Attachment G – Greenhouse Gas Emissions Technical Memorandum

This page left intentionally blank.

Harris & Associates

TECHNICAL MEMORANDUM

To: Lev Gershman, Managing Partner, Tideline Partners
From: Sharon Toland, Project Manager, Harris & Associates and Kelsey Hawkins, Deputy Project Manager, Harris & Associates
Subject: Tideline Kensho Residential Project – Greenhouse Gas Emissions Analysis
Date: May 1, 2023
CC: Ryan Binns, Senior Director, Harris & Associates
Att: 1, CalEEMod Results

Dear Mr. Gershman,

The following presents the results of Harris & Associates' analysis of the potential impacts of greenhouse gas (GHG) emissions from implementation of the proposed Tideline Kensho Residential Project (Project). The Project would develop 183 dwelling units, including three three-story buildings and one four-story building with covered parking included in three of the four buildings. The site would be rezoned out of the Pheasant Hill Specific Plan and into the Downtown Vista Specific Plan and would also include a General Plan amendment, a zoning change, a Site Development Plan, and a Tentative Parcel Map. The Project also proposes off-site sidewalk improvements on the northern side of Guajome Street from Eddie Drive to the Project site and on the southern side of Guajome Street between the Project's western property line and Mercantile Street. The Project site is on the southern side of Guajome Street just west of the existing SPRINTER light-rail line. Adjacent properties include single-family residential to the north, south, and west (and across Lado De Loma Drive). Commercial development is across Guajome Street, and vacant parcels, commercial development, and multi-family residential development are to the east across the SPRINTER tracks.

Background

A GHG is any gas that absorbs infrared radiation and traps heat in the atmosphere. GHGs are produced from natural processes and human activities. The accumulation of GHGs in the atmosphere influences the long-term atmospheric temperatures and contributes to global climate change. In California, per Assembly Bill 32 (2016), GHGs are defined to include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, plus chlorofluorocarbons and other chlorine- or bromine-containing gases. Hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are synthetic, powerful GHGs that are emitted from a variety of industrial processes and the production of chlorodifluoromethane. Construction or operation of the Project would not include any industrial processes, and chlorodifluoromethane has been mostly phased out of use in the United States, with the exception of feedstock production (USEPA 2022). Therefore, these GHGs are not discussed further in this memorandum. CO_2 accounts for the largest amount of GHG emissions, and collectively, CO_2, CH_4, and N_2O amount to 80 percent of the total radiative forcing from well-mixed GHGs (CARB 2014).

For each GHG, a global warming potential has been calculated to reflect how long emissions remain in the atmosphere and how strongly each GHG absorbs energy on a per-kilogram basis relative to CO_2. For example, one pound of CH_4 has 25 times more heat-capturing potential than one pound of CO_2. To simplify reporting and analysis, GHG emissions are typically reported in metric tons of carbon dioxide equivalent ($MTCO_2e$). Global warming potential is a metric that indicates the relative climate forcing of a kilogram of emissions when averaged

over the period of interest. Table 1, Global Warming Potential for Select Greenhouse Gases, identifies the CO_2e and atmospheric lifetimes of basic GHGs.

Table 1. Global Warming Potential for Select Greenhouse Gases

Pollutant	Atmospheric Lifetime (years)	Global Warming Potential (100-year)[1]
CH_4	12	28
CO_2	~100	1
N_2O	121	265

Source: CAPCOA 2021. Consistent with CalEEMod, Version 2020.4.0.
Notes: CH_4 = methane; CO_2 = carbon dioxide; N_2O = nitrous oxide
1 The warming effects over a 100-year period relative to other GHGs.

Regulatory Setting

Federal

The U.S. Environmental Protection Agency is responsible for implementing federal policy to address global climate change. In 2009, the U.S. Environmental Protection Agency issued a Final Rule for mandatory reporting of GHG emissions, which applies to fossil fuel and industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and requires annual reporting of emissions. This rule does not regulate the emission of GHGs; it only requires the monitoring and reporting of GHGs for those sources above certain thresholds.

State

California has enacted a variety of legislation relating to climate change, much of which has set aggressive goals for GHG emissions reductions throughout the state. California Executive Order S-03-05 (2005) establishes the goal of reducing GHG emissions to 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050. In September 2006, Governor Schwarzenegger signed California's Global Warming Solutions Act of 2006 (Assembly Bill 32), requiring the California Air Resources Board to establish a statewide GHG emissions cap for 2020 based on 1990 emissions and to adopt mandatory reporting rules for significant sources of GHG emissions. In April 2015, Governor Brown signed Executive Order B-30-15, which established the goal of reducing GHG emissions to 40 percent below 1990 levels by 2030.

Local

The City of Vista adopted an updated Climate Action Plan (CAP) in October 2021. The CAP includes targets to reduce Citywide GHG emissions by four percent below 2012 levels by 2020 and by 42 percent below 2012 levels by 2030. The City would meet its 2020 emissions reduction target without additional City-level action based on existing activities and trends. However, to meet the City's 2030 reduction target, additional actions beyond those implemented at the federal and state level are required. The CAP identifies strategies and measures to reduce GHG emissions Citywide from a variety of emissions categories to meet the City's 2030 target. CAP consistency is anticipated to be determined through a CAP Consistency Review Checklist (Checklist). The Checklist would contain GHG reduction measures applicable to development projects that are required to be implemented on a project-by-project basis to ensure that the specific emissions targets identified in the CAP are achieved. Once the process for determining project consistency is adopted, the CAP would be a qualified plan that may be used for the specific purpose of streamlining the California Environmental Quality Act (CEQA) analysis of GHG emissions for subsequent projects.

Significance Thresholds

Given the relatively low levels of emissions generated by a typical development in relationship to the total amount of GHG emissions generated on a national or global basis, individual development projects are not expected to result in significant, direct impacts with respect to climate change. However, given the magnitude of the impact of GHG emissions on the global climate, GHG emissions from new development could result in significant,

cumulative impacts with respect to climate change. Thus, the potential for a significant GHG impact is limited to cumulative impacts.

According to Appendix G of the CEQA Guidelines, a project would have a significant climate change impact if it would:

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

The determination of significance is governed by CEQA Guidelines, Section 15064.4, which 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. A lead agency shall have discretion to determine, in the context of a particular project, whether to [use a quantitative model or qualitative model]." In turn, CEQA Guidelines, Section 15064.4(b), clarifies that a lead agency should consider "whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project." Therefore, consistent with CEQA Guidelines, Section 15064.4, the GHG analysis for the Project appropriately relies on a threshold based on the exercise of careful judgment and believed to be appropriate in the context of this particular Project.

The potential GHG impacts from implementation of the Downtown Vista Specific Plan were determined based on consistency with GHG reduction measures recommended by state agencies and a regional goal of reducing GHG emissions by 35 percent compared to business-as-usual. The reduction measures and target have been replaced by the City's local climate planning efforts. As previously stated, the City has adopted a CAP, but the process for determining project consistency with the CAP is not yet available. The City has adopted interim guidance for evaluating individual development projects in the City based on the statewide emissions reduction targets and the previous CAP (City of Vista 2016). In accordance with the City's guidance, if total Project annual GHG emissions are less than 1,185 $MTCO_2e$, then the Project would not generate GHG emissions that would have a significant impact on the environment.

Neither the San Diego County Air Pollution Control District nor the City has adopted thresholds for determining the significance of a project's temporary construction GHG emissions. To be conservative in accounting for the Project's GHG emissions, the construction period emissions were amortized (i.e., averaged) over the anticipated 30-year lifespan of the Project buildings and added to the Project's operational emissions.

Impact Analysis

Construction

Construction activities associated with the Project would result in short-term GHG emissions from heavy equipment and construction worker vehicles. Project construction emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2020.4.0, based on construction information provided by the applicant, including construction schedule (approximately 21 months total), material movement (net export of 20,000 cubic yards), construction worker trips (B&G Consultants 2023), and total disturbance area (five acres). CalEEMod default inputs were assumed for construction equipment and vendor and haul vehicle trips. Model assumptions are provided in Attachment 1, CalEEMod Results.

Total GHG emissions associated with construction of the Project would be approximately 893 $MTCO_2e$. Amortized construction emissions for the Project would be 30 $MTCO_2e$ per year. The significance of the amortized construction emissions is addressed with operational emissions below.

Operation

Following construction, operation of the Project would result in a net increase in GHG emissions associated with vehicle trips, buildings (natural gas, purchased electricity), water consumption (energy embodied in potable water), solid waste management (including transport and landfill gas generation), and area sources (landscape equipment). Operational impacts were also estimated using CalEEMod. CalEEMod default inputs were assumed for the Project,

with the exception of vehicle trips and landscaping water use. Vehicle trip generation data was obtained from the Project's Local Transportation Study (CRA 2022). Vehicle trip length was adjusted to the regional trip estimate for residential use reported in the (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region (SANDAG 2002). The trip rate and length did not account for the Project's increased density compared to existing conditions, proximity to transit service, and implementation of new pedestrian facilities. Additionally, default indoor water use did not account for implementation of low-water use appliances. Therefore, these measures were selected in CalEEMod. Model assumptions are provided in Attachment 1. Calculated GHG emissions from Project operation are presented in Table 2, Estimated Annual Operational Emissions.

Table 2. Estimated Annual Operational Emissions

Emissions Source	CO_2e Emissions (metric tons)
Vehicle Emissions	491
Electricity	269
Natural Gas	71
Solid Waste	42
Water Use	58
Area Sources	2
Amortized Construction Emissions	30
Total Annual Emissions	**963**

Source: Attachment 1.
Notes: CO_2e = carbon dioxide equivalent

As shown in Table 2, GHG emissions from the Project's ongoing operation and amortized construction would be approximately 963 $MTCO_2e$, which is below the City's significance threshold of 1,185 $MTCO_2e$. This impact would be less than significant.

Summary

Implementation of the Project would not result in a significant impact related to GHG emissions consistent with the findings of the Downtown Vista Specific Plan Update Program Environmental Impact Report (City of Vista 2010). No mitigation measures would be required.

References

B&G Consultants. 2023. Kensho Multi-Family Housing Project Estimated On-Site Manpower Analysis. January.

CARB (California Air Resources Board). 2014. First Update to the Climate Change Scoping Plan: Building on the Framework Pursuant to AB 32, the California Global Warming Solutions Act of 2006. May. Accessed May 2023. https://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.

CAPCOA (California Air Pollution Control Officers Association). 2021. "Appendix A: Calculation Details for CalEEMod." In California Emissions Estimator Model Users Guide. Version 2020.4.0. May.

City of Vista. 2010. Downtown Vista Specific Plan Update Program Environmental Impact Report (SCH No. 2009061018). March 11.

City of Vista. 2016. Interim Guidance Memorandum on Assessing GHG Emissions from Projects Subject to CEQA.

City of Vista. 2021. City of Vista Climate Action Plan. October.

CRA (CR Associates). 2022. Pheasant Hill Multi-Family Local Transportation Study. December.

SANDAG (San Diego Association of Governments). 2002. (Not So) Brief Guide of Vehicular Traffic Generation Rates For The San Diego Region. April.

USEPA (U.S. Environmental Protection Agency). 2022. "Phaseout of Ozone-Depleting Substances (ODS)." Last updated June 16. Accessed May 2023. https://www.epa.gov/ods-phaseout.

Attachment 1. CalEEMod Results

This page intentionally left blank.

Tideline - Kensho Residential - San Diego Air Basin, Annual

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

Tideline - Kensho Residential

San Diego Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	71.69	1000sqft	1.00	71,692.00	0
Other Non-Asphalt Surfaces	20.92	1000sqft	0.40	20,922.00	0
Parking Lot	48.05	1000sqft	0.60	48,048.00	0
Apartments Mid Rise	183.00	Dwelling Unit	3.00	262,787.00	523

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - DU and SF per applicant data needs list.

Construction Phase - Construction schedule per applicant - manpower analysis jan 2023

Trips and VMT - Revised worker trips per manpower analysis from applicant Jan 2023

Demolition - Demo per updated submittal drawings

Grading -

Vehicle Trips - Revised trip rates and lengths per the TIA (CRA 2022)

Woodstoves - No hearths assumed

Water And Wastewater - Landscaping water use from submittal drawings

Tideline - Kensho Residential - San Diego Air Basin, Annual

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

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	130.00
tblConstructionPhase	NumDays	230.00	260.00
tblConstructionPhase	NumDays	8.00	30.00
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	NumDays	18.00	30.00
tblConstructionPhase	NumDays	5.00	60.00
tblFireplaces	NumberGas	100.65	0.00
tblFireplaces	NumberNoFireplace	18.30	183.00
tblFireplaces	NumberWood	64.05	0.00
tblGrading	MaterialExported	0.00	20,000.00
tblLandUse	LandUseSquareFeet	71,690.00	71,692.00
tblLandUse	LandUseSquareFeet	20,920.00	20,922.00
tblLandUse	LandUseSquareFeet	48,050.00	48,048.00
tblLandUse	LandUseSquareFeet	183,000.00	262,787.00
tblLandUse	LotAcreage	1.65	1.00
tblLandUse	LotAcreage	0.48	0.40
tblLandUse	LotAcreage	1.10	0.60
tblLandUse	LotAcreage	4.82	3.00
tblTripsAndVMT	WorkerTripNumber	15.00	14.00
tblTripsAndVMT	WorkerTripNumber	15.00	14.00
tblTripsAndVMT	WorkerTripNumber	191.00	160.00
tblTripsAndVMT	WorkerTripNumber	20.00	10.00
tblTripsAndVMT	WorkerTripNumber	38.00	36.00
tblTripsAndVMT	WorkerTripNumber	18.00	70.00
tblVehicleTrips	HO_TL	7.50	7.90
tblVehicleTrips	HS_TL	7.30	7.90

Tideline - Kensho Residential - San Diego Air Basin, Annual

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

tblVehicleTrips	HW_TL	10.80	7.90
tblVehicleTrips	ST_TR	4.91	6.00
tblVehicleTrips	SU_TR	4.09	6.00
tblVehicleTrips	WD_TR	5.44	6.00
tblWater	OutdoorWaterUseRate	7,516,791.61	1,283,121.00
tblWoodstoves	NumberCatalytic	9.15	0.00
tblWoodstoves	NumberNoncatalytic	9.15	0.00

2.0 Emissions Summary

Tideline - Kensho Residential - San Diego Air Basin, Annual

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

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0453	0.5521	0.4076	1.3300e-003	0.1060	0.0200	0.1260	0.0453	0.0185	0.0638	0.0000	123.5597	123.5597	0.0222	9.2200e-003	126.8626
2024	1.7403	2.2014	2.8285	6.5000e-003	0.2512	0.0888	0.3400	0.0710	0.0835	0.1545	0.0000	586.1757	586.1757	0.0863	0.0219	594.8694
2025	2.7961	0.9606	0.9244	1.9200e-003	0.6250	0.0416	0.6666	0.3125	0.0385	0.3509	0.0000	169.9198	169.9198	0.0429	9.7000e-004	171.2810
Maximum	**2.7961**	**2.2014**	**2.8285**	**6.5000e-003**	**0.6250**	**0.0888**	**0.6666**	**0.3125**	**0.0835**	**0.3509**	**0.0000**	**586.1757**	**586.1757**	**0.0863**	**0.0219**	**594.8694**

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					
2023	0.0453	0.5521	0.4076	1.3300e-003	0.1060	0.0200	0.1260	0.0453	0.0185	0.0638	0.0000	123.5596	123.5596	0.0222	9.2200e-003	126.8625
2024	1.7403	2.2014	2.8284	6.5000e-003	0.2512	0.0888	0.3400	0.0710	0.0835	0.1545	0.0000	586.1753	586.1753	0.0863	0.0219	594.8690
2025	2.7961	0.9606	0.9244	1.9200e-003	0.6250	0.0416	0.6666	0.3125	0.0385	0.3509	0.0000	169.9196	169.9196	0.0429	9.7000e-004	171.2809
Maximum	**2.7961**	**2.2014**	**2.8284**	**6.5000e-003**	**0.6250**	**0.0888**	**0.6666**	**0.3125**	**0.0835**	**0.3509**	**0.0000**	**586.1753**	**586.1753**	**0.0863**	**0.0219**	**594.8690**

Tideline - Kensho Residential - San Diego Air Basin, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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)
1	**11-1-2023**	**1-31-2024**	0.8419	0.8419
2	**2-1-2024**	**4-30-2024**	0.6567	0.6567
3	**5-1-2024**	**7-31-2024**	0.5734	0.5734
4	**8-1-2024**	**10-31-2024**	0.6452	0.6452
5	**11-1-2024**	**1-31-2025**	2.5774	2.5774
6	**2-1-2025**	**4-30-2025**	2.6236	2.6236
7	**5-1-2025**	**7-31-2025**	0.3570	0.3570
		Highest	2.6236	2.6236

Tideline - Kensho Residential - San Diego Air Basin, Annual

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.4923	0.0157	1.3588	7.0000e-005		7.5400e-003	7.5400e-003		7.5400e-003	7.5400e-003	0.0000	2.2221	2.2221	2.1300e-003	0.0000	2.2754
Energy	7.1800e-003	0.0614	0.0261	3.9000e-004		4.9600e-003	4.9600e-003		4.9600e-003	4.9600e-003	0.0000	339.4856	339.4856	0.0178	3.2900e-003	340.9105
Mobile	0.5017	0.5406	4.5753	9.5200e-003	1.0487	7.4700e-003	1.0561	0.2799	6.9700e-003	0.2868	0.0000	902.2564	902.2564	0.0649	0.0409	916.0615
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	41.5176	45.3002	0.3911	9.4800e-003	57.9020
Total	**2.0011**	**0.6176**	**5.9602**	**9.9800e-003**	**1.0487**	**0.0200**	**1.0686**	**0.2799**	**0.0195**	**0.2993**	**20.8705**	**1,285.4816**	**1,306.3521**	**1.4857**	**0.0537**	**1,359.4837**

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

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.4923	0.0157	1.3588	7.0000e-005		7.5400e-003	7.5400e-003		7.5400e-003	7.5400e-003	0.0000	2.2221	2.2221	2.1300e-003	0.0000	2.2754
Energy	7.1800e-003	0.0614	0.0261	3.9000e-004		4.9600e-003	4.9600e-003		4.9600e-003	4.9600e-003	0.0000	339.4856	339.4856	0.0178	3.2900e-003	340.9105
Mobile	0.3822	0.3373	2.8722	5.0800e-003	0.5461	4.2500e-003	0.5504	0.1458	3.9600e-003	0.1497	0.0000	481.9193	481.9193	0.0436	0.0261	490.7806
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	41.5176	45.3002	0.3911	9.4800e-003	57.9020
Total	**1.8817**	**0.4143**	**4.2572**	**5.5400e-003**	**0.5461**	**0.0168**	**0.5629**	**0.1458**	**0.0165**	**0.1622**	**20.8705**	**865.1446**	**886.0150**	**1.4644**	**0.0389**	**934.2027**

	ROG	NOx	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	**5.97**	**32.93**	**28.57**	**44.49**	**47.92**	**16.12**	**47.33**	**47.92**	**15.46**	**45.81**	**0.00**	**32.70**	**32.18**	**1.43**	**27.59**	**31.28**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/1/2023	11/28/2023	5	20	
2	Grading	Grading	11/29/2023	1/9/2024	5	30	
3	Building Construction	Building Construction	1/10/2024	1/7/2025	5	260	

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

4	Paving 1	Paving	2/13/2024	3/11/2024	5	20	
5	Architectural Coating	Architectural Coating	10/29/2024	4/28/2025	5	130	
6	Site Preparation 2	Site Preparation	3/3/2025	5/23/2025	5	60	
7	Paving 2	Paving	5/9/2025	6/19/2025	5	30	

Acres of Grading (Site Preparation Phase): 90

Acres of Grading (Grading Phase): 30

Acres of Paving: 2

Residential Indoor: 532,144; Residential Outdoor: 177,381; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 8,440 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation 2	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation 2	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving 1	Cement and Mortar Mixers	2	6.00	9	0.56
Paving 1	Pavers	1	8.00	130	0.42

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

Paving 1	Paving Equipment	2	6.00	132	0.36
Paving 1	Rollers	2	6.00	80	0.38
Paving 1	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving 2	Cement and Mortar Mixers	2	6.00	9	0.56
Paving 2	Pavers	1	8.00	130	0.42
Paving 2	Paving Equipment	2	6.00	132	0.36
Paving 2	Rollers	2	6.00	80	0.38
Paving 2	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	14.00	0.00	5.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation 2	7	70.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	14.00	0.00	2,500.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	160.00	43.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving 1	8	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving 2	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	36.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.7000e-004	0.0000	5.7000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0227	0.2148	0.1964	3.9000e-004		9.9800e-003	9.9800e-003		9.2800e-003	9.2800e-003	0.0000	33.9921	33.9921	9.5200e-003	0.0000	34.2301
Total	**0.0227**	**0.2148**	**0.1964**	**3.9000e-004**	**5.7000e-004**	**9.9800e-003**	**0.0106**	**9.0000e-005**	**9.2800e-003**	**9.3700e-003**	**0.0000**	**33.9921**	**33.9921**	**9.5200e-003**	**0.0000**	**34.2301**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.4000e-004	9.0000e-005	0.0000	4.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1500	0.1500	1.0000e-005	2.0000e-005	0.1573
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.6000e-004	3.2000e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.0000e-004	0.0000	0.8995	0.8995	3.0000e-005	2.0000e-005	0.9076
Total	**3.9000e-004**	**6.0000e-004**	**3.2900e-003**	**1.0000e-005**	**1.1600e-003**	**1.0000e-005**	**1.1800e-003**	**3.1000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**1.0496**	**1.0496**	**4.0000e-005**	**4.0000e-005**	**1.0649**

Tideline - Kensho Residential - San Diego Air Basin, Annual

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

3.2 Demolition - 2023

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					5.7000e-004	0.0000	5.7000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0227	0.2148	0.1964	3.9000e-004		9.9800e-003	9.9800e-003		9.2800e-003	9.2800e-003	0.0000	33.9920	33.9920	9.5200e-003	0.0000	34.2300
Total	**0.0227**	**0.2148**	**0.1964**	**3.9000e-004**	**5.7000e-004**	**9.9800e-003**	**0.0106**	**9.0000e-005**	**9.2800e-003**	**9.3700e-003**	**0.0000**	**33.9920**	**33.9920**	**9.5200e-003**	**0.0000**	**34.2300**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.4000e-004	9.0000e-005	0.0000	4.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1500	0.1500	1.0000e-005	2.0000e-005	0.1573
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.6000e-004	3.2000e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.0000e-004	0.0000	0.8995	0.8995	3.0000e-005	2.0000e-005	0.9076
Total	**3.9000e-004**	**6.0000e-004**	**3.2900e-003**	**1.0000e-005**	**1.1600e-003**	**1.0000e-005**	**1.1800e-003**	**3.1000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**1.0496**	**1.0496**	**4.0000e-005**	**4.0000e-005**	**1.0649**

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

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0866	0.0000	0.0866	0.0400	0.0000	0.0400	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0197	0.2063	0.1696	3.4000e-004		8.9100e-003	8.9100e-003		8.2000e-003	8.2000e-003	0.0000	29.9697	29.9697	9.6900e-003	0.0000	30.2120
Total	**0.0197**	**0.2063**	**0.1696**	**3.4000e-004**	**0.0866**	**8.9100e-003**	**0.0955**	**0.0400**	**8.2000e-003**	**0.0482**	**0.0000**	**29.9697**	**29.9697**	**9.6900e-003**	**0.0000**	**30.2120**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1200e-003	0.1301	0.0346	5.7000e-004	0.0164	1.0600e-003	0.0175	4.5100e-003	1.0200e-003	5.5300e-003	0.0000	57.5139	57.5139	2.8900e-003	9.1500e-003	60.3120
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	3.0000e-004	3.6800e-003	1.0000e-005	1.2900e-003	1.0000e-005	1.3000e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0344	1.0344	3.0000e-005	3.0000e-005	1.0437
Total	**2.5600e-003**	**0.1304**	**0.0383**	**5.8000e-004**	**0.0177**	**1.0700e-003**	**0.0188**	**4.8500e-003**	**1.0300e-003**	**5.8800e-003**	**0.0000**	**58.5484**	**58.5484**	**2.9200e-003**	**9.1800e-003**	**61.3556**

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

3.3 Grading - 2023

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					0.0866	0.0000	0.0866	0.0400	0.0000	0.0400	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0197	0.2063	0.1696	3.4000e-004		8.9100e-003	8.9100e-003		8.2000e-003	8.2000e-003	0.0000	29.9697	29.9697	9.6900e-003	0.0000	30.2120
Total	**0.0197**	**0.2063**	**0.1696**	**3.4000e-004**	**0.0866**	**8.9100e-003**	**0.0955**	**0.0400**	**8.2000e-003**	**0.0482**	**0.0000**	**29.9697**	**29.9697**	**9.6900e-003**	**0.0000**	**30.2120**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1200e-003	0.1301	0.0346	5.7000e-004	0.0164	1.0600e-003	0.0175	4.5100e-003	1.0200e-003	5.5300e-003	0.0000	57.5139	57.5139	2.8900e-003	9.1500e-003	60.3120
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	3.0000e-004	3.6800e-003	1.0000e-005	1.2900e-003	1.0000e-005	1.3000e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0344	1.0344	3.0000e-005	3.0000e-005	1.0437
Total	**2.5600e-003**	**0.1304**	**0.0383**	**5.8000e-004**	**0.0177**	**1.0700e-003**	**0.0188**	**4.8500e-003**	**1.0300e-003**	**5.8800e-003**	**0.0000**	**58.5484**	**58.5484**	**2.9200e-003**	**9.1800e-003**	**61.3556**

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

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0384	0.0000	0.0384	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8200e-003	0.0596	0.0517	1.0000e-004		2.5400e-003	2.5400e-003		2.3300e-003	2.3300e-003	0.0000	9.1224	9.1224	2.9500e-003	0.0000	9.1961
Total	**5.8200e-003**	**0.0596**	**0.0517**	**1.0000e-004**	**0.0384**	**2.5400e-003**	**0.0409**	**0.0135**	**2.3300e-003**	**0.0159**	**0.0000**	**9.1224**	**9.1224**	**2.9500e-003**	**0.0000**	**9.1961**

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	6.4000e-004	0.0392	0.0107	1.7000e-004	5.0000e-003	3.3000e-004	5.3200e-003	1.3700e-003	3.1000e-004	1.6800e-003	0.0000	17.1962	17.1962	9.1000e-004	2.7400e-003	18.0345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	1.0500e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3069	0.3069	1.0000e-005	1.0000e-005	0.3096
Total	**7.6000e-004**	**0.0393**	**0.0117**	**1.7000e-004**	**5.3900e-003**	**3.3000e-004**	**5.7200e-003**	**1.4700e-003**	**3.1000e-004**	**1.7900e-003**	**0.0000**	**17.5032**	**17.5032**	**9.2000e-004**	**2.7500e-003**	**18.3440**

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

3.3 Grading - 2024

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					0.0384	0.0000	0.0384	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8200e-003	0.0596	0.0517	1.0000e-004		2.5400e-003	2.5400e-003		2.3300e-003	2.3300e-003	0.0000	9.1224	9.1224	2.9500e-003	0.0000	9.1961
Total	**5.8200e-003**	**0.0596**	**0.0517**	**1.0000e-004**	**0.0384**	**2.5400e-003**	**0.0409**	**0.0135**	**2.3300e-003**	**0.0159**	**0.0000**	**9.1224**	**9.1224**	**2.9500e-003**	**0.0000**	**9.1961**

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	6.4000e-004	0.0392	0.0107	1.7000e-004	5.0000e-003	3.3000e-004	5.3200e-003	1.3700e-003	3.1000e-004	1.6800e-003	0.0000	17.1962	17.1962	9.1000e-004	2.7400e-003	18.0345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	1.0500e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3069	0.3069	1.0000e-005	1.0000e-005	0.3096
Total	**7.6000e-004**	**0.0393**	**0.0117**	**1.7000e-004**	**5.3900e-003**	**3.3000e-004**	**5.7200e-003**	**1.4700e-003**	**3.1000e-004**	**1.7900e-003**	**0.0000**	**17.5032**	**17.5032**	**9.2000e-004**	**2.7500e-003**	**18.3440**

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

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1876	1.7141	2.0613	3.4400e-003		0.0782	0.0782		0.0736	0.0736	0.0000	295.6076	295.6076	0.0699	0.0000	297.3552
Total	**0.1876**	**1.7141**	**2.0613**	**3.4400e-003**		**0.0782**	**0.0782**		**0.0736**	**0.0736**	**0.0000**	**295.6076**	**295.6076**	**0.0699**	**0.0000**	**297.3552**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.1900e-003	0.2417	0.0839	1.1000e-003	0.0364	1.4400e-003	0.0379	0.0105	1.3800e-003	0.0119	0.0000	108.0905	108.0905	3.4000e-003	0.0157	112.8423
Worker	0.0519	0.0344	0.4363	1.3700e-003	0.1636	8.6000e-004	0.1645	0.0435	7.9000e-004	0.0443	0.0000	127.7863	127.7863	3.5000e-003	3.3700e-003	128.8793
Total	**0.0581**	**0.2761**	**0.5201**	**2.4700e-003**	**0.2000**	**2.3000e-003**	**0.2023**	**0.0540**	**2.1700e-003**	**0.0562**	**0.0000**	**235.8768**	**235.8768**	**6.9000e-003**	**0.0190**	**241.7216**

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

3.4 Building Construction - 2024

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	0.1876	1.7141	2.0613	3.4400e-003		0.0782	0.0782		0.0736	0.0736	0.0000	295.6073	295.6073	0.0699	0.0000	297.3548
Total	**0.1876**	**1.7141**	**2.0613**	**3.4400e-003**		**0.0782**	**0.0782**		**0.0736**	**0.0736**	**0.0000**	**295.6073**	**295.6073**	**0.0699**	**0.0000**	**297.3548**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.1900e-003	0.2417	0.0839	1.1000e-003	0.0364	1.4400e-003	0.0379	0.0105	1.3800e-003	0.0119	0.0000	108.0905	108.0905	3.4000e-003	0.0157	112.8423
Worker	0.0519	0.0344	0.4363	1.3700e-003	0.1636	8.6000e-004	0.1645	0.0435	7.9000e-004	0.0443	0.0000	127.7863	127.7863	3.5000e-003	3.3700e-003	128.8793
Total	**0.0581**	**0.2761**	**0.5201**	**2.4700e-003**	**0.2000**	**2.3000e-003**	**0.2023**	**0.0540**	**2.1700e-003**	**0.0562**	**0.0000**	**235.8768**	**235.8768**	**6.9000e-003**	**0.0190**	**241.7216**

Tideline - Kensho Residential - San Diego Air Basin, Annual

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

3.4 Building Construction - 2025

Unmitigated Construction 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	3.4200e-003	0.0312	0.0402	7.0000e-005		1.3200e-003	1.3200e-003		1.2400e-003	1.2400e-003	0.0000	5.7980	5.7980	1.3600e-003	0.0000	5.8321
Total	**3.4200e-003**	**0.0312**	**0.0402**	**7.0000e-005**		**1.3200e-003**	**1.3200e-003**		**1.2400e-003**	**1.2400e-003**	**0.0000**	**5.7980**	**5.7980**	**1.3600e-003**	**0.0000**	**5.8321**

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	1.2000e-004	4.6900e-003	1.6200e-003	2.0000e-005	7.1000e-004	3.0000e-005	7.4000e-004	2.1000e-004	3.0000e-005	2.3000e-004	0.0000	2.0790	2.0790	7.0000e-005	3.0000e-004	2.1704
Worker	9.6000e-004	6.1000e-004	8.0300e-003	3.0000e-005	3.2100e-003	2.0000e-005	3.2200e-003	8.5000e-004	1.0000e-005	8.7000e-004	0.0000	2.4444	2.4444	6.0000e-005	6.0000e-005	2.4645
Total	**1.0800e-003**	**5.3000e-003**	**9.6500e-003**	**5.0000e-005**	**3.9200e-003**	**5.0000e-005**	**3.9600e-003**	**1.0600e-003**	**4.0000e-005**	**1.1000e-003**	**0.0000**	**4.5234**	**4.5234**	**1.3000e-004**	**3.6000e-004**	**4.6349**

Tideline - Kensho Residential - San Diego Air Basin, Annual

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

3.4 Building Construction - 2025

Mitigated Construction 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	3.4200e-003	0.0312	0.0402	7.0000e-005		1.3200e-003	1.3200e-003		1.2400e-003	1.2400e-003	0.0000	5.7980	5.7980	1.3600e-003	0.0000	5.8321
Total	**3.4200e-003**	**0.0312**	**0.0402**	**7.0000e-005**		**1.3200e-003**	**1.3200e-003**		**1.2400e-003**	**1.2400e-003**	**0.0000**	**5.7980**	**5.7980**	**1.3600e-003**	**0.0000**	**5.8321**

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	1.2000e-004	4.6900e-003	1.6200e-003	2.0000e-005	7.1000e-004	3.0000e-005	7.4000e-004	2.1000e-004	3.0000e-005	2.3000e-004	0.0000	2.0790	2.0790	7.0000e-005	3.0000e-004	2.1704
Worker	9.6000e-004	6.1000e-004	8.0300e-003	3.0000e-005	3.2100e-003	2.0000e-005	3.2200e-003	8.5000e-004	1.0000e-005	8.7000e-004	0.0000	2.4444	2.4444	6.0000e-005	6.0000e-005	2.4645
Total	**1.0800e-003**	**5.3000e-003**	**9.6500e-003**	**5.0000e-005**	**3.9200e-003**	**5.0000e-005**	**3.9600e-003**	**1.0600e-003**	**4.0000e-005**	**1.1000e-003**	**0.0000**	**4.5234**	**4.5234**	**1.3000e-004**	**3.6000e-004**	**4.6349**

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

3.5 Paving 1 - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.8100e-003	0.0827	0.1222	1.9000e-004		3.9900e-003	3.9900e-003		3.6800e-003	3.6800e-003	0.0000	16.3803	16.3803	5.1500e-003	0.0000	16.5090
Paving	7.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.6000e-003**	**0.0827**	**0.1222**	**1.9000e-004**		**3.9900e-003**	**3.9900e-003**		**3.6800e-003**	**3.6800e-003**	**0.0000**	**16.3803**	**16.3803**	**5.1500e-003**	**0.0000**	**16.5090**

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	2.5000e-004	1.7000e-004	2.1400e-003	1.0000e-005	8.0000e-004	0.0000	8.1000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	0.6264	0.6264	2.0000e-005	2.0000e-005	0.6318
Total	**2.5000e-004**	**1.7000e-004**	**2.1400e-003**	**1.0000e-005**	**8.0000e-004**	**0.0000**	**8.1000e-004**	**2.1000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6264**	**0.6264**	**2.0000e-005**	**2.0000e-005**	**0.6318**

Tideline - Kensho Residential - San Diego Air Basin, Annual

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

3.5 Paving 1 - 2024

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	8.8100e-003	0.0827	0.1222	1.9000e-004		3.9900e-003	3.9900e-003		3.6800e-003	3.6800e-003	0.0000	16.3803	16.3803	5.1500e-003	0.0000	16.5090
Paving	7.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.6000e-003**	**0.0827**	**0.1222**	**1.9000e-004**		**3.9900e-003**	**3.9900e-003**		**3.6800e-003**	**3.6800e-003**	**0.0000**	**16.3803**	**16.3803**	**5.1500e-003**	**0.0000**	**16.5090**

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	2.5000e-004	1.7000e-004	2.1400e-003	1.0000e-005	8.0000e-004	0.0000	8.1000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	0.6264	0.6264	2.0000e-005	2.0000e-005	0.6318
Total	**2.5000e-004**	**1.7000e-004**	**2.1400e-003**	**1.0000e-005**	**8.0000e-004**	**0.0000**	**8.1000e-004**	**2.1000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6264**	**0.6264**	**2.0000e-005**	**2.0000e-005**	**0.6318**

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

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4719					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.1600e-003	0.0280	0.0416	7.0000e-005		1.4000e-003	1.4000e-003		1.4000e-003	1.4000e-003	0.0000	5.8725	5.8725	3.3000e-004	0.0000	5.8808
Total	**1.4761**	**0.0280**	**0.0416**	**7.0000e-005**		**1.4000e-003**	**1.4000e-003**		**1.4000e-003**	**1.4000e-003**	**0.0000**	**5.8725**	**5.8725**	**3.3000e-004**	**0.0000**	**5.8808**

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	2.1100e-003	1.3900e-003	0.0177	6.0000e-005	6.6400e-003	3.0000e-005	6.6700e-003	1.7600e-003	3.0000e-005	1.8000e-003	0.0000	5.1866	5.1866	1.4000e-004	1.4000e-004	5.2310
Total	**2.1100e-003**	**1.3900e-003**	**0.0177**	**6.0000e-005**	**6.6400e-003**	**3.0000e-005**	**6.6700e-003**	**1.7600e-003**	**3.0000e-005**	**1.8000e-003**	**0.0000**	**5.1866**	**5.1866**	**1.4000e-004**	**1.4000e-004**	**5.2310**

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

3.6 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4719					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.1600e-003	0.0280	0.0416	7.0000e-005		1.4000e-003	1.4000e-003		1.4000e-003	1.4000e-003	0.0000	5.8725	5.8725	3.3000e-004	0.0000	5.8807
Total	**1.4761**	**0.0280**	**0.0416**	**7.0000e-005**		**1.4000e-003**	**1.4000e-003**		**1.4000e-003**	**1.4000e-003**	**0.0000**	**5.8725**	**5.8725**	**3.3000e-004**	**0.0000**	**5.8807**

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	2.1100e-003	1.3900e-003	0.0177	6.0000e-005	6.6400e-003	3.0000e-005	6.6700e-003	1.7600e-003	3.0000e-005	1.8000e-003	0.0000	5.1866	5.1866	1.4000e-004	1.4000e-004	5.2310
Total	**2.1100e-003**	**1.3900e-003**	**0.0177**	**6.0000e-005**	**6.6400e-003**	**3.0000e-005**	**6.6700e-003**	**1.7600e-003**	**3.0000e-005**	**1.8000e-003**	**0.0000**	**5.1866**	**5.1866**	**1.4000e-004**	**1.4000e-004**	**5.2310**

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

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.6878					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1800e-003	0.0481	0.0760	1.2000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003	0.0000	10.7237	10.7237	5.8000e-004	0.0000	10.7383
Total	**2.6950**	**0.0481**	**0.0760**	**1.2000e-004**		**2.1600e-003**	**2.1600e-003**		**2.1600e-003**	**2.1600e-003**	**0.0000**	**10.7237**	**10.7237**	**5.8000e-004**	**0.0000**	**10.7383**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6300e-003	2.3100e-003	0.0304	1.0000e-004	0.0121	6.0000e-005	0.0122	3.2200e-003	6.0000e-005	3.2800e-003	0.0000	9.2399	9.2399	2.4000e-004	2.3000e-004	9.3158
Total	**3.6300e-003**	**2.3100e-003**	**0.0304**	**1.0000e-004**	**0.0121**	**6.0000e-005**	**0.0122**	**3.2200e-003**	**6.0000e-005**	**3.2800e-003**	**0.0000**	**9.2399**	**9.2399**	**2.4000e-004**	**2.3000e-004**	**9.3158**

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

3.6 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.6878					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1800e-003	0.0481	0.0760	1.2000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003	0.0000	10.7237	10.7237	5.8000e-004	0.0000	10.7383
Total	**2.6950**	**0.0481**	**0.0760**	**1.2000e-004**		**2.1600e-003**	**2.1600e-003**		**2.1600e-003**	**2.1600e-003**	**0.0000**	**10.7237**	**10.7237**	**5.8000e-004**	**0.0000**	**10.7383**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6300e-003	2.3100e-003	0.0304	1.0000e-004	0.0121	6.0000e-005	0.0122	3.2200e-003	6.0000e-005	3.2800e-003	0.0000	9.2399	9.2399	2.4000e-004	2.3000e-004	9.3158
Total	**3.6300e-003**	**2.3100e-003**	**0.0304**	**1.0000e-004**	**0.0121**	**6.0000e-005**	**0.0122**	**3.2200e-003**	**6.0000e-005**	**3.2800e-003**	**0.0000**	**9.2399**	**9.2399**	**2.4000e-004**	**2.3000e-004**	**9.3158**

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

3.7 Site Preparation 2 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5897	0.0000	0.5897	0.3031	0.0000	0.3031	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0742	0.7570	0.5374	1.1400e-003		0.0326	0.0326		0.0300	0.0300	0.0000	100.4010	100.4010	0.0325	0.0000	101.2128
Total	**0.0742**	**0.7570**	**0.5374**	**1.1400e-003**	**0.5897**	**0.0326**	**0.6223**	**0.3031**	**0.0300**	**0.3331**	**0.0000**	**100.4010**	**100.4010**	**0.0325**	**0.0000**	**101.2128**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0400e-003	3.2000e-003	0.0422	1.4000e-004	0.0168	8.0000e-005	0.0169	4.4700e-003	8.0000e-005	4.5500e-003	0.0000	12.8332	12.8332	3.3000e-004	3.3000e-004	12.9385
Total	**5.0400e-003**	**3.2000e-003**	**0.0422**	**1.4000e-004**	**0.0168**	**8.0000e-005**	**0.0169**	**4.4700e-003**	**8.0000e-005**	**4.5500e-003**	**0.0000**	**12.8332**	**12.8332**	**3.3000e-004**	**3.3000e-004**	**12.9385**

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

3.7 Site Preparation 2 - 2025

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					0.5897	0.0000	0.5897	0.3031	0.0000	0.3031	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0742	0.7570	0.5374	1.1400e-003		0.0326	0.0326		0.0300	0.0300	0.0000	100.4008	100.4008	0.0325	0.0000	101.2126
Total	**0.0742**	**0.7570**	**0.5374**	**1.1400e-003**	**0.5897**	**0.0326**	**0.6223**	**0.3031**	**0.0300**	**0.3331**	**0.0000**	**100.4008**	**100.4008**	**0.0325**	**0.0000**	**101.2126**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0400e-003	3.2000e-003	0.0422	1.4000e-004	0.0168	8.0000e-005	0.0169	4.4700e-003	8.0000e-005	4.5500e-003	0.0000	12.8332	12.8332	3.3000e-004	3.3000e-004	12.9385
Total	**5.0400e-003**	**3.2000e-003**	**0.0422**	**1.4000e-004**	**0.0168**	**8.0000e-005**	**0.0169**	**4.4700e-003**	**8.0000e-005**	**4.5500e-003**	**0.0000**	**12.8332**	**12.8332**	**3.3000e-004**	**3.3000e-004**	**12.9385**

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

3.8 Paving 2 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0123	0.1130	0.1827	2.8000e-004		5.2900e-003	5.2900e-003		4.8900e-003	4.8900e-003	0.0000	24.5674	24.5674	7.7200e-003	0.0000	24.7604
Paving	7.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0131**	**0.1130**	**0.1827**	**2.8000e-004**		**5.2900e-003**	**5.2900e-003**		**4.8900e-003**	**4.8900e-003**	**0.0000**	**24.5674**	**24.5674**	**7.7200e-003**	**0.0000**	**24.7604**

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	7.2000e-004	4.6000e-004	6.0300e-003	2.0000e-005	2.4100e-003	1.0000e-005	2.4200e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.8333	1.8333	5.0000e-005	5.0000e-005	1.8484
Total	**7.2000e-004**	**4.6000e-004**	**6.0300e-003**	**2.0000e-005**	**2.4100e-003**	**1.0000e-005**	**2.4200e-003**	**6.4000e-004**	**1.0000e-005**	**6.5000e-004**	**0.0000**	**1.8333**	**1.8333**	**5.0000e-005**	**5.0000e-005**	**1.8484**

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

3.8 Paving 2 - 2025

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	0.0123	0.1130	0.1827	2.8000e-004		5.2900e-003	5.2900e-003		4.8900e-003	4.8900e-003	0.0000	24.5673	24.5673	7.7200e-003	0.0000	24.7603
Paving	7.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0131**	**0.1130**	**0.1827**	**2.8000e-004**		**5.2900e-003**	**5.2900e-003**		**4.8900e-003**	**4.8900e-003**	**0.0000**	**24.5673**	**24.5673**	**7.7200e-003**	**0.0000**	**24.7603**

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	7.2000e-004	4.6000e-004	6.0300e-003	2.0000e-005	2.4100e-003	1.0000e-005	2.4200e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.8333	1.8333	5.0000e-005	5.0000e-005	1.8484
Total	**7.2000e-004**	**4.6000e-004**	**6.0300e-003**	**2.0000e-005**	**2.4100e-003**	**1.0000e-005**	**2.4200e-003**	**6.4000e-004**	**1.0000e-005**	**6.5000e-004**	**0.0000**	**1.8333**	**1.8333**	**5.0000e-005**	**5.0000e-005**	**1.8484**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3822	0.3373	2.8722	5.0800e-003	0.5461	4.2500e-003	0.5504	0.1458	3.9600e-003	0.1497	0.0000	481.9193	481.9193	0.0436	0.0261	490.7806
Unmitigated	0.5017	0.5406	4.5753	9.5200e-003	1.0487	7.4700e-003	1.0561	0.2799	6.9700e-003	0.2868	0.0000	902.2564	902.2564	0.0649	0.0409	916.0615

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,098.00	1,098.00	1098.00	2,803,399	1,459,981
Enclosed Parking Structure	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	1,098.00	1,098.00	1,098.00	2,803,399	1,459,981

4.3 Trip Type Information

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

	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
Apartments Mid Rise	7.90	7.90	7.90	41.60	18.80	39.60	86	11	3
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
Enclosed Parking Structure	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
Other Non-Asphalt Surfaces	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
Parking Lot	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Tideline - Kensho Residential - San Diego Air Basin, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	268.4308	268.4308	0.0164	1.9900e-003	269.4335
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	268.4308	268.4308	0.0164	1.9900e-003	269.4335
NaturalGas Mitigated	7.1800e-003	0.0614	0.0261	3.9000e-004		4.9600e-003	4.9600e-003		4.9600e-003	4.9600e-003	0.0000	71.0548	71.0548	1.3600e-003	1.3000e-003	71.4771
NaturalGas Unmitigated	7.1800e-003	0.0614	0.0261	3.9000e-004		4.9600e-003	4.9600e-003		4.9600e-003	4.9600e-003	0.0000	71.0548	71.0548	1.3600e-003	1.3000e-003	71.4771

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					
Apartments Mid Rise	1.33152e+006	7.1800e-003	0.0614	0.0261	3.9000e-004		4.9600e-003	4.9600e-003		4.9600e-003	4.9600e-003	0.0000	71.0548	71.0548	1.3600e-003	1.3000e-003	71.4771
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.1800e-003**	**0.0614**	**0.0261**	**3.9000e-004**		**4.9600e-003**	**4.9600e-003**		**4.9600e-003**	**4.9600e-003**	**0.0000**	**71.0548**	**71.0548**	**1.3600e-003**	**1.3000e-003**	**71.4771**

Tideline - Kensho Residential - San Diego Air Basin, Annual

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

5.2 Energy by Land Use - NaturalGas

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					
Apartments Mid Rise	1.33152e+006	7.1800e-003	0.0614	0.0261	3.9000e-004		4.9600e-003	4.9600e-003		4.9600e-003	4.9600e-003	0.0000	71.0548	71.0548	1.3600e-003	1.3000e-003	71.4771
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.1800e-003**	**0.0614**	**0.0261**	**3.9000e-004**		**4.9600e-003**	**4.9600e-003**		**4.9600e-003**	**4.9600e-003**	**0.0000**	**71.0548**	**71.0548**	**1.3600e-003**	**1.3000e-003**	**71.4771**

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			
Apartments Mid Rise	702746	172.1241	0.0105	1.2800e-003	172.7670
Enclosed Parking Structure	376383	92.1878	5.6300e-003	6.8000e-004	92.5321
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	16816.8	4.1190	2.5000e-004	3.0000e-005	4.1343
Total		**268.4308**	**0.0164**	**1.9900e-003**	**269.4335**

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

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	702746	172.1241	0.0105	1.2800e-003	172.7670
Enclosed Parking Structure	376383	92.1878	5.6300e-003	6.8000e-004	92.5321
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	16816.8	4.1190	2.5000e-004	3.0000e-005	4.1343
Total		**268.4308**	**0.0164**	**1.9900e-003**	**269.4335**

6.0 Area Detail

6.1 Mitigation Measures Area

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.4923	0.0157	1.3588	7.0000e-005		7.5400e-003	7.5400e-003		7.5400e-003	7.5400e-003	0.0000	2.2221	2.2221	2.1300e-003	0.0000	2.2754
Unmitigated	1.4923	0.0157	1.3588	7.0000e-005		7.5400e-003	7.5400e-003		7.5400e-003	7.5400e-003	0.0000	2.2221	2.2221	2.1300e-003	0.0000	2.2754

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	0.4160					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0354					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	0.0409	0.0157	1.3588	7.0000e-005		7.5400e-003	7.5400e-003		7.5400e-003	7.5400e-003	0.0000	2.2221	2.2221	2.1300e-003	0.0000	2.2754
Total	**1.4923**	**0.0157**	**1.3588**	**7.0000e-005**		**7.5400e-003**	**7.5400e-003**		**7.5400e-003**	**7.5400e-003**	**0.0000**	**2.2221**	**2.2221**	**2.1300e-003**	**0.0000**	**2.2754**

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	0.4160					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0354					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	0.0409	0.0157	1.3588	7.0000e-005		7.5400e-003	7.5400e-003		7.5400e-003	7.5400e-003	0.0000	2.2221	2.2221	2.1300e-003	0.0000	2.2754
Total	**1.4923**	**0.0157**	**1.3588**	**7.0000e-005**		**7.5400e-003**	**7.5400e-003**		**7.5400e-003**	**7.5400e-003**	**0.0000**	**2.2221**	**2.2221**	**2.1300e-003**	**0.0000**	**2.2754**

7.0 Water Detail

7.1 Mitigation Measures Water

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	45.3002	0.3911	9.4800e-003	57.9020
Unmitigated	45.3002	0.3911	9.4800e-003	57.9020

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	11.9232 / 1.28312	45.3002	0.3911	9.4800e-003	57.9020
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**45.3002**	**0.3911**	**9.4800e-003**	**57.9020**

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

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	11.9232 / 1.28312	45.3002	0.3911	9.4800e-003	57.9020
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**45.3002**	**0.3911**	**9.4800e-003**	**57.9020**

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	17.0878	1.0099	0.0000	42.3343
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			
Apartments Mid Rise	84.18	17.0878	1.0099	0.0000	42.3343
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
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			
Apartments Mid Rise	84.18	17.0878	1.0099	0.0000	42.3343
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**17.0878**	**1.0099**	**0.0000**	**42.3343**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

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

Equipment Type	Number

11.0 Vegetation

This page intentionally left blank.