Turnover (Sit Down Restaurant)	42.01	8.5277	0.5040	0.0000	21.1269
Library	28	5.6838	0.3359	0.0000	14.0812
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Pharmacy/Drugstore w/o Drive Thru	199.18	40.4317	2.3895	0.0000	100.1679
Supermarket	63.06	12.8006	0.7565	0.0000	31.7130
Total		115.1507	6.8052	0.0000	285.2809

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

Concar Passage- Baseline - San Mateo County, Annual

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

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

Equipment Type	Number
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11.0 Vegetation
