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April 4, 2025

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RE: York Drive Active Senior Living Development - PDS2021 -MUP-21-001 - Greenhouse Gas Screening Letter San Diego County

The purpose of this greenhouse gas (GHG) screening assessment, conducted for the York Drive Active Senior Living Development (Project), is to determine GHG significance under the California Environmental Quality Act (CEQA) from both the construction and operations of the Project. More specifically, this screening analysis is to provide documentation showing Project conformance with greenhouse gas laws and regulations. Specific GHG regulations and policies are attached to this letter in ***Attachment A***.

The County is currently working on GHG specific significance thresholds though none are established as of the date of this report. Based on this, the County does recognize other methodologies to show compliance under CEQA. Currently, the County recommends using California's 2022 Scoping Plan (CARB, 2022) roadmap which provides general recommendations that local agencies could adopt to help the State achieve the overall scoping plan goal of achieving carbon neutrality by 2045 or earlier. The 2022 Scoping Plan extends and expands upon these earlier plans by reducing anthropogenic emissions to 85 percent below 1990 levels by 2045.

Appendix "D" of CARB's 2022 Scoping Plan recommends local jurisdictions such as the County of San Diego develop a Climate Action Plans (CAP) and provides some recommendations but ultimately leaves flexibility to the local jurisdiction to meet requirements for the local jurisdiction. Appendix D has multiple examples of areas local CAPs could consider. One example is for Projects to reduce vehicle miles traveled (VMT). Appendix D indicates that one way to reduce VMT is by eliminating minimum parking standards and reducing spaces available. In addition, Appendix D recommends installing solar power, installing electric vehicle (EV) infrastructure, including building decarbonization strategies such as maximizing the usage of electricity versus natural gas. In addition, GHGs can be reduced through implementing water conservation strategies (CARB, 2022). Measures such as these should be included as part of CEQA analyses

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to reduce GHG emissions. Among other strategies, it is expected that the County will consider recommendations within Appendix D of the 2022 ARB Scoping Plan to develop the County CAP.

The proposed development is located on a 4.27 acre project site. The Project is located at 1822, 1844 and 1864 York Drive, in the North County Metropolitan Subregional Plan area of an unincorporated area of San Diego County within a close proximity to the City of Vista. The proposed Project seeks to construct one four-story building of 138,139 square feet and would have a total of 183 Senior Units. The residential development would have a Group Residential classification and would have a shared kitchen. Senior Units include 121 studios, 51 one-bedroom units, and 11 two-bedroom units.

The site is subject to the General Plan Regional Category Village, Land Use Designation Village Residential VR-2 (2 units/acre). Zoning for the site is Rural Residential (RR). The project is considered a "Group Residential" which would have a shared kitchen. Based on this, the project would not require any zone changes.

Construction of the Project would be expected to begin in 2024 with completion expected in late 2024 to early 2025. The project will require import of 22,000 Cubic Yards (CY) of import. The first full year of operations is expected in 2024. Greenhouse Gas impacts related to construction and daily operations were calculated using CalEEMod Version 2020.4.0[1] air quality model, which was developed by BREEZE Software for South Coast Air Quality Management District (SCAQMD) in 2021. The CalEEMod input/output model is provided in ***Attachments B***. CalEEMod software utilizes Title 24 California Building Standards Code which includes requirements for energy efficiency based on Title 24 (2019) requirements as default. The model also has the capability to enter design features as mitigation measures which will reduce GHG emissions.

[1] Since this Project analysis was started, an updated version of CalEEMod has been released by SCAQMD. The updated version of the model Version 2022.1.1.16 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. Because the 2022 version has been updated over 30 times since it was released, however, it is assumed that the model is still in flux. As a result, the 2020 version of CalEEMod is assessed as providing a more consistent estimate of emissions for the project because it does not include the additional control measures included in the updated version. This results in the 2020 version also being more conservative.

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Project design features (PDFs 1-7) have been included in the GHG estimations (modeling) for the Project. The applicant has agreed to implement all PDFs and will be included in the Project's Conditions of Approval. A list of the PDFs is provided below and within this analysis.

York Drive Active Senior Living PDFs

PDF 1: The Project will utilize architectural coatings compliant with SDAPCD Rule 67 (SDAPCD, 2015).

PDF 2: In accordance with AB 939, and to be consistent with AB 341's statewide 75 percent diversion policy, the Project will seek to also achieve a 75 percent diversion goal by providing areas for storage and collection of recyclables and provide literature promoting recycling to achieve additional waste diversion.

PDF 3: The Project applicant will be required to comply with County's Water Conservation in Landscaping Ordinance and demonstrates a 40 percent reduction in outdoor use and will submit a Landscape Document Package to show such compliance.

PDF 4: Install low flow indoor water fixtures in all residential units to achieve at least a 20 percent reduction in indoor water use.

PDF 5: The typical design requirements for a senior development requires 194 spots for this site. The project would supply a reduced quantity of parking for purposes of reducing VMT onsite. The project would limit parking to 160 spaces or a 17.5% reduction from what would otherwise be recommended.

PDF 6: The Project would install 183 kilowatts (KW) of onsite solar.

PDF 7: The Project will provide 35 EV Capable Spaces and 9 of these would install the EV supply Equipment (EVSE) (California - CGBSC, 2022).

Construction Activities

CalEEMod has been updated to reflect the anticipated construction activities and dates identified in Table 1. Based on the construction model outputs shown in Table 2, we find that construction of the project will produce approximately 593.96 MT CO_2e/year during the construction period. Since GHG emissions are typically reported on an annual basis, it is acceptable to average the total construction emission over the life of the Project, which is assumed to be 30 years. This methodology was recommended by SCAQMD (SCAQMD, 2008). Based on this, the project would add 19.79 MT CO_2e per year.

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Table 1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Complete	Quantity
Site Preparation	06/01/2022	06/07/2022	
Rubber Tired Dozers			2
Tractors/Loaders/Backhoes			1
Grading	06/08/2022	06/17/2022	
Excavators			1
Graders			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			2
Paving	06/18/2022	07/13/2022	
Pavers			1
Paving Equipment			2
Rollers			2
Building Construction	07/14/2022	05/31/2023	
Cranes			1
Forklifts			1
Generator Sets			1
Tractors/Loaders/Backhoes			2
Welders			1
Architectural Coating	04/27/2023	05/31/2023	
Air Compressors			1
This equipment and durations were selected based on discussion with the Project Engineer.			

Table 2: Expected Construction CO_2e Emissions Summary MT/Year

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
2022	0.00	321.10	321.10	0.04	0.02	328.34
2023	0.00	191.18	191.18	0.02	0.01	193.65
Total						**593.96**
Yearly Average Construction Emissions (Metric Tons/year over 30 years)						**17.40**

York Drive Active Senior Living Development Operations (2024)

Project operations would be expected in 2024. The Project would generate 643 average daily trips (ADT) as was estimated by LL&G Engineers within the Project traffic scoping letter (LL&G, 2025). CalEEMod 2020.4.0 was utilized for the operational GHG model. It should be noted that the traffic assessment also made changes to the trip generation (revised from 677 to 643 ADT) given the relatively close location (0.3 miles) from the nearby Buena Creek Sprinter rail station

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though the trip generation rate using a 0.3 mile input. This has an effect of reducing project ADT by an estimated 5% (LL&G, 2025). Since the Project is so close to a rail station, it is possible that the ADT reductions could be greater than 5% if the state and local areas increase rail and public transportations infrastructure. The rail trip reductions were not added to the CalEEMod model in terms of trips however a design feature for geographical location located near the rail station was included in the modeling. In addition, the project will intentionally provide a reduced parking design which will reduce vehicular trips and perhaps encourage residents to increase rail activity beyond the expected 5%.

For Parking specifically, the proposed design requirements require 194 parking stalls. The project would supply a reduced quantity of parking for the purpose of reducing VMT onsite. The project would limit parking to 160 spaces or a 17.5% reduction from what would otherwise be recommended per the site plan. This input was included in the Project CalEEMod file.

For this assessment, the operational year of the project would be 2024. Energy-intensity factors were updated within CalEEMod to reflect state mandates on utility providers. SDG&E is the utility provider for the project and by default uses SDG&E's emissions rate in 2009. In 2009 SDG&E achieved 10.5 percent procurement of renewable energy (California Public Utilities Commission, 2016); The state mandate for renewable energy portfolio's (RPS) was 33 percent by 2020 and 60 percent by 2030 (SDG&E, 2020). The RPS inputs are shown on the first page of the CalEEMod output provided as ***Attachment B*** to this report.

CalEEMod 2020.4.0 was updated to reflect San Diego Gas and Electric's (SDG&E) latest emissions rates and show that a 33% RPS was achieved. CalEEMod 2016.3.2 (the model prior to 2020.4.0) was based on default emissions from 2009 which included a 10.5% RPS factor (California Public Utilities Commission, 2016). CalEEMod 2020.4.0 utilized by default the SDG&E GHG intensity of 540 pounds CO_2e per megawatt hour lb CO_2e/MWh which means that when broken out, each MWh of energy delivered by SDG&E is made up of 33% zero emission renewable energy and 67% carbon-based fueled energy. At the extreme ends of RPS where RPS is 0%, the GHG intensity would be 100% carbon-based. Taking the composite 720.49 lb CO_2e/MWh reported in 2009 and removing renewable sources and relying only on carbon-based sources yields an intensity of 805.02 lb/MWh (720.49 lb CO_2e/MWh /(89.5% non-renewable sources) x100%). This means that whenever SDG&E adds renewable energy to the grid, carbon-based fuel usage intensities of 805.02 lb CO_2e/MWh are avoided as carbon-based systems are taken offline. This is important to note because renewable energy intensities cannot offset renewable intensities as long as carbon-based fuel systems are utilized.

In accordance with SB 100, SDG&E will achieve an RPS of 60 percent in 2030. At Project Buildout Year 2024, RPS would be 43.8%. Given this, the Project operations would expect to receive at least 43.8% of the energy from renewable sources and 56.2% from non-renewable

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sources without usage of any onsite solar generation. From a modeling perspective, the Project baseline without added solar would be based on the average GHG intensity for the model year. Any solar added by the Project would be renewable and would therefore offset nonrenewable sources generated by SDG&E. After correcting the emissions based on RPS achievements identified in CalEEMod 2020.4.0, the emission factors in 2030 are shown in Table 3. The calculations for these emission factors are shown in ***Attachment C***.

Table 3: SDG&E Energy Intensity Factors

GHG	Current RPS Factors 2020 33% Achieved (lbs CO_2e /MWh)	2024 RPS Factors 43.8% Achieved (lbs CO_2e /MWh)	Any Year no RPS Emission Factors (lbs CO_2e /MWh)
Carbon Dioxide (CO_2)	539.98	452.94	805.94
Methane (CH_4)	0.033	0.0277	0.0493
Nitrous Oxide (N_2O)	0.004	0.0034	0.0060

CalEEMod default settings were used for water, energy, solid waste and area sources. In addition, standard mitigation measures within the model were selected to represent PDFs 1-6 and were included in the model. PDF 5 was modeled separately which is further discussed below. PDF 6 would further reduce GHG emissions but are not quantified in this analysis. A description of each PDF and how it was modeled is described below:

PDF 1: The Project will utilize architectural coatings compliant with SDAPCD Rule 67 (SDAPCD, 2015).

PDF 2: In accordance with AB 939, and to be consistent with AB 341's statewide 75 percent diversion policy, the Project will seek to also achieve a 75 percent diversion goal by providing areas for storage and collection of recyclables and provide literature promoting recycling to achieve additional waste diversion.

PDF 3: The Project applicant will be required to comply with County's Water Conservation in Landscaping Ordinance and demonstrates a 40 percent reduction in outdoor use and will submit a Landscape Document Package to show such compliance.

PDF 4: Install low flow indoor water fixtures in all residential units to achieve at least a 20 percent reduction in indoor water use.

PDF 5: The typical design requirements for a senior development requires 194 spots for this site. The project would supply a reduced quantity of parking for the purpose of reducing VMT onsite. The project would limit parking to 160 spaces or a 17.5% reduction from what would otherwise be recommended.

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PDF 6: The Project would install 183 kilowatts (KW) of onsite solar.

PDF 7: The Project will provide 35 EV Capable Spaces and 9 of these would install the EV supply Equipment (EVSE) (California - CGBSC, 2022).

A PV system as identified in PDF 6 in the geographical location of the Vista area would generate roughly 304,559 kilowatt hours (kWH) yearly as estimated by the National Renewable Energy Laboratory (NREL) PV Watts Calculator as shown in ***Attachment D*** to this report. Since solar is 100 percent renewable, it will offset nonrenewable energy sources as opposed to renewable sources SDG&E adds under the RPS program. For this reason, a second CalEEMod file was prepared (without RPS corrections) and is shown as ***Attachment E*** to this letter.

Based upon the CalEEMod calculations, the annual emissions from operations and construction would be 768.42 MT CO_2e per year. The results of the modeling are provided in Table 4 below.

Table 4: Operational Emissions Summary MT/Year

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT/Yr)
Area	0.00	2.22	2.22	0.00	0.00	2.28
Energy	0.00	270.01	270.01	0.01	0.00	271.21
Mobile	0.00	500.60	500.60	0.04	0.02	508.60
Waste	12.82	0.00	12.82	0.76	0.00	31.75
Water	3.03	35.81	38.84	0.31	0.01	48.92
Total which includes PDFs 1-5 (MT/Year)						**862.77**
Amortized Construction Emissions (Table 5.1 above)						**17.40**
PDF 6 – Install 183 kW Solar which produces 304,559 kWH yearly						**-111.75**
Total Operations (MT/Year)						**768.42**
Data is presented in decimal format and may have rounding errors.						

Scoping Plan 2022 Consistency

The Proposed Project would generate 768.42 MT CO2e per year after the Project is fully operational. These emissions would be decreased as State and Local policies are changed to reflect goals outlined in the 2022 Scoping Plan, many of which are external to the Project. As noted, the Project would include multiple PDF designed to reduce GHG emissions through the addition of reduced parking locations, installation of solar panels, installation of EV Charging

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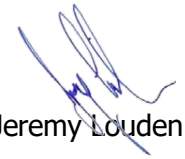
locations and implementation of water reduction strategies. The main kitchen and laundry facility will be natural gas supplied due to limited options on the appliances needed. The Project will equip all of the residential units with electric ranges and electric stovetops as opposed to natural gas units. This change allows for building decarbonization.

With the incorporation of the PDFs, the Project would reduce GHG emissions and would be consistent with the 2022 Scoping Plan roadmap. In addition, the Project would be consistent with the County's General Plan, and SANDAG RTP/SCS. Without a qualified CAP or local adopted thresholds, the significance of the proposed Project's GHG emissions is based on consistency with these plans for reducing GHG emissions.

As discussed above, the project would be considered less than significant for GHG emissions. If you have any questions, please do not hesitate to contact me directly at (760) 473-1253.

Sincerely,
Ldn Consulting, Inc.



Jeremy Louden

Attachments:

Attachment A: GHG Regulatory Requirements

Attachment B: CALEEMOD Inputs/Outputs

Attachment C: RPS Calculation Worksheet

Attachment D: NREL PV WATTS Worksheet

Attachment E: CALEEMOD Solar Inputs/Outputs

Sources:

California - CGBSC. (2022). *2022 California Green Building Standards Code, Title 24, Part 11 (CALGreen)*. Retrieved from https://codes.iccsafe.org/content/CAGBC2022P1/chapter-5-nonresidential-mandatory-measures#CAGBC2022P1_Ch05_SubCh5.1

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Attachment A:
CLIMATE CHANGE REGULATORY ENVIRONMENT

Federal

Massachusetts v. US Environmental Protection Agency (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 such as CO_2, CH_4, N_2O, Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulfur hexafluoride (SF_6) within 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.

Federal Vehicle Standards.

On May 14, 2007, Executive Order (EO) 13432 was signed by President George Bush. This EO directed the EPA, the Department of Transportation (DOT), and the Department of Energy (DOE) to establish GHG emissions regulations from the transportation sector.

This EO led to the Federal Government establishing stricter fuel efficiency and GHG emissions regulations for vehicles manufactured starting in 2012 which effectively updated the Corporate Average Fuel Economy (CAFE) Standards which was first enacted in 1975 (DOT, 2014). These CAFE standards have been updated regularly and each time they are, Vehicle efficiency requirements become more stringent.

In May 2022, the National Highway Traffic Safety Administration (NHTSA) published rules finalizing revised fuel economy standards for passenger cars and light trucks for 2024-2025 and

the standards increase at a rate of 8 percent per year. Then in 2026 an increase in the efficiency standard by 10 precent would be required. NHTSA estimates that the industry fleet-wide average will be 49 mpg in 2026. (NHTSA, 2022).

In July 2023, NHTSA proposed new CAFE standards for passenger cars and light trucks built in model years 2027-2032, and new fuel efficiency standards for heavy-duty pickup trucks and vans built in model years 2030-2035. If finalized, the proposal would require an industry fleet-wide average of approximately 58 miles per gallon for passenger cars and light trucks in MY 2032, by increasing fuel economy by 2% year over year for passenger cars and by 4% year over year for light trucks. (NHTSA, 2023)

State

Executive Order S-3-05

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

AB 32 and CARB's Climate Change Scoping Plan

In furtherance of the goals established in EO S-3-05, the Legislature enacted 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, at the State level CARB will continue monitoring compliance and enforcing rules, regulation, emission limitations, emission reduction measures, or market-based compliance mechanisms adopted.

In 2007, CARB approved a limit on the statewide GHG emissions level for the 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.

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

[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.

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.

CARB's Climate Change Scoping Plan Update 2022

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 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 relies 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.

The 2022 Scoping Plan includes key actions to support success in the necessary transition away from fossil combustion. Among the actions listed is decarbonizing the electricity sector; which depends on both using energy more efficiently and replacing fossil-fueled generation with renewable and zero carbon resources, including solar, wind, energy storage, geothermal, biomass, and hydroelectric power. Another action includes expanding incentive programs to support the holistic retrofit of existing buildings. Buildings have cross-sector interactions that

[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.

influence public health and well-being and affect energy use. There are about 14 million existing homes and over 7.5 billion square feet of existing commercial buildings in California. Fossil gas supplies about half of the energy consumed by end uses in these buildings. In achieving carbon neutrality, transitioning away from fossil gas in existing residential and commercial buildings is an important action item.

Section 4.1.2 of Appendix "D" of CARB's 2022 Scoping Plan recommends exploring options to fund or implement local, offsite direct GHG reduction strategies. Examples include local building retrofit programs targeting existing residential and commercial buildings that result in the installation of solar panels and other such measures in exchange for being credited with the resulting GHG reductions in a project's CEQA analyses. Such offsite mitigation measures, "are viable options for mitigation under CEQA and would not be double counted, provided they are not otherwise required by law or regulation and would not have happened but for the mitigation requirements of the project." (CARB, 2022)

AB 97

AB 97 was enacted in 2007 and expressly recognized the need to analyze GHG emissions as a part of the CEQA process. AB 97 required the Governor's Office of Planning and Research (OPR) to develop CEQA Guidelines for GHG emissions (Pub. Resources Code, §21083.05.)

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 CARB 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 by 2045 represents the Governor's policy goal but is not required to make a significance determination. The state has already determined that 80 percent below 1990 levels by 2050 is a long-term target that represents California's share of emissions reductions to stabilize and limit global warming and "avoid dangerous climate change". EO B-30-15 sets forth the 2050 target endorsed by the Intergovernmental Panel on Climate Change's finding and notes that the state's 2050 target will "attain a level of emissions necessary to avoid dangerous climate change" because it may limit 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 relies 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.

Assembly Bill 1279

In 2022, the Governor approved Assembly Bill 1279 (AB 1279) (State of California, 2022) which requires the state board to prepare and approve a scoping plan for achieving the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions and to update the scoping plan at least once every 5 years. This bill, the California Climate Crisis Act, would declare the policy of the state both to achieve net zero greenhouse gas emissions as soon as possible, but no later than 2045, and achieve and maintain net negative greenhouse gas emissions thereafter, and to ensure that by 2045, statewide anthropogenic greenhouse gas emissions are reduced to at least 85% below the 1990 levels.

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.

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, and improve on lighting efficiency requirements, to name a few. The project will be required to implement Title 24 2022 or the code cycle relevant at the time of building permit issuance.

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

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 (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 latest amendment to LCFS implementation regulations was in 2018 via CARB approved amendments which included strengthening and smoothing the carbon intensity benchmarks

through 2030 in-line with California's 2030 GHG emission reduction target enacted through SB 32 (CARB, 2018).

SB 375

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

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

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

In 2018, CARB updated the SB 375 targets. For purposes of SANDAG, the updated targets include a 15 percent reduction in emissions per capita by 2020 and a 19 percent reduction by 2035.
SANDAG approved the 2021 Regional Plan in December 2021. The Plan provides a big picture vision for how the San Diego region will grow through 2050 and beyond with an implementation program to help make the plan a reality. Within the Draft Plan, SANDAG introduced a transformative vision for transportation in San Diego County that completely reimagines how people and goods could move throughout the region in the 21st century. The plan outlines the "5 Big Moves" which are: Complete Corridors, Transit Leap, Mobility Hubs, Flexible Fleets, and the Next OS. This plan is the region's long-term plan which will be implemented incrementally through the Regional Transportation Improvement Program (RTIP) (SANDAG, 2021).

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB, 2017). To reduce GHG emissions, CARB, in conjunction with the EPA and the NHTSA, also has adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34 percent in 2025 compared to 2017 (CARB, 2012).

The Zero Emission Vehicle (ZEV) program acts as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles (PHEVs) in the 2018 to 2025 model years (California Air Resources Board, 2017).

This program was recently updated and is known as the Advanced Clean Cars II (ACC II) Program. The ACC II regulations will rapidly scale down emissions of light-duty passenger cars, pickup trucks and SUVs starting with the 2026 model year through 2035. The regulations are two-pronged. First, it amends the ZEV Regulation to require an increasing number of zero-emission vehicles, and relies on currently available advanced vehicle technologies, including battery-electric, hydrogen fuel cell electric and plug-in hybrid electric-vehicles, to meet air quality and climate change emissions standards. Second, the Low-emission Vehicle Regulations were amended to include increasingly stringent standards for gasoline cars and heavier passenger trucks to continue to reduce smog-forming emissions (CARB, 2023).

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).

EO N-79-20

EO N-79-20 (September 2020) Governor Gavin Newsom signed EO N-79-20 in 2020 and it requires that 100 percent of new car sales in California be ZEVs by 2035. The plan targets 35 percent ZEV sales by 2026, 68 percent by 2030, and 100 percent by 2035 (CARB, 2023).

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).

<u>Renewable Energy Procurement</u>

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) further accelerated and expanded the RPS and requires an 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.

SB 1020

In 2022, the Governor approved SB 1020 (State of California, 2022). This bill requires the state board to conduct a series of public workshops to give interested parties an opportunity to comment on the plan and requires a portion of those workshops to be conducted in regions of the state that have the most significant exposure to pollutants. This bill includes as regions for these workshops federal extreme nonattainment areas that have communities with minority populations, communities with low-income populations, or both.

Under existing law, it was the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of all retail sales of electricity to California end-use customers and 100% of electricity procured to serve all state agencies by December 31, 2045.
This bill revised the state policy to instead provide that eligible renewable energy resources and zero-carbon resources supply 90% of all retail sales of electricity to California end-use customers by December 31, 2035, 95% of all retail sales of electricity to California end-use customers by December 31, 2040, 100% of all retail sales of electricity to California end-use customers by

December 31, 2045, and 100% of electricity procured to serve all state agencies by December 31, 2035, as specified.

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 in waste being disposed wherein 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.

AB 1826 (2014)

In October 2014 Governor Brown signed AB 1826 which requires businesses to recycle their organic waste as of April 1, 2016. The law also required that after January 1, 2016, local jurisdictions across the state were required to implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that

consist of five or more units. This required business generating over 8 cubic yards (CY) of waste per a week to arrange organic waste recycling services. The law also contained a trigger that allowed for increased implementation. For example, in 2019 CalRecycle changed the 8 CY threshold to 4 CY and then in 2020 to CY for business to implement organic recycling programs (CalRecycle, 2023).

Local Regulations

County of San Diego General Plan

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

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

Framework for CEQA Analysis

A number of agencies throughout the state, including multiple air districts, have drafted and/or adopted varying threshold approaches and guidelines for analyzing GHG emissions and global climate change in CEQA documents. The State of California has developed guidelines to address the significance of climate change impacts based on Appendix G of the CEQA Guidelines

Appendix G of the CEQA Guidelines

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

1. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.*

2. *Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

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

CEQA Guidelines Section 15064.4 states that the "determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." Section 15064.4(b) further states a lead agency should consider the following nonexclusive list of factors when assessing the significance of GHG emissions:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;

2. The extent to which project emissions exceed a threshold of significance that the lead agency determines applies to the project; and

3. The extent to which the project complies with regulations or requirements adopted to implement statewide, regional, or local plans for the reduction or mitigation for GHG emissions.

CEQA Guidelines Section 15064(h)(1) states that "the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable." A cumulative impact may be significant when the project's incremental effect, though individually limited, is cumulatively considerable. As discussed above, climate change results from incremental contributions of GHG emissions on a global scale. Section 15064.4 states that the "determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." Section 15064.4(b)(1)-(3) further states that, "a lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment: (1) the extent to which a project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting; (2) whether project emissions exceed a threshold of significance that the lead agency determines applies to the project; and, (3) the extent to which the project complies with regulations or requirements adopted to

implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions."

Recognizing that GHG emissions contribute to the cumulative impact condition of global climate change, section 15064(h)(1) of the CEQA Guidelines is also applicable. Section 15064(h)(1) states that "the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable." A cumulative impact may be significant when the project's incremental effect, though individually limited, is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of other past, current, and reasonably foreseeable probable future projects. As discussed above, climate change is the product of incremental contributions of GHG emissions on a global scale.

Finally, Section 15064(h)(3) of the CEQA Guidelines is pertinent. Section 15064(h)(3) states that: "[a] lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program…that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located."

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

York Drive Active Senior Living

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	160.00	Space	1.44	64,000.00	0
Retirement Community	183.00	Dwelling Unit	2.83	138,139.00	523

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	452.94	**CH4 Intensity (lb/MWhr)**	0.028	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS 2024 33% achieved 2020 60% will be achieved in 2030

Land Use - 4.27 acres... Building is 138,139 SF

Construction Phase - CS

Off-road Equipment -

Off-road Equipment - ce

Off-road Equipment - ce

Off-road Equipment - ce

Off-road Equipment - ce

Trips and VMT -

Grading - 22k CY import

York Drive Active Senior Living - San Diego County, Annual

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

Architectural Coating - Rule 67 Paint

Vehicle Trips - Updated per Traffic Study

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - Project would not install hearth options

Area Coating - Rule 67 Paints

Energy Use -

Construction Off-road Equipment Mitigation - Tier 4

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

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	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 3
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 3
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	18.00	25.00
tblFireplaces	NumberGas	100.65	0.00
tblFireplaces	NumberNoFireplace	18.30	183.00
tblFireplaces	NumberWood	64.05	0.00
tblGrading	AcresOfGrading	5.00	7.50
tblGrading	MaterialImported	0.00	22,000.00
tblLandUse	LandUseSquareFeet	183,000.00	138,139.00
tblLandUse	LotAcreage	36.60	2.83
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

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

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.028
tblProjectCharacteristics	CO2IntensityFactor	539.98	452.94
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.003
tblVehicleTrips	HO_TTP	39.60	39.00
tblVehicleTrips	HS_TTP	18.80	19.00
tblVehicleTrips	HW_TTP	41.60	42.00
tblVehicleTrips	ST_TR	2.03	3.70
tblVehicleTrips	SU_TR	1.95	3.70
tblVehicleTrips	WD_TR	2.40	3.70
tblWoodstoves	NumberCatalytic	9.15	0.00
tblWoodstoves	NumberNoncatalytic	9.15	0.00

2.0 Emissions Summary

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

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1378	1.2545	1.1989	3.4900e-003	0.1786	0.0475	0.2261	0.0619	0.0449	0.1068	0.0000	321.0984	321.0984	0.0381	0.0211	328.3419
2023	0.9686	0.7056	0.9015	2.1300e-003	0.0828	0.0295	0.1123	0.0223	0.0280	0.0503	0.0000	191.1766	191.1766	0.0238	6.3000e-003	193.6485
Maximum	**0.9686**	**1.2545**	**1.1989**	**3.4900e-003**	**0.1786**	**0.0475**	**0.2261**	**0.0619**	**0.0449**	**0.1068**	**0.0000**	**321.0984**	**321.0984**	**0.0381**	**0.0211**	**328.3419**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0632	0.6245	1.3083	3.4900e-003	0.1786	6.3400e-003	0.1849	0.0619	6.1600e-003	0.0680	0.0000	321.0982	321.0982	0.0381	0.0211	328.3417
2023	0.9171	0.3094	0.9827	2.1300e-003	0.0828	2.8500e-003	0.0857	0.0223	2.8000e-003	0.0251	0.0000	191.1765	191.1765	0.0238	6.3000e-003	193.6484
Maximum	**0.9171**	**0.6245**	**1.3083**	**3.4900e-003**	**0.1786**	**6.3400e-003**	**0.1849**	**0.0619**	**6.1600e-003**	**0.0680**	**0.0000**	**321.0982**	**321.0982**	**0.0381**	**0.0211**	**328.3417**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**11.39**	**52.35**	**-9.08**	**0.00**	**0.00**	**88.07**	**20.05**	**0.00**	**87.71**	**40.72**	**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)
2	**4-1-2022**	**6-30-2022**	0.3580	0.2291
3	**7-1-2022**	**9-30-2022**	0.4710	0.1961
4	**10-1-2022**	**12-31-2022**	0.5237	0.2280
5	**1-1-2023**	**3-31-2023**	0.4663	0.2098
6	**4-1-2023**	**6-30-2023**	1.2071	1.0165
		Highest	1.2071	1.0165

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	0.6719	0.0157	1.3597	7.0000e-005		7.5300e-003	7.5300e-003		7.5300e-003	7.5300e-003	0.0000	2.2224	2.2224	2.1400e-003	0.0000	2.2759
Energy	0.0108	0.0919	0.0391	5.9000e-004		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003	0.0000	270.0068	270.0068	0.0122	3.0300e-003	271.2148
Mobile	0.3411	0.3871	3.2137	6.7800e-003	0.7243	5.3100e-003	0.7296	0.1933	4.9500e-003	0.1982	0.0000	637.4527	637.4527	0.0448	0.0286	647.0813
Waste						0.0000	0.0000		0.0000	0.0000	17.0878	0.0000	17.0878	1.0099	0.0000	42.3343
Water						0.0000	0.0000		0.0000	0.0000	3.7827	49.0540	52.8366	0.3916	9.5000e-003	65.4560
Total	**1.0238**	**0.4947**	**4.6125**	**7.4400e-003**	**0.7243**	**0.0203**	**0.7445**	**0.1933**	**0.0199**	**0.2132**	**20.8705**	**958.7358**	**979.6063**	**1.4605**	**0.0411**	**1,028.3622**

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	0.6719	0.0157	1.3597	7.0000e-005		7.5300e-003	7.5300e-003		7.5300e-003	7.5300e-003	0.0000	2.2224	2.2224	2.1400e-003	0.0000	2.2759
Energy	0.0108	0.0919	0.0391	5.9000e-004		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003	0.0000	270.0068	270.0068	0.0122	3.0300e-003	271.2148
Mobile	0.3021	0.3185	2.6499	5.3300e-003	0.5648	4.2400e-003	0.5690	0.1507	3.9600e-003	0.1547	0.0000	500.5976	500.5976	0.0380	0.0237	508.6044
Waste						0.0000	0.0000		0.0000	0.0000	12.8158	0.0000	12.8158	0.7574	0.0000	31.7507
Water						0.0000	0.0000		0.0000	0.0000	3.0261	35.8117	38.8378	0.3130	7.5800e-003	48.9212
Total	**0.9848**	**0.4260**	**4.0487**	**5.9900e-003**	**0.5648**	**0.0192**	**0.5840**	**0.1507**	**0.0189**	**0.1697**	**15.8420**	**808.6385**	**824.4805**	**1.1227**	**0.0343**	**862.7669**

	ROG	NOx	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	**3.81**	**13.88**	**12.22**	**19.49**	**22.02**	**5.28**	**21.56**	**22.02**	**4.97**	**20.43**	**24.09**	**15.66**	**15.84**	**23.13**	**16.53**	**16.10**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2022	6/7/2022	5	5	
2	Grading	Grading	6/8/2022	6/17/2022	5	8	
3	Paving	Paving	6/18/2022	7/13/2022	5	18	

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

4	Building Construction	Building Construction	7/14/2022	5/31/2023	5	230	
5	Architectural Coating	Architectural Coating	4/27/2023	5/31/2023	5	25	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 8

Acres of Paving: 1.44

Residential Indoor: 279,731; Residential Outdoor: 93,244; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 3,840 (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	1	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	2	8.00	97	0.37
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	6.00	132	0.36
Paving	Rollers	1	6.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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

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	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	2,750.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	159.00	30.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	32.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0341	0.0000	0.0341	0.0170	0.0000	0.0170	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-003	0.0482	0.0235	5.0000e-005		2.3100e-003	2.3100e-003		2.1300e-003	2.1300e-003	0.0000	4.4346	4.4346	1.4300e-003	0.0000	4.4704
Total	**4.6000e-003**	**0.0482**	**0.0235**	**5.0000e-005**	**0.0341**	**2.3100e-003**	**0.0364**	**0.0170**	**2.1300e-003**	**0.0191**	**0.0000**	**4.4346**	**4.4346**	**1.4300e-003**	**0.0000**	**4.4704**

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

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.9000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1319	0.1319	0.0000	0.0000	0.1331
Total	**6.0000e-005**	**4.0000e-005**	**4.9000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1319**	**0.1319**	**0.0000**	**0.0000**	**0.1331**

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					0.0341	0.0000	0.0341	0.0170	0.0000	0.0170	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.2000e-004	2.6800e-003	0.0250	5.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	4.4346	4.4346	1.4300e-003	0.0000	4.4704
Total	**6.2000e-004**	**2.6800e-003**	**0.0250**	**5.0000e-005**	**0.0341**	**8.0000e-005**	**0.0342**	**0.0170**	**8.0000e-005**	**0.0171**	**0.0000**	**4.4346**	**4.4346**	**1.4300e-003**	**0.0000**	**4.4704**

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

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.9000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1319	0.1319	0.0000	0.0000	0.1331
Total	**6.0000e-005**	**4.0000e-005**	**4.9000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1319**	**0.1319**	**0.0000**	**0.0000**	**0.1331**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0299	0.0000	0.0299	0.0139	0.0000	0.0139	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1400e-003	0.0767	0.0521	1.1000e-004		3.4000e-003	3.4000e-003		3.1300e-003	3.1300e-003	0.0000	9.3288	9.3288	3.0200e-003	0.0000	9.4042
Total	**7.1400e-003**	**0.0767**	**0.0521**	**1.1000e-004**	**0.0299**	**3.4000e-003**	**0.0333**	**0.0139**	**3.1300e-003**	**0.0171**	**0.0000**	**9.3288**	**9.3288**	**3.0200e-003**	**0.0000**	**9.4042**

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

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0900e-003	0.2315	0.0546	8.6000e-004	0.0236	2.1500e-003	0.0257	6.4700e-003	2.0600e-003	8.5300e-003	0.0000	86.1867	86.1867	4.1400e-003	0.0137	90.3703
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	1.5000e-004	1.1000e-004	1.2800e-003	0.0000	4.2000e-004	0.0000	4.2000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3429	0.3429	1.0000e-005	1.0000e-005	0.3462
Total	**6.2400e-003**	**0.2316**	**0.0559**	**8.6000e-004**	**0.0240**	**2.1500e-003**	**0.0261**	**6.5800e-003**	**2.0600e-003**	**8.6400e-003**	**0.0000**	**86.5296**	**86.5296**	**4.1500e-003**	**0.0137**	**90.7165**

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					0.0299	0.0000	0.0299	0.0139	0.0000	0.0139	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0168	0.0638	1.1000e-004		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	9.3288	9.3288	3.0200e-003	0.0000	9.4042
Total	**1.6300e-003**	**0.0168**	**0.0638**	**1.1000e-004**	**0.0299**	**2.0000e-004**	**0.0301**	**0.0139**	**2.0000e-004**	**0.0141**	**0.0000**	**9.3288**	**9.3288**	**3.0200e-003**	**0.0000**	**9.4042**

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

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0900e-003	0.2315	0.0546	8.6000e-004	0.0236	2.1500e-003	0.0257	6.4700e-003	2.0600e-003	8.5300e-003	0.0000	86.1867	86.1867	4.1400e-003	0.0137	90.3703
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	1.5000e-004	1.1000e-004	1.2800e-003	0.0000	4.2000e-004	0.0000	4.2000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3429	0.3429	1.0000e-005	1.0000e-005	0.3462
Total	**6.2400e-003**	**0.2316**	**0.0559**	**8.6000e-004**	**0.0240**	**2.1500e-003**	**0.0261**	**6.5800e-003**	**2.0600e-003**	**8.6400e-003**	**0.0000**	**86.5296**	**86.5296**	**4.1500e-003**	**0.0137**	**90.7165**

3.4 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.1900e-003	0.0423	0.0557	9.0000e-005		2.1400e-003	2.1400e-003		1.9700e-003	1.9700e-003	0.0000	7.6886	7.6886	2.4900e-003	0.0000	7.7507
Paving	1.8900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.0800e-003**	**0.0423**	**0.0557**	**9.0000e-005**		**2.1400e-003**	**2.1400e-003**		**1.9700e-003**	**1.9700e-003**	**0.0000**	**7.6886**	**7.6886**	**2.4900e-003**	**0.0000**	**7.7507**

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

3.4 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.5000e-004	1.7700e-003	1.0000e-005	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.4748	0.4748	1.0000e-005	1.0000e-005	0.4793
Total	**2.1000e-004**	**1.5000e-004**	**1.7700e-003**	**1.0000e-005**	**5.8000e-004**	**0.0000**	**5.8000e-004**	**1.5000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4748**	**0.4748**	**1.0000e-005**	**1.0000e-005**	**0.4793**

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	1.0800e-003	4.6700e-003	0.0664	9.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	7.6886	7.6886	2.4900e-003	0.0000	7.7507
Paving	1.8900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.9700e-003**	**4.6700e-003**	**0.0664**	**9.0000e-005**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**7.6886**	**7.6886**	**2.4900e-003**	**0.0000**	**7.7507**

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

3.4 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.5000e-004	1.7700e-003	1.0000e-005	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.4748	0.4748	1.0000e-005	1.0000e-005	0.4793
Total	**2.1000e-004**	**1.5000e-004**	**1.7700e-003**	**1.0000e-005**	**5.8000e-004**	**0.0000**	**5.8000e-004**	**1.5000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4748**	**0.4748**	**1.0000e-005**	**1.0000e-005**	**0.4793**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0814	0.7344	0.7380	1.2900e-003		0.0360	0.0360		0.0342	0.0342	0.0000	110.3826	110.3826	0.0239	0.0000	110.9788
Total	**0.0814**	**0.7344**	**0.7380**	**1.2900e-003**		**0.0360**	**0.0360**		**0.0342**	**0.0342**	**0.0000**	**110.3826**	**110.3826**	**0.0239**	**0.0000**	**110.9788**

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

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0500e-003	0.1007	0.0330	3.9000e-004	0.0122	1.0600e-003	0.0132	3.5100e-003	1.0100e-003	4.5200e-003	0.0000	38.1627	38.1627	1.1600e-003	5.5400e-003	39.8436
Worker	0.0280	0.0203	0.2384	6.9000e-004	0.0778	4.5000e-004	0.0782	0.0207	4.2000e-004	0.0211	0.0000	63.9648	63.9648	2.0100e-003	1.8500e-003	64.5652
Total	**0.0321**	**0.1211**	**0.2714**	**1.0800e-003**	**0.0899**	**1.5100e-003**	**0.0914**	**0.0242**	**1.4300e-003**	**0.0256**	**0.0000**	**102.1276**	**102.1276**	**3.1700e-003**	**7.3900e-003**	**104.4089**

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	0.0195	0.2475	0.8236	1.2900e-003		2.2400e-003	2.2400e-003		2.2400e-003	2.2400e-003	0.0000	110.3824	110.3824	0.0239	0.0000	110.9786
Total	**0.0195**	**0.2475**	**0.8236**	**1.2900e-003**		**2.2400e-003**	**2.2400e-003**		**2.2400e-003**	**2.2400e-003**	**0.0000**	**110.3824**	**110.3824**	**0.0239**	**0.0000**	**110.9786**

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

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0500e-003	0.1007	0.0330	3.9000e-004	0.0122	1.0600e-003	0.0132	3.5100e-003	1.0100e-003	4.5200e-003	0.0000	38.1627	38.1627	1.1600e-003	5.5400e-003	39.8436
Worker	0.0280	0.0203	0.2384	6.9000e-004	0.0778	4.5000e-004	0.0782	0.0207	4.2000e-004	0.0211	0.0000	63.9648	63.9648	2.0100e-003	1.8500e-003	64.5652
Total	**0.0321**	**0.1211**	**0.2714**	**1.0800e-003**	**0.0899**	**1.5100e-003**	**0.0914**	**0.0242**	**1.4300e-003**	**0.0256**	**0.0000**	**102.1276**	**102.1276**	**3.1700e-003**	**7.3900e-003**	**104.4089**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0667	0.6006	0.6481	1.1400e-003		0.0278	0.0278		0.0264	0.0264	0.0000	97.7442	97.7442	0.0209	0.0000	98.2668
Total	**0.0667**	**0.6006**	**0.6481**	**1.1400e-003**		**0.0278**	**0.0278**		**0.0264**	**0.0264**	**0.0000**	**97.7442**	**97.7442**	**0.0209**	**0.0000**	**98.2668**

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

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-003	0.0719	0.0254	3.3000e-004	0.0108	4.2000e-004	0.0112	3.1100e-003	4.1000e-004	3.5100e-003	0.0000	32.5054	32.5054	9.8000e-004	4.7100e-003	33.9335
Worker	0.0232	0.0161	0.1962	5.9000e-004	0.0689	3.8000e-004	0.0692	0.0183	3.5000e-004	0.0187	0.0000	55.1655	55.1655	1.6200e-003	1.5200e-003	55.6588
Total	**0.0251**	**0.0880**	**0.2216**	**9.2000e-004**	**0.0796**	**8.0000e-004**	**0.0804**	**0.0214**	**7.6000e-004**	**0.0222**	**0.0000**	**87.6708**	**87.6708**	**2.6000e-003**	**6.2300e-003**	**89.5923**

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	0.0172	0.2191	0.7291	1.1400e-003		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	97.7441	97.7441	0.0209	0.0000	98.2667
Total	**0.0172**	**0.2191**	**0.7291**	**1.1400e-003**		**1.9800e-003**	**1.9800e-003**		**1.9800e-003**	**1.9800e-003**	**0.0000**	**97.7441**	**97.7441**	**0.0209**	**0.0000**	**98.2667**

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

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-003	0.0719	0.0254	3.3000e-004	0.0108	4.2000e-004	0.0112	3.1100e-003	4.1000e-004	3.5100e-003	0.0000	32.5054	32.5054	9.8000e-004	4.7100e-003	33.9335
Worker	0.0232	0.0161	0.1962	5.9000e-004	0.0689	3.8000e-004	0.0692	0.0183	3.5000e-004	0.0187	0.0000	55.1655	55.1655	1.6200e-003	1.5200e-003	55.6588
Total	**0.0251**	**0.0880**	**0.2216**	**9.2000e-004**	**0.0796**	**8.0000e-004**	**0.0804**	**0.0214**	**7.6000e-004**	**0.0222**	**0.0000**	**87.6708**	**87.6708**	**2.6000e-003**	**6.2300e-003**	**89.5923**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8733					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4000e-003	0.0163	0.0226	4.0000e-005		8.9000e-004	8.9000e-004		8.9000e-004	8.9000e-004	0.0000	3.1916	3.1916	1.9000e-004	0.0000	3.1963
Total	**0.8757**	**0.0163**	**0.0226**	**4.0000e-005**		**8.9000e-004**	**8.9000e-004**		**8.9000e-004**	**8.9000e-004**	**0.0000**	**3.1916**	**3.1916**	**1.9000e-004**	**0.0000**	**3.1963**

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

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	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	1.0800e-003	7.5000e-004	9.1400e-003	3.0000e-005	3.2100e-003	2.0000e-005	3.2300e-003	8.5000e-004	2.0000e-005	8.7000e-004	0.0000	2.5700	2.5700	8.0000e-005	7.0000e-005	2.5930
Total	**1.0800e-003**	**7.5000e-004**	**9.1400e-003**	**3.0000e-005**	**3.2100e-003**	**2.0000e-005**	**3.2300e-003**	**8.5000e-004**	**2.0000e-005**	**8.7000e-004**	**0.0000**	**2.5700**	**2.5700**	**8.0000e-005**	**7.0000e-005**	**2.5930**

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	0.8733					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7000e-004	1.6100e-003	0.0229	4.0000e-005		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	3.1916	3.1916	1.9000e-004	0.0000	3.1963
Total	**0.8736**	**1.6100e-003**	**0.0229**	**4.0000e-005**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**3.1916**	**3.1916**	**1.9000e-004**	**0.0000**	**3.1963**

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

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	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	1.0800e-003	7.5000e-004	9.1400e-003	3.0000e-005	3.2100e-003	2.0000e-005	3.2300e-003	8.5000e-004	2.0000e-005	8.7000e-004	0.0000	2.5700	2.5700	8.0000e-005	7.0000e-005	2.5930
Total	**1.0800e-003**	**7.5000e-004**	**9.1400e-003**	**3.0000e-005**	**3.2100e-003**	**2.0000e-005**	**3.2300e-003**	**8.5000e-004**	**2.0000e-005**	**8.7000e-004**	**0.0000**	**2.5700**	**2.5700**	**8.0000e-005**	**7.0000e-005**	**2.5930**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Limit Parking Supply

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	0.3021	0.3185	2.6499	5.3300e-003	0.5648	4.2400e-003	0.5690	0.1507	3.9600e-003	0.1547	0.0000	500.5976	500.5976	0.0380	0.0237	508.6044
Unmitigated	0.3411	0.3871	3.2137	6.7800e-003	0.7243	5.3100e-003	0.7296	0.1933	4.9500e-003	0.1982	0.0000	637.4527	637.4527	0.0448	0.0286	647.0813

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Retirement Community	677.10	677.10	677.10	1,936,126	1,509,852
Total	677.10	677.10	677.10	1,936,126	1,509,852

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
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Retirement Community	10.80	7.30	7.50	42.00	19.00	39.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Retirement Community	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

5.0 Energy Detail

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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	163.6172	163.6172	0.0101	1.0800e-003	164.1930
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	163.6172	163.6172	0.0101	1.0800e-003	164.1930
NaturalGas Mitigated	0.0108	0.0919	0.0391	5.9000e-004		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003	0.0000	106.3896	106.3896	2.0400e-003	1.9500e-003	107.0218
NaturalGas Unmitigated	0.0108	0.0919	0.0391	5.9000e-004		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003	0.0000	106.3896	106.3896	2.0400e-003	1.9500e-003	107.0218

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					
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
Retirement Community	1.99367e+006	0.0108	0.0919	0.0391	5.9000e-004		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003	0.0000	106.3896	106.3896	2.0400e-003	1.9500e-003	107.0218
Total		**0.0108**	**0.0919**	**0.0391**	**5.9000e-004**		**7.4300e-003**	**7.4300e-003**		**7.4300e-003**	**7.4300e-003**	**0.0000**	**106.3896**	**106.3896**	**2.0400e-003**	**1.9500e-003**	**107.0218**

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					
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
Retirement Community	1.99367e+006	0.0108	0.0919	0.0391	5.9000e-004		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003	0.0000	106.3896	106.3896	2.0400e-003	1.9500e-003	107.0218
Total		**0.0108**	**0.0919**	**0.0391**	**5.9000e-004**		**7.4300e-003**	**7.4300e-003**		**7.4300e-003**	**7.4300e-003**	**0.0000**	**106.3896**	**106.3896**	**2.0400e-003**	**1.9500e-003**	**107.0218**

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	22400	4.6021	2.8000e-004	3.0000e-005	4.6183
Retirement Community	773984	159.0151	9.8300e-003	1.0500e-003	159.5747
Total		**163.6172**	**0.0101**	**1.0800e-003**	**164.1930**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	22400	4.6021	2.8000e-004	3.0000e-005	4.6183
Retirement Community	773984	159.0151	9.8300e-003	1.0500e-003	159.5747
Total		**163.6172**	**0.0101**	**1.0800e-003**	**164.1930**

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	0.6719	0.0157	1.3597	7.0000e-005		7.5300e-003	7.5300e-003		7.5300e-003	7.5300e-003	0.0000	2.2224	2.2224	2.1400e-003	0.0000	2.2759
Unmitigated	0.6719	0.0157	1.3597	7.0000e-005		7.5300e-003	7.5300e-003		7.5300e-003	7.5300e-003	0.0000	2.2224	2.2224	2.1400e-003	0.0000	2.2759

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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0873					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5436					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0410	0.0157	1.3597	7.0000e-005		7.5300e-003	7.5300e-003		7.5300e-003	7.5300e-003	0.0000	2.2224	2.2224	2.1400e-003	0.0000	2.2759
Total	**0.6719**	**0.0157**	**1.3597**	**7.0000e-005**		**7.5300e-003**	**7.5300e-003**		**7.5300e-003**	**7.5300e-003**	**0.0000**	**2.2224**	**2.2224**	**2.1400e-003**	**0.0000**	**2.2759**

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	0.0873					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5436					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0410	0.0157	1.3597	7.0000e-005		7.5300e-003	7.5300e-003		7.5300e-003	7.5300e-003	0.0000	2.2224	2.2224	2.1400e-003	0.0000	2.2759
Total	**0.6719**	**0.0157**	**1.3597**	**7.0000e-005**		**7.5300e-003**	**7.5300e-003**		**7.5300e-003**	**7.5300e-003**	**0.0000**	**2.2224**	**2.2224**	**2.1400e-003**	**0.0000**	**2.2759**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

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	38.8378	0.3130	7.5800e-003	48.9212
Unmitigated	52.8366	0.3916	9.5000e-003	65.4560

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Retirement Community	11.9232 / 7.51679	52.8366	0.3916	9.5000e-003	65.4560
Total		**52.8366**	**0.3916**	**9.5000e-003**	**65.4560**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Retirement Community	9.53855 / 4.51007	38.8378	0.3130	7.5800e-003	48.9212
Total		**38.8378**	**0.3130**	**7.5800e-003**	**48.9212**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.8158	0.7574	0.0000	31.7507
Unmitigated	17.0878	1.0099	0.0000	42.3343

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Retirement Community	84.18	17.0878	1.0099	0.0000	42.3343
Total		**17.0878**	**1.0099**	**0.0000**	**42.3343**

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

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Retirement Community	63.135	12.8158	0.7574	0.0000	31.7507
Total		**12.8158**	**0.7574**	**0.0000**	**31.7507**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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

Year	RPS Achieved	Co2 Intensity	CH4 Intensity	N2O Intensity	
2020 Base Year	33.00%	539.98	0.0330	0.0040	
Any Year No RPS Included	0.0%	805.94	0.0493	0.0060	
2009	10.5%	721.32	0.0441	0.0053	
2020	33.0%	539.98	0.0330	0.0040	33% Required by Law
2021	35.7%	518.22	0.0317	0.0038	
2022	38.4%	496.46	0.0303	0.0037	
2023	41.1%	474.70	0.0290	0.0035	
2024	43.8%	452.94	0.0277	0.0034	
2025	46.5%	431.18	0.0264	0.0032	
2026	49.2%	409.42	0.0250	0.0030	
2027	51.9%	387.66	0.0237	0.0029	
2028	54.6%	365.90	0.0224	0.0027	
2029	57.3%	344.14	0.0210	0.0025	
2030	60.0%	322.38	0.0197	0.0024	60% Required by Law

NREL
NATIONAL RENEWABLE ENERGY LABORATORY

Caution: Photovoltaic system performance predictions calculated by PVWatts® include many inherent assumptions and uncertainties and do not reflect variations between PV technologies nor site-specific characteristics except as represented by PVWatts® inputs. For example, PV modules with better performance are not differentiated within PVWatts® from lesser performing modules. Both NREL and private companies provide more sophisticated PV modeling tools (such as the System Advisor Model at https://sam.nrel.gov) that allow for more precise and complex modeling of PV systems.

The expected range is based on 30 years of actual weather data at the given location and is intended to provide an indication of the variation you might see. For more information, please refer to this NREL report: The Error Report.

The energy output range is based on analysis of 30 years of historical weather data for nearby , and is intended to provide an indication of the possible interannual variability in generation for a Fixed (open rack) PV system at this location.

RESULTS

304,559 kWh/Year*

System output may range from 292,742 to 306,478 kWh per year near this location.

Month	Solar Radiation (kWh / m^2 / day)	AC Energy (kWh)	Value ($)
January	4.68	20,795	3,400
February	5.07	20,166	3,297
March	6.01	26,248	4,292
April	6.54	27,490	4,495
May	6.69	28,652	4,685
June	7.04	29,100	4,758
July	7.12	30,096	4,921
August	7.30	30,604	5,004
September	6.70	27,236	4,453
October	5.63	24,110	3,942
November	5.00	20,938	3,423
December	4.29	19,124	3,127
Annual	**6.01**	**304,559**	**$ 49,797**

Location and Station Identification

Requested Location	vista ca
Weather Data Source	Lat, Lon: 33.21, -117.22 1.0 mi
Latitude	33.21° N
Longitude	117.22° W

PV System Specifications *(Residential)*

DC System Size	183 kW
Module Type	Premium
Array Type	Fixed (roof mount)
Array Tilt	20°
Array Azimuth	180°
System Losses	14.08%
Inverter Efficiency	96%
DC to AC Size Ratio	1.2

Economics

Average Retail Electricity Rate	0.164 $/kWh

Performance Metrics

Capacity Factor	19.0%

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

York Drive Active Senior Development 183 kW Solar

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	805.94	**CH4 Intensity (lb/MWhr)**	0.049	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project would install 183 kW PV system

Land Use - Rooftop Solar

Construction Phase -

Off-road Equipment -

Off-road Equipment - zero hours

Trips and VMT - zero

Grading -

Architectural Coating -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Woodstoves - blank

Area Coating -

Landscape Equipment - zero

Energy Use - Solar Calculated in PV Watts by NREL

Water And Wastewater -

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation - Per NREL = 304,559 kWh

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.049
tblProjectCharacteristics	CO2IntensityFactor	539.98	805.94
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.006
tblTripsAndVMT	WorkerTripNumber	3.00	0.00

2.0 Emissions Summary

York Drive Active Senior Development 183 kW Solar - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	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**

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

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	-111.3371	-111.3371	-0.0068	-0.0008	-111.7533
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**-111.3371**	**-111.3371**	**-0.0068**	**-0.0008**	**-111.7533**

	ROG	NOx	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**	**556,685,500.00**	**556,685,500.00**	**0.00**	**0.00**	**558,766,650.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	12/9/2018	12/10/2018	5	1	

Acres of Grading (Site Preparation Phase): 0

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	0.00	187	0.41

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	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2018

Unmitigated Construction On-Site

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

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3.2 Site Preparation - 2018

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

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3.2 Site Preparation - 2018

Mitigated Construction Off-Site

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

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	-111.3371	-111.3371	-0.0068	-0.0008	-111.7533
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	-304559	-111.3371	-0.0068	-0.0008	-111.7533
Total		**-111.3371**	**-0.0068**	**-0.0008**	**-111.7533**

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation