Hallmark-Barham Specific Plan EIR

Technical Appendices

Appendix H.1

Greenhouse Gas Report

GREENHOUSE GAS ASSESSMENT

East Barham Residential Development Project
City of San Marcos, CA

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1.0 INTRODUCTION

1.1 Project Description

The project proposes 151 multi-family residential units situated on approximately 10.56 gross acres. Residential buildings comprise approximately 2.8-acres of the project site. Multi-family residential dwelling units are comprised of one, two, and three-story condominiums with ten dwelling unit types interspersed throughout the Specific Plan area. Overall building heights will not exceed 40 feet. The project proposes a total of 349 parking spaces. This includes 283 garage spaces associated with the units, which will be pre-wired for electric vehicle charging stations. The project design includes 66 outdoor parking spaces of which 10 would be for the residences. The project would also include three electric vehicle charging stations within the visitor parking areas. The project would be designed without hearth options within any of the proposed multi-family units.

The project is proposing a General Plan Amendment (GP20-0002), Specific Plan (SP20-0002), Rezone (RZ20-0001), Multi-Family Site Development Plan (MFSD20-0001), Tentative Subdivision Map (TM20-0001), a Conditional Use Permit (CUP20-0007) and a Grading Variance (GV20-0002). The General Plan Land Use designation for the site is Mixed Use 3 (MU3), which is a mixed-use non-residential designation with a maximum floor area ratio (FAR) of 1.50. A constructable concept plan for the existing site was prepared calling for the construction of three 3-story buildings consisting of 275,067 square feet (SF) of office use, 18,344 of retail use, and 879 parking spaces. Parking would be developed within a parking garage within each building. The total area including the parking would have a total gross floor area of 459,558 SF and would have a conservative FAR of 1.03.

Construction of the proposed project and the MU3 General Plan zoning designation (MU3 General Plan Buildout Scenario) would be expected to occur over a 16-month duration and are assumed to be the same. Grading for the project will consist of approximately 39,711 cubic yards (CY) of cut material and 86,052 CY of fill material requiring an import of approximately 46,341 CY of fill material. The MU3 scenario is anticipated to be the same.

During grading a rock crusher similar to a Terex 4242SR 310 horsepower (HP)+/- standalone would be onsite for ancillary crushing needs if necessary. The project also may require some blasting-related activities; as such, the project's air quality study estimated the criteria air pollutants associated with blasting. Of relevance to this analysis, blasting-related activities would utilize ammonium nitrate with fuel oil (ANFO) based explosives. When ANFO detonates, the blast would produce both CO and NOx (EPA, 1995) neither of which are considered GHGs.

The proposed Project development plan as well as an existing site concept consistent with the MU3 General Plan Buildout Scenario is provided in Figures 1-A and 1-B respectively.

1.2 Project Location

The vacant 10.56 acre project site having an Assessor Parcel Number (APN) of 228-310-0100 is located at 943 E. Barham Drive in the Barham/Discovery Community in the City of San Marcos. Specifically, the project site is located on the southern side of Barham Drive between Woodland Parkway and La Moree Road. A project vicinity map is shown in Figure 1-C.

1.3 Purpose of this Report

The purpose of this Greenhouse Gas (GHG) Assessment is to analyze the project's GHG emissions and evaluate its conformance with the City of San Marcos' Climate Action Plan (CAP). As described in the City's CAP, there is an existing framework of federal, State, regional, and local policies and regulations that identify GHG reduction requirements within the State. The CAP provides a plan for the City to meet these requirements and achieve local reduction requirements outlined in the CAP. In addition, as identified in the CAP, showing consistency with the CAP would also demonstrate that the proposed Project would have a less than significant impact under the California Environmental Quality Act (CEQA) (City of San Marcos, 2020).

This analysis has been completed in order to compare Greenhouse Gas (GHG) emissions from both the proposed 151-unit multi-family residential development and an allowable MU3 General Plan Buildout Scenario to construct three 3-story buildings consisting of 275,067 square feet (SF) of office use, 18,344 of retail use, and 879 parking spaces.

Figure 1-A: Proposed Project Site Development Plan

Source: (SB&O, INC., 2021)

Figure 1-B: MU3 General Plan Buildout Scenario Site Development Plan

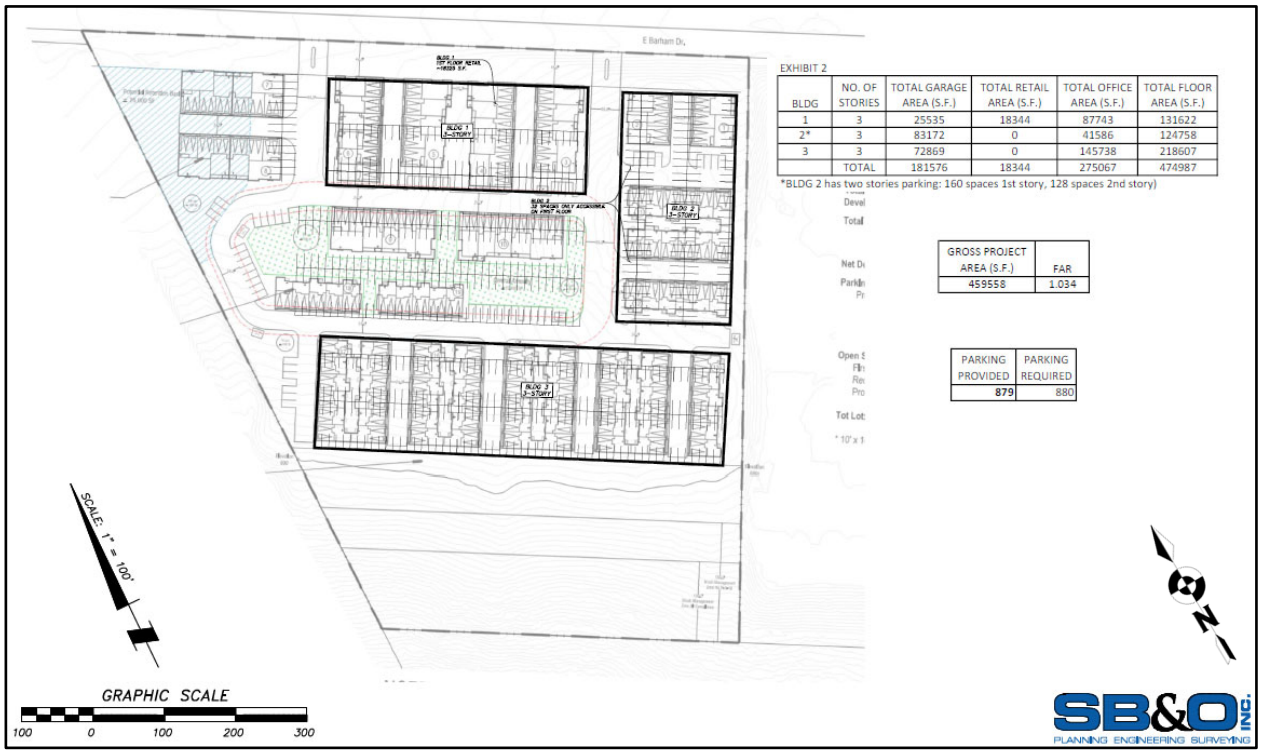


EXHIBIT 2

BLDG	NO. OF STORIES	TOTAL GARAGE AREA (S.F.)	TOTAL RETAIL AREA (S.F.)	TOTAL OFFICE AREA (S.F.)	TOTAL FLOOR AREA (S.F.)
1	3	25535	18344	87743	131622
2*	3	83172	0	41586	124758
3	3	72869	0	145738	218607
	TOTAL	181576	18344	275067	474987

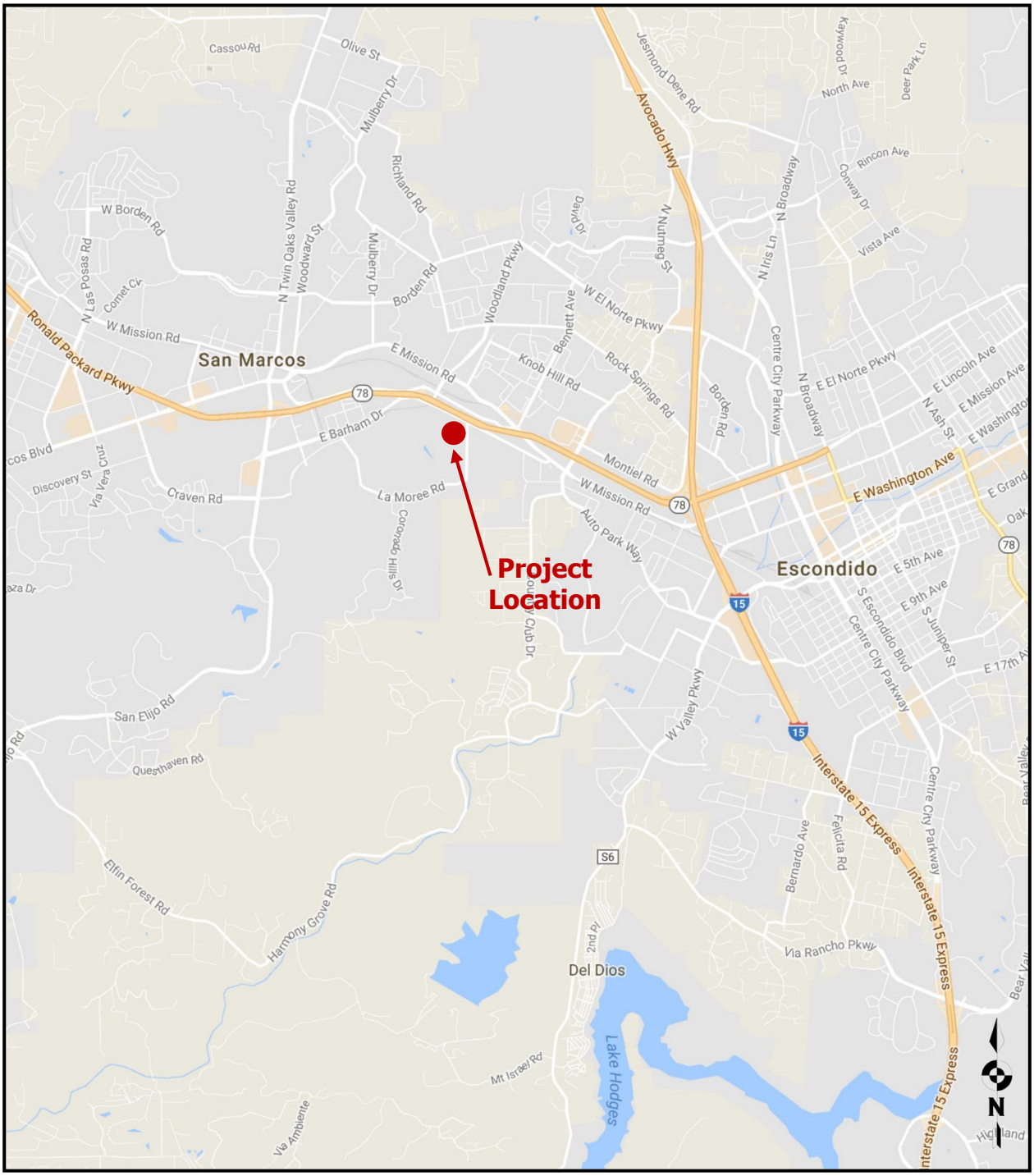
*BLDG 2 has two stories parking: 160 spaces 1st story, 128 spaces 2nd story)

GROSS PROJECT AREA (S.F.)	FAR
459558	1.034

PARKING PROVIDED	PARKING REQUIRED
879	880

Source: (SB&O, INC., 2021)

Figure 1-C: Project Vicinity Map



Source: (Google, 2021)

2.0 BACKGROUND AND ENVIRONMENTAL SETTING

2.1 Understanding Climate Change and Greenhouse Gases

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in the Earth's energy balance, including variations in the sun's energy reaching Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere. The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a threefold process as follows:

Short-wave radiation emitted by the Sun is absorbed by the Earth, the Earth emits a portion of this energy in the form of long-wave radiation and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth.

The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on the Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise.

The GHGs typically analyzed in a greenhouse gas study are Carbon Dioxide (CO_2), Methane (CH_4), and Nitrous Oxide (N_2O) because they are emitted in the greatest quantities from human activities. A brief description of each GHG follows:

Carbon Dioxide. CO_2 is a naturally occurring gas and a by-product of human activities. It is the principal anthropogenic GHG that affects the Earth's radiative balance. Natural sources of CO_2 include, but are not limited to, respiration of bacteria, plants, animals, and fungi; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO_2 are from the combustion of fuels such as coal, oil, natural gas, and wood and changes in land use.

Methane. CH_4 is produced through both natural and human activities. CH_4 is a flammable gas and is the main component of natural gas. CH_4 is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide. N_2O is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N_2O. Sources of N_2O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers, manure management, industrial processes (such as in nitric acid production, nylon production, and fossil-fuel-fired power plants), vehicle emissions, and using N_2O as a propellant (such as in rockets, racecars, and aerosol sprays).

To simplify greenhouse gas calculations, both CH_4 and N_2O are converted to an equivalent amount of carbon dioxide, or CO_2e. CO_2e is calculated by multiplying the calculated levels of CH_4 and N_2O by a Global Warming Potential (GWP). GWPs for both CH_4 and N_2 are presented within the 2007 Intergovernmental Panel on Climate Change (IPCC) report as being 25 and 298, respectively (IPCC, 2007).

2.2 Climate and Meteorology

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west heats up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps San Diego mostly sunny and warm. Typically, during the winter months, the high-pressure system drops to the south and brings cooler, moister weather from the north. It is common for inversion layers to develop within high-pressure areas, which mostly define pressure patterns over the SDAB. These inversions are caused when a thin layer of the atmosphere increases in temperature with height. An inversion acts like a lid preventing vertical mixing of air through convective overturning. The City of San Marcos is within the SDAB so the same generalizations are true for the City.

Meteorological trends within the area generally show daytime highs ranging between 64ºF in the winter to approximately 88ºF in the summer with August usually being the hottest month. Daytime Low temperatures range from approximately 37ºF in the winter to approximately 59ºF in the summer. Precipitation is generally about 16.2 inches per year (WRCC, 2021). Prevailing wind patterns for the area vary during any given month during the year and also vary depending on the time of day or night. The predominant pattern though throughout the year is usually from the west or westerly (WRCC, 2018). The existing site aerial map is shown in Figure 2-A.

Figure 2-A: Existing Site Layout

Source: (Google Earth Pro, 2021)

3.0 CLIMATE CHANGE REGULATORY ENVIRONMENT

3.1 State

State Greenhouse Gas Targets

Executive Order S-3-05

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

AB 32 and CARB's Climate Change Scoping Plan

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

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

In 2007, CARB approved a limit on the statewide GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 million metric tons (MMT) CO_2E). CARB's adoption of this limit is in accordance with Health and Safety Code Section 38550.

Further, in 2008, CARB adopted the *Climate Change Scoping Plan: A Framework for Change* (*2008 Scoping Plan*) in accordance with Health and Safety Code Section 38561. The *2008 Scoping Plan* established an overall framework for the measures to be implemented to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The *2008 Scoping Plan* evaluated opportunities for sector-specific reductions,

integrated all CARB and Climate Action Team[1] early actions and additional GHG reduction features by both entities, identified additional measures to be pursued as regulations, and outlined the role of a cap-and-trade program.

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

In the 2011 Final Supplement to the *2008 Scoping Plan's* Functional Equivalent Document, CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 percent (down from 28.5 percent) from the BAU conditions. When the 2020 emissions level projection was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009–2016) and the Renewables Portfolio Standard (12 percent to 20 percent), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16 percent (down from 28.5 percent) from the BAU conditions.

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

EO B-30-15

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under S-3-05 and AB 32. EO B-30-15 set an interim goal of reducing

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

statewide GHG emissions to 40 percent below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing statewide GHG emissions to 80 percent below 1990 levels by 2050 as set forth in S-3-05. To facilitate achievement of this goal, EO B-30-15 calls for an update to CARB's *Scoping Plan* to express the 2030 target in terms of MMT CO_2e. The EO also calls for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. Sector-specific agencies in transportation, energy, water, and forestry were required to prepare GHG reduction plans by September 2015, followed by a report on action taken in relation to these plans in June 2016.

SB 32 and AB 197

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

2017 Climate Change Scoping Plan

In November 2017, CARB released *California's 2017 Climate Change Scoping Plan* for public review and comment (CARB, 2017). This update includes CARB's strategy for achieving the state's 2030 GHG target as established in Senate Bill (SB) 32 (discussed below). The strategy includes continuing the Cap-and-Trade Program through 2030,[2] inclusive policies and broad support for clean technologies, enhanced industrial efficiency and competitiveness, prioritization of transportation sustainability, continued leadership on clean energy, putting

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

waste resources to beneficial use, supporting resilient agricultural and rural economics and natural and working lands, securing California's water supplies, and cleaning the air and public health. When discussing project-level GHG emissions reduction actions and thresholds, the *2017 Scoping Plan* states "[a]chieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development." However, the *2017 Scoping Plan* also recognizes that such an achievement "may not be feasible or appropriate for every project … and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA." CARB's Governing Board adopted the *2017 Scoping Plan* in December 2017.

Building Energy

Title 24, Part 6

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

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

The Project would be required, at a minimum, to comply with the latest version of Title 24 standards at the time the Project seeks building permits. At the time this report was

written, the 2019 standards were applicable and went into effect on January 1, 2020. The 2019 standards continue to improve upon the 2016 standards for residential and nonresidential buildings. One of the most notable changes in the 2019 standards is the requirement for the installation of rooftop solar on residential buildings (California Energy Commission, 2017). It should be noted that the State updates these regulations every three years. Thus, throughout Project construction, buildings will need comply with the most recently adopted standards.

Title 24, Part 11

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

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

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

content in building materials, 30 percent permeable paving, 25 percent cement reduction, and cool/solar-reflective roofs.

The CALGreen standards were again updated in 2019 which includes mandatory measures for planning and design, energy efficiency, water and conservation efficiency, material and resource conservation as well as Environmental Quality. A thorough checklist is provided by California's Housing and Community Development Department (Housing and Community Development, 2019). The project would be required to utilize the latest CalGreen standards (International Code Council, 2019).

Title 20

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

Mobile Sources

AB 1493

In response to the transportation sector accounting for more than half of California's CO_2 emissions, AB 1493 was enacted in July 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by CARB to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards will result in a reduction of about 22

percent in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of about 30 percent (CARB, 2017).

EO S-1-07

Issued in January 2007, EO S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009 and began implementation in 2011. The LCFS is designed to encourage the use of cleaner low-carbon transportation fuels in California, encourage the production of those fuels, and therefore, reduce GHG emissions and decrease petroleum dependence in the transportation sector.

The latest amendment to LCFS implementation regulations was in 2018 and CARB approved amendments which included strengthening and smoothing the carbon intensity benchmarks through 2030 in-line with California's 2030 GHG emission reduction target enacted through SB 32 (CARB, 2018).

SB 375

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

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

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

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

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

Currently SANDAG is working on the 2021 Regional Plan. The current Draft Plan provides a big picture vision for how the San Diego region will grow through 2050 and beyond with an implementation program to help make the plan a reality. Within the Draft Plan, SANDAG introduced a transformative vision for transportation in San Diego County that completely reimagines how people and goods could move throughout the region in the 21st century. The plan outlines the "5 Big Moves" which are: Complete Corridors, Transit Leap, Mobility Hubs, Flexible Fleets, and the Next OS. The SANDAG Board of Directors will be asked to adopt the 2021 Regional Plan in late 2021. Once adopted, it will become the region's long-term plan to be implemented incrementally through the Regional Transportation Improvement Program (RTIP) (SANDAG, 2021).

Advanced Clean Cars Program

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

model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34 percent in 2025 (California Air Resources Board, 2012).

EO B-16-12

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

SB 350

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

Renewable Energy Procurement

SB 1078

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

SB X1 2

SB X1 2 (2011) expanded the RPS by establishing that 20 percent of the total electricity sold to retail customers in California per year by December 31, 2013, and 33 percent by December 31, 2020, and in subsequent years be secured from qualifying renewable energy sources. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other

specified requirements with respect to its location. In addition to the retail sellers previously covered by the RPS, SB X1 2 added local, publicly owned electric utilities to the RPS.

SB 350

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

SB 100

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

Water

EO B-29-15

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

Solid Waste

AB 939 and AB 341

AB 939 (1989), known as the Integrated Waste Management Act (Public Resources Code Sections 40000 et seq.), was passed because of the increase in waste stream and the

decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25 percent by 1995 and 50 percent by the year 2000.

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

Increasing the amount of commercial solid waste that is recycled, reused, or composted will reduce GHG emissions primarily by 1) reducing the energy requirements associated with the extraction, harvest, and processing of raw materials and 2) using recyclable materials that require less energy than raw materials to manufacture finished products (CalRecycle, 2020) Increased diversion of organic materials (green and food waste) will also reduce GHG emissions (CO_2 and CH_4) resulting from decomposition in landfills by redirecting this material to processes that use the solid waste material to produce vehicle fuels, heat, electricity, or compost.

3.2 GHG Thresholds of Significance

The City of San Marcos (City) adopted an updated Climate Action Plan (CAP) on December 8, 2020. The CAP outlines strategies and measures that the City will undertake to achieve its proportional share of State greenhouse gas (GHG) emissions reduction targets. The CAP is a plan for the reduction of GHG emissions in accordance with California Environmental Quality Act (CEQA) Guidelines Section 15183.5. Pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it is consistent with the City's CAP. The CAP set the following citywide targets (City of San Marcos, 2020).

- 4 percent below 2012 levels (575,000 MTCO2e) by 2020,
- 42 percent below 2012 levels (347,000 MTCO2e) by 2030

The City has also developed a Climate Action Plan Consistency Review Checklist (CAP Consistency Checklist), in conjunction with the CAP, to provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger

environmental review pursuant to CEQA. The CAP Consistency Guidance Memo dated July 15, 2020 summarizes the methodology and application of a GHG screening threshold which is set at 500 metric tons carbon dioxide equivalent [MTCO2e] per year as outlined int the CAP (Ascent, 2020). Projects that are projected to emit fewer than 500 $MTCO_2e$ annually would not make a considerable contribution to the cumulative impact of climate change and would not need to provide additional analysis to demonstrate consistency with the CAP. It should be noted that this screening threshold is for new development projects consistent with the City's General Plan. When such a project exceeds the screening threshold, the project would be required to demonstrate consistency with the CAP through the CAP Consistency Checklist.

In most cases, compliance with the Checklist would provide the CEQA streamlining path to allow project specific environmental documents, if eligible, to tier from and/or incorporate by reference the CAP's programmatic review of GHG impacts. Projects that are consistent with the General Plan and implement CAP GHG reduction measures may incorporate by reference the CAP's cumulative GHG analysis. The City's CAP meets the requirements under Section 15183.5 of the CEQA Guidelines as a qualified plan for the reduction of GHG emissions for use in cumulative impact analysis pertaining to development projects. The Checklist provides a streamlined review process for the GHG emissions analysis of proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA.

If a project is consistent with the existing General Plan land use designation(s), it can be determined to be consistent with the CAP projections and can move forward to Step 2 of the Checklist.

In addition, some projects may seek a General Plan amendment. For these projects, the Checklist requires a determination on whether the amendment would result in an equivalent or less GHG-intensive project when compared to the existing designations. In addition to providing evidence to support the conclusion that the project would generate fewer emissions than existing designations, these projects would demonstrate consistency with the CAP through completion of Step 2 of the Checklist.

If a land use designation amendment results in a more GHG-intensive project, the project is required to prepare a quantitative GHG analysis based on applicable sections of the CEQA Guidelines.

4.0 METHODOLOGY

4.1 Construction CO_2e Emissions Calculation Methodology

GHGs related to construction and daily operations were calculated using the latest CalEEMod 2020.4.0 GHG model. The purpose of this analysis is to complete a comparison with the proposed Project and the MU3 General Plan Buildout scenario. The construction module in CalEEMod is used to calculate the emissions associated with the construction of the project. The CalEEMod input/output model is shown in ***Attachment A*** for the Proposed Project and ***Attachment B*** for the MU3 General Plan Buildout scenario.

The project would start grading late 2022 with residential construction to start shortly thereafter. Grading will consist of approximately 39,711 cubic yards (CY) of cut material and 86,052 CY of fill material requiring an import of approximately 46,341 CY of fill material. Earthwork associated with grading within CalEEMod uses a "Grading Equipment Passes" methodology which has been approved by SCAQMD. As noted in CalEEMod documentation, this methodology was approved by CAPCOA (CAPCOA, 2021). Since CalEEMod was used for GHG estimation from construction, this methodology was assumed.

Per the Project Engineer, during grading operations, a standalone rock crusher similar to a Terex 4242SR 310 horsepower (HP)+/- would be onsite for ancillary crushing needs if necessary. An example of the crusher modeled within CalEEMod is shown in ***Attachment C*** to this report. Construction of all residential units would be expected sometime in 2024. As previously discussed, the project's blasting-related activities would not generate GHG emissions. Table 4.1 describes the construction equipment and durations.

Table 4.1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Completion	Quantity	Work Days
Site Preparation	12/1/2022	12/14/2022		10
Graders			3	
Rubber Tired Dozers			4	
Haul Trucks	12/1/2022	12/14/2022	8	
Rock Drilling	12/15/2022	12/21/2022		5
Bore/Drill Rigs			1	
Grading	12/15/2022	1/25/2023		30
Crushing/Proc. Equipment			1	
Excavators			2	
Graders			1	
Rubber Tired Dozers			1	
Scrapers			2	
Tractors/Loaders/Backhoes			2	
Haul Trucks	12/15/2022	1/25/2023	8	
Building Construction	01/26/2023	03/20/2024		300
Cranes			1	
Forklifts			3	
Generator Sets			1	
Tractors/Loaders/Backhoes			3	
Welders			1	
Paving	03/21/2024	04/17/2024		20
Pavers			2	
Paving Equipment			2	
Rollers			2	
Architectural Coating	2/15/2024	4/17/2024		45
Air Compressors			1	
This equipment list is based upon equipment inventory within CALEEMOD 2020.4.0.				

4.2 Operational Emissions Calculation Methodology

Once construction is complete, the proposed project would generate GHG emissions from daily operations which would include sources such as Area (or onsite emissions like landscaping), Energy usage from electricity and natural gas, mobile sources from vehicular traffic, municipal waste and from water uses, which are calculated within CalEEMod. For consistency with the CAP, the project was analyzed under the 2030 year scenario. Also, no hearth options were included within the modeling.

Solid municipal waste generated in the form of trash is also considered within this analysis as the decomposition of organic material breaks down to form GHGs. GHGs from water are also

indirectly generated through the conveyance of the resource via pumping throughout the state and as necessary for wastewater treatment.

It should be noted that electrical energy-intensity factors were updated in CalEEMod 2020.4.0 to reflect San Diego Gas and Electric's (SDG&E) latest emissions rates which SDG&E provided to CAPCOA for the model update. CalEEMod 2016.3.2 (the model prior to 2020.4.0) was based on default emissions from 2009 which included a 10.5% RPS factor as indicated by California Public Utilities Commission (CPUC) (CPUC, 2016). The default CalEEMod 2020.4.0 emissions are now 540 pounds per megawatt hour (lb/MWh) which when compared with the defaults in 2016.3.2 represents a 33% achievement for RPS in 2020 which is consistent with SBX1-2. In accordance with SB 100, SDG&E will achieve an RPS of 60% in 2030. Table 4.2 identifies what the emissions in 2030 will be assuming a 60% RPS is achieved as required.

Table 4.2: SDG&E Energy Intensity Factors

GHG	2009 Factors (lbs/MWh) w/10.5% RPS	Current RPS Factors 2020 33% Achieved (lbs/MWh)	Current RPS Factors 2030 60% Achieved (lbs/MWh)
Carbon Dioxide (CO_2)	720.49	539.98	322.38
Methane (CH_4)	0.029	0.033	0.0197
Nitrous Oxide (N_2O)	0.006	0.004	0.0024

The Project traffic engineer estimated that the project would generate 1,208 daily trips (LLG Engineers, 2021). These traffic numbers were utilized within the CalEEMod analysis as the model. In addition, the project traffic study estimated that the MU3 General Plan Buildout scenario would generate 5,410 ADT (LLG Engineers, 2021). This analysis uses a 5.4 mile trip distance which is consistent with the project's air quality assessment which uses methodologies looking at EMFAC total VMT divided by the total number of trips within the County of San Diego (LDN Consulting, 2021). It should be noted that the Air Quality report used a 2025 scenario and the VMT per trip may be slightly different in 2030. Since the project comparison would utilize the same year regardless, any changes in VMT per trip would be inconsequential. The EMFAC modeling results are provided as ***Attachment D***. The trip distance is used for an illustrative comparative analysis for the project and is not intended to set a precedent for trip distances for projects in the City of San Marcos. Individual project analyses will continue to be assessed based on project-specific conditions and substantiated trip distances.

Additionally, it was assumed that an average of 10% of the structural surface area will be re-painted each year. The operational modeling results for the proposed development and the MU3 General Plan Buildout scenario can also be seen in ***Attachments A*** and ***-B*** respectively.

5.0 FINDINGS

5.1 Project Related Construction Emissions

Utilizing the CALEEMOD 2020.4.0 construction inputs as shown in Table 4.1, we find that construction of the project will produce approximately 881.55 MT of CO_2e over the construction life of the project. Given the fact that the total emissions would ultimately contribute to cumulative levels, construction emissions of GHGs were annualized to allow for inclusion in operational emissions estimates, consistent with the South Coast Air Quality Management District (SCAQMD) recommendations for construction GHG emissions (SCAQMD, 2008). Construction emissions were annualized over a 30-year period, per SCAQMD recommendations, to account for emissions generated over the assumed project lifetime. Given this, the Project would add approximately 29.38 MT CO_2e per year from construction which were added to annual operational emissions estimates. A summary of the construction emissions is shown in Table 5.1.

Table 5.1: Expected Annual Construction CO_2e Emissions Summary

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT)
2022	0.00	164.80	164.80	0.02	0.02	170.08
2023	0.00	570.74	570.74	0.09	0.02	579.61
2024	0.00	130.56	130.56	0.02	0.00	131.86
Total Construction Emissions						**881.55**
Yearly Average Construction Emissions (Metric Tons/year over 30 years)						**29.38**
Expected Construction emissions are based upon CalEEMod modeling assumptions for equipment and durations listed in Table 4.1.						

5.2 Proposed Project Operational Emissions

Once construction is completed the proposed project would generate GHG emissions from daily operations which would include sources such as area, energy, mobile, solid waste and water uses, which are calculated within CalEEMod. Area Sources include consumer products, landscaping and architectural coatings as part of regular maintenance. Energy sources would be from electricity usage and natural gas. Solid waste generated in the form of trash is also considered as decomposition of organic material breaks down to form GHGs. Water sources include standard residential uses including landscaping activities.

This analysis is driven by the CAP and since this Project seeks a General Plan Amendment, the proposed Project is analyzed in comparison with existing designations to determine if it

would be less intense than what would otherwise be approved under the existing General Plan. If a project's proposed amendment to the General Plan results is lower GHG emissions than development under the General Plan, the project would be required to implement the applicable CAP Measures identified in Step 2 of the CAP Consistency Review Checklist. Based on this, quantifiable measures such as EV Chargers are provided.

The proposed project has 66 parking spaces and would include 3 Electric Vehicle Charging Stations. The project has been designed to meet the requirements of Measure T-2. The City's CAP estimated that in the year 2030, 363 MT CO_2e will be reduced from 220 installed Electric Vehicle chargers or 1.65 MT CO_2e per charger (San Marcos, 2020). Based on the City's CAP, each multi-family EV charging station would reduce GHG emission by 1.65 MT CO_2e per a charger or 4.95 MT CO_2e reduction from the 3 chargers required by the CAP measure.

Proposed Project Findings

Table 5.2 indicates that the Project would generate 954.74 MT CO_2e per year without incorporating any CAP measures. The Project would however be required to implement CAP measures and these measures would further reduce GHG emissions. Since the intent of this analysis is to compare the proposed Project with the MU3 General Plan Buildout scenario, not all CAP measures were calculated. With the incorporation of CAP measure T-2, the provision of three Level 2 electric vehicle charging stations, the project would generate 949.79 MT CO_2e as can be seen in Table 5.2.

Table 5.2: Proposed Project Operational Emissions Summary (MT/Year)

Source	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT/Yr)
Area	0.00	1.83	1.83	0.00	0.00	1.88
Energy	0.00	216.47	216.47	0.01	0.00	217.48
Mobile	0.00	618.74	618.74	0.05	0.03	628.77
Waste	14.10	0.00	14.10	0.83	0.00	34.93
Water	3.12	28.81	31.93	0.32	0.01	42.30
Operations Total						**925.36**
Construction Emissions (See Table5.1 above)						**29.38**
Construction and Operations						**954.74**
CAP Measures T-2: EV Charger Reduction						**-4.95**
Project GHG Emissions						**949.79**
Data is presented in decimal format and may have rounding errors.						

5.3 MU3 General Plan Buildout Construction Emissions

The MU3 buildout scenario is assumed to have a similar construction footprint as the proposed project. A similar construction model was prepared based on default settings though did include manual updates similar to the project to reflect identical cut/fill/import as well as rock breaking activities. The equipment list as well as durations are identical for the MU3 General Plan Buildout Scenario as shown in Table 4.1 above. Table 5.3 shows the construction emissions from the MU3 General Plan Buildout Scenario. As noted, the construction emissions are not the same since the building land uses and areas are different.

Table 5.3: MU3 General Plan Annual Construction CO_2e Emissions Summary

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT)
2022	0.00	166.10	166.10	0.02	0.02	171.39
2023	0.00	874.39	874.39	0.10	0.06	893.28
2024	0.00	205.28	205.28	0.03	0.01	208.95
Total Construction Emissions						**1,273.62**
Yearly Average Construction Emissions (Metric Tons/year over 30 years)						**42.45**
Expected Construction emissions are based upon CalEEMod modeling assumptions for equipment and durations listed in Table 4.1.						

5.4 MU3 General Plan Buildout Scenario Operational Emissions

Once construction is completed the MU3 General Plan Buildout scenario would generate GHG emissions from sources as described in Section 5.2 above. Under this scenario, since it is non-residential, not all the same CAP measures would apply. The CAP measures included for quantification such as EV Chargers and Solar are included.

The City's CAP estimated that in the year 2030 based on a City wide analysis, 2,130 MT CO_2e will be reduced from 234 installed commercial Electric Vehicle chargers or 9.10 MT CO_2e per charger (San Marcos, 2020). Utilizing the same reductions for this site, the MU3 General Plan Buildout scenario would have 879 parking locations and would include 44 Electric Vehicle Charging Stations. Based on the City's CAP, each commercial EV charging station would reduce GHG emission by 9.1 MT CO_2e per a charger or 400.4 MT CO_2e reduction from the 44 chargers required by the CAP measure. It should be noted that these estimates are scaled down from CAP calculations for illustrative purposes only. Projects that may need to attribute quantified reductions to these measures in the future would conduct a project-specific bottom-up analysis of estimated reductions.

Based on the City's CAP, the total cumulative PV system in San Marcos was 10.3 megawatts direct current (MWdc) and that amount of solar generated 17,585 megawatt hours (MWh) or 1,707.28 MWh per MWdc installed. Since it is assumed that all renewable energy sources generated by SDG&E or generated within SDG&Es service network, any renewable source added by the project would offset non-renewable generation. CalEEMod indicates that GHG intensities from electrical (identified in Table 4.2) could be as high as those generated in 2009 but would likely even be higher since in 2009, SDG&E received power from San Onofre Nuclear Generation Station. Based on the emission factors presented in the CAP, GHG emissions from solar would save roughly 651 lbs CO_2e per MWh produced.

The MU3 General Plan Buildout scenario is 293,411 SF and would therefore be required to install 586.8 kWdc of solar or 0.586 MWdc. Based on this, the MU3 General Plan Buildout scenario would generate roughly 1,000.4 MWh of energy per year (1,707.28 MWh/MWdc * 0.586 MWdc) and would save 325.65 tons per year which converts to 295.42 MT CO_2e per year since 1 US ton is equivalent to 0.907 MT.

Table 5.4 indicates that the MU3 General Plan Buildout Scenario would generate 3,964.92 MT CO_2e per year without incorporating any CAP measures. This scenario would be required to implement all of the CAP measures identified in Section 2 of the CAP Checklist and these measures would further reduce GHG emissions though quantification is difficult. When reduction for CAP measures T-2 and E-2 are considered, the MU3 General Plan Buildout scenario would generate 3,269.10 MT CO_2e per year.

Table 5.4: MU3 General Plan Buildout Operational Emissions Summary (MT/Year)

Source	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT/Yr)
Area	0.00	0.02	0.02	0.00	0.00	0.02
Energy	0.00	1069.60	1069.60	0.05	0.01	1074.25
Mobile	0.00	2453.97	2453.97	0.20	0.12	2495.21
Waste	55.84	0.00	55.84	3.30	0.00	138.34
Water	15.94	145.71	161.65	1.65	0.04	214.65
					Operations Total	**3,922.47**
					Construction Emissions (See Table5.1 above)	**42.45**
					Construction and Operations	**3,964.92**
					CAP Measure T-2: EV Charger Reduction	**-400.40**
					CAP Measures E-2: Solar PV Installation	**-295.42**
					MU3 General Plan Buildout Scenario Project GHG Emissions	**3,269.10**
Data is presented in decimal format and may have rounding errors.						

Comparison of the Proposed Project and the MU3 General Plan Buildout Scenario

When the proposed Project's GHG emissions are compared to the GHG emissions estimated under the MU3 General Plan Buildout scenario, the Project would have an estimated 70% less intense carbon footprint than would otherwise be assumed in the City's General Plan or 949.79 MT CO_2e per year compared to 3,269.10 MT CO_2e per year. This is driven largely by the reduced number of vehicle trips that would occur under the proposed project compared to buildout under the General Plan.

5.5 CEQA Compliance

SB 97 directed amendments to the California Environmental Quality Act (CEQA) statute to specifically establish that GHG emissions and their impacts are appropriate subjects for CEQA analysis. Under SB 97 the project should be able to answer the follow questions for CEQA compliance.

1. Will the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The City is committed to reducing its GHG emissions consistent with SB 32. Based on this requirement, the City's CAP concludes that proposed General Plan amendments would be consistent with the CAP so long as the GHG emission generated by the amendment are less than would otherwise be produced by a consistent General Plan buildout scenario.

The proposed project was found to emit 949.79 MT CO_2e per year and the MU3 General Plan Buildout scenario was estimated to generate 3,269.10 MT CO_2e per year. The Project would therefore a less intense carbon footprint by an estimated 70% when compared to what would otherwise be assumed in the City's General Plan. Given this, the project would be required to implement CAP measures applicable to the multi-family residential project. Based on this, a less than significant impact would be expected on the environment with respect the GHG emissions from the project.

2. Will the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The proposed project was found to emit 949.79 MT CO2e per year and the MU3 General Plan Buildout scenario would generate 3,269.10 MT CO2e per year. The Project would therefore result in a less intense carbon footprint by 70% when compared to what would otherwise be assumed in the City's General Plan. CAP consistency can be assumed as long as the amendment results in an equivalent or less GHG-intensive project when compared to the

existing designations. In addition to providing evidence to support the conclusion that the project would generate fewer emissions than existing designations, these projects would demonstrate consistency with the CAP through completion of Step 2 of the Checklist. Based on this, a less than significant impact would be expected by the project and the Project.

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ATTACHMENT A

CalEEMod Emission Model – Proposed Project

Barham 151 Unit Multi-Family Operational Year - San Diego County, Annual

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

Barham 151 Unit Multi-Family Operational Year

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	66.00	Space	0.59	26,400.00	0
Condo/Townhouse	151.00	Dwelling Unit	9.96	151,000.00	432

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2030
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	322.38	**CH4 Intensity (lb/MWhr)**	0.02	**N2O Intensity (lb/MWhr)**	0.002

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS 2030

Land Use - 10.55 acres

Construction Phase - CS

Off-road Equipment - Rock Crusher Added 310+/- HP

Off-road Equipment - CE

Trips and VMT -

Grading - 46341 CY of import

Architectural Coating - Rule 67 Paint

Vehicle Trips - Per Traffic Study

Vehicle Emission Factors -

Vehicle Emission Factors -

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

Vehicle Emission Factors -

Woodstoves - No Hearth

Area Coating - Rule 67 Paint

Energy Use -

Construction Off-road Equipment Mitigation - T4

Area Mitigation - default

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblAreaMitigation	UseLowVOCPaintParkingValue	100	250
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	250
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	250
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	5.00
tblConstructionPhase	NumDays	20.00	45.00
tblFireplaces	NumberGas	83.05	0.00
tblFireplaces	NumberNoFireplace	15.10	151.00
tblFireplaces	NumberWood	52.85	0.00
tblGrading	MaterialImported	0.00	34,755.00
tblGrading	MaterialImported	0.00	11,585.00
tblLandUse	LotAcreage	9.44	9.96
tblOffRoadEquipment	HorsePower	85.00	310.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

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

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Rock Drilling
tblOffRoadEquipment	PhaseName		Grading
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.02
tblProjectCharacteristics	CO2IntensityFactor	539.98	322.38
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.002
tblVehicleTrips	HO_TL	7.50	5.40
tblVehicleTrips	HO_TTP	39.60	39.00
tblVehicleTrips	HS_TL	7.30	5.40
tblVehicleTrips	HS_TTP	18.80	19.00
tblVehicleTrips	HW_TL	10.80	5.40
tblVehicleTrips	HW_TTP	41.60	42.00
tblVehicleTrips	ST_TR	8.14	8.00
tblVehicleTrips	SU_TR	6.28	8.00
tblVehicleTrips	WD_TR	7.32	8.00
tblWoodstoves	NumberCatalytic	7.55	0.00
tblWoodstoves	NumberNoncatalytic	7.55	0.00

2.0 Emissions Summary

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

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0521	0.7049	0.3710	1.7200e-003	0.2146	0.0217	0.2362	0.0840	0.0201	0.1041	0.0000	164.8010	164.8010	0.0216	0.0159	170.0813
2023	0.2751	2.4102	2.6803	6.3100e-003	0.2609	0.1018	0.3627	0.0775	0.0957	0.1731	0.0000	570.7432	570.7432	0.0915	0.0221	579.6118
2024	1.0172	0.5451	0.7539	1.4700e-003	0.0373	0.0242	0.0615	0.0100	0.0227	0.0327	0.0000	130.5636	130.5636	0.0238	2.3500e-003	131.8573
Maximum	**1.0172**	**2.4102**	**2.6803**	**6.3100e-003**	**0.2609**	**0.1018**	**0.3627**	**0.0840**	**0.0957**	**0.1731**	**0.0000**	**570.7432**	**570.7432**	**0.0915**	**0.0221**	**579.6118**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0163	0.3057	0.4317	1.7200e-003	0.2146	3.6400e-003	0.2182	0.0840	3.5300e-003	0.0876	0.0000	164.8009	164.8009	0.0216	0.0159	170.0812
2023	0.0944	0.6220	2.9156	6.3100e-003	0.2609	8.8900e-003	0.2697	0.0775	8.7500e-003	0.0862	0.0000	570.7427	570.7427	0.0915	0.0221	579.6114
2024	0.9735	0.1125	0.8186	1.4700e-003	0.0373	1.9700e-003	0.0393	0.0100	1.9500e-003	0.0120	0.0000	130.5635	130.5635	0.0238	2.3500e-003	131.8571
Maximum	**0.9735**	**0.6220**	**2.9156**	**6.3100e-003**	**0.2609**	**8.8900e-003**	**0.2697**	**0.0840**	**8.7500e-003**	**0.0876**	**0.0000**	**570.7427**	**570.7427**	**0.0915**	**0.0221**	**579.6114**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**19.35**	**71.58**	**-9.48**	**0.00**	**0.00**	**90.18**	**20.16**	**0.00**	**89.73**	**40.09**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**12-1-2022**	**2-28-2023**	1.5480	0.6018
2	**3-1-2023**	**5-31-2023**	0.5717	0.1316
3	**6-1-2023**	**8-31-2023**	0.5708	0.1306
4	**9-1-2023**	**11-30-2023**	0.5665	0.1311
5	**12-1-2023**	**2-29-2024**	0.7779	0.3583
6	**3-1-2024**	**5-31-2024**	0.9719	0.7722
		Highest	1.5480	0.7722

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7198	0.0129	1.1188	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	1.8326	1.8326	1.7500e-003	0.0000	1.8763
Energy	0.0109	0.0934	0.0397	6.0000e-004		7.5500e-003	7.5500e-003		7.5500e-003	7.5500e-003	0.0000	216.4738	216.4738	8.7900e-003	2.6500e-003	217.4848
Mobile	0.3867	0.3540	3.2687	6.3300e-003	0.7886	4.5500e-003	0.7932	0.2105	4.2400e-003	0.2147	0.0000	618.7394	618.7394	0.0477	0.0297	628.7666
Waste						0.0000	0.0000		0.0000	0.0000	14.0998	0.0000	14.0998	0.8333	0.0000	34.9315
Water						0.0000	0.0000		0.0000	0.0000	3.1212	28.8090	31.9302	0.3224	7.7500e-003	42.2983
Total	**1.1174**	**0.4603**	**4.4273**	**6.9900e-003**	**0.7886**	**0.0183**	**0.8070**	**0.2105**	**0.0180**	**0.2285**	**17.2210**	**865.8548**	**883.0758**	**1.2139**	**0.0401**	**925.3576**

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

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7198	0.0129	1.1188	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	1.8326	1.8326	1.7500e-003	0.0000	1.8763
Energy	0.0109	0.0934	0.0397	6.0000e-004		7.5500e-003	7.5500e-003		7.5500e-003	7.5500e-003	0.0000	216.4738	216.4738	8.7900e-003	2.6500e-003	217.4848
Mobile	0.3867	0.3540	3.2687	6.3300e-003	0.7886	4.5500e-003	0.7932	0.2105	4.2400e-003	0.2147	0.0000	618.7394	618.7394	0.0477	0.0297	628.7666
Waste						0.0000	0.0000		0.0000	0.0000	14.0998	0.0000	14.0998	0.8333	0.0000	34.9315
Water						0.0000	0.0000		0.0000	0.0000	3.1212	28.8090	31.9302	0.3224	7.7500e-003	42.2983
Total	**1.1174**	**0.4603**	**4.4273**	**6.9900e-003**	**0.7886**	**0.0183**	**0.8070**	**0.2105**	**0.0180**	**0.2285**	**17.2210**	**865.8548**	**883.0758**	**1.2139**	**0.0401**	**925.3576**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	12/1/2022	12/14/2022	5	10	
2	Rock Drilling	Grading	12/15/2022	12/21/2022	5	5	
3	Grading	Grading	12/15/2022	1/25/2023	5	30	

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

4	Building Construction	Building Construction	1/26/2023	3/20/2024	5	300	
5	Architectural Coating	Architectural Coating	2/15/2024	4/17/2024	5	45	
6	Paving	Paving	3/21/2024	4/17/2024	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.59

Residential Indoor: 305,775; Residential Outdoor: 101,925; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,584 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Rock Drilling	Bore/Drill Rigs	1	3.00	221	0.50
Grading	Crushing/Proc. Equipment	1	8.00	310	0.78
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

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

Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	1,448.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rock Drilling	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	4,344.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	120.00	20.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	24.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0991	0.0000	0.0991	0.0506	0.0000	0.0506	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	**0.0159**	**0.1654**	**0.0985**	**1.9000e-004**	**0.0991**	**8.0600e-003**	**0.1072**	**0.0506**	**7.4200e-003**	**0.0581**	**0.0000**	**16.7197**	**16.7197**	**5.4100e-003**	**0.0000**	**16.8549**

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

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2100e-003	0.1219	0.0288	4.5000e-004	0.0124	1.1300e-003	0.0135	3.4100e-003	1.0800e-003	4.4900e-003	0.0000	45.3812	45.3812	2.1800e-003	7.2100e-003	47.5841
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	2.6000e-004	1.9000e-004	2.2100e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5936	0.5936	2.0000e-005	2.0000e-005	0.5991
Total	**3.4700e-003**	**0.1221**	**0.0310**	**4.6000e-004**	**0.0131**	**1.1300e-003**	**0.0143**	**3.6000e-003**	**1.0800e-003**	**4.6900e-003**	**0.0000**	**45.9748**	**45.9748**	**2.2000e-003**	**7.2300e-003**	**48.1832**

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					0.0991	0.0000	0.0991	0.0506	0.0000	0.0506	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3300e-003	0.0101	0.1043	1.9000e-004		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	**2.3300e-003**	**0.0101**	**0.1043**	**1.9000e-004**	**0.0991**	**3.1000e-004**	**0.0994**	**0.0506**	**3.1000e-004**	**0.0510**	**0.0000**	**16.7197**	**16.7197**	**5.4100e-003**	**0.0000**	**16.8549**

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

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2100e-003	0.1219	0.0288	4.5000e-004	0.0124	1.1300e-003	0.0135	3.4100e-003	1.0800e-003	4.4900e-003	0.0000	45.3812	45.3812	2.1800e-003	7.2100e-003	47.5841
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	2.6000e-004	1.9000e-004	2.2100e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5936	0.5936	2.0000e-005	2.0000e-005	0.5991
Total	**3.4700e-003**	**0.1221**	**0.0310**	**4.6000e-004**	**0.0131**	**1.1300e-003**	**0.0143**	**3.6000e-003**	**1.0800e-003**	**4.6900e-003**	**0.0000**	**45.9748**	**45.9748**	**2.2000e-003**	**7.2300e-003**	**48.1832**

3.3 Rock Drilling - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1000e-004	2.1200e-003	1.9100e-003	1.0000e-005		7.0000e-005	7.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.7770	0.7770	2.5000e-004	0.0000	0.7833
Total	**2.1000e-004**	**2.1200e-003**	**1.9100e-003**	**1.0000e-005**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.7770**	**0.7770**	**2.5000e-004**	**0.0000**	**0.7833**

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

3.3 Rock Drilling - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0495	0.0495	0.0000	0.0000	0.0499
Total	**2.0000e-005**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0495**	**0.0495**	**0.0000**	**0.0000**	**0.0499**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1000e-004	4.8000e-004	4.0200e-003	1.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.7770	0.7770	2.5000e-004	0.0000	0.7833
Total	**1.1000e-004**	**4.8000e-004**	**4.0200e-003**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.7770**	**0.7770**	**2.5000e-004**	**0.0000**	**0.7833**

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

3.3 Rock Drilling - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0495	0.0495	0.0000	0.0000	0.0499
Total	**2.0000e-005**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0495**	**0.0495**	**0.0000**	**0.0000**	**0.0499**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0863	0.0000	0.0863	0.0254	0.0000	0.0254	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0283	0.2686	0.2016	5.0000e-004		0.0110	0.0110		0.0103	0.0103	0.0000	45.9126	45.9126	0.0111	0.0000	46.1905
Total	**0.0283**	**0.2686**	**0.2016**	**5.0000e-004**	**0.0863**	**0.0110**	**0.0973**	**0.0254**	**0.0103**	**0.0356**	**0.0000**	**45.9126**	**45.9126**	**0.0111**	**0.0000**	**46.1905**

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

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8500e-003	0.1463	0.0345	5.5000e-004	0.0149	1.3600e-003	0.0162	4.0900e-003	1.3000e-003	5.3900e-003	0.0000	54.4574	54.4574	2.6200e-003	8.6500e-003	57.1009
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	2.9000e-004	3.3900e-003	1.0000e-005	1.1100e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9101	0.9101	3.0000e-005	3.0000e-005	0.9187
Total	**4.2500e-003**	**0.1466**	**0.0379**	**5.6000e-004**	**0.0160**	**1.3700e-003**	**0.0174**	**4.3800e-003**	**1.3100e-003**	**5.6900e-003**	**0.0000**	**55.3676**	**55.3676**	**2.6500e-003**	**8.6800e-003**	**58.0195**

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					0.0863	0.0000	0.0863	0.0254	0.0000	0.0254	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-003	0.0265	0.2543	5.0000e-004		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	45.9125	45.9125	0.0111	0.0000	46.1904
Total	**6.1000e-003**	**0.0265**	**0.2543**	**5.0000e-004**	**0.0863**	**8.1000e-004**	**0.0871**	**0.0254**	**8.1000e-004**	**0.0262**	**0.0000**	**45.9125**	**45.9125**	**0.0111**	**0.0000**	**46.1904**

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

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8500e-003	0.1463	0.0345	5.5000e-004	0.0149	1.3600e-003	0.0162	4.0900e-003	1.3000e-003	5.3900e-003	0.0000	54.4574	54.4574	2.6200e-003	8.6500e-003	57.1009
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	2.9000e-004	3.3900e-003	1.0000e-005	1.1100e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9101	0.9101	3.0000e-005	3.0000e-005	0.9187
Total	**4.2500e-003**	**0.1466**	**0.0379**	**5.6000e-004**	**0.0160**	**1.3700e-003**	**0.0174**	**4.3800e-003**	**1.3100e-003**	**5.6900e-003**	**0.0000**	**55.3676**	**55.3676**	**2.6500e-003**	**8.6800e-003**	**58.0195**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1044	0.0000	0.1044	0.0353	0.0000	0.0353	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0393	0.3577	0.2933	7.5000e-004		0.0144	0.0144		0.0134	0.0134	0.0000	68.8694	68.8694	0.0166	0.0000	69.2854
Total	**0.0393**	**0.3577**	**0.2933**	**7.5000e-004**	**0.1044**	**0.0144**	**0.1188**	**0.0353**	**0.0134**	**0.0487**	**0.0000**	**68.8694**	**68.8694**	**0.0166**	**0.0000**	**69.2854**

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

3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.8800e-003	0.1769	0.0471	7.8000e-004	0.0223	1.4500e-003	0.0238	6.1300e-003	1.3900e-003	7.5200e-003	0.0000	78.2109	78.2109	3.9400e-003	0.0124	82.0159
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	5.6000e-004	3.9000e-004	4.7300e-003	1.0000e-005	1.6600e-003	1.0000e-005	1.6700e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3300	1.3300	4.0000e-005	4.0000e-005	1.3419
Total	**3.4400e-003**	**0.1773**	**0.0518**	**7.9000e-004**	**0.0240**	**1.4600e-003**	**0.0254**	**6.5700e-003**	**1.4000e-003**	**7.9700e-003**	**0.0000**	**79.5409**	**79.5409**	**3.9800e-003**	**0.0125**	**83.3578**

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					0.1044	0.0000	0.1044	0.0353	0.0000	0.0353	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.1600e-003	0.0397	0.3814	7.5000e-004		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003	0.0000	68.8693	68.8693	0.0166	0.0000	69.2853
Total	**9.1600e-003**	**0.0397**	**0.3814**	**7.5000e-004**	**0.1044**	**1.2200e-003**	**0.1056**	**0.0353**	**1.2200e-003**	**0.0365**	**0.0000**	**68.8693**	**68.8693**	**0.0166**	**0.0000**	**69.2853**

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

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.8800e-003	0.1769	0.0471	7.8000e-004	0.0223	1.4500e-003	0.0238	6.1300e-003	1.3900e-003	7.5200e-003	0.0000	78.2109	78.2109	3.9400e-003	0.0124	82.0159
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	5.6000e-004	3.9000e-004	4.7300e-003	1.0000e-005	1.6600e-003	1.0000e-005	1.6700e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3300	1.3300	4.0000e-005	4.0000e-005	1.3419
Total	**3.4400e-003**	**0.1773**	**0.0518**	**7.9000e-004**	**0.0240**	**1.4600e-003**	**0.0254**	**6.5700e-003**	**1.4000e-003**	**7.9700e-003**	**0.0000**	**79.5409**	**79.5409**	**3.9800e-003**	**0.0125**	**83.3578**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1903	1.7406	1.9655	3.2600e-003		0.0847	0.0847		0.0797	0.0797	0.0000	280.4837	280.4837	0.0667	0.0000	282.1518
Total	**0.1903**	**1.7406**	**1.9655**	**3.2600e-003**		**0.0847**	**0.0847**		**0.0797**	**0.0797**	**0.0000**	**280.4837**	**280.4837**	**0.0667**	**0.0000**	**282.1518**

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

3.5 Building Construction - 2023

Unmitigated Construction 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	2.8400e-003	0.1074	0.0379	5.0000e-004	0.0161	6.3000e-004	0.0167	4.6400e-003	6.1000e-004	5.2500e-003	0.0000	48.5574	48.5574	1.4700e-003	7.0400e-003	50.6908
Worker	0.0393	0.0272	0.3318	1.0000e-003	0.1164	6.4000e-004	0.1171	0.0309	5.9000e-004	0.0315	0.0000	93.2917	93.2917	2.7300e-003	2.5700e-003	94.1261
Total	**0.0421**	**0.1346**	**0.3697**	**1.5000e-003**	**0.1325**	**1.2700e-003**	**0.1338**	**0.0356**	**1.2000e-003**	**0.0368**	**0.0000**	**141.8491**	**141.8491**	**4.2000e-003**	**9.6100e-003**	**144.8168**

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	0.0397	0.2704	2.1127	3.2600e-003		4.9400e-003	4.9400e-003		4.9400e-003	4.9400e-003	0.0000	280.4834	280.4834	0.0667	0.0000	282.1515
Total	**0.0397**	**0.2704**	**2.1127**	**3.2600e-003**		**4.9400e-003**	**4.9400e-003**		**4.9400e-003**	**4.9400e-003**	**0.0000**	**280.4834**	**280.4834**	**0.0667**	**0.0000**	**282.1515**

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

3.5 Building Construction - 2023

Mitigated Construction 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	2.8400e-003	0.1074	0.0379	5.0000e-004	0.0161	6.3000e-004	0.0167	4.6400e-003	6.1000e-004	5.2500e-003	0.0000	48.5574	48.5574	1.4700e-003	7.0400e-003	50.6908
Worker	0.0393	0.0272	0.3318	1.0000e-003	0.1164	6.4000e-004	0.1171	0.0309	5.9000e-004	0.0315	0.0000	93.2917	93.2917	2.7300e-003	2.5700e-003	94.1261
Total	**0.0421**	**0.1346**	**0.3697**	**1.5000e-003**	**0.1325**	**1.2700e-003**	**0.1338**	**0.0356**	**1.2000e-003**	**0.0368**	**0.0000**	**141.8491**	**141.8491**	**4.2000e-003**	**9.6100e-003**	**144.8168**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0427	0.3899	0.4688	7.8000e-004		0.0178	0.0178		0.0167	0.0167	0.0000	67.2362	67.2362	0.0159	0.0000	67.6337
Total	**0.0427**	**0.3899**	**0.4688**	**7.8000e-004**		**0.0178**	**0.0178**		**0.0167**	**0.0167**	**0.0000**	**67.2362**	**67.2362**	**0.0159**	**0.0000**	**67.6337**

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

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6000e-004	0.0256	8.8700e-003	1.2000e-004	3.8500e-003	1.5000e-004	4.0000e-003	1.1100e-003	1.5000e-004	1.2600e-003	0.0000	11.4350	11.4350	3.6000e-004	1.6600e-003	11.9377
Worker	8.8500e-003	5.8600e-003	0.0744	2.3000e-004	0.0279	1.5000e-004	0.0281	7.4200e-003	1.3000e-004	7.5500e-003	0.0000	21.7988	21.7988	6.0000e-004	5.8000e-004	21.9853
Total	**9.5100e-003**	**0.0314**	**0.0833**	**3.5000e-004**	**0.0318**	**3.0000e-004**	**0.0321**	**8.5300e-003**	**2.8000e-004**	**8.8100e-003**	**0.0000**	**33.2339**	**33.2339**	**9.6000e-004**	**2.2400e-003**	**33.9230**

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	9.5100e-003	0.0648	0.5064	7.8000e-004		1.1800e-003	1.1800e-003		1.1800e-003	1.1800e-003	0.0000	67.2362	67.2362	0.0159	0.0000	67.6337
Total	**9.5100e-003**	**0.0648**	**0.5064**	**7.8000e-004**		**1.1800e-003**	**1.1800e-003**		**1.1800e-003**	**1.1800e-003**	**0.0000**	**67.2362**	**67.2362**	**0.0159**	**0.0000**	**67.6337**

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

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6000e-004	0.0256	8.8700e-003	1.2000e-004	3.8500e-003	1.5000e-004	4.0000e-003	1.1100e-003	1.5000e-004	1.2600e-003	0.0000	11.4350	11.4350	3.6000e-004	1.6600e-003	11.9377
Worker	8.8500e-003	5.8600e-003	0.0744	2.3000e-004	0.0279	1.5000e-004	0.0281	7.4200e-003	1.3000e-004	7.5500e-003	0.0000	21.7988	21.7988	6.0000e-004	5.8000e-004	21.9853
Total	**9.5100e-003**	**0.0314**	**0.0833**	**3.5000e-004**	**0.0318**	**3.0000e-004**	**0.0321**	**8.5300e-003**	**2.8000e-004**	**8.8100e-003**	**0.0000**	**33.2339**	**33.2339**	**9.6000e-004**	**2.2400e-003**	**33.9230**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9485					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0700e-003	0.0274	0.0407	7.0000e-005		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003	0.0000	5.7448	5.7448	3.2000e-004	0.0000	5.7529
Total	**0.9526**	**0.0274**	**0.0407**	**7.0000e-005**		**1.3700e-003**	**1.3700e-003**		**1.3700e-003**	**1.3700e-003**	**0.0000**	**5.7448**	**5.7448**	**3.2000e-004**	**0.0000**	**5.7529**

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

3.6 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3700e-003	9.1000e-004	0.0116	4.0000e-005	4.3300e-003	2.0000e-005	4.3500e-003	1.1500e-003	2.0000e-005	1.1700e-003	0.0000	3.3826	3.3826	9.0000e-005	9.0000e-005	3.4115
Total	**1.3700e-003**	**9.1000e-004**	**0.0116**	**4.0000e-005**	**4.3300e-003**	**2.0000e-005**	**4.3500e-003**	**1.1500e-003**	**2.0000e-005**	**1.1700e-003**	**0.0000**	**3.3826**	**3.3826**	**9.0000e-005**	**9.0000e-005**	**3.4115**

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	0.9485					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7000e-004	2.9000e-003	0.0412	7.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	5.7448	5.7448	3.2000e-004	0.0000	5.7529
Total	**0.9492**	**2.9000e-003**	**0.0412**	**7.0000e-005**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**	**0.0000**	**5.7448**	**5.7448**	**3.2000e-004**	**0.0000**	**5.7529**

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

3.6 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3700e-003	9.1000e-004	0.0116	4.0000e-005	4.3300e-003	2.0000e-005	4.3500e-003	1.1500e-003	2.0000e-005	1.1700e-003	0.0000	3.3826	3.3826	9.0000e-005	9.0000e-005	3.4115
Total	**1.3700e-003**	**9.1000e-004**	**0.0116**	**4.0000e-005**	**4.3300e-003**	**2.0000e-005**	**4.3500e-003**	**1.1500e-003**	**2.0000e-005**	**1.1700e-003**	**0.0000**	**3.3826**	**3.3826**	**9.0000e-005**	**9.0000e-005**	**3.4115**

3.7 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1885
Paving	7.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0107**	**0.0953**	**0.1463**	**2.3000e-004**		**4.6900e-003**	**4.6900e-003**		**4.3100e-003**	**4.3100e-003**	**0.0000**	**20.0265**	**20.0265**	**6.4800e-003**	**0.0000**	**20.1885**

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

3.7 Paving - 2024

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	3.8000e-004	2.5000e-004	3.2100e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9396	0.9396	3.0000e-005	2.0000e-005	0.9476
Total	**3.8000e-004**	**2.5000e-004**	**3.2100e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9396**	**0.9396**	**3.0000e-005**	**2.0000e-005**	**0.9476**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8000e-003	0.0122	0.1730	2.3000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1884
Paving	7.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.5700e-003**	**0.0122**	**0.1730**	**2.3000e-004**		**3.7000e-004**	**3.7000e-004**		**3.7000e-004**	**3.7000e-004**	**0.0000**	**20.0265**	**20.0265**	**6.4800e-003**	**0.0000**	**20.1884**

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

3.7 Paving - 2024

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	3.8000e-004	2.5000e-004	3.2100e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9396	0.9396	3.0000e-005	2.0000e-005	0.9476
Total	**3.8000e-004**	**2.5000e-004**	**3.2100e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9396**	**0.9396**	**3.0000e-005**	**2.0000e-005**	**0.9476**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Barham 151 Unit Multi-Family Operational Year - San Diego County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3867	0.3540	3.2687	6.3300e-003	0.7886	4.5500e-003	0.7932	0.2105	4.2400e-003	0.2147	0.0000	618.7394	618.7394	0.0477	0.0297	628.7666
Unmitigated	0.3867	0.3540	3.2687	6.3300e-003	0.7886	4.5500e-003	0.7932	0.2105	4.2400e-003	0.2147	0.0000	618.7394	618.7394	0.0477	0.0297	628.7666

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	1,208.00	1,208.00	1208.00	2,108,639	2,108,639
Parking Lot	0.00	0.00	0.00		
Total	1,208.00	1,208.00	1,208.00	2,108,639	2,108,639

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	5.40	5.40	5.40	42.00	19.00	39.00	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Parking Lot	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936

5.0 Energy Detail

Barham 151 Unit Multi-Family Operational Year - San Diego County, Annual

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

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	108.3058	108.3058	6.7200e-003	6.7000e-004	108.6740
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	108.3058	108.3058	6.7200e-003	6.7000e-004	108.6740
NaturalGas Mitigated	0.0109	0.0934	0.0397	6.0000e-004		7.5500e-003	7.5500e-003		7.5500e-003	7.5500e-003	0.0000	108.1680	108.1680	2.0700e-003	1.9800e-003	108.8108
NaturalGas Unmitigated	0.0109	0.0934	0.0397	6.0000e-004		7.5500e-003	7.5500e-003		7.5500e-003	7.5500e-003	0.0000	108.1680	108.1680	2.0700e-003	1.9800e-003	108.8108

Barham 151 Unit Multi-Family Operational Year - San Diego County, Annual

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	2.02699e+006	0.0109	0.0934	0.0397	6.0000e-004		7.5500e-003	7.5500e-003		7.5500e-003	7.5500e-003	0.0000	108.1680	108.1680	2.0700e-003	1.9800e-003	108.8108
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
Total		**0.0109**	**0.0934**	**0.0397**	**6.0000e-004**		**7.5500e-003**	**7.5500e-003**		**7.5500e-003**	**7.5500e-003**	**0.0000**	**108.1680**	**108.1680**	**2.0700e-003**	**1.9800e-003**	**108.8108**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	2.02699e+006	0.0109	0.0934	0.0397	6.0000e-004		7.5500e-003	7.5500e-003		7.5500e-003	7.5500e-003	0.0000	108.1680	108.1680	2.0700e-003	1.9800e-003	108.8108
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
Total		**0.0109**	**0.0934**	**0.0397**	**6.0000e-004**		**7.5500e-003**	**7.5500e-003**		**7.5500e-003**	**7.5500e-003**	**0.0000**	**108.1680**	**108.1680**	**2.0700e-003**	**1.9800e-003**	**108.8108**

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	731418	106.9547	6.6400e-003	6.6000e-004	107.3183
Parking Lot	9240	1.3512	8.0000e-005	1.0000e-005	1.3558
Total		**108.3058**	**6.7200e-003**	**6.7000e-004**	**108.6740**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	731418	106.9547	6.6400e-003	6.6000e-004	107.3183
Parking Lot	9240	1.3512	8.0000e-005	1.0000e-005	1.3558
Total		**108.3058**	**6.7200e-003**	**6.7000e-004**	**108.6740**

6.0 Area Detail

Barham 151 Unit Multi-Family Operational Year - San Diego County, Annual

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

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	0.7198	0.0129	1.1188	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	1.8326	1.8326	1.7500e-003	0.0000	1.8763
Unmitigated	0.7198	0.0129	1.1188	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	1.8326	1.8326	1.7500e-003	0.0000	1.8763

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

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	0.0949					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5914					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	0.0335	0.0129	1.1188	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	1.8326	1.8326	1.7500e-003	0.0000	1.8763
Total	**0.7198**	**0.0129**	**1.1188**	**6.0000e-005**		**6.2200e-003**	**6.2200e-003**		**6.2200e-003**	**6.2200e-003**	**0.0000**	**1.8326**	**1.8326**	**1.7500e-003**	**0.0000**	**1.8763**

Barham 151 Unit Multi-Family Operational Year - San Diego County, Annual

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

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	0.0949					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5914					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	0.0335	0.0129	1.1188	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	1.8326	1.8326	1.7500e-003	0.0000	1.8763
Total	**0.7198**	**0.0129**	**1.1188**	**6.0000e-005**		**6.2200e-003**	**6.2200e-003**		**6.2200e-003**	**6.2200e-003**	**0.0000**	**1.8326**	**1.8326**	**1.7500e-003**	**0.0000**	**1.8763**

7.0 Water Detail

7.1 Mitigation Measures Water

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	31.9302	0.3224	7.7500e-003	42.2983
Unmitigated	31.9302	0.3224	7.7500e-003	42.2983

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	9.83826 / 6.20238	31.9302	0.3224	7.7500e-003	42.2983
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**31.9302**	**0.3224**	**7.7500e-003**	**42.2983**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	9.83826 / 6.20238	31.9302	0.3224	7.7500e-003	42.2983
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**31.9302**	**0.3224**	**7.7500e-003**	**42.2983**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	14.0998	0.8333	0.0000	34.9315
Unmitigated	14.0998	0.8333	0.0000	34.9315

Barham 151 Unit Multi-Family Operational Year - San Diego County, Annual

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	69.46	14.0998	0.8333	0.0000	34.9315
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**14.0998**	**0.8333**	**0.0000**	**34.9315**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	69.46	14.0998	0.8333	0.0000	34.9315
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**14.0998**	**0.8333**	**0.0000**	**34.9315**

9.0 Operational Offroad

Barham 151 Unit Multi-Family Operational Year - San Diego County, Annual

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

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

ATTACHMENT B

CalEEMod Emission Model – MU3 General Plan Buildout Scenario

Barham MU3 Scenario - San Diego County, Annual

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

Barham MU3 Scenario

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	275.07	1000sqft	6.31	275,067.00	0
Enclosed Parking with Elevator	679.00	Space	2.02	271,600.00	0
Parking Lot	200.00	Space	1.80	80,000.00	0
Strip Mall	18.34	1000sqft	0.42	18,344.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2030
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	322.38	**CH4 Intensity (lb/MWhr)**	0.0197	**N2O Intensity (lb/MWhr)**	0.0024

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS 2030

Land Use - 10.55 acre

Construction Phase - Construction Schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Rock Crusher 310 HP+/-

Off-road Equipment -

Off-road Equipment - Rock Drill used for limited blasting if needed

Trips and VMT -

Barham MU3 Scenario - San Diego County, Annual

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

Grading -

Architectural Coating - Rule 67 Paint

Vehicle Trips - Per TS

Area Coating - Rule 67 Paints

Construction Off-road Equipment Mitigation - Tier 4

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	5.00
tblConstructionPhase	NumDays	20.00	45.00
tblGrading	MaterialImported	0.00	34,755.00
tblGrading	MaterialImported	0.00	11,585.00
tblLandUse	LandUseSquareFeet	275,070.00	275,067.00
tblLandUse	LandUseSquareFeet	18,340.00	18,344.00
tblLandUse	LotAcreage	6.11	2.02
tblOffRoadEquipment	HorsePower	85.00	310.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.0197
tblProjectCharacteristics	CO2IntensityFactor	539.98	322.38
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.0024
tblVehicleTrips	CC_TL	7.30	5.40
tblVehicleTrips	CC_TL	7.30	5.40

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

tblVehicleTrips	CNW_TL	7.30	5.40
tblVehicleTrips	CNW_TL	7.30	5.40
tblVehicleTrips	CW_TL	9.50	5.40
tblVehicleTrips	CW_TL	9.50	5.40
tblVehicleTrips	ST_TR	2.21	17.00
tblVehicleTrips	ST_TR	42.04	40.00
tblVehicleTrips	SU_TR	0.70	17.00
tblVehicleTrips	SU_TR	20.43	40.00
tblVehicleTrips	WD_TR	9.74	17.00
tblVehicleTrips	WD_TR	44.32	40.00

2.0 Emissions Summary

Barham MU3 Scenario - San Diego County, Annual

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

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0524	0.7084	0.3742	1.7300e-003	0.2146	0.0218	0.2364	0.0840	0.0202	0.1043	0.0000	166.0959	166.0959	0.0220	0.0159	171.3867
2023	0.3273	2.8998	3.1805	9.4600e-003	0.4483	0.1052	0.5535	0.1289	0.0989	0.2278	0.0000	874.3865	874.3865	0.1006	0.0550	893.2770
2024	1.4923	0.6620	0.8792	2.2500e-003	0.0866	0.0250	0.1116	0.0235	0.0235	0.0470	0.0000	205.2789	205.2789	0.0260	0.0101	208.9527
Maximum	**1.4923**	**2.8998**	**3.1805**	**9.4600e-003**	**0.4483**	**0.1052**	**0.5535**	**0.1289**	**0.0989**	**0.2278**	**0.0000**	**874.3865**	**874.3865**	**0.1006**	**0.0550**	**893.2770**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0165	0.3065	0.4384	1.7300e-003	0.2146	3.6700e-003	0.2182	0.0840	3.5600e-003	0.0876	0.0000	166.0959	166.0959	0.0220	0.0159	171.3866
2023	0.1465	1.1116	3.4158	9.4600e-003	0.4483	0.0123	0.4606	0.1289	0.0120	0.1408	0.0000	874.3861	874.3861	0.1006	0.0550	893.2766
2024	1.4486	0.2293	0.9439	2.2500e-003	0.0866	2.8000e-003	0.0894	0.0235	2.7400e-003	0.0262	0.0000	205.2788	205.2788	0.0260	0.0101	208.9526
Maximum	**1.4486**	**1.1116**	**3.4158**	**9.4600e-003**	**0.4483**	**0.0123**	**0.4606**	**0.1289**	**0.0120**	**0.1408**	**0.0000**	**874.3861**	**874.3861**	**0.1006**	**0.0550**	**893.2766**

Barham MU3 Scenario - San Diego County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**13.91**	**61.42**	**-8.21**	**0.00**	**0.00**	**87.68**	**14.78**	**0.00**	**87.20**	**32.82**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**12-1-2022**	**2-28-2023**	1.6069	0.6579
2	**3-1-2023**	**5-31-2023**	0.7163	0.2762
3	**6-1-2023**	**8-31-2023**	0.7130	0.2729
4	**9-1-2023**	**11-30-2023**	0.7117	0.2764
5	**12-1-2023**	**2-29-2024**	1.0339	0.6143
6	**3-1-2024**	**5-31-2024**	1.3579	1.1582
		Highest	1.6069	1.1582

Barham MU3 Scenario - San Diego County, Annual

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3105	1.0000e-004	0.0107	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0210	0.0210	5.0000e-005	0.0000	0.0223
Energy	0.0299	0.2721	0.2285	1.6300e-003		0.0207	0.0207		0.0207	0.0207	0.0000	1,069.5968	1,069.5968	0.0529	0.0112	1,074.2542
Mobile	1.6418	1.4529	13.4125	0.0251	3.1109	0.0183	3.1292	0.8302	0.0171	0.8472	0.0000	2,453.9683	2,453.9683	0.1971	0.1219	2,495.2142
Waste						0.0000	0.0000		0.0000	0.0000	55.8388	0.0000	55.8388	3.3000	0.0000	138.3382
Water						0.0000	0.0000		0.0000	0.0000	15.9413	145.7071	161.6484	1.6462	0.0398	214.6482
Total	**2.9822**	**1.7251**	**13.6517**	**0.0267**	**3.1109**	**0.0390**	**3.1499**	**0.8302**	**0.0378**	**0.8679**	**71.7800**	**3,669.2931**	**3,741.0731**	**5.1963**	**0.1728**	**3,922.4771**

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

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3105	1.0000e-004	0.0107	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0210	0.0210	5.0000e-005	0.0000	0.0223
Energy	0.0299	0.2721	0.2285	1.6300e-003		0.0207	0.0207		0.0207	0.0207	0.0000	1,069.5968	1,069.5968	0.0529	0.0112	1,074.2542
Mobile	1.6418	1.4529	13.4125	0.0251	3.1109	0.0183	3.1292	0.8302	0.0171	0.8472	0.0000	2,453.9683	2,453.9683	0.1971	0.1219	2,495.2142
Waste						0.0000	0.0000		0.0000	0.0000	55.8388	0.0000	55.8388	3.3000	0.0000	138.3382
Water						0.0000	0.0000		0.0000	0.0000	15.9413	145.7071	161.6484	1.6462	0.0398	214.6482
Total	**2.9822**	**1.7251**	**13.6517**	**0.0267**	**3.1109**	**0.0390**	**3.1499**	**0.8302**	**0.0378**	**0.8679**	**71.7800**	**3,669.2931**	**3,741.0731**	**5.1963**	**0.1728**	**3,922.4771**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	12/1/2022	12/14/2022	5	10	
2	Grading	Grading	12/15/2022	1/25/2023	5	30	
3	Rock Drilling	Grading	12/15/2022	12/21/2022	5	5	

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

4	Building Construction	Building Construction	1/26/2023	3/20/2024	5	300	
5	Architectural Coating	Architectural Coating	2/15/2024	4/17/2024	5	45	
6	Paving	Paving	3/21/2024	4/17/2024	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 3.82

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 440,117; Non-Residential Outdoor: 146,706; Striped Parking Area: 21,096 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Crushing/Proc. Equipment	1	8.00	310	0.78
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
Rock Drilling	Bore/Drill Rigs	1	8.00	221	0.50
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

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

Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	1,448.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	4,344.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rock Drilling	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	242.00	106.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	48.00	0.00	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

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0991	0.0000	0.0991	0.0506	0.0000	0.0506	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	**0.0159**	**0.1654**	**0.0985**	**1.9000e-004**	**0.0991**	**8.0600e-003**	**0.1072**	**0.0506**	**7.4200e-003**	**0.0581**	**0.0000**	**16.7197**	**16.7197**	**5.4100e-003**	**0.0000**	**16.8549**

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

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2100e-003	0.1219	0.0288	4.5000e-004	0.0124	1.1300e-003	0.0135	3.4100e-003	1.0800e-003	4.4900e-003	0.0000	45.3812	45.3812	2.1800e-003	7.2100e-003	47.5841
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	2.6000e-004	1.9000e-004	2.2100e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5936	0.5936	2.0000e-005	2.0000e-005	0.5991
Total	**3.4700e-003**	**0.1221**	**0.0310**	**4.6000e-004**	**0.0131**	**1.1300e-003**	**0.0143**	**3.6000e-003**	**1.0800e-003**	**4.6900e-003**	**0.0000**	**45.9748**	**45.9748**	**2.2000e-003**	**7.2300e-003**	**48.1832**

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					0.0991	0.0000	0.0991	0.0506	0.0000	0.0506	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3300e-003	0.0101	0.1043	1.9000e-004		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	**2.3300e-003**	**0.0101**	**0.1043**	**1.9000e-004**	**0.0991**	**3.1000e-004**	**0.0994**	**0.0506**	**3.1000e-004**	**0.0510**	**0.0000**	**16.7197**	**16.7197**	**5.4100e-003**	**0.0000**	**16.8549**

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

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2100e-003	0.1219	0.0288	4.5000e-004	0.0124	1.1300e-003	0.0135	3.4100e-003	1.0800e-003	4.4900e-003	0.0000	45.3812	45.3812	2.1800e-003	7.2100e-003	47.5841
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	2.6000e-004	1.9000e-004	2.2100e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5936	0.5936	2.0000e-005	2.0000e-005	0.5991
Total	**3.4700e-003**	**0.1221**	**0.0310**	**4.6000e-004**	**0.0131**	**1.1300e-003**	**0.0143**	**3.6000e-003**	**1.0800e-003**	**4.6900e-003**	**0.0000**	**45.9748**	**45.9748**	**2.2000e-003**	**7.2300e-003**	**48.1832**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0863	0.0000	0.0863	0.0254	0.0000	0.0254	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0283	0.2686	0.2016	5.0000e-004		0.0110	0.0110		0.0103	0.0103	0.0000	45.9126	45.9126	0.0111	0.0000	46.1905
Total	**0.0283**	**0.2686**	**0.2016**	**5.0000e-004**	**0.0863**	**0.0110**	**0.0973**	**0.0254**	**0.0103**	**0.0356**	**0.0000**	**45.9126**	**45.9126**	**0.0111**	**0.0000**	**46.1905**

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

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8500e-003	0.1463	0.0345	5.5000e-004	0.0149	1.3600e-003	0.0162	4.0900e-003	1.3000e-003	5.3900e-003	0.0000	54.4574	54.4574	2.6200e-003	8.6500e-003	57.1009
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	2.9000e-004	3.3900e-003	1.0000e-005	1.1100e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9101	0.9101	3.0000e-005	3.0000e-005	0.9187
Total	**4.2500e-003**	**0.1466**	**0.0379**	**5.6000e-004**	**0.0160**	**1.3700e-003**	**0.0174**	**4.3800e-003**	**1.3100e-003**	**5.6900e-003**	**0.0000**	**55.3676**	**55.3676**	**2.6500e-003**	**8.6800e-003**	**58.0195**

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					0.0863	0.0000	0.0863	0.0254	0.0000	0.0254	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-003	0.0265	0.2543	5.0000e-004		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	45.9125	45.9125	0.0111	0.0000	46.1904
Total	**6.1000e-003**	**0.0265**	**0.2543**	**5.0000e-004**	**0.0863**	**8.1000e-004**	**0.0871**	**0.0254**	**8.1000e-004**	**0.0262**	**0.0000**	**45.9125**	**45.9125**	**0.0111**	**0.0000**	**46.1904**

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

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8500e-003	0.1463	0.0345	5.5000e-004	0.0149	1.3600e-003	0.0162	4.0900e-003	1.3000e-003	5.3900e-003	0.0000	54.4574	54.4574	2.6200e-003	8.6500e-003	57.1009
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	2.9000e-004	3.3900e-003	1.0000e-005	1.1100e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9101	0.9101	3.0000e-005	3.0000e-005	0.9187
Total	**4.2500e-003**	**0.1466**	**0.0379**	**5.6000e-004**	**0.0160**	**1.3700e-003**	**0.0174**	**4.3800e-003**	**1.3100e-003**	**5.6900e-003**	**0.0000**	**55.3676**	**55.3676**	**2.6500e-003**	**8.6800e-003**	**58.0195**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1044	0.0000	0.1044	0.0353	0.0000	0.0353	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0393	0.3577	0.2933	7.5000e-004		0.0144	0.0144		0.0134	0.0134	0.0000	68.8694	68.8694	0.0166	0.0000	69.2854
Total	**0.0393**	**0.3577**	**0.2933**	**7.5000e-004**	**0.1044**	**0.0144**	**0.1188**	**0.0353**	**0.0134**	**0.0487**	**0.0000**	**68.8694**	**68.8694**	**0.0166**	**0.0000**	**69.2854**

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

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.8800e-003	0.1769	0.0471	7.8000e-004	0.0223	1.4500e-003	0.0238	6.1300e-003	1.3900e-003	7.5200e-003	0.0000	78.2109	78.2109	3.9400e-003	0.0124	82.0159
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	5.6000e-004	3.9000e-004	4.7300e-003	1.0000e-005	1.6600e-003	1.0000e-005	1.6700e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3300	1.3300	4.0000e-005	4.0000e-005	1.3419
Total	**3.4400e-003**	**0.1773**	**0.0518**	**7.9000e-004**	**0.0240**	**1.4600e-003**	**0.0254**	**6.5700e-003**	**1.4000e-003**	**7.9700e-003**	**0.0000**	**79.5409**	**79.5409**	**3.9800e-003**	**0.0125**	**83.3578**

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					0.1044	0.0000	0.1044	0.0353	0.0000	0.0353	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.1600e-003	0.0397	0.3814	7.5000e-004		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003	0.0000	68.8693	68.8693	0.0166	0.0000	69.2853
Total	**9.1600e-003**	**0.0397**	**0.3814**	**7.5000e-004**	**0.1044**	**1.2200e-003**	**0.1056**	**0.0353**	**1.2200e-003**	**0.0365**	**0.0000**	**68.8693**	**68.8693**	**0.0166**	**0.0000**	**69.2853**

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

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.8800e-003	0.1769	0.0471	7.8000e-004	0.0223	1.4500e-003	0.0238	6.1300e-003	1.3900e-003	7.5200e-003	0.0000	78.2109	78.2109	3.9400e-003	0.0124	82.0159
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	5.6000e-004	3.9000e-004	4.7300e-003	1.0000e-005	1.6600e-003	1.0000e-005	1.6700e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3300	1.3300	4.0000e-005	4.0000e-005	1.3419
Total	**3.4400e-003**	**0.1773**	**0.0518**	**7.9000e-004**	**0.0240**	**1.4600e-003**	**0.0254**	**6.5700e-003**	**1.4000e-003**	**7.9700e-003**	**0.0000**	**79.5409**	**79.5409**	**3.9800e-003**	**0.0125**	**83.3578**

3.4 Rock Drilling - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.6000e-004	5.6700e-003	5.1000e-003	2.0000e-005		1.8000e-004	1.8000e-004		1.7000e-004	1.7000e-004	0.0000	2.0719	2.0719	6.7000e-004	0.0000	2.0887
Total	**5.6000e-004**	**5.6700e-003**	**5.1000e-003**	**2.0000e-005**	**0.0000**	**1.8000e-004**	**1.8000e-004**	**0.0000**	**1.7000e-004**	**1.7000e-004**	**0.0000**	**2.0719**	**2.0719**	**6.7000e-004**	**0.0000**	**2.0887**

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

3.4 Rock Drilling - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0495	0.0495	0.0000	0.0000	0.0499
Total	**2.0000e-005**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0495**	**0.0495**	**0.0000**	**0.0000**	**0.0499**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	1.2700e-003	0.0107	2.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.0719	2.0719	6.7000e-004	0.0000	2.0887
Total	**2.9000e-004**	**1.2700e-003**	**0.0107**	**2.0000e-005**	**0.0000**	**4.0000e-005**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**4.0000e-005**	**0.0000**	**2.0719**	**2.0719**	**6.7000e-004**	**0.0000**	**2.0887**

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

3.4 Rock Drilling - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0495	0.0495	0.0000	0.0000	0.0499
Total	**2.0000e-005**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0495**	**0.0495**	**0.0000**	**0.0000**	**0.0499**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1903	1.7406	1.9655	3.2600e-003		0.0847	0.0847		0.0797	0.0797	0.0000	280.4837	280.4837	0.0667	0.0000	282.1518
Total	**0.1903**	**1.7406**	**1.9655**	**3.2600e-003**		**0.0847**	**0.0847**		**0.0797**	**0.0797**	**0.0000**	**280.4837**	**280.4837**	**0.0667**	**0.0000**	**282.1518**

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

3.5 Building Construction - 2023

Unmitigated Construction 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	0.0151	0.5694	0.2008	2.6300e-003	0.0852	3.3600e-003	0.0885	0.0246	3.2100e-003	0.0278	0.0000	257.3542	257.3542	7.7800e-003	0.0373	268.6611
Worker	0.0792	0.0548	0.6691	2.0300e-003	0.2348	1.2900e-003	0.2361	0.0624	1.1900e-003	0.0636	0.0000	188.1383	188.1383	5.5100e-003	5.1800e-003	189.8209
Total	**0.0943**	**0.6243**	**0.8699**	**4.6600e-003**	**0.3200**	**4.6500e-003**	**0.3246**	**0.0870**	**4.4000e-003**	**0.0914**	**0.0000**	**445.4924**	**445.4924**	**0.0133**	**0.0425**	**458.4820**

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	0.0397	0.2704	2.1127	3.2600e-003		4.9400e-003	4.9400e-003		4.9400e-003	4.9400e-003	0.0000	280.4834	280.4834	0.0667	0.0000	282.1515
Total	**0.0397**	**0.2704**	**2.1127**	**3.2600e-003**		**4.9400e-003**	**4.9400e-003**		**4.9400e-003**	**4.9400e-003**	**0.0000**	**280.4834**	**280.4834**	**0.0667**	**0.0000**	**282.1515**

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

3.5 Building Construction - 2023

Mitigated Construction 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	0.0151	0.5694	0.2008	2.6300e-003	0.0852	3.3600e-003	0.0885	0.0246	3.2100e-003	0.0278	0.0000	257.3542	257.3542	7.7800e-003	0.0373	268.6611
Worker	0.0792	0.0548	0.6691	2.0300e-003	0.2348	1.2900e-003	0.2361	0.0624	1.1900e-003	0.0636	0.0000	188.1383	188.1383	5.5100e-003	5.1800e-003	189.8209
Total	**0.0943**	**0.6243**	**0.8699**	**4.6600e-003**	**0.3200**	**4.6500e-003**	**0.3246**	**0.0870**	**4.4000e-003**	**0.0914**	**0.0000**	**445.4924**	**445.4924**	**0.0133**	**0.0425**	**458.4820**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0427	0.3899	0.4688	7.8000e-004		0.0178	0.0178		0.0167	0.0167	0.0000	67.2362	67.2362	0.0159	0.0000	67.6337
Total	**0.0427**	**0.3899**	**0.4688**	**7.8000e-004**		**0.0178**	**0.0178**		**0.0167**	**0.0167**	**0.0000**	**67.2362**	**67.2362**	**0.0159**	**0.0000**	**67.6337**

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

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4700e-003	0.1355	0.0470	6.2000e-004	0.0204	8.1000e-004	0.0212	5.8900e-003	7.7000e-004	6.6700e-003	0.0000	60.6056	60.6056	1.9100e-003	8.7800e-003	63.2699
Worker	0.0179	0.0118	0.1501	4.7000e-004	0.0563	3.0000e-004	0.0566	0.0150	2.7000e-004	0.0152	0.0000	43.9610	43.9610	1.2000e-003	1.1600e-003	44.3370
Total	**0.0213**	**0.1474**	**0.1971**	**1.0900e-003**	**0.0767**	**1.1100e-003**	**0.0778**	**0.0208**	**1.0400e-003**	**0.0219**	**0.0000**	**104.5666**	**104.5666**	**3.1100e-003**	**9.9400e-003**	**107.6069**

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	9.5100e-003	0.0648	0.5064	7.8000e-004		1.1800e-003	1.1800e-003		1.1800e-003	1.1800e-003	0.0000	67.2362	67.2362	0.0159	0.0000	67.6337
Total	**9.5100e-003**	**0.0648**	**0.5064**	**7.8000e-004**		**1.1800e-003**	**1.1800e-003**		**1.1800e-003**	**1.1800e-003**	**0.0000**	**67.2362**	**67.2362**	**0.0159**	**0.0000**	**67.6337**

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

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4700e-003	0.1355	0.0470	6.2000e-004	0.0204	8.1000e-004	0.0212	5.8900e-003	7.7000e-004	6.6700e-003	0.0000	60.6056	60.6056	1.9100e-003	8.7800e-003	63.2699
Worker	0.0179	0.0118	0.1501	4.7000e-004	0.0563	3.0000e-004	0.0566	0.0150	2.7000e-004	0.0152	0.0000	43.9610	43.9610	1.2000e-003	1.1600e-003	44.3370
Total	**0.0213**	**0.1474**	**0.1971**	**1.0900e-003**	**0.0767**	**1.1100e-003**	**0.0778**	**0.0208**	**1.0400e-003**	**0.0219**	**0.0000**	**104.5666**	**104.5666**	**3.1100e-003**	**9.9400e-003**	**107.6069**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4089					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0700e-003	0.0274	0.0407	7.0000e-005		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003	0.0000	5.7448	5.7448	3.2000e-004	0.0000	5.7529
Total	**1.4129**	**0.0274**	**0.0407**	**7.0000e-005**		**1.3700e-003**	**1.3700e-003**		**1.3700e-003**	**1.3700e-003**	**0.0000**	**5.7448**	**5.7448**	**3.2000e-004**	**0.0000**	**5.7529**

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

3.6 Architectural Coating - 2024

Unmitigated Construction 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	2.7500e-003	1.8200e-003	0.0231	7.0000e-005	8.6600e-003	5.0000e-005	8.7100e-003	2.3000e-003	4.0000e-005	2.3400e-003	0.0000	6.7652	6.7652	1.9000e-004	1.8000e-004	6.8230
Total	**2.7500e-003**	**1.8200e-003**	**0.0231**	**7.0000e-005**	**8.6600e-003**	**5.0000e-005**	**8.7100e-003**	**2.3000e-003**	**4.0000e-005**	**2.3400e-003**	**0.0000**	**6.7652**	**6.7652**	**1.9000e-004**	**1.8000e-004**	**6.8230**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4089					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7000e-004	2.9000e-003	0.0412	7.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	5.7448	5.7448	3.2000e-004	0.0000	5.7529
Total	**1.4095**	**2.9000e-003**	**0.0412**	**7.0000e-005**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**	**0.0000**	**5.7448**	**5.7448**	**3.2000e-004**	**0.0000**	**5.7529**

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

3.6 Architectural Coating - 2024

Mitigated Construction 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	2.7500e-003	1.8200e-003	0.0231	7.0000e-005	8.6600e-003	5.0000e-005	8.7100e-003	2.3000e-003	4.0000e-005	2.3400e-003	0.0000	6.7652	6.7652	1.9000e-004	1.8000e-004	6.8230
Total	**2.7500e-003**	**1.8200e-003**	**0.0231**	**7.0000e-005**	**8.6600e-003**	**5.0000e-005**	**8.7100e-003**	**2.3000e-003**	**4.0000e-005**	**2.3400e-003**	**0.0000**	**6.7652**	**6.7652**	**1.9000e-004**	**1.8000e-004**	**6.8230**

3.7 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1885
Paving	2.3600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0122**	**0.0953**	**0.1463**	**2.3000e-004**		**4.6900e-003**	**4.6900e-003**		**4.3100e-003**	**4.3100e-003**	**0.0000**	**20.0265**	**20.0265**	**6.4800e-003**	**0.0000**	**20.1885**

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

3.7 Paving - 2024

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	3.8000e-004	2.5000e-004	3.2100e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9396	0.9396	3.0000e-005	2.0000e-005	0.9476
Total	**3.8000e-004**	**2.5000e-004**	**3.2100e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9396**	**0.9396**	**3.0000e-005**	**2.0000e-005**	**0.9476**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8000e-003	0.0122	0.1730	2.3000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1884
Paving	2.3600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.1600e-003**	**0.0122**	**0.1730**	**2.3000e-004**		**3.7000e-004**	**3.7000e-004**		**3.7000e-004**	**3.7000e-004**	**0.0000**	**20.0265**	**20.0265**	**6.4800e-003**	**0.0000**	**20.1884**

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

3.7 Paving - 2024

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	3.8000e-004	2.5000e-004	3.2100e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9396	0.9396	3.0000e-005	2.0000e-005	0.9476
Total	**3.8000e-004**	**2.5000e-004**	**3.2100e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9396**	**0.9396**	**3.0000e-005**	**2.0000e-005**	**0.9476**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.6418	1.4529	13.4125	0.0251	3.1109	0.0183	3.1292	0.8302	0.0171	0.8472	0.0000	2,453.9683	2,453.9683	0.1971	0.1219	2,495.2142
Unmitigated	1.6418	1.4529	13.4125	0.0251	3.1109	0.0183	3.1292	0.8302	0.0171	0.8472	0.0000	2,453.9683	2,453.9683	0.1971	0.1219	2,495.2142

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	4,676.19	4,676.19	4676.19	7,520,875	7,520,875
Parking Lot	0.00	0.00	0.00		
Strip Mall	733.60	733.60	733.60	797,086	797,086
Total	5,409.79	5,409.79	5,409.79	8,317,961	8,317,961

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	5.40	5.40	5.40	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	5.40	5.40	5.40	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
General Office Building	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Parking Lot	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Strip Mall	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	773.4108	773.4108	0.0473	5.7600e-003	776.3082
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	773.4108	773.4108	0.0473	5.7600e-003	776.3082
NaturalGas Mitigated	0.0299	0.2721	0.2285	1.6300e-003		0.0207	0.0207		0.0207	0.0207	0.0000	296.1860	296.1860	5.6800e-003	5.4300e-003	297.9461
NaturalGas Unmitigated	0.0299	0.2721	0.2285	1.6300e-003		0.0207	0.0207		0.0207	0.0207	0.0000	296.1860	296.1860	5.6800e-003	5.4300e-003	297.9461

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	5.50959e+006	0.0297	0.2701	0.2269	1.6200e-003		0.0205	0.0205		0.0205	0.0205	0.0000	294.0128	294.0128	5.6400e-003	5.3900e-003	295.7600
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
Strip Mall	40723.7	2.2000e-004	2.0000e-003	1.6800e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1732	2.1732	4.0000e-005	4.0000e-005	2.1861
Total		**0.0299**	**0.2721**	**0.2286**	**1.6300e-003**		**0.0207**	**0.0207**		**0.0207**	**0.0207**	**0.0000**	**296.1860**	**296.1860**	**5.6800e-003**	**5.4300e-003**	**297.9461**

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	5.50959e+006	0.0297	0.2701	0.2269	1.6200e-003		0.0205	0.0205		0.0205	0.0205	0.0000	294.0128	294.0128	5.6400e-003	5.3900e-003	295.7600
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
Strip Mall	40723.7	2.2000e-004	2.0000e-003	1.6800e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1732	2.1732	4.0000e-005	4.0000e-005	2.1861
Total		**0.0299**	**0.2721**	**0.2286**	**1.6300e-003**		**0.0207**	**0.0207**		**0.0207**	**0.0207**	**0.0000**	**296.1860**	**296.1860**	**5.6800e-003**	**5.4300e-003**	**297.9461**

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.4775e+006	216.0541	0.0132	1.6100e-003	216.8635
General Office Building	3.55937e+006	520.4831	0.0318	3.8700e-003	522.4329
Parking Lot	28000	4.0944	2.5000e-004	3.0000e-005	4.1098
Strip Mall	224164	32.7793	2.0000e-003	2.4000e-004	32.9021
Total		**773.4108**	**0.0473**	**5.7500e-003**	**776.3082**

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

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.4775e+006	216.0541	0.0132	1.6100e-003	216.8635
General Office Building	3.55937e+006	520.4831	0.0318	3.8700e-003	522.4329
Parking Lot	28000	4.0944	2.5000e-004	3.0000e-005	4.1098
Strip Mall	224164	32.7793	2.0000e-003	2.4000e-004	32.9021
Total		**773.4108**	**0.0473**	**5.7500e-003**	**776.3082**

6.0 Area Detail

6.1 Mitigation Measures Area

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.3105	1.0000e-004	0.0107	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0210	0.0210	5.0000e-005	0.0000	0.0223
Unmitigated	1.3105	1.0000e-004	0.0107	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0210	0.0210	5.0000e-005	0.0000	0.0223

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	0.1409					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1686					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.8000e-004	1.0000e-004	0.0107	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0210	0.0210	5.0000e-005	0.0000	0.0223
Total	**1.3105**	**1.0000e-004**	**0.0107**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0210**	**0.0210**	**5.0000e-005**	**0.0000**	**0.0223**

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

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	0.1409					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1686					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.8000e-004	1.0000e-004	0.0107	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0210	0.0210	5.0000e-005	0.0000	0.0223
Total	**1.3105**	**1.0000e-004**	**0.0107**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0210**	**0.0210**	**5.0000e-005**	**0.0000**	**0.0223**

7.0 Water Detail

7.1 Mitigation Measures Water

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	161.6484	1.6462	0.0398	214.6482
Unmitigated	161.6484	1.6462	0.0398	214.6482

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	48.8892 / 29.9644	157.2780	1.6017	0.0387	208.8450
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.35849 / 0.832623	4.3703	0.0445	1.0700e-003	5.8032
Total		**161.6483**	**1.6462**	**0.0397**	**214.6482**

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

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	48.8892 / 29.9644	157.2780	1.6017	0.0387	208.8450
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.35849 / 0.832623	4.3703	0.0445	1.0700e-003	5.8032
Total		**161.6483**	**1.6462**	**0.0397**	**214.6482**

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	55.8388	3.3000	0.0000	138.3382
Unmitigated	55.8388	3.3000	0.0000	138.3382

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	255.82	51.9292	3.0689	0.0000	128.6523
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	19.26	3.9096	0.2311	0.0000	9.6859
Total		**55.8388**	**3.3000**	**0.0000**	**138.3382**

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

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	255.82	51.9292	3.0689	0.0000	128.6523
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	19.26	3.9096	0.2311	0.0000	9.6859
Total		**55.8388**	**3.3000**	**0.0000**	**138.3382**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

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

Equipment Type	Number

11.0 Vegetation

ATTACHMENT C

TEREX 4242SR Rock Crusher Example Cut Sheet

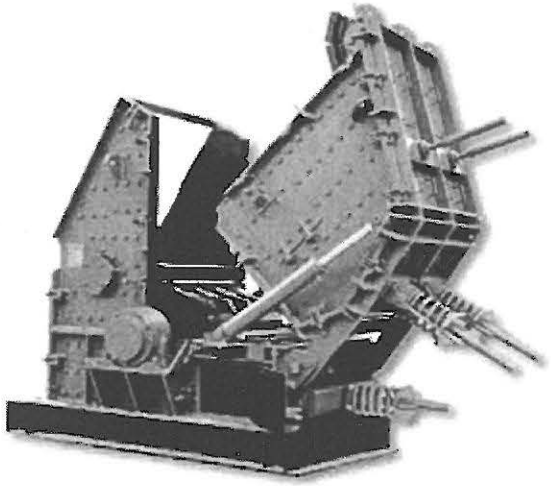
TEREX | PEGSON

4242SR SPECIFICATION

Above photograph features a 4242SR fitted with the optional side conveyor and magnet

IMPACT CRUSHER

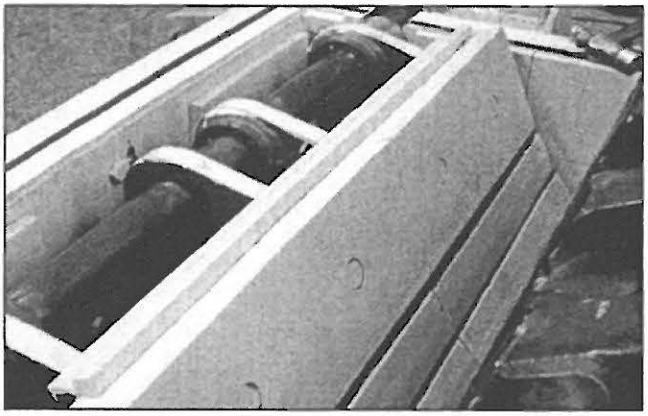
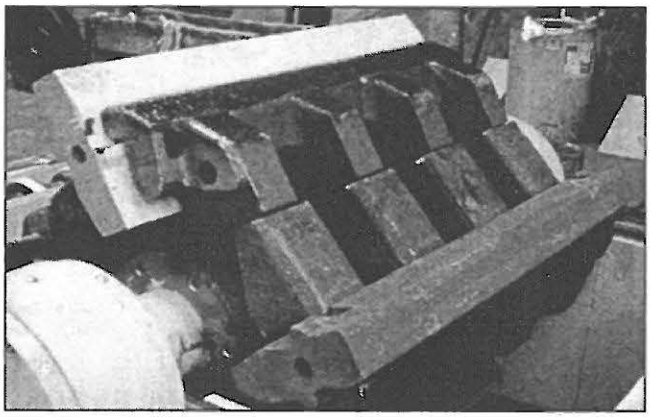
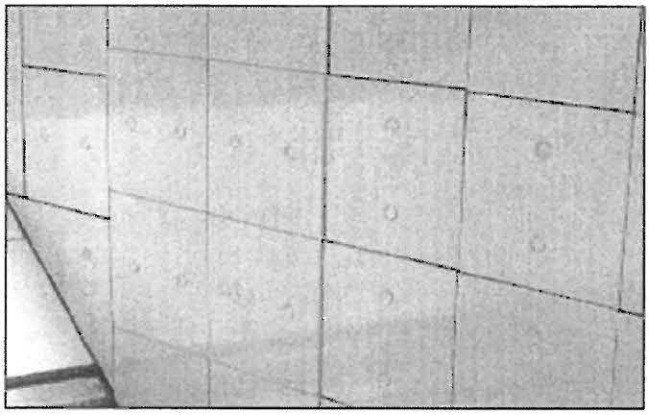
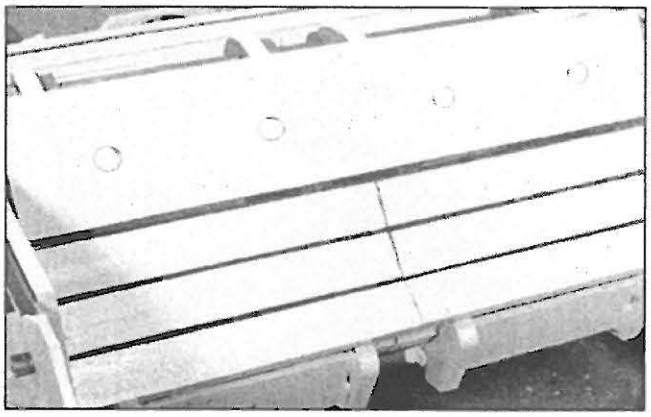
Crusher type:	428 Fixed Hammer Impactor.
Feed opening:	1067mm x 711mm.
Rotor Width:	1066 mm.
Rotor Diameter:	1066 mm (Over Hammers).
Crusher frame:	Fabricated from steel plate and fitted with replaceable liner plates.
Rotor:	Runs in two heavy-duty spherical self aligning roller bearings and is fitted with four reversible and replaceable fixed blow bars.
Blowbars:	Two full size and two half size high manganese blow bars are fitted as standard.
Impact aprons:	Fitted in upper and middle positions and lined with wear resistant impact plates.
Drive:	Through wedge belts with screw tension adjustment on engine.
Engine pulley:	Machines built for stock are fitted with the standard speed pulley (suitable for quarry applications). The slower crusher pulley is supplied loose.
Maximum feed size:	400mm^3 depending on type of blow bar and material being processed.
Impactor speeds:	Slow 504 rpm (224mm diameter) Std. 630 rpm (280mm diameter)
Lubrication:	Greased roller bearings, inner and outer labyrinth seals.
Adjustment:	Manual adjustment on upper and lower aprons with overload compression springs on lower apron.
Maintenance:	Hydraulic case opening
Crusher Liners:	Fully lined internally with abrasion resistant steel.
Grinding path:	Optional grinding path with manual adjustment and overload compression springs suitable for certain quarry applications.



APPLICATIONS

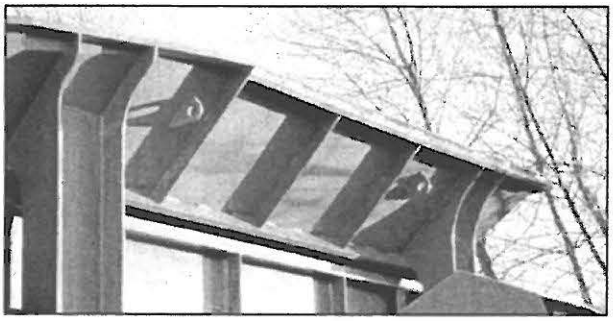
This plant is designed for both demolition and quarrying applications. When fitted with manganese blow bars the crusher will tolerate small quantities of steel reinforcing bar in the feed. However, the machine is not designed to accept large pieces of steel or other uncrushable objects, and the feed material should be assessed / inspected for suitability prior to use. It is vitally important that large pieces of steel or similar uncrushable objects are not allowed to enter the crushing chamber as severe damage and injury may occur. When High Chrome bars are fitted, *no* steel should be allowed to enter the chamber, the machine should only be used on quarry applications, or clean materials such as asphalt.

IMPACT CRUSHER - INTERNAL

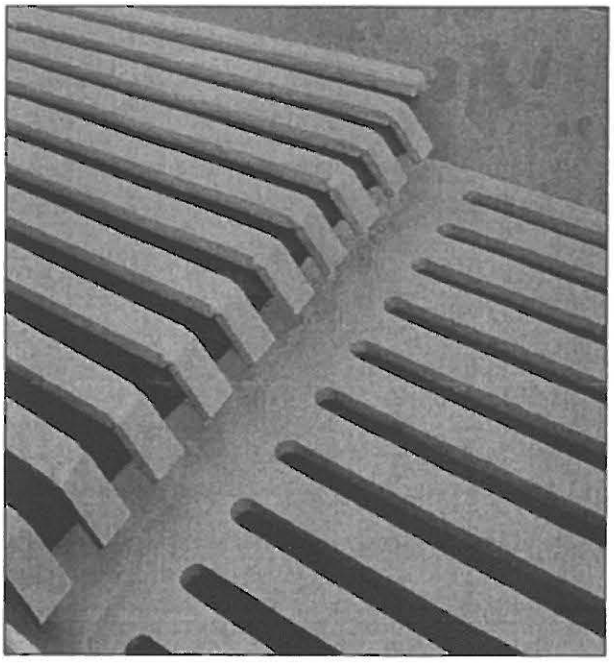
HOPPER

Hopper type:	Fixed Hopper.
Hopper length:	4m.
Hopper width:	2.1m.
Hopper capacity:	Up to 3.8m^3 gross depending on method of feed.
Hopper body:	Hardox wear resistant steel plate with suitably braced steel sections.



VIBRATING GRIZZLY FEEDER

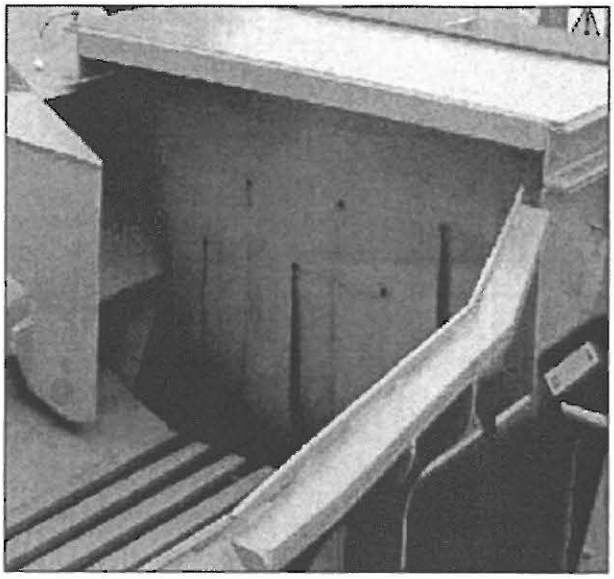
Type:	Spring mounted vibrating pan.
Vibrating unit:	Twin heavy-duty cast eccentric shafts running in spherical roller bearings, gear coupled at drive end.
Length:	3.8m.
Width:	1.08m.
Pan:	12mm thick abrasion resistant steel bottom plate is included in the welded construction.
Drive:	Flange mounted hydraulic motor
Grizzly:	2.16m long double section of welded tapered finger bars at 50mm spaces fabricated in 20mm thick abrasion resistant steel.
Underscreen:	Removable rubber blanking mat fitted as standard. This can be substituted for various aperture wire meshes.
Control:	Variable speed control through a proportional flow control valve.



PLANT CHUTEWORK

Impactor feed chute: Fabricated in 10mm mild steel plate with full width single strand chain curtain and rubber curtain. Liners are fitted at wear points.

Grizzly fines chute: Chutework fabricated in 6mm mild steel plate is provided with two-way flapdoor. Material passing over the blanking mat is discharged to the main product conveyor via the bypass chute.



ON PLANT PRODUCT CONVEYOR

CONVEYOR 1

Conveyor type: Troughed belt conveyor with fixed tail end.

Belt type: Ripstop EP500/3 with 5mm top and 2mm bottom heavy-duty rubber covers.

Belt width: 1m.

Drive: Direct drive hydraulic motor

Feedboot: Fabricated in mild steel plate with abrasion resistant steel liners.

Control: Fixed speed.

Skirting: Fully skirted wear resistant rubber sealing along the conveyor length.

Belt covers: Canvas type removable dust covers are fitted at the head end.

Impact cradle: This is provided beneath the belt immediately below the impactor outlet.

Lubrication: Grease nipples located on bearing housings at tailshaft.

TOP DECK SIDE TRANSFER CONVEYOR

CONVEYOR 2

Conveyor type: Plain belt.

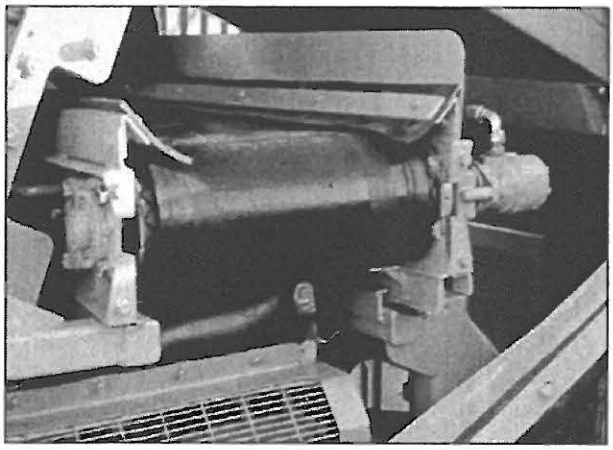
Belt type: EP400/2 with 5mm top and 1.5mm bottom rubber covers. A vulcanised joint is included.

Conveyor: Transfers material from the top deck of the sizing screen to the re-circulating conveyor.

Width: 500mm.

Drive: Direct drive hydraulic motor.

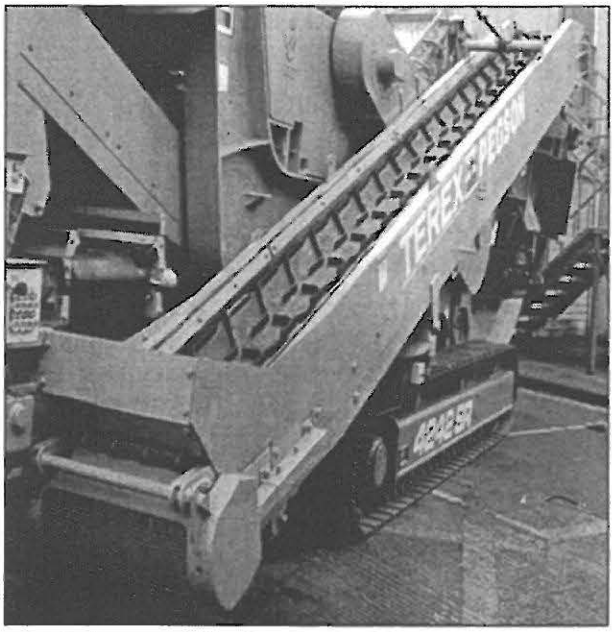
Lubrication: Grease nipples located on bearing housing at head and tailshaft.



RE-CIRCULATING CONVEYOR

CONVEYOR 3

Conveyor type:	Chevron type troughed belt.
Belt type:	EP315/2 with 3mm top and 1mm bottom rubber covers, 35mm high cleats and a vulcanised joint.
Conveyor:	Returns oversize material transferred from the top deck back to the impactor for re-crushing. This conveyor can be slewed to enable oversize material to be stockpiled at the side of the plant.
Width:	500mm.
Drive:	Direct drive hydraulic motor
Lubrication:	Grease nipples located on bearing housing for tailshaft. Remote grease nipples for head drum.



FINES PRODUCT CONVEYOR

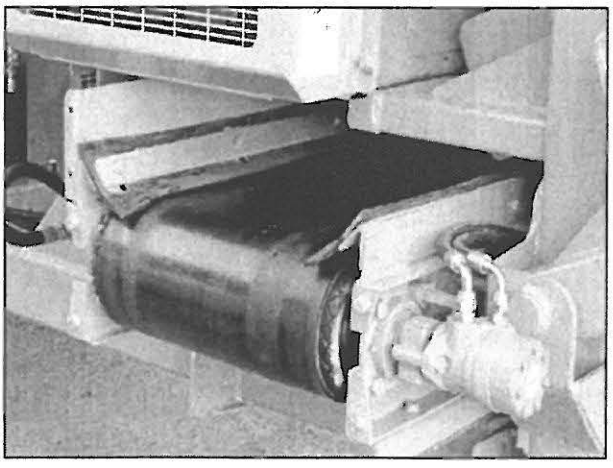
CONVEYOR 4

Conveyor type:	Plain troughed belt
Belt type:	EP400/2 with 5mm top and 1.5mm bottom rubber covers. A vulcanised joint is included.
Position:	Mounted beneath the sizing screen.
Width:	1.4m.
Discharge Height:	2.93m.
Drive:	Direct drive hydraulic motor.
Lubrication:	Grease nipples located on bearing housing at head and tailshaft.
Control:	Fixed Speed.

BOTTOM DECK SIDE TRANSFER CONVEYOR

CONVEYOR 5

Conveyor type:	Plain belt.
Belt type:	EP400/2 with 5mm top and 1.5mm bottom rubber covers. A vulcanised joint is included.
Conveyor:	Transfers material from the bottom deck of the sizing screen to the optional plant mounted stockpiling conveyor or the re-circulating conveyor when in position.
Width:	500mm.
Drive:	Direct drive hydraulic motor.
Lubrication:	Grease nipples located on bearing housing at head and tailshaft.



STOCKPILING CONVEYOR

CONVEYOR 6 (Optional extra)

Conveyor type:	Chevron type troughed belt
Belt type:	EP315/2 with 3mm top and 1mm bottom rubber covers, 35mm high cleats and a vulcanised joint.
Width:	500mm.
Drive:	Direct drive hydraulic motor.
Lubrication:	Grease nipples located on bearing housing at tailshaft. Remote grease nipples for head drum.
Conveyor:	Stockpiles material transferred from the bottom deck side transfer conveyor to the side of the plant.

SIZING SCREEN

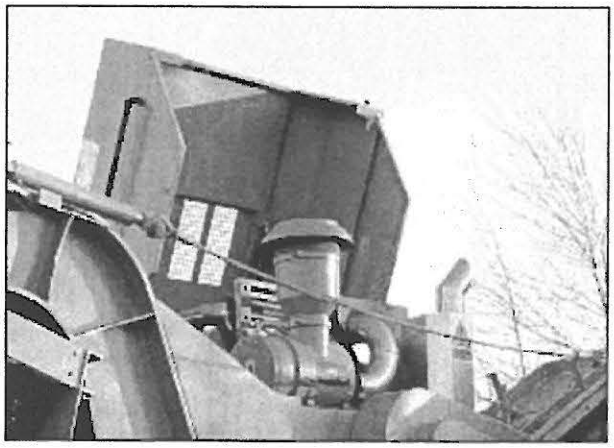
Type:	Double deck vibrating screen (Four bearing type)
Size:	1525 x 3350.
Position:	Mounted beneath the impactor product conveyor.
Drive:	Hydraulic drive.
Top deck:	45mm aperture fitted as standard
Bottom deck:	Optional mesh.
Control:	Fixed speed. (1100 rpm)
Lubrication:	Four grease nipples.
Access:	Fines conveyor and screen can be lowered for maintenance.

POWERPACK

Powerpack type:	Caterpillar C-9.
Performance:	309 HP (230kW) at 1800 rpm at sea level.
Engine:	Six cylinders, four stroke, direct Injection.
Fuel tank capacity:	463 Litres.

CLUTCH

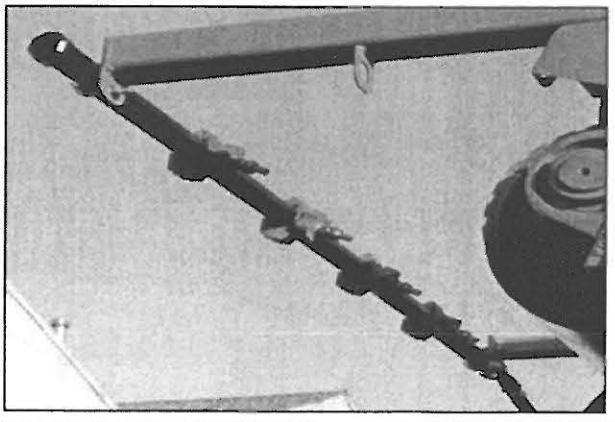
Clutch type:	Manually operated twin disc clutch.



DUST SUPPRESSION SPRAYS

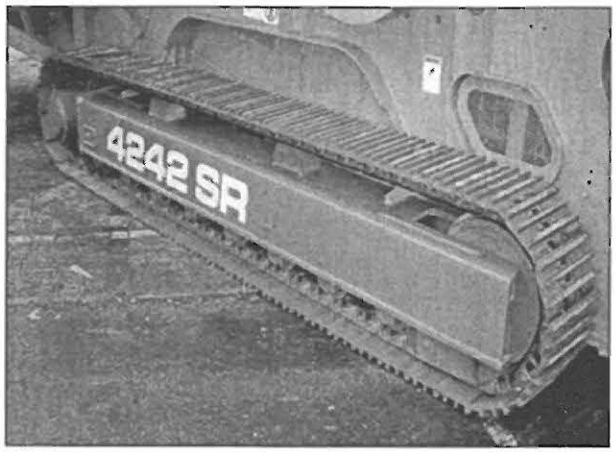
Sprays bars with atomiser nozzles are mounted over the impactor discharge point and the fines product conveyor head piped to an inlet manifold for client's pressured water supply.

Type:	Clean water multi atomising nozzles.
Inlet:	Single Point.
Pressure required:	2.8 bar (42 psi).
Water supply:	7 litres per minute.
Frost protection:	Via system drain valves.
Pump:	Optional extra.



CRAWLER TRACKS

Type:	Heavy-duty tracks fitted as standard.
Pitch:	160mm.
Longitudinal centres:	3800mm.
Track width:	400 mm.
Climbing grade:	29˚ maximum.
High speed:	0.8 km/hr.
Slow speed:	0.322 km/hr.
Drive:	Hydraulic integral motors
Track tensioning:	Hydraulic adjuster, grease tension.



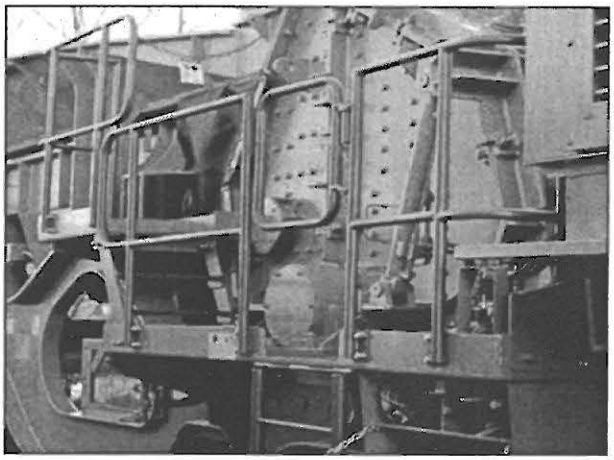
GUARDS

Wire mesh or sheet metal guards are provided for all drives, flywheels, pulleys & couplings.

The guards provided are designed and manufactured to CE & ANSI standards.

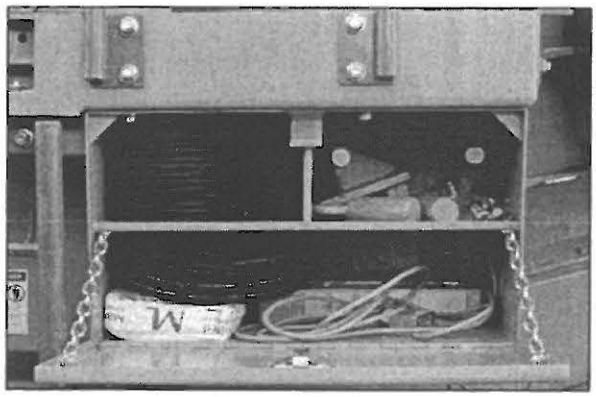
PLATFORMS

A steel grid maintenance platform is provided on one side of the feeder and impactor fitted with double row handrails and access ladders. Platforms are also included to gain access to the rear of the crusher and the powerpack.



TOOLBOX

A plant mounted lockable toolbox is provided containing the slower speed pulley, operators manual, impactor stops, spanner, door open locking pins, screen mesh tensioning hoses, blow bar ejector hoses and a grease gun.



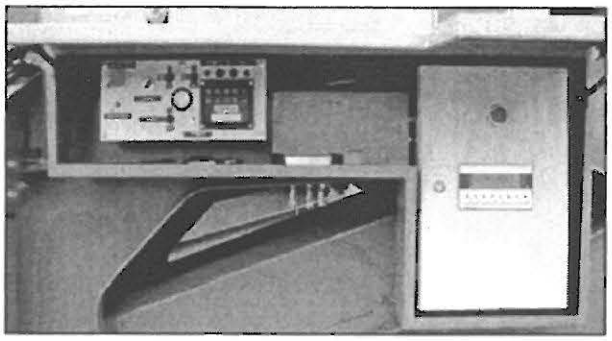
CHASSIS

Heavy duty steel fabricated I section of welded construction.

PLC CONTROLS

A PLC control system is fitted onto the plant to operate the following items: -

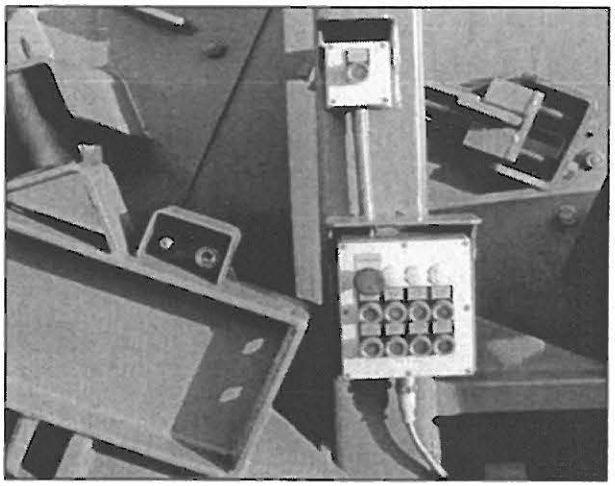
- Feeder (Start/Stop/Speed).
- Optional Dirt Conveyor (Start/Stop). *(Also operates Re-Circulating, stockpiling and side transfer conveyors)*
- Product Conveyor (Start/Stop).
- Screen and fines conveyor (Start/Stop).



SET UP CONTROLS

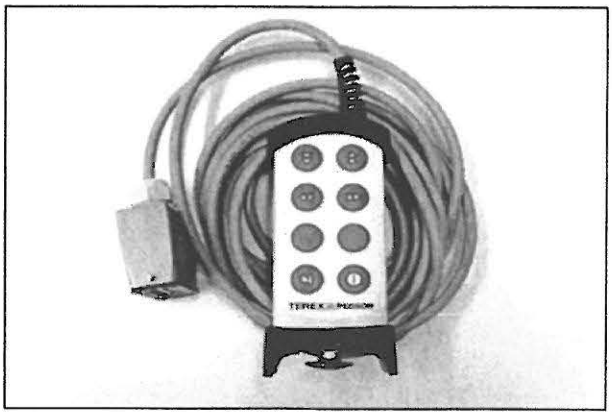
Controls are fitted onto the plant to operate the following items: -

- Side chute (Raise/Lower).
- Screen/Fines Conveyor (Raise/Lower).
- Recirculating Conveyor (Raise/Lower).
- Dirt Conveyor (Raise/Lower)



UMBILICAL CONTROL

An umbilical control unit is also supplied with the plant. This is fitted with controls for the track motion, feeder stop, start and a stop button for the plant.



OPTIONAL EXTRAS

(For prices refer to your dealer)

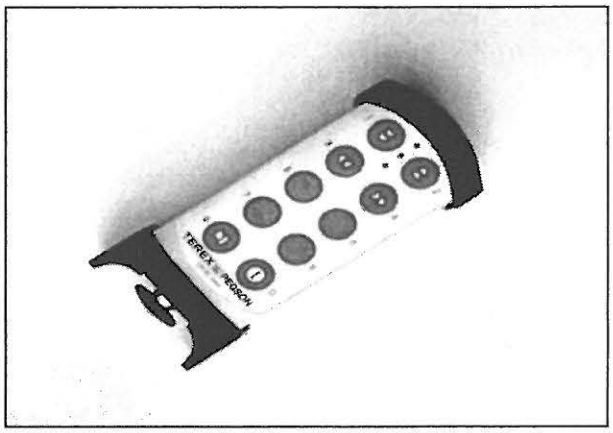
- High Chrome hammers (only for use when no steel in feed).
- Single idler belt weigher with integrator and speed sensing wheel fitted to fines conveyor.
- 500mm wide stockpiling conveyor from the bottom oversize transfer conveyor.
- Four full size hammers in lieu of two full and two half hammers.
- Re-fuelling pump kit.
- Radio remote control.
- Overband magnetic separator
- Side/dirt conveyor.
- Wire meshes for feeder underscreen to separate scalpings at 10mm, 20mm, 30mm, 40mm or 50mm. The optional dirt conveyor must be fitted.
- Grinding path (not suitable for demolition applications) fitted in the lower position and lined with wear resistant impact plates on the upper section, and reversible manganese impact bars on the lower section. When fitted greater control of the product size is achieved together with improved product shape.

RECOMMENDED OPTIONAL EXTRAS

- Engine fire extinguisher system.
- Hydraulic driven water pump assembly to provide a pressurised water supply to the dust suppression sprays.

REMOTE CONTROL (OPTIONAL EXTRA)

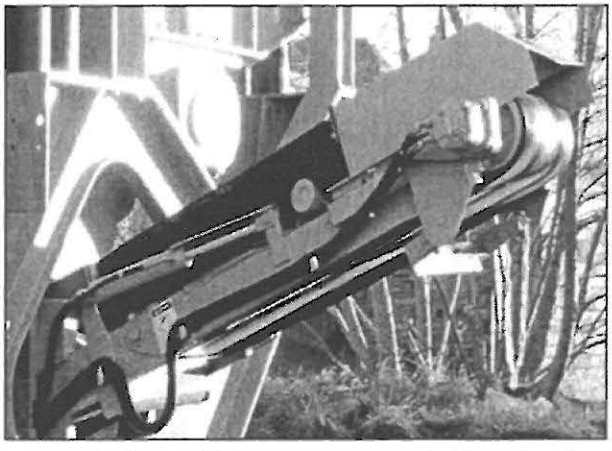
This option will control the tracking function and also provides stop and start controls for the vibrating grizzly feeder, together with a stop button for the plant. **This facility is only available in certain countries where type approval has been obtained.** For a full list of countries, please consult TP or your dealer.



ON PLANT DIRT/SIDE CONVEYOR

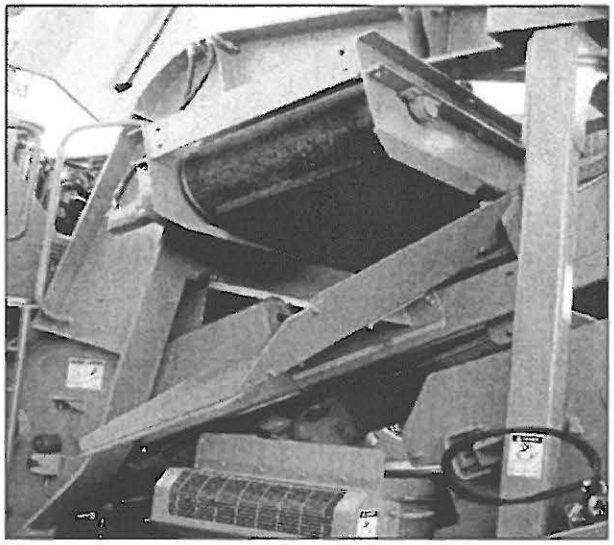
(OPTIONAL EXTRA) CONVEYOR DC

Conveyor type:	Plain troughed belt, hydraulic folding for transport.
Width:	600mm.
Discharge height:	2.0m.
Drive:	Direct drive hydraulic motor.
Lubrication:	Grease nipples located on bearing housing at head and tailshaft. Remote greasing at tail drum.
Skirts:	Full length.
Position:	Mounted to discharge on near side of plant.

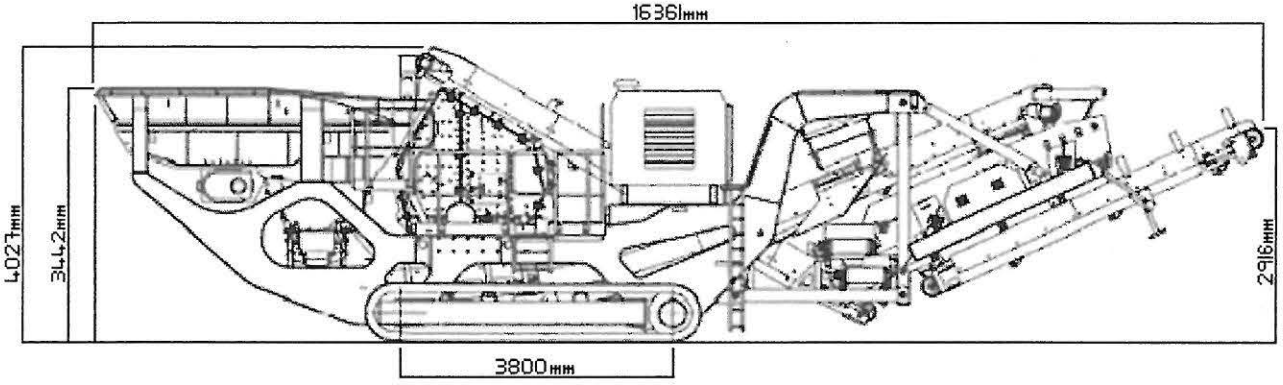


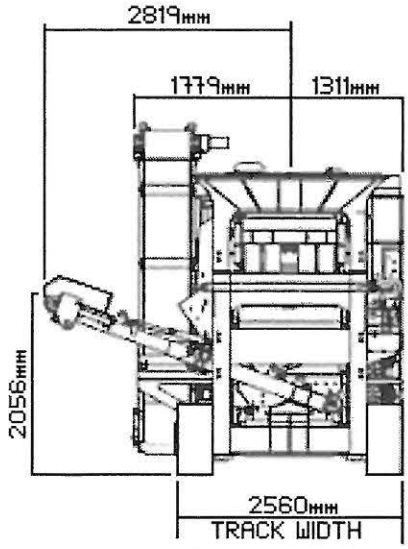
MAGNET
(OPTIONAL EXTRA)

Magnet Type:	Suspended self-cleaning overband, fitted with endless belt.
Magnet Width:	750mm.
Magnet length:	1000mm.
Drive:	Hydraulic Motor.
Control:	Pre-set variable speed.
Discharge chute:	Via stainless steel shedder plate.
Power:	570 Gauss at 200mm. 450 Gauss at 250mm.



PLANT DIAGRAM





APPROXIMATE OVERALL PLANT WEIGHTS & DIMENSIONS

Operating Length:	**16361 mm**
Operating Height:	**4027 mm**
Transport Length:	**16361 mm**
Transport Width:	**3090 mm**
Transport Height:	**3442 mm**
Total plant weight:	**44500 Kg**

PAINTING

The plant is finish painted RAL 5015 Blue. The tracks and handrails are painted RAL 7012 Grey.

GENERAL

TEREX | Pegson equipment complies with CE requirements.

The plant is designed to operate between ambient temperatures of between -10c and 40c at altitudes up to 1000 meters above sea level. For applications outside this range please consult with Terex Pegson Limited.

Above line drawings feature a 4242SR with optional magnet and side conveyor.

Please consult TEREX | Pegson if you have any other specific requirements in respect of guarding, noise or vibration levels, dust emissions, or any other factors relevant to health and safety measures or environmental protection needs. On receipt of specific requests, we will endeavour to ascertain the need for additional equipment and, if appropriate, quote extra to contract prices. Every endeavour will be made to supply equipment as specified, but we reserve the right, where necessary, to amend the specifications without prior notice as we operate a policy of continual product development. It is the importers responsibility to check that all equipment supplied complies with local legislation.

ATTACHMENT D

EMFAC – VMT per Trip Calculation

EMFAC2014 (v1.0.7) Emission Rates
Region Type: County
Region: San Diego
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips and DIURN

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Trips
San Diego	2025	HHDT	Aggregated	Aggregated	GAS	161.1216337	21202.37807	3223.721647
San Diego	2025	HHDT	Aggregated	Aggregated	DSL	15341.84567	2103842.221	0
San Diego	2025	LDA	Aggregated	Aggregated	GAS	1430879.21	47587916.84	9062515.432
San Diego	2025	LDA	Aggregated	Aggregated	DSL	18230.05635	610522.5588	114299.8171
San Diego	2025	LDA	Aggregated	Aggregated	ELEC	102949.8741	4362999.303	668758.3291
San Diego	2025	LDT1	Aggregated	Aggregated	GAS	110056.6214	3351787.675	665740.3764
San Diego	2025	LDT1	Aggregated	Aggregated	DSL	135.5653413	2803.107134	658.3286144
San Diego	2025	LDT1	Aggregated	Aggregated	ELEC	41.86046771	1338.281949	253.6785286
San Diego	2025	LDT2	Aggregated	Aggregated	GAS	445728.9448	15377108.99	2820576.047
San Diego	2025	LDT2	Aggregated	Aggregated	DSL	944.5915358	33384.93915	6012.222933
San Diego	2025	LHDT1	Aggregated	Aggregated	GAS	17137.47188	468069.7958	255322.7962
San Diego	2025	LHDT1	Aggregated	Aggregated	DSL	23103.06152	724642.3549	290607.4503
San Diego	2025	LHDT2	Aggregated	Aggregated	GAS	4048.832368	139572.0706	60321.56952
San Diego	2025	LHDT2	Aggregated	Aggregated	DSL	8965.43705	322602.574	112773.9196
San Diego	2025	MCY	Aggregated	Aggregated	GAS	70674.39783	501031.3352	141334.6608
San Diego	2025	MDV	Aggregated	Aggregated	GAS	267677.4564	8534402.663	1665093.779
San Diego	2025	MDV	Aggregated	Aggregated	DSL	5742.887036	206955.8564	36633.47691
San Diego	2025	MH	Aggregated	Aggregated	GAS	8633.503985	64191.89208	863.6957387
San Diego	2025	MH	Aggregated	Aggregated	DSL	2309.531209	17748.26353	230.9531209
San Diego	2025	MHDT	Aggregated	Aggregated	GAS	3092.563169	161145.5943	61876.00388
San Diego	2025	MHDT	Aggregated	Aggregated	DSL	25605.17262	1301919.202	0
San Diego	2025	OBUS	Aggregated	Aggregated	GAS	1716.976671	92464.33544	34353.26924
San Diego	2025	OBUS	Aggregated	Aggregated	DSL	935.0309742	73876.47022	0
San Diego	2025	SBUS	Aggregated	Aggregated	GAS	438.5086625	19991.26012	1754.03465
San Diego	2025	SBUS	Aggregated	Aggregated	DSL	1213.170137	45957.63464	0
San Diego	2025	UBUS	Aggregated	Aggregated	GAS	472.4052031	63912.54677	1889.620812
San Diego	2025	UBUS	Aggregated	Aggregated	DSL	690.1969245	93377.97918	2760.787698
						Total	86284768.12	16007853.97
						Total VMT/Trip		5.390152126