GREENHOUSE GAS ASSESSMENT

Chino Valley Fire Station 68 Development
City of Chino Hills, CA

Prepared By:

Ldn Consulting, Inc.

42428 Chisolm Trail
Murrieta, CA 92562

Prepared For:

Meghan Gibson
Chambers Group, Inc.
5 Hutton Centre Dr Suite 750
Santa Ana, CA 92707

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1.0 INTRODUCTION

1.1 Purpose of this Study

The purpose of this GHG assessment is to provide documentation in support of the Chino Valley Fire District's (CVFD) Project as it relates to greenhouse gas (GHG) compliance under California's Environmental Quality Act (CEQA). The proposed Project's GHG emissions impacts are based on the recommendations provided in Appendix G of the CEQA Guidelines which are (14 CCR 15000 et seq.):

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

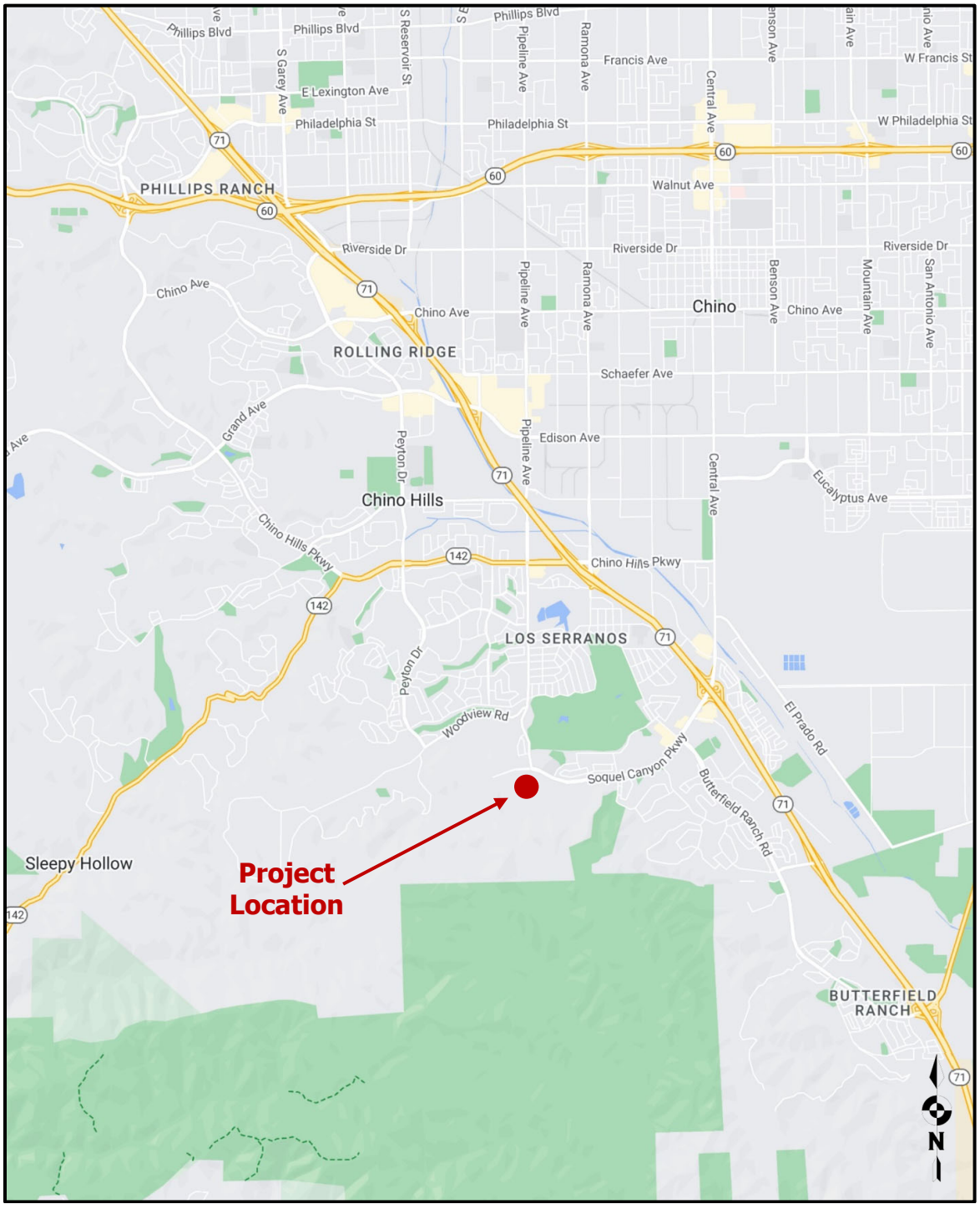
1.2 Project Description

The proposed Project site is generally located south of the intersection of Pipeline Avenue and Soquel Canyon Road in Chino Hills, CA which is located in the South Coast Air Basin (SCAB). A project vicinity map is shown in Figure 1-A.

The CVFD identified a significant need to build a fire station in the Soquel Canyon area of Chino Hills through a Standards of Cover Assessment and Master Plan update conducted in 2018. To support this requirement, The CVFD is proposing to construct a new fire station and emergency resource facility (ERF) which is expected to consist of approximately 18,745 square-foot in total on a 3.74 acre project site. Site improvements proposed include approximately 56,115-square-feet of hardscape including visitor and secured parking areas, 88,600 square-feet of landscaping, security fencing, concrete masonry site walls, hose tower, an emergency generator, an above ground fuel dispensing tank, and carports with photo voltaic (PV) arrays. The Project is expected to commence in early 2024 and be completed in early 2025. The project would require 14,307 Cubic Yards (CY) of export during construction.

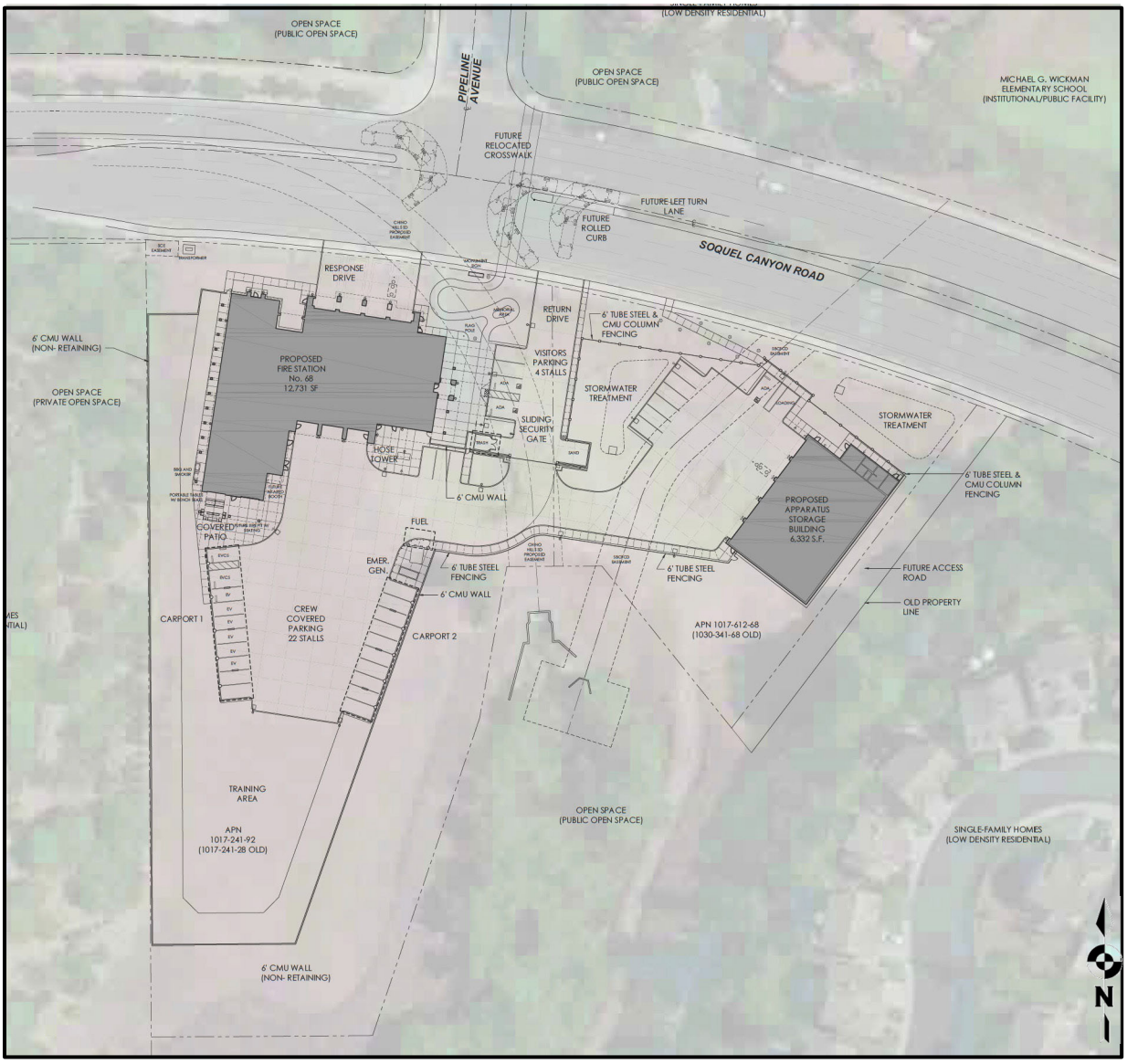
Following the construction of the Project, the new Fire Station 68 would serve the City of Chino, Chino Hills, and surrounding unincorporated areas. The new fire station and ERF will be added to the three existing Chino Hills fire stations, under the Chino Valley Fire District in order to maintain the appropriate levels of response times to calls for service within its service area. The Fire Department anticipate eight calls daily at the opening and forecasts as many as 12 calls per day at the peak. The site expects to operate with one ladder truck or an engine company, an ambulance as well as a Battalion Chief unit but may have as many as seven emergency vehicles used for the intended emergency services operations. The project site plan is shown in Figure 1-B.

Figure 1-A: Project Vicinity Map



Source: (Google Earth, 2023)

Figure 1-B: Site Plan Map



Source: (PBK Architects, 2023)

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Understanding Greenhouse Gasses

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.

Some greenhouse gases are emitted exclusively from human activities (e.g., synthetic halocarbons). Others occur naturally but are found at elevated levels due to human inputs (e.g., carbon dioxide). Anthropogenic sources result from energy-related activities (e.g., combustion of fossil fuels in the electric utility and transportation sectors), agriculture, land-use change, waste management and treatment activities, and various industrial processes. Major greenhouse gases include carbon dioxide, methane, nitrous oxide, and various synthetic chemicals (EPA, 2023).

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 widely reported as the most important anthropogenic greenhouse gas because it currently accounts for the greatest portion of the warming associated with human activities. Carbon dioxide occurs naturally as part of the global carbon cycle, but human activities have increased atmospheric loadings through combustion of fossil fuels and

other emissions sources. Natural sinks that remove carbon dioxide from the atmosphere (e.g., oceans, plants) help regulate carbon dioxide concentrations, but human activities can disturb these processes (e.g., deforestation) or enhance them (EPA, 2023).

Methane comes from many sources, including human activities such as coal mining, natural gas production and distribution, waste decomposition in landfills, and digestive processes in livestock and agriculture. Natural sources of methane include wetlands and termite mounds (EPA, 2023).

Nitrous Oxide is emitted during agricultural and industrial activities, as well as during combustion of solid waste and fossil fuels (EPA, 2023).

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 SCAB area often varies dramatically over short geographical distances due to the size and topography. Most of southern California is dominated by high-pressure systems for much of the year, which keeps Chino Hills 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 SCAB. 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. Daytime temperature highs within the City of Chino Hills typically range between 60 ºF in the winter to approximately 89 ºF in the summer with the month of August usually being the hottest month. Chino Hills usually receives an average seasonal precipitation of 21 inches of rain per year with the months of February and March usually being the wettest months of the year (City Data, 2023)

2.3 Existing Setting

The project is located on two separate parcels having assessor's Parcel Numbers (APN) 1017-241-28 and 1030-341-68. The site is zoned within Planned Development PD-41-163 (Kaufman and Broad, south of Soquel Canyon Parkway). The Project site is designated under the General

Plan Land Use Map as Institutional/Public Facility and Public Open Space. The Project proposes to change the portion of the designated Public Open Space to Institutional/Public Facility. The surrounding area to the east is also zoned within PD-41-163 with the single-family residential areas designated as Low Density Residential and Public Open Space. The Mark Wickham Elementary School to the northeast is under Planned District PD-43-161 and is designated as Institutional/Public Facility. Other portions of the surrounding areas are zoned as private open space (OS-1) with low density residential (R-S) to the west, and public open space (OS-2) with low density residential (R-S) to the north.

The site topography ranges in elevation from roughly 765 feet above mean sea level (MSL) on the northeastern boundary to approximately 800 feet above MSL on the southwestern boundary.

3.0 CLIMATE CHANGE REGULATORY ENVIRONMENT

3.1 Federal

Massachusetts v. EPA

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

- The Administrator found that elevated concentrations of GHGs—CO_2, CH_4, N_2O, Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulfur hexafluoride (SF_6)—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the "endangerment finding."
- The Administrator further found the combined emissions of GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the "cause or contribute finding."

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

3.2 State

State Greenhouse Gas Targets

Executive Order S-3-05

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

AB 32 and CARB's Climate Change Scoping Plan

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

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

In 2007, CARB approved a limit on the statewide GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 million metric tons (MMT) 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* (*Scoping Plan*) in accordance with Health and Safety Code Section 38561. The *Scoping Plan* established an overall framework for the measures that will be implemented to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The 2008 *Scoping Plan* evaluated opportunities for sector-specific reductions, integrated all CARB and Climate Action Team[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. The key elements of the 2008 *Scoping Plan* include the following (CARB, 2008):

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

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

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

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

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

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

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

recommended actions for each sector that will facilitate achievement of EO S-3-05's 2050 reduction goal.

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

As part of the *First Update*, CARB recalculated the state's 1990 emissions level using more recent global warming potentials identified by the IPCC. Using the recalculated 1990 emissions level (431 MMT CO_2e) and the revised 2020 emissions level projection identified in the 2011 Final Supplement, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15 percent (instead of 28.5 percent or 16 percent) from the BAU conditions.

In November 2017, CARB released *California's 2017 Climate Change Scoping Plan* (*Second Update*) for public review and comment (CARB, 2017). This update proposes CARB's strategy for achieving the state's 2030 GHG target as established in SB 32 (discussed below). The strategy includes continuing the Cap-and-Trade Program through 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 waste resources to beneficial use, supporting resilient agricultural and rural economics and natural and working lands, securing California's water supplies, and cleaning the air and public health.

When discussing project-level GHG emissions reduction actions and thresholds, the *Second Update* states "[a]chieving no additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development." However, the *Second Update* also recognizes that such an achievement "may not be feasible or appropriate for every project … and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA." CARB's Governing Board adopted the *Second Update* in December 2017.

In 2022 California released the latest scoping plan update which lays out the sector-by-sector roadmap for California to achieve carbon neutrality by 2045. This scoping plan, was prepared to address recent legislation and direction from Governor Newsom and it extends and expands

[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.

upon earlier plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045 (CARB, 2022). The plan suggests that bold steps are required by the State and calls for the need of vast research and development with respect to methods of capturing CO^2. The plan calls for a need to take an unprecedented transformation and aggressively seek reductions to reduce the need of fossil fuels by moving to zero emission transportation, electrifying the cars, buses, trucks and trains. The plan relays on external controls and requires partnership and collaboration with the federal government, other U.S. states, and other jurisdictions around the world for California to succeed in achieving its climate targets.

EO B-30-15

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 set an interim goal of reducing statewide GHG emissions to 40 percent below 1990 levels by 2030 to keep California on its 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).

EO B-55-18

In 2018, the Governor expanded upon EO S-3-05 by issuing Executive Order B-55-18 and creating a statewide goal of carbon neutrality by 2045. EO B-55-18 identifies the California Air Resources Board as the lead agency to develop a framework for implementation and progress tracking toward this goal. It should be noted that consistency with a statewide carbon neutrality target of 100% below 1990 levels by 2045 represents the Governor's policy goal, but is not required to make a significance determination. The state has already determined that 80% below 1990 levels by 2050 is a long-term threshold that represents California's share of emissions reductions to stabilize and limit global warming and "avoid environmental impacts" it has a significant impact. EO B-30-15 setting forth the 2050 target endorsed the Intergovernmental Panel on Climate Change's finding and noted that the state's 2050 target will "attain a level of emissions necessary to avoid dangerous climate change" because it limits global warming to 2 degrees Celsius by 2050.

In 2022 California released the latest scoping plan update which lays out the sector-by-sector roadmap for California to achieve carbon neutrality by 2045. This plan, addressing recent legislation and direction from Governor Newsom, extends and expands upon these earlier plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045 (CARB, 2022). The plan suggests that bold steps are required by the State and calls for the need of vast research and development with respect to methods of capturing CO2. The plan calls for a need to take an unprecedented transformation and aggressively seek reductions to reduce the need of fossil fuels by moving to zero emission transportation, electrifying the cars, buses, trucks and trains. The plan relays on external controls and requires partnership and collaboration with the federal government, other U.S. states, and other jurisdictions around the world for California to succeed in achieving its climate targets.

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 current code requirement is based on the 2022 standards, as those standards went into effect on January 1, 2023. The 2022 standards have mandatory requirements to reduce building envelope air leakage, improve roofing through Solar Reflectance and Thermal Emittance, improve on insulation, improve on space conditioning, water heating and plumbing, improve on lighting efficiency requirements to name a few. The project will be required to implement Title 24 2022.

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 newest CALGreen Standards were updated in 2022 and will become effective on January 1, 2023. The updated Code includes modifications to current codes and will be a requirement to the Project. Mandatory requirements include many updated Electric Vehicle Charging requirements for multi and single-family developments (California Title 24, Part 11, 2022).

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, Clean Car Standards - Pavley, Assembly Bill 1493, 2017).

EO S-1-07

Issued in January 2007, EO S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10 percent by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste.

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 (RTP). The goal of the SCS is to establish a forecasted development pattern for the region that, after considering transportation measures and policies, will achieve, if feasible and if implemented, the GHG reduction targets. If a SCS is unable to achieve the GHG reduction target, an MPO must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

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

In 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations. The targets for the Southern California Association of Governments (SCAG) is an 8 percent reduction in emissions per capita by 2020 and a 13 percent reduction by 2035.

SCAG completed and adopted its 2020-2045 RTP/SCS (Connect SoCal 2020) in September 2020. Since the adoption of the Plan, SCAG's Regional Council, which is SCAG's governing board, has approved a number of amendments and addendums to the Plan with the latest (Addendum 4) completed in June 2023 (SCAG, 2023). The RTP is updated every four years to reflect changes in economic trends, state and federal requirements, progress made on projects, and adjustments for population and jobs often reflected in general plans, specific plans or other land use planning tools.

EO B-16-12

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

AB 1236

AB 1236 (2015), as enacted in California's Planning and Zoning Law, requires local land use jurisdictions to approve applications for the installation of electric vehicle charging stations, as defined, through the issuance of specified permits unless there is substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill requires local land use jurisdictions with a population of

200,000 or more residents to adopt an ordinance, by September 30, 2016, that creates an expedited and streamlined permitting process for electric vehicle charging stations, as specified. In August 2016, the County Board of Supervisors adopted Ordinance No. 10437 adding a section to its County Code related to the expedited processing of electric vehicle charging stations permits consistent with AB 1236.

SB 350

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

Renewable Energy Procurement

SB 1078

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

SB X1 2

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

SB 350

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

lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency.

SB 100

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

Water

EO B-29-15

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

Solid Waste

AB 939 and AB 341

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

AB 341 (2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75 percent of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources

Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle has conducted multiple workshops and published documents that identify priority strategies that CalRecycle believes would assist the state in reaching the 75 percent goal by 2020.

Increasing the amount of commercial solid waste that is recycled, reused, or composted will reduce GHG emissions primarily by 1) reducing the energy requirements associated with the extraction, harvest, and processing of raw materials and 2) using recyclable materials that require less energy than raw materials to manufacture finished products (CalRecycle, 2018). Increased diversion of organic materials (green and food waste) will also reduce GHG emissions (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.

3.3 South Coast Air Quality Management District Thresholds of Significance

The City of Chino Hills does not have a specific GHG significance thresholds. Typically, the City of Chino Hills and Public Agencies located within air basins managed by the South Coast Air Quality Management District (SCAQMD) utilize SCAQMD thresholds. SCAQMD significance thresholds are published on their website (SCQAMD, 2023). From this guidance, SCQAMD's Tier 3 screening standards are the most applicable for this Project. Under this methodology, Tier 3 screening values are established at 3,000 MT/year CO_2e for residential/commercial. (South Coast Air Quality Management District, 2013)

3.4 City of Chino Hill General Plan

The City of Chino Hills is currently working on their 2023 General Plan update which has not been adopted. The approved 2015 General Plan (City of Chino Hills, 2015) includes Policies within the Conservation Element to the General Plan which are intended to reduce GHG emissions. The applicable policy for CVFD Project are provided below:

Policy CN-3.1: Endorse green building design in new and existing construction.

> *Action CN-3.1.1: Implement green building policies that promote increased use of energy efficiency, alternative energy, recycled materials, renewable resources, local materials, water efficiency, and pollution reduction.*
>
> *Action CN-3.1.4: Coordinate with state and regional agencies to ensure that alternative energy facilities are compatible with Chino Hills' natural and built environment.*

4.0 METHODOLOGY

4.1 Construction CO_2e Emissions Calculation Methodology

Pending approval, the Project is expected to kick off construction in early 2024 with full buildout expected roughly one year later in 2025. The project site has some development onsite consisting of multiple buildings. To minimize dust and construction diesel particulate emissions, the project will wet the construction site at least three times daily and utilize Tier 4 diesel construction equipment. Table 4.1 shows the expected timeframes as well as the expected number of pieces of equipment to complete the project for the scenario identified.

Table 4.1: Proposed Construction Phase and Duration

Equipment Identification	Proposed Start	Proposed Completion	Quantity
Site Preparation	1/1/2024	1/26/2024	
Rubber Tired Dozers			2
Tractors/Loaders/Backhoes			2
Grading	1/27/2024	3/1/2024	
Excavators			1
Graders			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			3
Building Construction	3/2/2024	1/17/2025	
Cranes			1
Forklifts			1
Generator Sets			1
Tractors/Loaders/Backhoes			1
Welders			
Paving	12/25/2024	1/17/2025	
Cement and Mortar Mixers			2
Pavers			1
Paving Equipment			2
Rollers			2
Tractors/Loaders/Backhoes			1
Paving	12/25/2024	1/17/2025	
Air Compressors			1
This equipment list is based upon equipment inventory and estimates within CalEEMod 2020.4.0.			

GHG emissions related to construction will be calculated using the CalEEMod Model, Version 2020.4.0[3] air quality model which was developed by Breeze Software for the SCAQMD. All GHG calculations are provided in ***Attachment A*** to this report.

4.2 Operational Emissions Calculation Methodology

Once construction is completed the proposed project would generate air quality and 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 usage of consumer products, landscaping and architectural coatings as part of regular maintenance. Energy sources would be from uses such as electricity and natural gas. Solid waste generated in the form of trash is also considered as 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.

Finally, the project would also generate GHGs through the use of carbon fuel burning vehicles for transportation. Based on the projected traffic volumes by the Project Traffic Study, the proposed project would generate as much as 87 average daily traffic (ADT) (LL&G, 2023). These trips were manually updated in CalEEMod and are reflected in the model GHG outputs.

The project is located on two separate parcels having assessor's Parcel Numbers (APN) 1017-241-28 (zoned Public Open Space) and 1030-341-68 (zoned Institutional/Public Facility). The Project proposes to change the portion of the designated Public Open Space to Institutional/Public Facility which is required for the City's fire station.

Lot 1030-341-68 is roughly 1.5 acres in size and since this area is zoned Institutional/Public Facility it would have an allowable Floor Area Ratio of 0.5 to 1 or ½ square foot per square foot. Given this, the project site could construct a 32,670 SF building on this single Lot and would remain consistent with the General Plan. Land uses allowed on this 1.5 acre site could consist of churches or even a hospital within this parcel alone. These uses generate

[3] Since the analysis was started, an updated version of CalEEMod has been released by SCAQMD. The updated version of the model Version 2022.1.1.14 is the latest update to CalEEMod and brings a new web-based platform, with many new features and components, such as a geospatial interface, location-specific vehicle miles traveled analysis, climate risks analysis, and health and equity. These significant updates enable CalEEMod to deliver enhanced analysis of GHG and criteria pollutant emissions and support local governments to better address climate change, public health, and equity. The latest version of CalEEMod includes construction equipment emission factors from OFFROAD 2017-ORION Version 1.0.1, which takes into account phaseout of older equipment and additional control measures. Mobile source emissions were calculated using EMFAC2021, which also includes phaseout of older vehicles and updated emission control measures. The 2020 version of CalEEMod provides a more conservative and consistent estimate of emissions for the project because it does not include the additional control measures included in the updated version which has been updated 30 times since it was released.

considerably higher traffic intensity and in the case of a hospital consume more energy per square foot than a fire station which was estimated at 87 ADT as was identified above.

The Project as designed would be constructed on a portion of Public Open Space and if the proposed Project was developed on this open space Lot alone, the land use intensity would be higher than what was assumed in the General Plan which could introduce significant cumulative operational air quality impacts in the City. However, since the Project would limit construction on both lots to 18,745 SF and since the allowable FAR for Lot 1030-341-689 alone is 32,670 SF, the project as designed would have a lower intensity after encumbering both lots to the 18,745 SF limit as the Project proposes and would not conflict with the General Plan.

5.0 FINDINGS

5.1 Project Related Construction Emissions

Utilizing the CalEEMod inputs for the model as shown in Table 4.1 above, we find that grading and construction of the project will produce approximately 448.29 Metric Tons of CO_2e over the construction life of the project. A summary of the construction emissions is shown in Table 5.1 below.

Table 5.1: Expected Annual Construction CO_2e Emissions Summary MT/Year

Year	Bio-CO_2	NBio-CO2	Total CO_2	CH_4	N_2O	CO_2e
2024	0.00	410.81	410.81	0.08	0.01	416.37
2025	0.00	31.67	31.67	0.01	0.00	31.93
					Total	**448.29**
Expected Construction emissions are based upon CalEEMod modeling assumptions for equipment and durations listed in Table 4.1 above.						

According to SCAQMD, the proposed project would be categorized as Tier III since emissions do not exceed the 3,000 MT CO_2e per year screening threshold. Given this, a less than significant GHG impact would be expected during construction. Given this, the project would have less than significant GHG impact on the environment and would not conflict with any applicable plans, policies or regulations adopted for the purpose of reducing GHG emissions.

5.2 Project Related Operational Emissions/Conclusions

As previously discussed, emissions generated from Area, Energy, Mobile, Solid Waste and Water uses is also calculated within CalEEMod. Statewide averages for utility emissions were utilized for the calculations throughout the model. The calculated operational emissions are identified in Table 5.2.

Table 5.2: Expected Operational Emissions Summary MT/Year

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Area	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.00	37.47	37.47	0.00	0.00	37.67
Mobile	0.00	91.78	91.78	0.01	0.00	93.27
Waste	21.70	0.00	21.70	1.28	0.00	53.75
Water	1.18	13.10	14.28	0.12	0.00	18.24
					Total Operations	**202.93**

Expected Construction emissions are based upon CalEEMod modeling assumptions for equipment and durations listed in Table 1 above. Data is presented in decimal format and may have rounding errors.

The Project was found to produce 202.93 MT CO_2e per year. According to SCAQMD, the proposed project would be categorized as Tier III since emissions do not exceed the 3,000 MT CO_2e per year screening threshold. The Project's emissions of 202.93 MT CO_2e are roughly 93% lower than what SCAQMD generally considers significant. Given this, the Project generated GHG emissions would be less than significant under CEQA.

It was determined that the worst case GHG emissions would be 416.37 MT during construction and 202.93 MT during operations which would not exceed screening thresholds applicable to this Project. It should also be noted that these calculated emissions are based on snapshot years during the construction periods and the first operational year in 2025. These periods would have the worst-case emissions. These calculated emissions would theoretically drop each year moving forward beyond 2025 as the State begins to integrate a combination of emerging technologies, modifies existing regulations, introduces new regulations, creates new State incentive programs, and promotes local jurisdictions to also follow these footsteps as indicated in the 2022 Scoping plan.

As indicated in Section 3 of this report, the Project will also be required to implement design and regulatory requirements to increase energy efficiency, reduce water consumption and increase reliance on renewable energy sources. These guidelines are established in California's Building Code under Title 24. Specific requirements as it relates to energy-efficiency and green building policies are identified within Parts 6 and -11 of Title 24. Title 24 is typically updated every three years and the current code applicable for this Project and the proposed construction dates is the 2022 version of Title 24. Requirements of these building requirements would include adding solar and electric vehicle charging which would be included in this Project.

The proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing GHG emissions. In addition, the proposed Project

would install solar PV panels on the carport roofs which would provide a renewable source of power and the proposed fire station would be designed to comply with the most current State and City energy efficiency requirements that includes Building Energy Efficiency Standards and California Green Building Standards. Therefore, the proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. This would include SCAG RTP/SCS assumptions and the States goals outlined in CARBs 2022 Scoping Plan.

6.0 REFERENCES

California Title 24, Part 11. (2022). Retrieved from https://www.dgs.ca.gov/BSC/Resources/2022-Title-24-California-Code-Changes

CARB. (2017). *Draft (The 2017 Climate Change Scoping Plan).* Retrieved from https://www.arb.ca.gov/cc/scopingplan/revised2017spu.pdf

CARB. (2018). *ww2.arb.ca.gov*. Retrieved 2021, from https://ww2.arb.ca.gov/resources/documents/lcfs-basics: https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard/about

CARB. (2022). *2022 Scoping Plan for Achieving Carbon Neutrality.* Retrieved from https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf

City Data. (2023). *http://www.city-data.com*. Retrieved from https://www.city-data.com/city/Chino-Hills-California.html

City of Chino Hills. (2015). *General Plan.* Retrieved from https://www.chinohills.org/DocumentCenter/View/11275/General-Plan---Final-approved-by-CC-2-14-15-4-21?bidId=

EPA. (2023). *https://www.epa.gov*. Retrieved from Greenhouse Gases: https://www.epa.gov/report-environment/greenhouse-gases

Google Earth. (2023). Retrieved from earth.google.com

IPCC. (2007). *IPCC Fourth Assessment Report: Climate Change 2007 : Working Group I: The Physical Science Basis.* Retrieved from https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html

LL&G. (2023). *Focused Traffic Impact Assessment for the Proposed Chino Valley Fire Station 68 Project.*

PBK Architects. (2023). *Proposed Site Plan.*

SCAG. (2023). *Connect SoCal - FINAL ADDENDUM #4 to the PROGRAM ENVIRONMENTAL IMPACT REPORT STATE CLEARINGHOUSE #2019011061.* Retrieved from https://scag.ca.gov/sites/main/files/file-attachments/23-2907-final-addendum-04-peir.pdf

SCQAMD. (2023). *Greenhouse Gases (GHG) - CEQA Significance Thresholds*. Retrieved from http://www.aqmd.gov: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds

South Coast Air Quality Management District. (2013, October 15). *Minutes for the GHG CEQA Significance Threshold*. Retrieved from http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf?sfvrsn=2

ATTACHMENT A

CalEEMod 2020.4.0 (Project Emissions)

Chino Fire Department - San Bernardino-South Coast County, Annual

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

Chino Fire Department

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government (Civic Center)	18.75	1000sqft	2.45	18,750.00	0
Parking Lot	56.12	1000sqft	1.29	56,120.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 3.74 acre site… updated to add 600 sf per email

Construction Phase - cs

Off-road Equipment - cs

Off-road Equipment - cs

Off-road Equipment - cs

Off-road Equipment - cs

Off-road Equipment - cs

Trips and VMT - Updated to reflect Project Export

Grading -

Vehicle Trips - Updated to reflect TS

Chino Fire Department - San Bernardino-South Coast County, Annual

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

Consumer Products -

Area Coating -

Landscape Equipment -

Energy Use -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - Tier 4 equipment PDF

Architectural Coating -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

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

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	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
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
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	5.00	20.00
tblConstructionPhase	NumDays	8.00	25.00
tblGrading	MaterialExported	0.00	7,948.00
tblGrading	MaterialExported	0.00	6,359.00
tblLandUse	LotAcreage	0.43	2.45
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblVehicleTrips	ST_TR	0.00	4.79

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

tblVehicleTrips	SU_TR	0.00	4.79
tblVehicleTrips	WD_TR	33.98	4.79

2.0 Emissions Summary

Chino Fire Department - San Bernardino-South Coast 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					
2024	0.2418	2.0280	2.2398	4.6300e-003	0.2836	0.0861	0.3696	0.1274	0.0806	0.2080	0.0000	410.8085	410.8085	0.0813	0.0118	416.3657
2025	0.0861	0.1411	0.2069	3.6000e-004	4.4800e-003	6.0900e-003	0.0106	1.2000e-003	5.7200e-003	6.9200e-003	0.0000	31.6709	31.6709	7.0800e-003	2.7000e-004	31.9275
Maximum	**0.2418**	**2.0280**	**2.2398**	**4.6300e-003**	**0.2836**	**0.0861**	**0.3696**	**0.1274**	**0.0806**	**0.2080**	**0.0000**	**410.8085**	**410.8085**	**0.0813**	**0.0118**	**416.3657**

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					
2024	0.0856	0.4384	2.4371	4.6300e-003	0.1491	2.3800e-003	0.1515	0.0601	2.3000e-003	0.0624	0.0000	410.8081	410.8081	0.0813	0.0118	416.3653
2025	0.0746	0.0252	0.2248	3.6000e-004	4.4800e-003	1.1000e-004	4.5900e-003	1.2000e-003	1.1000e-004	1.3100e-003	0.0000	31.6709	31.6709	7.0800e-003	2.7000e-004	31.9274
Maximum	**0.0856**	**0.4384**	**2.4371**	**4.6300e-003**	**0.1491**	**2.3800e-003**	**0.1515**	**0.0601**	**2.3000e-003**	**0.0624**	**0.0000**	**410.8081**	**410.8081**	**0.0813**	**0.0118**	**416.3653**

Chino Fire Department - San Bernardino-South Coast 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	**51.18**	**78.63**	**-8.79**	**0.00**	**46.67**	**97.30**	**58.94**	**52.31**	**97.21**	**70.35**	**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	**1-1-2024**	**3-31-2024**	0.6794	0.1768
2	**4-1-2024**	**6-30-2024**	0.5046	0.1031
3	**7-1-2024**	**9-30-2024**	0.5101	0.1042
4	**10-1-2024**	**12-31-2024**	0.5644	0.1355
5	**1-1-2025**	**3-31-2025**	0.2123	0.0932
		Highest	0.6794	0.1768

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	0.0715	1.0000e-005	9.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8600e-003	1.8600e-003	0.0000	0.0000	1.9800e-003
Energy	3.5000e-004	3.1500e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	37.4742	37.4742	2.9400e-003	4.1000e-004	37.6703
Mobile	0.0425	0.0653	0.4316	9.7000e-004	0.1046	7.8000e-004	0.1054	0.0279	7.3000e-004	0.0287	0.0000	91.7782	91.7782	5.2000e-003	4.5700e-003	93.2712
Waste						0.0000	0.0000		0.0000	0.0000	21.6957	0.0000	21.6957	1.2822	0.0000	53.7501
Water						0.0000	0.0000		0.0000	0.0000	1.1817	13.0997	14.2814	0.1225	3.0000e-003	18.2374
Total	**0.1143**	**0.0684**	**0.4352**	**9.9000e-004**	**0.1046**	**1.0200e-003**	**0.1056**	**0.0279**	**9.7000e-004**	**0.0289**	**22.8774**	**142.3540**	**165.2314**	**1.4128**	**7.9800e-003**	**202.9309**

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	0.0715	1.0000e-005	9.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8600e-003	1.8600e-003	0.0000	0.0000	1.9800e-003
Energy	3.5000e-004	3.1500e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	37.4742	37.4742	2.9400e-003	4.1000e-004	37.6703
Mobile	0.0425	0.0653	0.4316	9.7000e-004	0.1046	7.8000e-004	0.1054	0.0279	7.3000e-004	0.0287	0.0000	91.7782	91.7782	5.2000e-003	4.5700e-003	93.2712
Waste						0.0000	0.0000		0.0000	0.0000	21.6957	0.0000	21.6957	1.2822	0.0000	53.7501
Water						0.0000	0.0000		0.0000	0.0000	1.1817	13.0997	14.2814	0.1225	3.0000e-003	18.2374
Total	**0.1143**	**0.0684**	**0.4352**	**9.9000e-004**	**0.1046**	**1.0200e-003**	**0.1056**	**0.0279**	**9.7000e-004**	**0.0289**	**22.8774**	**142.3540**	**165.2314**	**1.4128**	**7.9800e-003**	**202.9309**

	ROG	NOx	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	1/1/2024	1/26/2024	5	20	
2	Grading	Grading	1/27/2024	3/1/2024	5	25	
3	Building Construction	Building Construction	3/2/2024	1/17/2025	5	230	

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

4	Paving	Paving	12/25/2024	1/17/2025	5	18	
5	Architectural Coating	Architectural Coating	12/25/2024	1/17/2025	5	18	

Acres of Grading (Site Preparation Phase): 20

Acres of Grading (Grading Phase): 25

Acres of Paving: 1.29

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 28,125; Non-Residential Outdoor: 9,375; Striped Parking Area: 3,367 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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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	4	10.00	0.00	795.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	994.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	30.00	12.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 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					
Fugitive Dust					0.1314	0.0000	0.1314	0.0674	0.0000	0.0674	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0168	0.1715	0.1073	2.3000e-004		7.7500e-003	7.7500e-003		7.1300e-003	7.1300e-003	0.0000	20.4797	20.4797	6.6200e-003	0.0000	20.6452
Total	**0.0168**	**0.1715**	**0.1073**	**2.3000e-004**	**0.1314**	**7.7500e-003**	**0.1392**	**0.0674**	**7.1300e-003**	**0.0745**	**0.0000**	**20.4797**	**20.4797**	**6.6200e-003**	**0.0000**	**20.6452**

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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 - 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	9.2000e-004	0.0464	0.0135	2.2000e-004	6.8500e-003	4.5000e-004	7.3000e-003	1.8800e-003	4.3000e-004	2.3100e-003	0.0000	21.7057	21.7057	9.1000e-004	3.4400e-003	22.7538
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	3.2000e-004	2.3000e-004	3.0300e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	0.0000	3.0000e-004	0.0000	0.8381	0.8381	2.0000e-005	2.0000e-005	0.8451
Total	**1.2400e-003**	**0.0466**	**0.0165**	**2.3000e-004**	**7.9500e-003**	**4.6000e-004**	**8.4000e-003**	**2.1700e-003**	**4.3000e-004**	**2.6100e-003**	**0.0000**	**22.5438**	**22.5438**	**9.3000e-004**	**3.4600e-003**	**23.5988**

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					0.0513	0.0000	0.0513	0.0263	0.0000	0.0263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8500e-003	0.0124	0.1235	2.3000e-004		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	20.4796	20.4796	6.6200e-003	0.0000	20.6452
Total	**2.8500e-003**	**0.0124**	**0.1235**	**2.3000e-004**	**0.0513**	**6.0000e-005**	**0.0513**	**0.0263**	**6.0000e-005**	**0.0264**	**0.0000**	**20.4796**	**20.4796**	**6.6200e-003**	**0.0000**	**20.6452**

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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 - 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	9.2000e-004	0.0464	0.0135	2.2000e-004	6.8500e-003	4.5000e-004	7.3000e-003	1.8800e-003	4.3000e-004	2.3100e-003	0.0000	21.7057	21.7057	9.1000e-004	3.4400e-003	22.7538
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	3.2000e-004	2.3000e-004	3.0300e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	0.0000	3.0000e-004	0.0000	0.8381	0.8381	2.0000e-005	2.0000e-005	0.8451
Total	**1.2400e-003**	**0.0466**	**0.0165**	**2.3000e-004**	**7.9500e-003**	**4.6000e-004**	**8.4000e-003**	**2.1700e-003**	**4.3000e-004**	**2.6100e-003**	**0.0000**	**22.5438**	**22.5438**	**9.3000e-004**	**3.4600e-003**	**23.5988**

3.3 Grading - 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					
Fugitive Dust					0.0890	0.0000	0.0890	0.0429	0.0000	0.0429	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0208	0.2129	0.1845	3.7000e-004		9.0600e-003	9.0600e-003		8.3300e-003	8.3300e-003	0.0000	32.5799	32.5799	0.0105	0.0000	32.8433
Total	**0.0208**	**0.2129**	**0.1845**	**3.7000e-004**	**0.0890**	**9.0600e-003**	**0.0980**	**0.0429**	**8.3300e-003**	**0.0512**	**0.0000**	**32.5799**	**32.5799**	**0.0105**	**0.0000**	**32.8433**

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

3.3 Grading - 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	1.1500e-003	0.0580	0.0168	2.7000e-004	8.5600e-003	5.7000e-004	9.1300e-003	2.3500e-003	5.4000e-004	2.8900e-003	0.0000	27.1390	27.1390	1.1400e-003	4.3000e-003	28.4494
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.1000e-004	4.3000e-004	5.6900e-003	2.0000e-005	2.0600e-003	1.0000e-005	2.0700e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.5715	1.5715	4.0000e-005	4.0000e-005	1.5845
Total	**1.7600e-003**	**0.0584**	**0.0225**	**2.9000e-004**	**0.0106**	**5.8000e-004**	**0.0112**	**2.9000e-003**	**5.5000e-004**	**3.4500e-003**	**0.0000**	**28.7105**	**28.7105**	**1.1800e-003**	**4.3400e-003**	**30.0338**

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					0.0347	0.0000	0.0347	0.0167	0.0000	0.0167	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5400e-003	0.0197	0.2219	3.7000e-004		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	32.5799	32.5799	0.0105	0.0000	32.8433
Total	**4.5400e-003**	**0.0197**	**0.2219**	**3.7000e-004**	**0.0347**	**9.0000e-005**	**0.0348**	**0.0167**	**9.0000e-005**	**0.0168**	**0.0000**	**32.5799**	**32.5799**	**0.0105**	**0.0000**	**32.8433**

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

3.3 Grading - 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	1.1500e-003	0.0580	0.0168	2.7000e-004	8.5600e-003	5.7000e-004	9.1300e-003	2.3500e-003	5.4000e-004	2.8900e-003	0.0000	27.1390	27.1390	1.1400e-003	4.3000e-003	28.4494
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.1000e-004	4.3000e-004	5.6900e-003	2.0000e-005	2.0600e-003	1.0000e-005	2.0700e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.5715	1.5715	4.0000e-005	4.0000e-005	1.5845
Total	**1.7600e-003**	**0.0584**	**0.0225**	**2.9000e-004**	**0.0106**	**5.8000e-004**	**0.0112**	**2.9000e-003**	**5.5000e-004**	**3.4500e-003**	**0.0000**	**28.7105**	**28.7105**	**1.1800e-003**	**4.3400e-003**	**30.0338**

3.4 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	0.1597	1.4587	1.7541	2.9200e-003		0.0665	0.0665		0.0626	0.0626	0.0000	251.5563	251.5563	0.0595	0.0000	253.0434
Total	**0.1597**	**1.4587**	**1.7541**	**2.9200e-003**		**0.0665**	**0.0665**		**0.0626**	**0.0626**	**0.0000**	**251.5563**	**251.5563**	**0.0595**	**0.0000**	**253.0434**

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3.4 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	1.4300e-003	0.0485	0.0191	2.3000e-004	8.2100e-003	3.4000e-004	8.5500e-003	2.3700e-003	3.2000e-004	2.6900e-003	0.0000	22.3792	22.3792	5.7000e-004	3.3100e-003	23.3789
Worker	0.0106	7.5100e-003	0.0987	2.9000e-004	0.0357	1.7000e-004	0.0359	9.4800e-003	1.6000e-004	9.6400e-003	0.0000	27.2810	27.2810	6.6000e-004	7.0000e-004	27.5064
Total	**0.0120**	**0.0560**	**0.1179**	**5.2000e-004**	**0.0439**	**5.1000e-004**	**0.0444**	**0.0119**	**4.8000e-004**	**0.0123**	**0.0000**	**49.6602**	**49.6602**	**1.2300e-003**	**4.0100e-003**	**50.8853**

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	0.0356	0.2425	1.8944	2.9200e-003		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	251.5560	251.5560	0.0595	0.0000	253.0431
Total	**0.0356**	**0.2425**	**1.8944**	**2.9200e-003**		**6.6000e-004**	**6.6000e-004**		**6.6000e-004**	**6.6000e-004**	**0.0000**	**251.5560**	**251.5560**	**0.0595**	**0.0000**	**253.0431**

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3.4 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	1.4300e-003	0.0485	0.0191	2.3000e-004	8.2100e-003	3.4000e-004	8.5500e-003	2.3700e-003	3.2000e-004	2.6900e-003	0.0000	22.3792	22.3792	5.7000e-004	3.3100e-003	23.3789
Worker	0.0106	7.5100e-003	0.0987	2.9000e-004	0.0357	1.7000e-004	0.0359	9.4800e-003	1.6000e-004	9.6400e-003	0.0000	27.2810	27.2810	6.6000e-004	7.0000e-004	27.5064
Total	**0.0120**	**0.0560**	**0.1179**	**5.2000e-004**	**0.0439**	**5.1000e-004**	**0.0444**	**0.0119**	**4.8000e-004**	**0.0123**	**0.0000**	**49.6602**	**49.6602**	**1.2300e-003**	**4.0100e-003**	**50.8853**

3.4 Building Construction - 2025

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	8.8900e-003	0.0811	0.1046	1.8000e-004		3.4300e-003	3.4300e-003		3.2300e-003	3.2300e-003	0.0000	15.0748	15.0748	3.5400e-003	0.0000	15.1634
Total	**8.8900e-003**	**0.0811**	**0.1046**	**1.8000e-004**		**3.4300e-003**	**3.4300e-003**		**3.2300e-003**	**3.2300e-003**	**0.0000**	**15.0748**	**15.0748**	**3.5400e-003**	**0.0000**	**15.1634**

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

3.4 Building Construction - 2025

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	8.0000e-005	2.8900e-003	1.1300e-003	1.0000e-005	4.9000e-004	2.0000e-005	5.1000e-004	1.4000e-004	2.0000e-005	1.6000e-004	0.0000	1.3146	1.3146	3.0000e-005	1.9000e-004	1.3733
Worker	5.9000e-004	4.0000e-004	5.5000e-003	2.0000e-005	2.1400e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.5943	1.5943	4.0000e-005	4.0000e-005	1.6068
Total	**6.7000e-004**	**3.2900e-003**	**6.6300e-003**	**3.0000e-005**	**2.6300e-003**	**3.0000e-005**	**2.6600e-003**	**7.1000e-004**	**3.0000e-005**	**7.4000e-004**	**0.0000**	**2.9089**	**2.9089**	**7.0000e-005**	**2.3000e-004**	**2.9802**

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	2.1300e-003	0.0145	0.1135	1.8000e-004		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	15.0748	15.0748	3.5400e-003	0.0000	15.1633
Total	**2.1300e-003**	**0.0145**	**0.1135**	**1.8000e-004**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**15.0748**	**15.0748**	**3.5400e-003**	**0.0000**	**15.1633**

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

3.4 Building Construction - 2025

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	8.0000e-005	2.8900e-003	1.1300e-003	1.0000e-005	4.9000e-004	2.0000e-005	5.1000e-004	1.4000e-004	2.0000e-005	1.6000e-004	0.0000	1.3146	1.3146	3.0000e-005	1.9000e-004	1.3733
Worker	5.9000e-004	4.0000e-004	5.5000e-003	2.0000e-005	2.1400e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.5943	1.5943	4.0000e-005	4.0000e-005	1.6068
Total	**6.7000e-004**	**3.2900e-003**	**6.6300e-003**	**3.0000e-005**	**2.6300e-003**	**3.0000e-005**	**2.6600e-003**	**7.1000e-004**	**3.0000e-005**	**7.4000e-004**	**0.0000**	**2.9089**	**2.9089**	**7.0000e-005**	**2.3000e-004**	**2.9802**

3.5 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	2.2000e-003	0.0207	0.0306	5.0000e-005		1.0000e-003	1.0000e-003		9.2000e-004	9.2000e-004	0.0000	4.0951	4.0951	1.2900e-003	0.0000	4.1273
Paving	4.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.6700e-003**	**0.0207**	**0.0306**	**5.0000e-005**		**1.0000e-003**	**1.0000e-003**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**4.0951**	**4.0951**	**1.2900e-003**	**0.0000**	**4.1273**

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

3.5 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	1.6000e-004	1.2000e-004	1.5200e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4191	0.4191	1.0000e-005	1.0000e-005	0.4225
Total	**1.6000e-004**	**1.2000e-004**	**1.5200e-003**	**0.0000**	**5.5000e-004**	**0.0000**	**5.5000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4191**	**0.4191**	**1.0000e-005**	**1.0000e-005**	**0.4225**

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	5.5000e-004	2.3800e-003	0.0338	5.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.0951	4.0951	1.2900e-003	0.0000	4.1272
Paving	4.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.0200e-003**	**2.3800e-003**	**0.0338**	**5.0000e-005**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.0951**	**4.0951**	**1.2900e-003**	**0.0000**	**4.1272**

Chino Fire Department - San Bernardino-South Coast County, Annual

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

3.5 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	1.6000e-004	1.2000e-004	1.5200e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4191	0.4191	1.0000e-005	1.0000e-005	0.4225
Total	**1.6000e-004**	**1.2000e-004**	**1.5200e-003**	**0.0000**	**5.5000e-004**	**0.0000**	**5.5000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4191**	**0.4191**	**1.0000e-005**	**1.0000e-005**	**0.4225**

3.5 Paving - 2025

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	5.3300e-003	0.0490	0.0792	1.2000e-004		2.2900e-003	2.2900e-003		2.1200e-003	2.1200e-003	0.0000	10.6459	10.6459	3.3400e-003	0.0000	10.7295
Paving	1.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.5500e-003**	**0.0490**	**0.0792**	**1.2000e-004**		**2.2900e-003**	**2.2900e-003**		**2.1200e-003**	**2.1200e-003**	**0.0000**	**10.6459**	**10.6459**	**3.3400e-003**	**0.0000**	**10.7295**

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

3.5 Paving - 2025

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	3.9000e-004	2.7000e-004	3.6600e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.8000e-004	0.0000	1.0629	1.0629	2.0000e-005	3.0000e-005	1.0712
Total	**3.9000e-004**	**2.7000e-004**	**3.6600e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4300e-003**	**3.8000e-004**	**1.0000e-005**	**3.8000e-004**	**0.0000**	**1.0629**	**1.0629**	**2.0000e-005**	**3.0000e-005**	**1.0712**

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	1.4300e-003	6.1800e-003	0.0880	1.2000e-004		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	10.6459	10.6459	3.3400e-003	0.0000	10.7295
Paving	1.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.6500e-003**	**6.1800e-003**	**0.0880**	**1.2000e-004**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**10.6459**	**10.6459**	**3.3400e-003**	**0.0000**	**10.7295**

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

3.5 Paving - 2025

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	3.9000e-004	2.7000e-004	3.6600e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.8000e-004	0.0000	1.0629	1.0629	2.0000e-005	3.0000e-005	1.0712
Total	**3.9000e-004**	**2.7000e-004**	**3.6600e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4300e-003**	**3.8000e-004**	**1.0000e-005**	**3.8000e-004**	**0.0000**	**1.0629**	**1.0629**	**2.0000e-005**	**3.0000e-005**	**1.0712**

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	0.0263					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5000e-004	3.0500e-003	4.5300e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6392
Total	**0.0268**	**3.0500e-003**	**4.5300e-003**	**1.0000e-005**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6392**

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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	5.0000e-005	3.0000e-005	4.5000e-004	0.0000	1.6000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1257	0.1257	0.0000	0.0000	0.1268
Total	**5.0000e-005**	**3.0000e-005**	**4.5000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1257**	**0.1257**	**0.0000**	**0.0000**	**0.1268**

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	0.0263					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.0000e-005	3.2000e-004	4.5800e-003	1.0000e-005		0.0000	0.0000		0.0000	0.0000	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6392
Total	**0.0264**	**3.2000e-004**	**4.5800e-003**	**1.0000e-005**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6392**

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	5.0000e-005	3.0000e-005	4.5000e-004	0.0000	1.6000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1257	0.1257	0.0000	0.0000	0.1268
Total	**5.0000e-005**	**3.0000e-005**	**4.5000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1257**	**0.1257**	**0.0000**	**0.0000**	**0.1268**

3.6 Architectural Coating - 2025

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	0.0684					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1100e-003	7.4500e-003	0.0118	2.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	1.6596	1.6596	9.0000e-005	0.0000	1.6619
Total	**0.0695**	**7.4500e-003**	**0.0118**	**2.0000e-005**		**3.3000e-004**	**3.3000e-004**		**3.3000e-004**	**3.3000e-004**	**0.0000**	**1.6596**	**1.6596**	**9.0000e-005**	**0.0000**	**1.6619**

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

3.6 Architectural Coating - 2025

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	1.2000e-004	8.0000e-005	1.1000e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3189	0.3189	1.0000e-005	1.0000e-005	0.3214
Total	**1.2000e-004**	**8.0000e-005**	**1.1000e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.3000e-004**	**1.1000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3189**	**0.3189**	**1.0000e-005**	**1.0000e-005**	**0.3214**

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	0.0684					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9000e-004	8.4000e-004	0.0119	2.0000e-005		0.0000	0.0000		0.0000	0.0000	0.0000	1.6596	1.6596	9.0000e-005	0.0000	1.6619
Total	**0.0686**	**8.4000e-004**	**0.0119**	**2.0000e-005**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.6596**	**1.6596**	**9.0000e-005**	**0.0000**	**1.6619**

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

3.6 Architectural Coating - 2025

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	1.2000e-004	8.0000e-005	1.1000e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3189	0.3189	1.0000e-005	1.0000e-005	0.3214
Total	**1.2000e-004**	**8.0000e-005**	**1.1000e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.3000e-004**	**1.1000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3189**	**0.3189**	**1.0000e-005**	**1.0000e-005**	**0.3214**

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	0.0425	0.0653	0.4316	9.7000e-004	0.1046	7.8000e-004	0.1054	0.0279	7.3000e-004	0.0287	0.0000	91.7782	91.7782	5.2000e-003	4.5700e-003	93.2712
Unmitigated	0.0425	0.0653	0.4316	9.7000e-004	0.1046	7.8000e-004	0.1054	0.0279	7.3000e-004	0.0287	0.0000	91.7782	91.7782	5.2000e-003	4.5700e-003	93.2712

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Government (Civic Center)	89.81	89.81	89.81	277,353	277,353
Parking Lot	0.00	0.00	0.00		
Total	89.81	89.81	89.81	277,353	277,353

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
Government (Civic Center)	16.60	8.40	6.90	75.00	20.00	5.00	50	34	16
Parking Lot	16.60	8.40	6.90	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
Government (Civic Center)	0.543085	0.056300	0.173085	0.134258	0.025645	0.007009	0.011926	0.017481	0.000552	0.000248	0.024848	0.000956	0.004606
Parking Lot	0.543085	0.056300	0.173085	0.134258	0.025645	0.007009	0.011926	0.017481	0.000552	0.000248	0.024848	0.000956	0.004606

5.0 Energy Detail

Chino Fire Department - San Bernardino-South Coast 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	34.0423	34.0423	2.8700e-003	3.5000e-004	34.2179
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	34.0423	34.0423	2.8700e-003	3.5000e-004	34.2179
NaturalGas Mitigated	3.5000e-004	3.1500e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4320	3.4320	7.0000e-005	6.0000e-005	3.4524
NaturalGas Unmitigated	3.5000e-004	3.1500e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4320	3.4320	7.0000e-005	6.0000e-005	3.4524

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					
Government (Civic Center)	64312.5	3.5000e-004	3.1500e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4320	3.4320	7.0000e-005	6.0000e-005	3.4524
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		**3.5000e-004**	**3.1500e-003**	**2.6500e-003**	**2.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**3.4320**	**3.4320**	**7.0000e-005**	**6.0000e-005**	**3.4524**

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					
Government (Civic Center)	64312.5	3.5000e-004	3.1500e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4320	3.4320	7.0000e-005	6.0000e-005	3.4524
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		**3.5000e-004**	**3.1500e-003**	**2.6500e-003**	**2.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**3.4320**	**3.4320**	**7.0000e-005**	**6.0000e-005**	**3.4524**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Government (Civic Center)	172313	30.5589	2.5800e-003	3.1000e-004	30.7165
Parking Lot	19642	3.4834	2.9000e-004	4.0000e-005	3.5014
Total		**34.0423**	**2.8700e-003**	**3.5000e-004**	**34.2179**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Government (Civic Center)	172313	30.5589	2.5800e-003	3.1000e-004	30.7165
Parking Lot	19642	3.4834	2.9000e-004	4.0000e-005	3.5014
Total		**34.0423**	**2.8700e-003**	**3.5000e-004**	**34.2179**

6.0 Area Detail

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	0.0715	1.0000e-005	9.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8600e-003	1.8600e-003	0.0000	0.0000	1.9800e-003
Unmitigated	0.0715	1.0000e-005	9.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8600e-003	1.8600e-003	0.0000	0.0000	1.9800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0714					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8600e-003	1.8600e-003	0.0000	0.0000	1.9800e-003
Total	**0.0715**	**1.0000e-005**	**9.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.8600e-003**	**1.8600e-003**	**0.0000**	**0.0000**	**1.9800e-003**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0714					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8600e-003	1.8600e-003	0.0000	0.0000	1.9800e-003
Total	**0.0715**	**1.0000e-005**	**9.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.8600e-003**	**1.8600e-003**	**0.0000**	**0.0000**	**1.9800e-003**

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	14.2814	0.1225	3.0000e-003	18.2374
Unmitigated	14.2814	0.1225	3.0000e-003	18.2374

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Government (Civic Center)	3.72487 / 2.28298	14.2814	0.1225	3.0000e-003	18.2374
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**14.2814**	**0.1225**	**3.0000e-003**	**18.2374**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Government (Civic Center)	3.72487 / 2.28298	14.2814	0.1225	3.0000e-003	18.2374
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**14.2814**	**0.1225**	**3.0000e-003**	**18.2374**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	21.6957	1.2822	0.0000	53.7501
Unmitigated	21.6957	1.2822	0.0000	53.7501

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Government (Civic Center)	106.88	21.6957	1.2822	0.0000	53.7501
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**21.6957**	**1.2822**	**0.0000**	**53.7501**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Government (Civic Center)	106.88	21.6957	1.2822	0.0000	53.7501
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**21.6957**	**1.2822**	**0.0000**	**53.7501**

9.0 Operational Offroad

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