

ATTACHMENT 8

GREENHOUSE GAS REDUCTION PLAN

JULY 2020



TECHNICAL REPORT

Greenhouse Gas Reduction Plan for the Point Molate Mixed Use Project

PREPARED FOR:

Winehaven Legacy LLC and City of Richmond



Greenhouse Gas Reduction Plan for the Point Molate Mixed Use Project

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1 INTRODUCTION AND PURPOSE

The Point Molate Mixed Use Project (Project) Draft Subsequent Environmental Impact Report (Draft SEIR) was released for public review in February 2020 (State Clearinghouse Number: 2019070447). The Draft SEIR determined that the level of greenhouse gas (GHG) emissions associated with the operation of two Project options (i.e., Option 1 – Residential Heavy and Option 2 – Commercial Heavy) would result in a cumulatively considerable contribution to climate change and, therefore, a significant impact. The Draft SEIR includes Mitigation Measure 4.2-5, which requires the Project developer to prepare and implement a GHG reduction plan (GHGRP) that reduces operational GHG emissions to as close as possible to net zero over the life of the Project. This GHGRP is intended to satisfy the requirements of Mitigation Measure 4.2-5.

Based on the analysis conducted in the Final SEIR, the estimated unmitigated net GHG emissions from the overall Project would be 14,948 metric tons of carbon dioxide equivalent per year (MTCO₂e/year) for Option 1 and 14,982 MTCO₂e/year for Option 2 with inclusion of an on-site wastewater treatment facility. Without the on-site wastewater facility (wastewater would be treated through a connection to the City of Richmond's sewer system), the estimated unmitigated net GHG emissions for Option 1 would be 14,761 MTCO₂e/year and 14,795 MTCO₂e/year for Option 2. Both Project options would exceed the identified threshold of net zero. The Draft SEIR concluded that mitigation would be required and with the incorporation of Mitigation Measures 4.2-1–4.2-5, impacts from GHG emissions to global climate change would be reduced, but not to a less-than-significant level (see page 4.2-53 of the Draft SEIR).¹ Mitigation Measure 4.2-1 addresses construction emissions and Mitigation Measures 4.2-2, 4.2-3, and 4.2-4 identify operational GHG reduction measures that would be incorporated into the development. To achieve the required net zero emission threshold, Mitigation Measure 4.2-5 requires the preparation of a GHGRP. Mitigation Measure 4.2-5 also provides that if available on-site reduction measures are not adequate to meet the established GHG threshold, then the Project must obtain off-site GHG reductions.

The purpose of this GHGRP is to demonstrate how the Project would implement Mitigation Measures 4.2-1–4.2-5 as well as other feasible measures to reduce emissions.

1.1 ORGANIZATION OF THIS DOCUMENT

This GHGRP includes a brief Project description, overall methodology, estimates of GHG emissions from development of the Project application based on the buildout year, quantification of mitigation measures, and a comparison of Project-generated emissions to the threshold of significance.

2 PROJECT LOCATION AND DESCRIPTION

The Project site is located within the City of Richmond, California (City) on former U.S. Navy facility, situated on the San Pablo Peninsula. The Project site is bounded by the San Francisco Bay (Bay) to the west, open space parcels to the north and south, and the Chevron-Richmond Refinery to the east. The Project site is approximately 1.5 miles north of Interstate 580 and the Richmond-San Rafael Bridge and has direct freeway access via Stenmark Drive.

¹ The Bay Trail extension is a separate project approved by the East Bay Regional Parks District in 2014. According to the CEQA document prepared for the Bay Trail extension, GHG emissions for the Bay Trail extension would be less than cumulatively considerable. The Project proponent would construct a 1.5-mile stretch of the Bay Trail extension project and the emissions from that portion of the Bay Trail extension have been included in the cumulative analysis for the Point Molate project since construction would occur at the same time as construction of the Point Molate Project.

2.1 EXISTING CONDITIONS

The Point Molate site was used primarily for fishing, commercial, and naval activities in the 20th century. From around 1890 to 1912, a Chinese shrimp camp was established at Point Molate where Chinese shrimpers lived and worked. From 1907 to 1919, the historic Winehaven winery occupied the northern portion of the Point Molate site. Beginning in 1942, the Point Molate site served as a U.S. Navy (Navy) fuel storage and transfer facility. The Navy ceased operations on the Project site on September 30, 1995, and in September 2003 transferred approximately 85 percent of the property to the City.

The Project site is currently in caretaker status, with maintenance of the remaining buildings and facilities undertaken by the City. Multiple small businesses currently hold licenses to utilize space on the Point Molate Site, but these licenses will be reevaluated for feasibility and may be terminated to allow development of the Project. The City currently uses approximately 18 acres of the southwest portion of the Project site for Point Molate Beach Park. The park includes a paved parking area, picnic tables, portable toilets, and shoreline access. Public use is allowed at the Point Molate Beach Park during appropriate hours.

2.2 PROPOSED PROJECT

Since release of the Draft SEIR in February 2020, the Project proponents have submitted a development application to the City that specifically describes the proposed Project, which would involve the construction and operation of residential units, mixed-use buildings, offices, joint fire and police substation, retail uses, and open space. The development proposed under the application refines the Project description and differs in some respects from both Options 1 and 2 evaluated in the Draft SEIR. Table 1 summarizes the proposed land uses and building sizes included in the development application. See Figure 1 for the Project's regional location and Figure 2 for the site and vicinity.

Table 1 Proposed Land Uses Under Development Application

Planned Use	Amount (New)	Amount (Historic or Existing) ¹	Unit
Single Family Housing	156	29	DU
Townhomes	241	0	DU
Mid-Rise Apartments/Condominiums	1,026	0	DU
Regional Retail	20,000	20,000	Sq. ft.
Neighborhood Retail	15,000	0	Sq. ft.
Office/R&D and/or Live/Work	58,511	325,263	Sq. ft.
Fire/Police Station	10,000	0	Sq. ft.
Water Transit Terminal	0	5,000	Sq. ft.
Parking	2,627	0	Spaces

Notes: DU = dwelling unit; sq. ft = square feet

¹ The Project site has existing buildings, some of which are historic.

Source: Hart Howerton 2020



Source: NatGeo 2019; AES 2019

Figure 1 Regional Location



Source: City of Richmond Online GIS Viewer 2019; ESRI 2019; AES 12/12/2019

Figure 2 Project Site and Vicinity

3 METHODOLOGY AND ANALYSIS

To prepare this GHGRP, the construction and operation of the land uses included in the development application were modeled using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2. All quantifiable measures included in Mitigation Measures 4.2-1–4.2-4 were estimated in Microsoft Excel and applied to the Project. Additional on-site GHG reduction measures not included in Mitigation Measure 4.2-4 were then applied.

3.1 GREENHOUSE GAS EMISSIONS ESTIMATE

3.1.1 Final SEIR GHG Emissions Summary

The Final SEIR estimated the Project's construction and operational emissions for both Project options, assuming an operational year of 2024, the earliest year people could occupy the Project site. Full buildout of the Project is not anticipated to occur until 2028, with the first full year of operation occurring in 2029. This GHGRP evaluates the development proposed in the Project application provided by Project developers and submitted to the City. Construction emissions for the Project were amortized over the lifetime of the Project (assumed to be 30 years for purposes of amortization, as was stated in the Draft SEIR) and added to the unmitigated operational GHG emissions estimate. For the purposes of comparison, the GHG emissions reported in the Final SEIR are summarized below by Project option in Table 2.

Table 2 Final SEIR Unmitigated Operational GHG Emissions by Source under Options 1 and 2 in 2024

Emissions Source	Annual GHG Emissions (MTCO ₂ e/year)	
	Option 1	Option 2
Area	151	151
Energy – Electricity	725	1,134
Energy – Natural Gas	1,517	1,873
Mobile	8,394	8,220
Stationary (with on-site WWTP)	109	109
Stationary (without on-site WWTP)	98	98
Waste	2,318	1,710
Water	280	390
Ferry	477	477
WWTP	176	176
Amortized Construction ¹	801	742
Total (with on-site WWTP)	14,948	14,982
Total (without on-site WWTP)	14,761	14,795

Notes: GHG = greenhouse gas; MTCO₂e/year = metric tons of carbon dioxide equivalent per year; WWTP = wastewater treatment plant.

Totals may not sum exactly due to independent rounding.

¹. Construction emissions are amortized over 30 years. Total construction emissions are 23,861 MTCO₂e.

Source: Ramboll 2020a

3.1.2 Existing Site Greenhouse Gas Emissions

Emissions associated with land uses currently operating at the Project site were quantified for the first full year of operation of the Project (i.e., 2029). Mobile-source related GHG emissions were estimated for both visitors at the Point Molate Beach Park and employee trips for buildings currently leased on the Project site. Mobile-source emissions were quantified using CalEEMod default trip rates and lengths based on the land use sizes. Building energy emissions were quantified using historical electricity consumption factors included in CalEEMod. CalEEMod was also used to estimate water- and waste-related emissions based on the sizes and types of buildings currently operating at the Project site. The Pacific Gas & Electric (PG&E) carbon intensity factor for electricity was adjusted for 2029 as described in Section 3.1.3 below. GHG emissions associated with existing land uses at the Project site are shown in Table 3 below by emissions source.

Table 3 Existing Site Operational GHG Emissions by Source in 2029

Emissions Source	Annual GHG Emissions (MTCO ₂ e/year)
Electricity	48
Mobile	352
Waste	45
Water	70
Total	515

Notes: GHG = greenhouse gas; MTCO₂e/year = metric tons of carbon dioxide equivalent per year.

Source: Modeling conducted by Ascent Environmental in 2020

3.1.3 Adjusted Greenhouse Gas Emissions (Refined Project)

The proposed development would result in less total GHG emissions than those presented in both Options 1 and 2 in the Final SEIR. The proposed land uses included in Table 1 were modeled for the first full year of operation of the full buildout of the project (2029). Additional adjustments were taken to account for legislative actions and Project-specific information that was not included in the Final SEIR modeling. Emissions model adjustments are described below.

CONSTRUCTION MITIGATION

The Draft SEIR includes Mitigation Measure 4.2-1 to reduce construction generated GHG emissions. Specifically, Mitigation Measure 4.2-1(j) requires the use of Tier 4 Final off-road diesel-powered equipment for construction equipment 50 horsepower or greater, except paving equipment; and the use of electric-powered equipment for construction equipment that is less than 50 horsepower. The construction emissions modeling conducted for the Draft SEIR did not quantify the electric-powered equipment requirement under Mitigation Measure 4.2-1(j). This has been updated and reflected in the emissions modeling for this GHGRP.

RENEWABLES PORTFOLIO STANDARD

California has passed legislation requiring the increased use of renewables to produce electricity for consumers, referred to as the Renewables Portfolio Standard (RPS). Under RPS, California utilities are required to generate 50 percent of their electricity from renewables by 2026 and 60 percent of by 2030, pursuant to Senate Bill (SB) 100 of 2018. This results in a lower carbon intensity of the electricity that would be provided by PG&E by the time the project is operational in 2029. The Final SEIR assumed compliance with a 2024 RPS target, using a carbon intensity of 167 pounds (lb) of carbon dioxide (CO₂) per megawatt-hour (MWh), while compliance with RPS in 2029 would result in a carbon intensity of 143 lb CO₂ per MWh. The modeling that was conducted for the Final SEIR did not account for anticipated compliance with RPS target years beyond 2024. Thus, the modeling conducted for this GHGRP was updated to reflect a linear interpolation between the legislatively mandated 2026 and 2030 RPS targets.

MOBILE-SOURCE EMISSIONS ADJUSTMENT

The Draft SEIR quantified the mobile-source emissions associated with the Project in the year 2024. The emissions were quantified using Project-specific generation rates derived from the Transportation Impact Analysis conducted for the Project and default trip lengths in CalEEMod specific to the Project's location. Because the number of dwelling units and square footage of nonresidential uses differs in the Project application from the two options evaluated in the Draft SEIR, the anticipated vehicle miles traveled (VMT) associated with the proposed land uses was recalculated using the same Project-specific generation rates and default CalEEMod trip lengths.

The anticipated VMT associated with the Refined Project was multiplied by emission factors provided in the California Air Resources Board's (CARB's) Emission FACtor 2017 (EMFAC 2017) model. The emission factors provided in EMFAC 2017 were adjusted to account for the federal Safer Affordable Fuel-Efficient Vehicle Rule (SAFE Rule), which addresses emissions and fuel economy standards. Part Two of the SAFE Rule addresses the Corporate Average Fuel Economy (CAFE) standards for passenger cars and light trucks for model years 2021–2026. This rulemaking includes new CAFE standards for model years 2022–2026 and amends existing CAFE standards for model year 2021. The SAFE Rule retains the model year 2020 standards (specifically, the footprint target curves for passenger cars and light trucks) through model year 2026. This adjustment to CAFE standards was jointly developed between the National Highway Traffic Safety Administration and the U.S. Environmental Protection Agency, which also proposed tailpipe CO₂ standards for the same vehicles covered by the same model years. Part Two was finalized in April 2020. CARB has estimated the vehicle tailpipe emissions impacts on GHG emissions from SAFE Rule Part 2 and has provided off-model adjustment factors to adjust emission outputs from CARB's EMFAC models (CARB 2020a). The emission factors used to quantify mobile source emissions during the first full year of operation (i.e., 2029) were adjusted with the factors provided by CARB.

WATER GENERATION ADJUSTMENT

The Water Supply Assessment (WSA) conducted for the Project includes water demand factors based on the land uses included in the Refined Project (BKF 2020). The total water demand reported in the Draft SEIR is based on the WSA factors and the amount of development proposed under both development options. Based on the Refined Project in the Project application, a new water demand was quantified, as shown in Table 4, reflecting the water demand factors included in the refined WSA. The annual water demand was included in the CalEEMod modeling conducted for this GHGRP.

Table 4 Projected Water Demand

Land Use Type	Land Use Size	Water Demand Rate	Annual Water Demand (gallons/year)
Single Family	186 DU	220 GPD/DU	14,935,800
Townhouse	240 DU	165 GPD/DU	14,454,000
Multi-Family	1,026 DU	110 GPD/DU	41,193,900
Retail/Restaurant	55,000 sq. ft.	0.5 GPD/sq. ft.	10,037,500
Office/R&D and/or Live/Work	383,775 sq. ft.	0.14 GPD/sq. ft.	19,610,903
Fire/Police Station	10,000 sq. ft.	0.14 GPD/sq. ft.	511,000
Ferry Terminal	5,000 sq. ft.	0.14 GPD/sq. ft.	255,000
Irrigation	N/A	N/A	80,000
Total	N/A	N/A	101,078,603

Notes: DU = dwelling unit; GPD/DU = gallons per day per dwelling unit; sq. ft. = square feet; GPD/sq. ft. = gallons per day per square foot; N/A = not applicable.

Source: Calculations by Ascent Environmental in 2020

WASTE GENERATION ADJUSTMENT

The Draft SEIR includes waste generation rates for residential, restaurant, and commercial land uses that are specific to the City of Richmond as reported to the California Department of Resources Recycling and Recovery. As noted in Table 3-2 of Section 3.0, "Project Description" of the Draft SEIR, the waste generation rate for residential uses is 12.23 lb per household per day and 5 lb per 1,000 square feet per day for restaurant and commercial land uses. Because the number of dwelling units and square footage of nonresidential uses differs in the Project application from the two options evaluated in the Draft SEIR, the anticipated waste generation associated with the proposed land uses was recalculated. Table 5 below shows the updated waste generation tonnage per year anticipated with implementation of the Project.

Table 5 Projected Solid Waste Generation

Land Use Type	Land Use Size	Waste Generation Rate	Annual Waste Generated (tons/year)
Residential	1,452 DU	12.23 lb/DU/day	3,241
Nonresidential	448,774 KSF	5 lb/KSF/day	410
Total	N/A	N/A	3,650

Notes: DU = dwelling unit; lb = pounds; KSF = 1,000 square feet; N/A = not applicable.

Source: Calculations by Ascent Environmental in 2020

Additionally, an adjustment was made to the quantified waste generation calculation to account for the current citywide waste diversion rate of 45.7 percent (Transparent Richmond n.d.). The CalEEMod modeling conducted for this GHGRP reflects the citywide diversion rate.

ADJUSTED GHG EMISSIONS ESTIMATE

After applying all adjustments described above for a buildout year of 2029, the annual GHG emissions associated with implementation of the Project application would be 12,707 MTCO₂e with the on-site wastewater treatment plant, or 12,520 MTCO₂e without the on-site wastewater treatment plant. Emissions by source are shown below in Table 6.

Table 6 Adjusted Operational GHG Emissions by Source in 2029

Emissions Source	Annual GHG Emissions (MTCO ₂ e/year)
Area	93
Energy – Electricity	717
Energy – Natural Gas	1,666
Mobile	8,051
Stationary ¹ (with on-site WWTP)	109
Stationary ¹ (without on-site WWTP)	98
Waste	998
Water	140
Ferry ¹	477
WWTP ¹	176
Amortized Construction ²	795
Existing Site	-515
Total (with on-site WWTP)	12,707
Total (without on-site WWTP)	12,520

Notes: GHG = greenhouse gas; MTCO₂e/year = metric tons of carbon dioxide equivalent per year; WWTP = on-site wastewater treatment plant.

¹. Stationary, ferry, and wastewater treatment plant emissions estimates were provided by Ramboll in 2020.

² Construction emissions are amortized over 30 years. Total construction emissions are 23,861 MTCO₂e.

Source: Modeling conducted by Ascent Environmental in 2020

As shown in Table 6, the Project's annual GHG emissions, with and without the on-site wastewater treatment plant, would remain above the net zero threshold and would need to be reduced by 12,707 MTCO₂e per year with the on-site wastewater treatment plant, and 12,520 MTCO₂e per year without the on-site wastewater treatment plant. Thus, additional mitigation measures are required, including Mitigation Measures 4.2-2, 4.2-3, and 4.2-4, as identified in the Draft SEIR.

3.2 DRAFT SEIR MITIGATION MEASURES

3.2.1 Mitigation Measure 4.2-2

The following mitigation measure is included in Mitigation Measure 4.2-2 of the Draft SEIR.

- ▶ Prior to issuance of occupancy permits for each phase of development, the Project would reduce emissions of criteria air pollutants and GHGs during operation through the following actions:
 - MM 4.2-2(a): Indoor painting shall utilize "super-compliant" volatile organic compound (VOC) architectural coating for residential and nonresidential interior areas. The VOC emission factors meet the more stringent limits in South Coast Air Quality Management District Rule 1113.
 - MM 4.2-2(b): Exterior painting shall utilize "super-compliant" VOC architectural coating for residential and nonresidential exterior areas. The VOC emission factors meet the more stringent limits in South Coast Air Quality Management District Rule 1113.
 - MM 4.2-2(c): The Project shall require energy-star rated appliances.
 - MM 4.2-2(d): The Project shall install electric water heaters and space heaters in all residential and commercial development.
 - MM 4.2-2(e): The Project shall implement the Transportation Demand Management program described in Section 4.13 of the Draft SEIR.
 - MM 4.2-2(f): The Project will comply with the City's ordinances regarding solid waste and recycling.
 - MM 4.2-2(g): The Project shall install low-flow bathroom faucets, low-flow kitchen faucets, low-flow toilets, and low-flow showers, consistent with CALGreen requirements.
 - MM 4.2-2(h): The Project shall commit to exclusive use of small-sized (149-passenger, 2,900 horsepower) ferries or water taxis equipped with Tier 4 engines.

Mitigation Measures 4.2-2(a) and 4.2-2(b) apply only to reactive organic gas emissions that are considered ozone precursors and relate to air quality. These measures would not result in GHG emission reductions.

Mitigation Measures 4.2-2(c), 4.2-2(e), 4.2-2(g), and 4.2-2(h) were quantified in the adjusted operational emissions estimate shown in Table 5 above. As explained above, the City of Richmond is currently achieving a 45.7 percent waste diversion rate. The City has not adopted a Zero Waste Ordinance and; thus, Mitigation Measure 4.2-2(f) was not applied to the Project's operational emissions estimate. Mitigation Measure 4.2-2(d) is included in electrification measures discussed under Section 3.2.4.

3.2.2 Mitigation Measure 4.2-3

The following mitigation measure is considered in Mitigation Measure 4.2-3 of the Draft SEIR.

- Prior to the issuance of residential building permits, the Applicant or its designee shall submit building design plans to the City for review and approval that demonstrate that each new single-family residence within the Plan Area subject to application of Title 24, Part 6 of the CCR would be equipped with a minimum of one single-port electric vehicle (EV) charging station.

The EV charging stations shall achieve a similar or better functionality as a Level 2 charging station. In the event that the installed charging stations use functionality/technology other than Level 2 charging stations, the parameters of the mitigation obligation (i.e., the number of parking spaces served by EV charging stations) shall reflect the comparative equivalency Level 2 charging stations to the installed charging stations on the basis of average charge rate per hour. For purpose of this equivalency demonstration, Level 2 charging stations shall be assumed to provide charging capabilities of 25 range miles per hour.

The emission reductions associated with the single-family residential EV chargers were calculated assuming that all new single-family and townhouses would be equipped with a Level 2 (charge power of 11.4 kilowatts [kW]) EV charger. It was assumed that 10 percent of the single-family units would have EVs, which is based on the California Energy Commission's EV population estimate for Contra Costa County in 2025 (NREL n.d.) and CARB's estimate for Contra Costa County's light-duty fleet in 2025 (CARB n.d.). For single-family residential chargers, it was assumed that they would be used to recharge the electricity needed for the average daily VMT per service population with TDM measures, as discussed in the mobile-source emissions adjustment in Section 3.1.2. The electricity demand was assumed to be carbon-free, as all single-family units would include enough solar photovoltaics (PV) to offset the units' anticipated electricity demand. Based on the VMT calculated, the equivalent emissions if the vehicles were gasoline-powered were estimated.

Installation of 407 Level 2 EV chargers in new single-family residences would result in GHG emission reductions of 49 MTCO₂e/year.

3.2.3 Mitigation Measure 4.2-4

The following mitigation measure is considered in Mitigation Measure 4.2-4 of the Draft SEIR.

- Prior to the issuance of commercial building permits, the Applicant or its designee shall submit building design plans to the City that demonstrate that the parking areas for commercial buildings in the Plan Area would be equipped with EV charging stations that provide charging opportunities to at least the number of parking spaces required by California Green Building Standards Code (CALGreen) Tier 1 standards (i.e., 10 percent). Commercial buildings include retail, restaurant, light industrial, office, and mixed-use buildings.

The EV charging stations shall achieve a similar or better functionality as a Level 2 charging station. In the event that the installed charging stations use functionality/technology other than Level 2 charging stations, the parameters of the mitigation obligation (i.e., the number of parking spaces served by EV charging stations) shall reflect the comparative equivalency of Level 2 charging stations to the installed charging stations on the basis of average charge rate per hour. For purposes of this equivalency demonstration, Level 2 charging stations shall be assumed to provide charging capabilities of 25 range miles per hour.

The same methodology used to quantify emission reductions associated with single-family residential EV chargers was used to quantify emission reductions for commercial EV chargers. For commercial EV chargers, it was assumed 75 percent of the EV chargers would be Level 2 (85 chargers) and 25 percent of the EV chargers would be Direct Current (DC) Fast Chargers (28 chargers with a charge power of 105 kW). Level 2 EV chargers were assumed to be used for 3 hours per day and DC Fast Chargers were assumed to be used for 1 hour per day.

Installation of 85 Level 2 EV chargers and 28 DC Fast Chargers would result in GHG emission reductions of 581 MTCO₂e/year.

Table 7 Summary of GHG Reductions from Mitigation Measures 4.2-3 and 4.2-4

Mitigation Measure	Annual GHG Emissions (MTCO ₂ e/year)
New Single-Family Residential EV Chargers	49
Commercial EV Chargers	581
Total Reductions from MMs 4.2-3 and 4.2-4	630
Reduction Summary	
Project Emissions without Mitigation	
With On-Site WWTP	12,707
Without On-Site WWTP	12,520
GHG Emission Reduction Needed to Meet Net Zero Threshold	
With On-Site WWTP	12,077
Without On-Site WWTP	11,890

Notes: GHG = greenhouse gas; MTCO₂e/year = metric tons of carbon dioxide equivalent per year; WWTP = on-site wastewater treatment plant; EV = electric vehicle; MMs = mitigation measures.

Source: Modeling conducted by Ascent Environmental in 2020

3.2.4 Mitigation Measure 4.2-5

The following mitigation measure is considered in Mitigation Measure 4.2-5 of the Draft SEIR.

- ▶ Prior to issuance of occupancy permits, the Project will reduce emissions of GHGs through implementation of a GHG Reduction Plan, which may include the following.

- **Increase on-site solar energy production beyond that required by the 2019 Title 24 Building Code.**

All non-historic single-family and multifamily residential buildings within the Project area shall size on-site solar PV to offset the GHG emissions associated with site energy consumption, comprised of electricity exclusively (see removal of natural gas from residences below) and inclusive of electricity required to charge EVs for each residential unit. The 2019 Title 24 Part 6 standards require all new low-rise residential (e.g., single-family, townhouses) to offset electricity consumption. Mid-rise residential (i.e., residential buildings over 4 stories and more) are subject to the nonresidential Title 24 Part 6 standards, which do not include on-site PV requirements. The anticipated electricity consumption associated with mid-rise residential (i.e., multifamily units) in the Project area is approximately 4,200 megawatt-hours per year (MWh/year). To accommodate this amount of generation, a solar system of 2,600 kW, or 2.5 kW per multifamily unit would be required, as determined using the National Renewable Energy Laboratory's PVWatts Calculator, based on the Project's location.

The installation of solar PV and associated electricity put on the grid would be subject to the interconnection rules of the local utility provider. Solar PV could be installed on building rooftops (including on nonresidential buildings) or ground mounted. Solar PV to offset electricity consumption for all new mid-rise residential buildings would effectively eliminate all GHG emissions associated with these buildings. This measure would result in GHG emission reductions of 281 MTCO₂e/year.

- **Require commercial tenants to opt into a 100 percent carbon-free electricity provider option, such as the Deep Green option provided by Marin Clean Energy (MCE).**

All nonresidential tenants shall sign agreements to opt into MCE as their electricity provider. MCE provides three electricity options ranging from 60 percent to 100 percent renewable. All nonresidential buildings shall be powered by MCE's Deep Green or Local Sol option, which both provide 100 percent renewable electricity. Compliance with this measure would eliminate all electricity-related emissions associated with nonresidential buildings and would result in GHG emission reductions of 436 MTCO₂e/year.

- **Require use of electrically powered landscape equipment in the Modified Project.**

Multiple electrical receptacles shall be included on the exterior of all residential and nonresidential buildings and accessible for purposes of charging or powering electric landscaping equipment and providing an alternative to using fossil fuel-powered generators. The electrical receptacles shall have an electric potential of 100 volts. There should be a minimum of one electrical receptacle on each side of the building and one receptacle every 100 linear feet around the perimeter of the building.

All homeowners and tenants of nonresidential buildings shall use only electric-powered landscape equipment. This requirement shall be included in Homeowner Association Declarations of Covenants, Conditions, and Restrictions and lease agreements.

To quantify the GHG emission reduction associated with electric-powered landscape equipment, the CalEEMod output for landscape equipment was eliminated, as it assumes gasoline- or diesel-powered equipment as the default. The use of all-electric landscaping equipment would result in GHG emission reductions of 18 MTCO₂e/year. This would effectively eliminate all GHG emissions associated with landscaping because all Project buildings will be supplied with renewable electricity through on-site generation or MCE's Deep Green or Local Sol options.

- **Install EV chargers at multifamily residential buildings.**

Equip 10 percent of the parking spaces at multifamily residential buildings with EV charging stations.

The EV charging stations shall achieve a similar or better functionality as a Level 2 charging station. In the event that the installed charging stations use functionality/technology other than Level 2 charging stations, the parameters of the mitigation obligation (i.e., the number of parking spaces served by EV charging stations) shall reflect the comparative equivalency Level 2 charging stations to the installed charging stations on the basis of average charge rate per hour. For purpose of this equivalency demonstration, Level 2 charging stations shall be assumed to provide charging capabilities of 25 range miles per hour.

The same methodology used to quantify emission reductions associated with single-family residential EV chargers was used to quantify emission reductions for multifamily EV chargers. For multifamily units, it was assumed that 263 Level 2 EV chargers would be installed based on applying CALGreen Tier 1 EV requirements (10 percent of parking spaces) to the anticipated number of multifamily parking spaces provided in the Project's parking plan (Orton 2020).

Installation of 263 Level 2 EV chargers in parking spaces serving multifamily residences would result in GHG emission reductions of 311 MTCO₂e/year.

- **Install EV chargers in retrofitted single-family residences.**

Mitigation Measure 4.2-3 requires that each new single-family residence include at least one EV charger with similar or better functionality as a Level 2 charging station. The Project would also retrofit 29 historic structures to become single-family dwelling units. Each of these retrofitted units shall include a minimum of one single-port EV charging station.

The EV charging stations shall achieve a similar or better functionality as a Level 2 charging station. In the event that the installed charging stations use functionality/technology other than Level 2 charging stations, the parameters of the mitigation obligation (i.e., the number of parking spaces served by EV charging stations) shall reflect the comparative equivalency Level 2 charging stations to the installed charging stations on the basis of average charge rate per hour. For purpose of this equivalency demonstration, Level 2 charging stations shall be assumed to provide charging capabilities of 25 range miles per hour.

The same methodology used to quantify emission reductions associated with new single-family residential EV chargers was used to quantify emission reductions for retrofitted single-family EV chargers. Installation of 29 Level 2 EV chargers in retrofitted single-family residences would result in GHG emission reductions of 4 MTCO₂e/year.

- **Provide additional residential and commercial bike parking (beyond City code requirements).**

As noted on page 3-28 of the Draft SEIR, “Free covered and secure bicycle parking facilities would be provided onsite for bicycle commuters within seventy-five feet of a building entrance in at least nine locations. Secure short-term bicycle parking would be located within fifty feet of the main entrances to each commercial building.” Thus, while bicycle parking will contribute to VMT reductions, it would not result in additional GHG emission reductions.

- **Plant additional trees throughout the Project site.**

The City of Richmond Municipal Code includes tree planting requirements for residential and mixed-use zones, as well as streets. Residential zones are required to have one tree per 1,000 square foot lot area; mixed use zones are required to have one tree per 2,000 square foot lot area; one street tree is required per 50 linear feet of street frontage (City of Richmond 2020). Based on these requirements and the proposed development, it was estimated that 3,221 trees would be required under the City’s Municipal Code. Additionally, it was assumed that 20 trees would be planted per acre of parks and open space in the Project area. In total, it was assumed that approximately 7,080 trees would be planted. Using a carbon sequestration rate provided in CalEEMod for a mix of tree types, this measure would result in GHG emission reductions of 251 MTCO₂e/year.

- **Install light-emitting diode (LED) streetlights.**

As stated in the Project’s design guidelines, “Energy-efficient lighting technology should be used to reduce energy use. The use of energy-efficient, long life LEDs with light color rendered as a warm (not cool white) is encouraged.” It is therefore assumed that all streetlights in the Project area would meet these guidelines. Because streetlight-related energy consumption was not quantified for the Project, a reduction for energy-efficient streetlights cannot be taken. No additional GHG emission reductions can be achieved from this measure.

- **Reduce the Project’s use of natural gas.**

Electric Fireplaces in Residences: The Project shall not install gas fireplaces in any single-family or multifamily residential unit. Electric fireplaces will be available by the project applicant but will only be installed at the request of individual homeowners. The removal of all gas fireplaces from residences would result in GHG emission reductions of 75 MTCO₂e/year. This was estimated by removing the CalEEMod output column for fireplaces under area source emissions.

Electric Appliances, Water, and Space Heating in Residences: The Project shall not install gas cooktops, space heaters, water heaters, dryers, or any other gas-powered appliances in any single-family or multifamily residential unit. As noted in Mitigation Measure 4.2-2(d) above, the Project shall install electric water heaters and space heaters in all residential and commercial development. The removal of all building energy-related natural gas from residences would result in GHG emission reductions of 997 MTCO₂e/year. This was estimated by removing the CalEEMod output column for natural gas in all residential land use types under the building energy source emissions. While removal of natural gas-powered appliances would increase electricity consumption for each residential unit, it would not result in additional GHG emissions associated with electricity because all residences would be required to have on-site PV systems to cover electricity demand as discussed above.

All-Electric New and Retrofitted Nonresidential and Mixed-Use Buildings: The Project shall not install gas cooktops, space heaters, water heaters, dryers, or any other gas-powered appliances in any new or retrofitted nonresidential or mixed-use building. As noted in Mitigation Measure 4.2-2(d) above, the Project shall install electric water heaters and space heaters in all residential and commercial development. The removal of natural gas from all nonresidential and mixed-use buildings would result in GHG emission reductions of 668 MTCO₂e/year. This was estimated by removing the CalEEMod output column for natural gas in the nonresidential land use types under the building energy emissions. While removal of natural gas-powered appliances would increase electricity consumption, it would not result in additional GHG emissions

associated with electricity because all commercial tenants would be required to opt into MCE as their electricity provider, which would eliminate all electricity-related emissions.

3.2.5 Additional GHG Reduction Measures

ZERO EMISSION WATER TAXI

As noted in the Draft SEIR, a diesel-powered ferry would serve the Project, providing up to four daily trips between Point Molate and the San Francisco Ferry Terminal. For the GHG analysis conducted for the Draft SEIR, the ferry was estimated to have a 149-passenger capacity and would be 2,900 horsepower.

Since release of the Draft SEIR, additional market research has been conducted to determine the feasibility of a ferry service between the Project area and San Francisco. It has been determined that a more appropriate service to transport commuters would be a water taxi. As described in Mitigation Measure 4.2-2(h), the Project would require the ferry to achieve Tier 4 standards, which is also required by CARB's Commercial Harbor Craft (CHC) Regulation. The current CHC Regulation will be fully implemented by December 1, 2022 and draft concepts for CHC regulations that would extend from 2023 to 2031 have been drafted. The proposed requirements for new and in-use ferries, starting January 1, 2028, is that all new ferries operating on short routes (less than 3 nautical miles) would be required to be zero-emission (CARB 2020b). CARB's proposed concepts do not include other ferry categories for ferries operating on longer routes (more than 3 nautical miles). Because it is anticipated that the route between the Project area and San Francisco would be longer than 3 nautical miles, an electric ferry cannot be assumed to be required by regulation for this GHGRP. However, due to the quickly evolving technology, the current availability of hydrogen fuel cell ferries currently operating the San Francisco Bay, and the Project's operational year of 2029, the Project shall commit to providing a zero-emission water taxi. The taxi could be electric powered, with electricity provided through one of MCE's 100 percent renewable options, or hydrogen fuel cells. Under this measure, GHG emissions would be reduced by 477 MTCO₂e/year.

75 PERCENT WASTE DIVERSION

Section 3.1.2 explains that the current waste diversion rate for the City is 45.7 percent. Because the Project's first full year of operation would be 2029, it is assumed that a greater diversion rate could be attained. The State of California set a 75 percent waste diversion goal to be met by 2020. The Richmond Climate Action Plan includes Objective 4: Zero Waste, which seeks to divert 90 percent of all solid waste from landfills by 2030. Under this measure, the Project shall achieve at least a 75 percent waste diversion target upon full buildout of the Project to align with the State's waste diversion targets. Compliance with this measure would reduce GHG emissions by 539 MTCO₂e/year.

Table 8 Summary of GHG Reduction Measures in Greenhouse Gas Reduction Plan

Mitigation Measure	Annual GHG Emissions (MTCO ₂ e/year)
New Single-Family Residential EV Chargers	49
Commercial EV Chargers	581
Solar PV for Multifamily Residential Buildings	281
100 Percent Renewable Electricity for Nonresidential Buildings	436
Electric-Powered Landscape Equipment	18
Multifamily Residential EV Chargers	311
Retrofitted Single-Family Residential EV Chargers	4
Tree Planting	251
Removal of Natural Gas from Residential Buildings	1,073
Removal of Natural Gas from New Nonresidential and Mixed-Use Buildings	668

Mitigation Measure	Annual GHG Emissions (MTCO ₂ e/year)
Zero-Emission Water Taxi	477
75 Percent Waste Diversion	539
Total Reductions from Greenhouse Gas Reduction Measures	4,687
Reduction Summary	
Project Emissions without Greenhouse Gas Reduction Plan	
With On-Site WWTP	12,707
Without On-Site WWTP	12,520
GHG Emission Reduction Needed to Meet Net Zero Threshold	
With On-Site WWTP	8,020
Without On-Site WWTP	7,833

Notes: GHG = greenhouse gas; MTCO₂e/year = metric tons of carbon dioxide equivalent per year; WWTP = on-site wastewater treatment plant; EV = electric vehicle; PV = photovoltaics.

Source: Modeling conducted by Ascent Environmental in 2020

3.2.6 Local Offsets

After implementation of all on-site reduction measures discussed in this section, the Project would still need to reduce annual GHG emissions by 7,833 to 8,020 MTCO₂e per year, as shown in Table 8. This amount of GHG emission reduction could be achieved through funding a City-identified local offset project that would be credited to the Project's emissions or purchase credits created by a City project. Before funding a local offset project, the developer shall contact the Zoning Administrator regarding its offset plan and obtain review and approval of the plan.

The City has identified a local offset project which the Project could support to reduce its GHG emissions further. A combined heat and power plant has been proposed at the HydroScience facility that would produce electricity and steam for the City by combusting a blend of biogas enriched with natural gas associated with operation of the facility's wastewater treatment plant. The project has two implementation options: a cogeneration plant with heat capture and without heat capture (Ramboll 2020b). The implementation of this project would result in GHG emission reductions of 1,452 MTCO₂e/year with heat capture, or 857 MTCO₂e/year without heat capture. The City has not identified any other local offset projects that could reduce GHG emissions beyond reductions already accounted for in the City's Climate Action Plan and by local, State, and federal regulations. The City may require additional offsets if any additional local offsets become available prior to the Project obtaining its final discretionary approvals.

3.2.7 GHG Emission Review

After implementation of the on-site reduction measures discussed above, the Project would still need to reduce annual GHG emissions by 7,833 to 8,020 MTCO₂e per year, as shown in Table 8. For policy reasons, the City does not support the purchase of registry credits from the voluntary carbon offset market to reduce GHG emissions to zero for this Project. However, the City supports the purchase of offsets produced by local offset projects, which provide co-benefits to City residents. Currently, there are insufficient local offsets to reduce the Project's GHG emissions to zero. At each Development Plan Review ("Development Plan Development") determination pursuant to Municipal Code section 15.04.810.080, the Development Plan Development proponent must submit to the City proof that the applicable measures from this GHGRP have been incorporated into the Development Plan Development and there are no additional feasible mitigation measures, such as local offsets, available to further reduce GHG emissions to meet the City's GHG emission threshold. All local offsets must be real, additional, quantifiable, enforceable, validated, and permanent.

3.2.8 Adaptive Management Strategies

This GHGRP is based on the GHG regulations and technology available today. It is reasonably foreseeable that GHG regulations and technology change in the future. To account for such changes, upon the applicant's request, the Zoning Administrator may approve changes to this GHGRP as follows:

- (a) Substitution of GHG reduction measures that are equally effective or superior to those proposed in this GHGRP, provided that the effectiveness of the proposed measures is supported by substantial evidence.
- (b) Reduction of the amount of carbon offsets required to offset annual Project-generated GHG emissions as a result of (i) technological or (ii) regulatory changes that reduce Project-generated GHG impacts compared to the assumptions of this GHGRP, provided that the revised requirements are based on Project-specific information available at the time and supported with substantial evidence.
- (c) Reduction in the amount of carbon offsets required to offset annual Project-generated GHG emissions if the Project's actual operational impacts are less than predicted by this GHGRP, provided that the reduction is supported by substantial evidence.

4 CONCLUSION

To satisfy the requirements of the Mitigation Monitoring and Reporting Program, the Project must incorporate the requirements of Mitigation Measure 4.2-5 in addition to Mitigation Measures 4.2-2, 4.2-3, and 4.2-4. Pursuant to Mitigation Measure 4.2-5, the applicant has prepared this GHGRP that requires removal of natural gas from residential and nonresidential buildings, installation of residential and nonresidential EV chargers, solar PV for multifamily residential buildings, renewable electricity for nonresidential buildings, electric-powered landscaping equipment, tree planting, increased waste diversion, and zero-emission water taxis to reduce the Project's emissions. The Project would also fund a combined heat and power plant that the City has identified as a local offset project, which would further reduce GHG emissions. Compliance with the GHGRP measures would not reduce the Project's GHG emissions to net zero. As shown in Table 9, neither option would reduce the Project's emissions to net zero and thus, the Project would result in a cumulatively considerable contribution to climate change and this impact would be significant and unavoidable.

Table 9 Summary of GHG Reduction Plan

Project Emissions Estimate	Annual GHG Emissions (MTCO ₂ e/year)	
	Project without WWTP	Project with WWTP
Final SEIR Option 1 (Option 2)	14,761 (14,795)	14,948 (14,982)
Refined Project	12,520	12,707
With Mitigation Measures 4.2-3 and 4.2-4	11,890	12,077
With Mitigation Measure 4.2-5	8,219	8,406
With GHG Reduction Plan Measures	7,833	8,020
With City offset project (cogeneration plant with heat capture)	6,408	6,595
With City offset project (cogeneration plant without heat capture)	6,976	7,163

Notes: GHG = greenhouse gas; MTCO₂e/year = metric tons of carbon dioxide equivalent per year; WWTP = on-site wastewater treatment plant; SEIR = Subsequent Environmental Impact Report.

Source: Modeling conducted by Ascent Environmental in 2020

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Attachment A

Modeling Inputs and Results

Point Molate GHG Emissions Summary

Construction Emissions Summary

Year	MTCO2e
2021	2,609.86
2022	1,651.22
2023	3,735.79
2024	3,409.26
2025	3,269.46
2026	3,204.38
2027	3,146.41
2028	2,834.98
Total	23,861.36
Amortized	795.38

Includes Tier 4 for all off-road equipment over 50 hp except paving equipment

Includes electric for off-road equipment under 50 hp

Includes construction of Bay trail

Operational Emissions Summary

	Without WWTP	With WWTP
Source	MTCO2e	
Area	93	93
Electricity	717	717
Natural Gas	1,666	1,666
Water	140	140
Solid Waste	998	998
Water Taxi	477	477
Mobile	8,051	8,051
Stationary	98	109
WWTP	-	176
Amortized Construction	795	795
Existing Site	(515)	(515)
Total	12,520	12,707

Natural Gas Emissions Summary

Land Use	Size	Units	MTCO2e
New Buildings			
Apartments Mid-Rise	1026	DU	379.7974
Townhouses	241	DU	275.7142
General Office Building	31.194	1000 sq ft	23.1587
Quality Restaurant	20	1000 sq ft	167.4308
Regional Shopping Center	10	1000 sq ft	1.8413
Single Family	156	DU	254.6696
Convenience Market	15	1000 sq ft	2.7619
Historic Buildings			
General Office Building	372.581	1000 sq ft	471.8116
Single Family	29	DU	87.1791
Convenience Market	5	1000 sq ft	1.444
Total			1665.809

New buildings include 2019 Title 24 adjustment

Electricity Emissions Summary

Land Use	Size	Units	MTCO2e
New Buildings			
Apartments Mid-Rise	1026	DU	268.4838
Townhouses	241	DU	0
General Office Building	31.194	1000 sq ft	22.6183
Quality Restaurant	20	1000 sq ft	36.9826
Regional Shopping Center	10	1000 sq ft	6.4372
Single Family	156	DU	0
Convenience Market	15	1000 sq ft	9.6558
Historic Buildings			
General Office Building	372.581	1000 sq ft	355.9658
Single Family	29	DU	12.9309
Convenience Market	5	1000 sq ft	3.983
Total			717.0574

New buildings include 2029 PG&E EF, 2019 Title 24, energy efficient appliances

Historic buildings include 2029 PG&E EF

Area Source Emissions Summary

	MTCO2e
Landscaping	18.0918
Fireplaces	75.3487
Total	93.4405

Water Emissions Summary

	MTCO2e
Total indoor/outdoor water use	139.781

Includes low-flow fixtures

Solid Waste Emissions Summary

	MTCO2e
Total solid waste	998.0637

Includes 45.7% diversion rate

Stationary Emissions Summary

	MTCO2e
Without WWTP	97.7
With WWTP	109.1

Includes Tier 4 Final diesel generators

Mobile Source Emission Summary

Total mobile sources (MTCO2e)	8,051
Daily VMT/service population	10.41
Service Population	5,607
Residents/DU	2.83
Total DU	1,452
Employment/KSF	3.3
KSF	453.775
Project Daily VMT	58,354
Project Annual VMT	21,299,096

Water Taxi Emission Summary

	MTCO2e
Total water taxi emissions	477

Wastewater Treatment Plant Emission Summary

Source	MTCO2e
Brine Truck	2.8
Energy Consumption	173
Total	176

Existing Point Molate Site GHG Emissions

Point Molate Beach Park	MTCO2e
Mobile	85.00
Existing Buildings	
Electricity	48.16
Mobile	266.65
Waste	45.18
Water	69.85
Total	514.84

GHGRP Reduction Measures

New Single Family Housing EV Charging in 2029

Number of charging stations	397	Notes				
Percent of units with Evs	10%	<-- calculated				
Number of Evs	40					
Average daily VMT per service population	10.41	<-- TIA with TDM				
Average daily eVMT	413.20					
Equivalent daily kWh	168.14					
Average Efficiency of EV LDV (kWh/100-mi)	40.69231918	<-- EMFAC2017 for Contra Costa County, includes SAFE Rule Part 2				
Average Efficiency of Gasoline LDV in 2029 (mpg)	38.39030182	<-- informational purposes only				
GHG Emissions per kWh in 2029 (MTCO2e/kWh)	-	<-- all electricity will be 100% renewable				
GHG Emissions per mi for average gasoline LDV (gCO2/mi)	325					

Type of EV Charger	Charger Power (kW)	Charged Amount (kWh)	Equivalent VMT	EV emissions (MTCO2e)	Equivalent Gasoline Emissions (MTCO2e)	Emissions Reductions (MTCO2e)
Level 2	11.4	61,371	150,817	-	48.95	48.95

Residential L2 start with a 6.6 kW rating and go up to a 11.4 kW rating by 2025. (CEC 2018, Table 4.1)

Retrofitted Single Family Housing EV Charging in 2029

Number of charging stations	29	Notes				
Percent of units with Evs	10%	<-- calculated				
Number of Evs	3					
Average daily VMT per service population	10.41	<-- TIA with TDM				
Average daily eVMT	30.18					
Equivalent daily kWh	12.28					
Average Efficiency of EV LDV (kWh/100-mi)	40.69231918	<-- EMFAC2017 for Contra Costa County, includes SAFE Rule Part 2				
Average Efficiency of Gasoline LDV in 2029 (mpg)	38.39030182	<-- informational purposes only				
GHG Emissions per kWh in 2029 (MTCO2e/kWh)	-	<-- all electricity will be 100% renewable				
GHG Emissions per mi for average gasoline LDV (gCO2/mi)	325					

Type of EV Charger	Charger Power (kW)	Charged Amount (kWh)	Equivalent VMT	EV emissions (MTCO2e)	Equivalent Gasoline Emissions (MTCO2e)	Emissions Reductions (MTCO2e)
Level 2	11.4	4,483	11,017	-	3.58	3.58

Residential L2 start with a 6.6 kW rating and go up to a 11.4 kW rating by 2025. (CEC 2018, Table 4.1)

Multi Family Housing EV Charging in 2029

Number of charging stations	262.7	Notes				
Number of units	1026					
Percent of units with Evs	10%	<-- calculated				
Number of Evs	103					
Average daily VMT per service population	10.41	<-- TIA with TDM				
Average daily eVMT	1,067.86					
Equivalent daily kWh	434.54					
Average Efficiency of EV LDV (kWh/100-mi)	40.69231918	<-- EMFAC2017 for Contra Costa County				
Average Efficiency of Gasoline LDV in 2029 (mpg)	38.39030182	<-- informational purposes only				
GHG Emissions per kWh in 2029 (MTCO2e/kWh)	-	<-- all electricity will be 100% renewable				
GHG Emissions per mi for average gasoline LDV (gCO2/mi)	325					

Type of EV Charger	Charger Power (kW)	Charged Amount (kWh)	Equivalent VMT	EV emissions (MTCO2e)	Equivalent Gasoline Emissions (MTCO2e)	Emissions Reductions (MTCO2e)
Level 2	11.4	389,769	957,845	-	310.90	310.90

Residential L2 start with a 6.6 kW rating and go up to a 11.4 kW rating by 2025. (CEC 2018, Table 4.1)

Commercial EV Charging in 2029

Number of parking spaces	1,127	Orton parking plan April 2020				
Number of charging stations - Level 2	85					
Hours of charging per day - Level 2	3.0	<-- UCLA 2019 EV Charing at Work p. 35				
Number of hours of charging per year - Level 2	92,555					
Number of charging stations - DC Fast	28					
Hours of charging per day - DC Fast	1.0					
Number of hours of charging per year - DC Fast	10,284					
Average Efficiency of EV LDV (kWh/100-mi)	40.69231918	<-- EMFAC2017 for Contra Costa County				
Average Efficiency of Gasoline LDV in 2035 (mpg)	38.39030182	<-- informational purposes only				
GHG Emissions per kWh in 2029 (MTCO2e/kWh)	-	<-- all electricity will be 100% renewable				
GHG Emissions per mi for average gasoline LDV (gCO2/mi)	325					

Type of EV Charger	Percent Breakdown of Charger Types	Charger Power (kW)	Charged Amount (kWh)	Equivalent VMT	EV emissions (MTCO2e)	Equivalent Gasoline Emissions (MTCO2e)	Emissions Reductions (MTCO2e)
Level 2	75%	6.6	458,147	1,125,880	-	365.45	365.45
DC Fast Charger	25%	105	269,952	663,397	-	215.33	215.33
Total							580.77

Number of charging stations based on installing chargers for the spaces the 2019 CalGreen Tier 1 standards would otherwise require to be "EV-Capable". This assumes 26 parking spaces will be serviced by a charging station. The Project assumes that each commercial land use will have its own parking lots and all parking, including historic buildings will be new. Existing parking is not subject to CalGreen standards.

DCFCs start with a 50kW rating and go up to a 105 kW rating by 2025. (CEC 2018, Table 4.1)

Tree Sequestration Benefits

Number of trees to be planted	Trees per KSF lot area/50 linear feet	KSF lot area/linear feet	Total trees	
Residential Zone	1	2,640	2,640	<-- City of Richmond Municipal Code
Mixed Use Zone	0.5	514	257	<-- City of Richmond Municipal Code
Streets	1	16,200	324	<-- City of Richmond Municipal Code
Open Space			3,860	20 trees/acre assumption
Total Trees	7,081			
Carbon sequestration (MTCO2e/tree/year)	0.0354	Source: CalEEMod Appendix D, Table 11.2		
Total GHG reduction (MTCO2e/year)	250.66			

GHGRP Reduction Measure Summary

Reduction Measures	MTCO ₂ e	
No natural gas fireplaces	75	
Electric landscape equipment	18	
No natural gas in residences	997	
No natural gas in new nonresidential and mixed-use buildings	668	
Residential onsite solar or EBCE electricity	281	
Nonresidential and mixed-use EBCE electricity	436	
New single family EV chargers	49	
Retrofitted single family EV chargers	4	
Multi family EV chargers	311	
Nonresidential EV chargers	581	
Tree planting	251	
Electric water taxi	477	
75 Percent Waste Diversion	539	
Total Reductions	4,687	
Reductions Needed	Without WWTP	With WWTP
	7,833	8,020

City-identified offset project (with heat capture)	1425	
City-identified offset project (without heat capture)	857	
	Without WWTP	With WWTP
Project GHG Emissions after All Feasible Measures (w/heat capture)	6,408	6,595
Project GHG Emissions after All Feasible Measures (w/out heat capture)	6,976	7,163

Refined Project Land Uses

		Residential							Nonresidential					
Planning Area	Acreage	Net Dev. Area (AC)	Single Family		Townhouses	Multi-Family	Parking	Net. Dev. Area (AC)	Mixed Use	Regional Retail	Office	Neighborhood Retail	Civic	Transportation
			New (DU)	Historic (DU)	New (DU)	New (DU)	Spaces		Historic (SF)	New (SF)	New (SF)	New (SF)	New (SF)	Historic (SF)
A	21.8	17.2	30		180	140	201	-				5,000		
B	11.5	7.6	25		33			-						
C	19.3	12.2	83			85	128	-						
D	7.8	3.2				66	99	-						
E	9.3	4.2				300	450	-				10,000		5,000
F	10.4	5.6	2	2		231	346	0.9	11,319				10,000	
G	8	6.3	16	27	28			1.7						
H	22	4.3				204	1,403	9.2	361,262	20,000	31,194			
Total	110.1		156	29	241	1,026	2,627		372,581	20,000	31,194	15,000	10,000	5,000

Calculation Assumptions

Water Demand

Land Use Type	GPD/Unit	Units/SF	GPY	Source
Single Family	220	185	14,855,500	WSA
Townhouse	165	241	14,514,225	
Apartments	110	1,026	41,193,900	
Retail/Restaurant	0.5	55,000	10,037,500	
Office	0.14	383,775	19,610,903	
Water Transit Terminal	0.14	5,000	255,500	
Fire/Police Station	0.14	10,000	511,000	
Irrigation			80,000	

Solid Waste Generation

Land Use Type	lb/unit/day	unit	tons/year	Source
Residential	12.23	1,452	3,240.83	DEIR Table 3-2
Retail/Commerical	5	453.78	414.07	

Vehicle Emission Factors 2029

	CO2 (g/mi)	CH4 (g/mi)	N2O (g/mi)
All vehicles	306.28	0.01	0.02

EV Population Estimate

	Estimate	Source
Total EVs in Contra Costa County in 2025	45,873	<-- EVIPro
Total LDA population in Contra Costa County in 2025	451,004	<-- EMFAC2017
Percent Evs	10%	

PG&E 2029 EF Calculation

PG&E 2018 EF (lb CO2/MWh)	206.00
PG&E 2029 EF (lb CO2/MWh)	143.17
CAMX 2018 EF (lb CH4/MWh)	0.03
CAMX EF 2029 (lb CH4/MWh)	0.024
CAMX 2018 EF (lb N2O/MWh)	0.004
CAMX EF 2029 (lb N2O/MWh)	0.003
PG&E 2029 EF (lb CO2e/MWh)	144.59
PG&E 2029 EF (MTCO2e/kWh)	0.00007

<https://www.theclimateregistry.org/our-members/cris-public-reports/>

eGRID 2018 (<https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid>)

eGRID 2018 (<https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid>)

Conversion Factors

MT/lb	0.000453592
g/tons	907185
tons/MT	1.10231

GWP Factor

CO2	1
CH4	25
N2O	298

RPS Requirements

RPS Target Year	2018	2026	2029	2030
Percent Renewable	27%	50%	58%	60%
Increase in Renewables (2018-2029)			31%	

Source: EMFAC2017 (v1.0.2) Emissions Inventory

Region Type: County

Region: Contra Costa

Calendar Year: 2029

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model	Speed	Fuel	Population	VMT	CO2										CH4_RUNEX	CH4_IDLEX	CH4_STREX	CH4_TOTEX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	N2O_TOTEX	Fuel Consumption
								RUNE	CO2_I	CO2_STRE	CO2_TOTE	X	X	X	X	X	X									
Contra Costa	2029	All Other Bus	Aggregate	Aggregate	Diesel	137.4514	7906.515221	1154.592	8.169	0.085	0	8.254205	4.01189E-06	3.47171E-07	0	4.35906E-06	0.001284043	1.3403E-05	0	0.001297446	0.73564					
Contra Costa	2029	LDA	Aggregate	Aggregate	Gasoline	466470.3	16529106.11	2186094	3967	0	111.5543	4335.596	0.020411153	0	0.082713209	0.103124362	0.058329733	0	0.051758261	430.5542						
Contra Costa	2029	LDA	Aggregate	Aggregate	Diesel	5478.915	199495.1234	25903.6	38.42	0	0	38.42282	6.66018E-05	0	0	6.66018E-05	0.006039532	0	0	0.006039532	3.424358					
Contra Costa	2029	LDA	Aggregate	Aggregate	Electricity	20399.38	830097.9324	99390.46	0	0	0	0	0	0	0	0	0	0	0	0	0					
Contra Costa	2029	LD1T	Aggregate	Aggregate	Gasoline	46757.16	1643579.115	214953.9	466.3	0	13.00378	509.4844	0.003627405	0	0.010200925	0.01382833	0.007680359	0	0.005585922	0.013266281	50.59527					
Contra Costa	2029	LD1T	Aggregate	Aggregate	Diesel	8.918872	237.9123723	35.46002	0.092	0	0	0.091991	6.52696E-07	0	0	6.52696E-07	1.44597E-05	0	0	1.44597E-05	0.008199					
Contra Costa	2029	LD1T	Aggregate	Aggregate	Electricity	975.9656	41359.25092	4818.333	0	0	0	0	0	0	0	0	0	0	0	0	0					
Contra Costa	2029	LD2T	Aggregate	Aggregate	Gasoline	145405.5	5175470.443	673264.2	1515	0	43.02394	1655.609	0.010562482	0	0.035527572	0.046090055	0.022674624	0	0.018713809	0.041388433	164.4132					
Contra Costa	2029	LD2T	Aggregate	Aggregate	Diesel	1300.506	49569.17576	6195.202	13.03	0	0	13.02561	3.23575E-05	0	0	3.23575E-05	0.002047445	0	0	0.002047445	1.160882					
Contra Costa	2029	LD2T	Aggregate	Aggregate	Electricity	3730.836	108565.6525	18371.02	0	0	0	0	0	0	0	0	0	0	0	0	0					
Contra Costa	2029	LHD1	Aggregate	Aggregate	Gasoline	9808.902	336755.3305	146138	341.1	1.223	2.866828	345.2323	0.002041783	0.001157285	0.002883611	0.006082679	0.003135124	3.13474E-05	0.005811079	0.008977551	36.44038					
Contra Costa	2029	LHD1	Aggregate	Aggregate	Diesel	9104.332	321368.6604	114521	176.7	1.245	0	177.9399	0.002386961	5.11638E-05	0	0.002438124	0.027774043	0.000195628	0	0.02796672	15.85854					
Contra Costa	2029	LHD2	Aggregate	Aggregate	Gasoline	1342.529	47127.64367	20001.69	54.08	0.191	0.439057	54.70769	0.000186788	0.000156422	0.000355235	0.000698446	0.00040576	4.21909E-06	0.000779306	0.001189285	5.774572					
Contra Costa	2029	LHD2	Aggregate	Aggregate	Diesel	3413.886	119955.5633	42942.39	73.68	0.745	0	74.42486	0.000855788	1.91851E-05	0	0.000874973	0.011581489	0.000117062	0	0.011698551	6.632969					
Contra Costa	2029	MCV	Aggregate	Aggregate	Gasoline	21445.37	153481.6486	42890.74	36.01	0	2.850014	38.6294	0.055722902	0	0.011934875	0.067657777	0.011291991	0	0.000772805	0.011947996	4.102108					
Contra Costa	2029	MDV	Aggregate	Aggregate	Gasoline	97057.32	3270991.42	443437.7	1183	0	35.17748	1295.176	0.008498773	0	0.027179632	0.035678405	0.010719589	0	0.013223713	0.030243302	128.6198					
Contra Costa	2029	MDV	Aggregate	Aggregate	Diesel	2934.372	107206.2983	13889.97	36.88	0	0	36.88023	3.80874E-05	0	0	3.80874E-05	0.005797059	0	0	0.005797059	3.286878					
Contra Costa	2029	MDV	Aggregate	Aggregate	Electricity	2487.285	7891.076768	12337.0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Contra Costa	2029	MH	Aggregate	Aggregate	Gasoline	1673.987	16046.81889	167.4656	28.04	0	0.004336	28.04528	0.00011443	0	5.45454E-06	0.000119884	0.000292783	0	7.36199E-06	0.000300145	2.960169					
Contra Costa	2029	MH	Aggregate	Aggregate	Diesel	828.4005	7227.572109	82.84005	7.543	0	0	7.542653	3.7659E-05	0	0	3.7659E-05	0.0011856	0	0	0.0011856	0.672224					
Contra Costa	2029	Motor Coach	Aggregate	Aggregate	Diesel	36.1595	4287.446466	527.9286	6.288	0.387	0	6.674238	4.09795E-06	7.39597E-06	0	1.14939E-05	0.000988843	6.07542E-05	0	0.001049097	0.594828					
Contra Costa	2029	OBUS	Aggregate	Aggregate	Gasoline	287.702	13247.34527	5756.342	22.96	0.112	0.156968	23.23216	0.000124183	6.34732E-05	0.000184069	0.000371726	0.000245991	1.79242E-06	0.000168243	0.000416026	2.452229					
Contra Costa	2029	PTO	Aggregate	Aggregate	Diesel	0	9529.508708	0	19.4	0	0	19.39989	1.26014E-05	0	0	1.26014E-05	0.003049393	0	0	0.003049393	1.728977					
Contra Costa	2029	SBUS	Aggregate	Aggregate	Gasoline	107.8149	5244.717504	431.1595	4.391	0.272	0.020192	4.683308	3.00421E-05	0.000295551	2.48439E-05	0.000350537	8.46962E-05	1.16419E-05	2.24781E-05	0.000118816	0.494338					
Contra Costa	2029	SBUS	Aggregate	Aggregate	Diesel	1357.66	44315.51822	15667.21	45.34	4.651	0	49.98688	7.18391E-05	1.87498E-05	0	9.0598E-05	0.007162224	0.000731018	0	0.007857242	4.454982					
Contra Costa	2029	T6 Ag	Aggregate	Aggregate	Diesel	9.720826	52.36079409	42.77163	0.061	0.007	0	0.068287	2.90017E-08	2.45526E-08	0	5.35542E-08	9.63251E-06	1.10119E-06	0	1.07337E-05	0.006086					
Contra Costa	2029	T6 CAIRP hea	Aggregate	Aggregate	Diesel	23.0627	4149.88228	336.7154	3.403	0.013	0	3.419664	1.6483E-06	5.82511E-08	0	1.70655E-06	0.000534979	2.11981E-06	0	0.000537099	0.30453					
Contra Costa	2029	T6 CAIRP sm	Aggregate	Aggregate	Diesel	11.77093	546.4459322	171.8556	0.494	0.007	0	0.500462	2.20744E-07	2.97307E-08	0	2.50475E-07	7.75808E-05	1.0848E-06	0	7.86656E-05	0.0044603					
Contra Costa	2029	T6 instate co	Aggregate	Aggregate	Diesel	232.1447	14137.69176	1049.517	17.54	0.151	0	17.69292	1.50635E-05	5.8729E-07	0	1.56508E-05	0.002757356	2.37245E-05	0	0.00278108	1.576847					
Contra Costa	2029	T6 instate co	Aggregate	Aggregate	Diesel	515.6878	25871.34508	2331.404	30.42	0.322	0	30.74322	2.00595E-05	1.30255E-06	0	2.13621E-05	0.004781838	5.05685E-05	0	0.004832406	2.739929					
Contra Costa	2029	T6 instate he	Aggregate	Aggregate	Diesel	859.2001	87982.9059	9915.05	86.61	0.553	0	87.1603	4.36022E-05	2.17014E-06	0	4.57724E-05	0.013613471	8.6915E-05	0	0.013700386	7.767999					
Contra Costa	2029	T6 instate sn	Aggregate	Aggregate	Diesel	2874.445	120923.9245	33170.7	123.7	1.824	0	125.5661	5.8137E-05	7.26019E-06	0	6.53972E-05	0.019450522	0.000286727	0	0.019737249	1.139084					
Contra Costa	2029	T6 OOS heav	Aggregate	Aggregate	Diesel	12.24971	2196.589316	178.8458	1.803	0.007	0	1.81043	8.73177E-07	3.094E-08	0	9.04117E-07	0.000283447	1.12731E-06	0	0.000284574	0.161351					
Contra Costa	2029	T6 OOS smal	Aggregate	Aggregate	Diesel	6.989219	322.997677	102.0426	0.292	0.004	0	0.29599	1.30567E-07	1.76532E-08	0	1.4822E-07	4.58808E-05	6.44608E-07	0	4.65254E-05	0.026179					
Contra Costa	2029	T6 Public	Aggregate	Aggregate	Diesel	752.2479	11909.54155	2281.819	13.21	2.514	0	15.72239	2.0096E-05	1.04982E-05	0	3.05941E-05	0.002076118	0.000395222	0	0.00247134	1.406127					
Contra Costa	2029	T6 utility	Aggregate	Aggregate	Diesel	71.41068	1185.834071	821.2228	1.14	0.116	0	1.255582	4.44174E-07	4.95708E-07	0	9.39882E-07	0.000179185	1.81747E-05	0	0.00019736	0.111901					
Contra Costa	2029	T6T5	Aggregate	Aggregate	Gasoline	976.0529	55679.95109	19528.87	94.17	0.521	0.726417	95.42153	0.000306852	0.00030172	0.000723753	0.001332324	0.00069983	9.16179E-06	0.000658492	0.001367484	10.07025					
Contra Costa	2029	T7 Ag	Aggregate	Aggregate	Diesel	10.94116	35.00679058	48.1411	0.063	0.025	0	0.087642	4.07197E-08	4.09016E-07	0	4.49736E-07	9.87122E-06	3.90482E-06	0	1.3776E-05	0.007811					
Contra Costa	2029	T7 CAIRP	Aggregate	Aggregate	Diesel	55.49	108994.4025	8095.555	13.5	14.09	0	147.6007	0.000113245	0.000296224	0	0.000409469	0.002988610	0.002214672	0	0.023200778	13.15462					
Contra Costa	2029	T7 CAIRP cor	Aggregate	Aggregate	Diesel	55.1791	10155.22681	249.4626	16.2	0.21	0	16.40667	1.84668E-05	4.50442E-06	0	2.29712E-05	0.002545895	3.30049E-05	0	0.0025789	1.462212					
Contra Costa	2029	T7 NNOOS	Aggregate	Aggregate	Diesel	734.5101	132893.6574	10723.85	152.1	21.8	0	173.8955	0.000127067	0.000487015	0	0.000614082	0.023907222	0.003426724	0	0.027333946	15.49809					
Contra Costa	2029	T7 NOOS	Aggregate	Aggregate	Diesel	221.2705	42820.7496	3230.549	52.6	6.995	0	59.59516	4.45725E-05	0.000146713	0	0.000191285	0.008268072	0.0001099458	0	0.00936753	5.311301					
Contra Costa	2029	T7 other por	Aggregate	Aggregate	Diesel	64.06833	1267.74488	486.9193	19.3	0.26	0	19.61466	1.82615E-05	5.38619E-06	0	2.36477E-05	0.003042323	4.08283E-05	0	0.003083151	1.748118					
Contra Costa	2029	T7 POAK	Aggregate	Aggregate	Diesel	541.1335	84047.41363	4112.615	131.5	3.508	0	134.9732	0.000123558	7.26375E-05	0	0.000196196	0.020664475	0.000551426	0	0.0212159	12.0292					
Contra Costa	2029	T7 Public	Aggregate	Aggregate	Diesel	458.2666	9286.219888	1390.075	16.32	1.517	0	17.83857	4.53052E-05	2.6584E-05	0	7.18892E-05	0.002565561	0.000238415	0	0.0020803976	1.589828					
Contra Costa	2029	T7 Single	Aggregate	Aggregate	Diesel	720.1725	47992.51065	8310.691	72.47	4.197	0	76.671	4.47504E-05	8.0607E-05	0	0.000125357	0.011391852	0.000659762	0	0.012051613	6.833152					
Contra Costa	2029	T7 single cor	Aggregate	Aggregate	Diesel	355.8612	25193.24985	1608.835	44.31	1.465	0	45.77454	4.62586E-05	2.89175E-05	0	7.51761E-05	0.000694783	0.000230338	0	0.007195121	4.079566					
Contra Costa	2029	T7 SWCV	Aggregate	Aggregate	Diesel	86.52477	3535.26182	337.4466	16.9	0.																

Region Type: County
Region: CONTRA COSTA
Calendar Year: 2025
Season: Annual

Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption. Note 'day' in the unit is operation day.

[illegible]

Point Molate GHGRP Unmitigated - New Land Uses - Contra Costa County, Annual

Point Molate GHGRP Unmitigated - New Land Uses

Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	31.19	1000sqft	0.72	31,194.00	0
Parking Lot	2,627.00	Space	23.64	1,050,800.00	0
City Park	2.73	Acre	2.73	118,918.80	0
City Park	30.00	Acre	30.00	1,306,800.00	0
Quality Restaurant	20.00	1000sqft	0.46	20,000.00	0
Apartments Mid Rise	1,026.00	Dwelling Unit	27.00	1,026,000.00	2934
Condo/Townhouse	241.00	Dwelling Unit	15.06	241,000.00	689
Single Family Housing	156.00	Dwelling Unit	50.65	280,800.00	446
Convenience Market (24 Hour)	15.00	1000sqft	0.34	15,000.00	0
Regional Shopping Center	10.00	1000sqft	0.23	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	5			Operational Year	2029
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	143.17	CH4 Intensity (lb/MW hr)	0.024	N2O Intensity (lb/MW hr)	0.003

1.3 User Entered Comments & Non-Default Data

Point Molate GHGRP Unmitigated - New Land Uses - Contra Costa County, Annual

Project Characteristics - 2029 EF adjusted for RPS

Land Use - Land uses from Exhibit 7a/b

Parking spaces from Exhibit 6b - Off Street Parking

Strip mall represents neighborhood serving retail

Construction Phase - Schedule matches Final SEIR AQ/GHG appendix

Off-road Equipment - Equipment matches DEIR AQ/GHG appendix

Off-road Equipment - Equipment matches DEIR AQ/GHG appendix

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Equipment list matches SEIR AQ/GHG appendix

Off-road Equipment -

Off-road Equipment -

Trips and VMT - Trip numbers and lengths match SEIR AQ/GHG appendix

Grading - Grading acreage matches SEIR assumptions

Vehicle Trips - Mobile emissions quantified separately

Woodstoves - 600 natural gas fireplaces would operate for 3.5 hours per day for 11.14 days per year assumed per SEIR modeling

Energy Use - 2019 Title 24 reduces nonresidential and mid-rise residential energy consumption by 30%. Low-rise residential energy consumption is reduced 7% before onsite solar requirement.

Water And Wastewater - Water demand calculated from rates included in refined WSA

Solid Waste - Solid waste generation rates derived from Table 3-2 of SEIR

Construction Off-road Equipment Mitigation - Tier 4 for all off-road equipment over 50 hp except paving equipment, electric for off-road equipment under 50 hp

Waste Mitigation - Diversion rate of 45.7 percent assumed based on current Richmond diversion rates.

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	220.00	110.00
tblConstructionPhase	NumDays	3,100.00	1,550.00
tblConstructionPhase	NumDays	200.00	78.00

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tblConstructionPhase	NumDays	310.00	261.00
tblConstructionPhase	NumDays	310.00	262.00
tblConstructionPhase	NumDays	220.00	125.00
tblConstructionPhase	NumDays	120.00	89.00
tblEnergyUse	T24E	426.45	298.52
tblEnergyUse	T24E	204.52	190.20
tblEnergyUse	T24E	2.24	1.57
tblEnergyUse	T24E	4.10	2.67
tblEnergyUse	T24E	2.67	1.87
tblEnergyUse	T24E	2.24	1.57
tblEnergyUse	T24E	217.68	202.44
tblEnergyUse	T24NG	6,115.43	4,280.80
tblEnergyUse	T24NG	20,104.20	18,696.90
tblEnergyUse	T24NG	3.90	2.73
tblEnergyUse	T24NG	18.32	12.82
tblEnergyUse	T24NG	39.90	27.93
tblEnergyUse	T24NG	3.90	2.73
tblEnergyUse	T24NG	39,708.76	27,796.13
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	153.90	600.00
tblFireplaces	NumberGas	36.15	0.00
tblFireplaces	NumberGas	39.00	0.00
tblFireplaces	NumberNoFireplace	41.04	0.00
tblFireplaces	NumberNoFireplace	9.64	0.00
tblFireplaces	NumberNoFireplace	12.48	0.00

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tblFireplaces	NumberWood	174.42	0.00
tblFireplaces	NumberWood	40.97	0.00
tblFireplaces	NumberWood	67.08	0.00
tblGrading	AcresOfGrading	1,696.50	90.00
tblGrading	AcresOfGrading	622.25	2.73
tblLandUse	LandUseSquareFeet	31,190.00	31,194.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	8.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.024
tblProjectCharacteristics	CO2IntensityFactor	641.35	143.17
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblSolidWaste	SolidWasteGenerationRate	471.96	3,240.83
tblSolidWaste	SolidWasteGenerationRate	2.81	0.00
tblSolidWaste	SolidWasteGenerationRate	110.86	0.00
tblSolidWaste	SolidWasteGenerationRate	45.08	0.00
tblSolidWaste	SolidWasteGenerationRate	29.01	414.07
tblSolidWaste	SolidWasteGenerationRate	18.25	0.00
tblSolidWaste	SolidWasteGenerationRate	10.50	0.00
tblSolidWaste	SolidWasteGenerationRate	187.32	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	227.00
tblTripsAndVMT	HaulingTripNumber	0.00	43,069.00

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tblTripsAndVMT	HaulingTripNumber	0.00	1,306.00
tblTripsAndVMT	VendorTripNumber	571.00	466.00
tblTripsAndVMT	WorkerTripNumber	2,035.00	2,002.00
tblTripsAndVMT	WorkerTripNumber	407.00	400.00
tblVehicleTrips	ST_TR	6.39	0.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	5.67	0.00
tblVehicleTrips	ST_TR	863.10	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	94.36	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	ST_TR	9.91	0.00
tblVehicleTrips	SU_TR	5.86	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	4.84	0.00
tblVehicleTrips	SU_TR	758.45	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	72.16	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	SU_TR	8.62	0.00
tblVehicleTrips	WD_TR	6.65	0.00
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	5.81	0.00
tblVehicleTrips	WD_TR	737.99	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	89.95	0.00
tblVehicleTrips	WD_TR	42.70	0.00

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tblVehicleTrips	WD_TR	9.52	0.00
tblWater	IndoorWaterUseRate	66,848,030.29	41,193,900.00
tblWater	IndoorWaterUseRate	15,702,120.17	14,514,225.00
tblWater	IndoorWaterUseRate	1,111,087.82	0.00
tblWater	IndoorWaterUseRate	5,543,515.60	20,377,403.00
tblWater	IndoorWaterUseRate	6,070,674.25	10,037,500.00
tblWater	IndoorWaterUseRate	10,164,028.00	14,855,500.00
tblWater	OutdoorWaterUseRate	42,143,323.44	0.00
tblWater	OutdoorWaterUseRate	38,997,184.57	80,000.00
tblWater	OutdoorWaterUseRate	9,899,162.72	0.00
tblWater	OutdoorWaterUseRate	680,989.31	0.00
tblWater	OutdoorWaterUseRate	3,397,638.59	0.00
tblWater	OutdoorWaterUseRate	387,489.85	0.00
tblWater	OutdoorWaterUseRate	6,407,756.78	0.00
tblWoodstoves	NumberCatalytic	20.52	0.00
tblWoodstoves	NumberCatalytic	4.82	0.00
tblWoodstoves	NumberCatalytic	6.24	0.00
tblWoodstoves	NumberNoncatalytic	20.52	0.00
tblWoodstoves	NumberNoncatalytic	4.82	0.00
tblWoodstoves	NumberNoncatalytic	6.24	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	21.06	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	0.00

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2.0 Emissions Summary**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					
2021											0.0000	2,597.782 8	2,597.782 8	0.4832	0.0000	2,609.861 8
2022											0.0000	1,645.624 8	1,645.624 8	0.3799	0.0000	1,655.121 2
2023											0.0000	3,755.793 3	3,755.793 3	0.2082	0.0000	3,760.997 5
2024											0.0000	3,430.024 1	3,430.024 1	0.1582	0.0000	3,433.979 7
2025											0.0000	3,290.306 3	3,290.306 3	0.1511	0.0000	3,294.083 7
2026											0.0000	3,225.322 2	3,225.322 2	0.1474	0.0000	3,229.006 0
2027											0.0000	3,167.430 9	3,167.430 9	0.1440	0.0000	3,171.030 1
2028											0.0000	2,854.298 2	2,854.298 2	0.1291	0.0000	2,857.526 2
Maximum											0.0000	3,755.793 3	3,755.793 3	0.4832	0.0000	3,760.997 5

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2.1 Overall Construction**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					
2021											0.0000	2,597.781 2	2,597.781 2	0.4832	0.0000	2,609.860 2
2022											0.0000	1,645.623 4	1,645.623 4	0.3799	0.0000	1,655.1199
2023											0.0000	3,755.792 7	3,755.792 7	0.2082	0.0000	3,760.996 9
2024											0.0000	3,430.023 7	3,430.023 7	0.1582	0.0000	3,433.979 3
2025											0.0000	3,290.306 0	3,290.306 0	0.1511	0.0000	3,294.083 4
2026											0.0000	3,225.321 9	3,225.321 9	0.1474	0.0000	3,229.005 6
2027											0.0000	3,167.430 5	3,167.430 5	0.1440	0.0000	3,171.029 7
2028											0.0000	2,854.297 9	2,854.297 9	0.1291	0.0000	2,857.525 8
Maximum											0.0000	3,755.792 7	3,755.792 7	0.4832	0.0000	3,760.996 9

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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)
		Highest		

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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	92.2117	92.2117	0.0181	1.3700e-003	93.0732
Energy											0.0000	1,629.1780	1,629.1780	0.1100	0.0313	1,641.2420
Mobile											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste											741.9117	0.0000	741.9117	43.8457	0.0000	1,838.0548
Water											32.2708	35.8650	68.1358	3.3205	0.0790	174.6956
Total											774.1825	1,757.2548	2,531.4372	47.2943	0.1116	3,747.0656

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	92.2117	92.2117	0.0181	1.3700e-003	93.0732
Energy											0.0000	1,618.3418	1,618.3418	0.1082	0.0310	1,630.2927
Mobile											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste											402.8580	0.0000	402.8580	23.8082	0.0000	998.0637
Water											25.8167	28.7163	54.5329	2.6564	0.0632	139.7810
Total											428.6747	1,739.2698	2,167.9445	26.5909	0.0956	2,861.2107

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.63	1.02	14.36	43.78	14.36	23.64

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/2/2021	5/20/2021	5	78	
2	Site Preparation	Site Preparation	3/1/2021	7/1/2021	5	89	
3	Grading	Grading	4/1/2021	3/31/2022	5	261	
4	Paving	Paving	1/1/2022	6/24/2022	5	125	
5	Bay Trail Grading	Grading	3/1/2022	3/1/2023	5	262	
6	Building Construction	Building Construction	12/23/2022	11/30/2028	5	1550	
7	Architectural Coating	Architectural Coating	9/1/2023	2/1/2024	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 90

Acres of Paving: 23.64

Residential Indoor: 3,134,295; Residential Outdoor: 1,044,765; Non-Residential Indoor: 114,291; Non-Residential Outdoor: 38,097; Striped Parking Area: 63,048 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	6	8.00	367	0.48

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Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Bay Trail Grading	Excavators	1	6.00	158	0.38
Bay Trail Grading	Graders	1	6.00	187	0.41
Bay Trail Grading	Off-Highway Trucks	1	8.00	402	0.38
Bay Trail Grading	Paving Equipment	1	8.00	132	0.36
Bay Trail Grading	Plate Compactors	1	8.00	8	0.43
Bay Trail Grading	Rubber Tired Dozers	1	6.00	247	0.40
Bay Trail Grading	Scrapers	2	8.00	367	0.48
Bay Trail Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	8	6.00	78	0.48

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	227.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	12	30.00	0.00	43,069.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Bay Trail Grading	9	23.00	0.00	1,306.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	2,002.00	466.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	8	400.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

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											0.0000	132.6031	132.6031	0.0373	0.0000	133.5361
Total											0.0000	132.6031	132.6031	0.0373	0.0000	133.5361

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3.2 Demolition - 2021**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	8.5003	8.5003	3.7000e-004	0.0000	8.5096
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	3.9261	3.9261	9.0000e-005	0.0000	3.9283
Total											0.0000	12.4264	12.4264	4.6000e-004	0.0000	12.4379

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											0.0000	132.6029	132.6029	0.0373	0.0000	133.5360
Total											0.0000	132.6029	132.6029	0.0373	0.0000	133.5360

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3.2 Demolition - 2021**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	8.5003	8.5003	3.7000e-004	0.0000	8.5096
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	3.9261	3.9261	9.0000e-005	0.0000	3.9283
Total											0.0000	12.4264	12.4264	4.6000e-004	0.0000	12.4379

3.3 Site Preparation - 2021**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
Off-Road											0.0000	148.7889	148.7889	0.0481	0.0000	149.9920
Total											0.0000	148.7889	148.7889	0.0481	0.0000	149.9920

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3.3 Site Preparation - 2021**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	5.3757	5.3757	1.2000e-004	0.0000	5.3788
Total											0.0000	5.3757	5.3757	1.2000e-004	0.0000	5.3788

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
Off-Road											0.0000	148.7888	148.7888	0.0481	0.0000	149.9918
Total											0.0000	148.7888	148.7888	0.0481	0.0000	149.9918

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3.3 Site Preparation - 2021**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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	5.3757	5.3757	1.2000e-004	0.0000	5.3788
Total											0.0000	5.3757	5.3757	1.2000e-004	0.0000	5.3788

3.4 Grading - 2021**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
Off-Road											0.0000	1,061.4523	1,061.4523	0.3433	0.0000	1,070.0347
Total											0.0000	1,061.4523	1,061.4523	0.3433	0.0000	1,070.0347

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3.4 Grading - 2021**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	1,217.3046	1,217.3046	0.0534	0.0000	1,218.6393
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	19.8317	19.8317	4.5000e-004	0.0000	19.8430
Total											0.0000	1,237.1363	1,237.1363	0.0538	0.0000	1,238.4823

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
Off-Road											0.0000	1,061.4511	1,061.4511	0.3433	0.0000	1,070.0334
Total											0.0000	1,061.4511	1,061.4511	0.3433	0.0000	1,070.0334

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3.4 Grading - 2021**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	1,217.3046	1,217.3046	0.0534	0.0000	1,218.6393
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	19.8317	19.8317	4.5000e-004	0.0000	19.8430
Total											0.0000	1,237.1363	1,237.1363	0.0538	0.0000	1,238.4823

3.4 Grading - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	345.2407	345.2407	0.1117	0.0000	348.0322
Total											0.0000	345.2407	345.2407	0.1117	0.0000	348.0322

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3.4 Grading - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	390.1857	390.1857	0.0168	0.0000	390.6059
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	6.2036	6.2036	1.3000e-004	0.0000	6.2069
Total											0.0000	396.3892	396.3892	0.0169	0.0000	396.8127

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
Off-Road											0.0000	345.2403	345.2403	0.1117	0.0000	348.0318
Total											0.0000	345.2403	345.2403	0.1117	0.0000	348.0318

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3.4 Grading - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	390.1857	390.1857	0.0168	0.0000	390.6059
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	6.2036	6.2036	1.3000e-004	0.0000	6.2069
Total											0.0000	396.3892	396.3892	0.0169	0.0000	396.8127

3.5 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											0.0000	125.1722	125.1722	0.0405	0.0000	126.1843
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											0.0000	125.1722	125.1722	0.0405	0.0000	126.1843

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3.5 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	6.0582	6.0582	1.3000e-004	0.0000	6.0614
Total											0.0000	6.0582	6.0582	1.3000e-004	0.0000	6.0614

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											0.0000	125.1721	125.1721	0.0405	0.0000	126.1842
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											0.0000	125.1721	125.1721	0.0405	0.0000	126.1842

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3.5 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	6.0582	6.0582	1.3000e-004	0.0000	6.0614
Total											0.0000	6.0582	6.0582	1.3000e-004	0.0000	6.0614

3.6 Bay Trail 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	634.5980	634.5980	0.2045	0.0000	639.7103
Total											0.0000	634.5980	634.5980	0.2045	0.0000	639.7103

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3.6 Bay Trail 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											0.0000	40.3323	40.3323	1.7400e-003	0.0000	40.3757
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	16.2747	16.2747	3.4000e-004	0.0000	16.2833
Total											0.0000	56.6070	56.6070	2.0800e-003	0.0000	56.6590

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
Off-Road											0.0000	634.5973	634.5973	0.2045	0.0000	639.7095
Total											0.0000	634.5973	634.5973	0.2045	0.0000	639.7095

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3.6 Bay Trail 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											0.0000	40.3323	40.3323	1.7400e-003	0.0000	40.3757
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	16.2747	16.2747	3.4000e-004	0.0000	16.2833
Total											0.0000	56.6070	56.6070	2.0800e-003	0.0000	56.6590

3.6 Bay Trail 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	124.6130	124.6130	0.0402	0.0000	125.6168
Total											0.0000	124.6130	124.6130	0.0402	0.0000	125.6168

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3.6 Bay Trail Grading - 2023**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	7.6175	7.6175	3.0000e-004	0.0000	7.6249
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	3.0714	3.0714	6.0000e-005	0.0000	3.0729
Total											0.0000	10.6888	10.6888	3.6000e-004	0.0000	10.6977

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
Off-Road											0.0000	124.6128	124.6128	0.0402	0.0000	125.6167
Total											0.0000	124.6128	124.6128	0.0402	0.0000	125.6167

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3.6 Bay Trail Grading - 2023**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	7.6175	7.6175	3.0000e-004	0.0000	7.6249
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	3.0714	3.0714	6.0000e-005	0.0000	3.0729
Total											0.0000	10.6888	10.6888	3.6000e-004	0.0000	10.6977

3.7 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											0.0000	6.9518	6.9518	1.6700e-003	0.0000	6.9934
Total											0.0000	6.9518	6.9518	1.6700e-003	0.0000	6.9934

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3.7 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
Vendor											0.0000	35.7965	35.7965	1.5900e-003	0.0000	35.8363
Worker											0.0000	38.8111	38.8111	8.2000e-004	0.0000	38.8317
Total											0.0000	74.6076	74.6076	2.4100e-003	0.0000	74.6679

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											0.0000	6.9518	6.9518	1.6700e-003	0.0000	6.9934
Total											0.0000	6.9518	6.9518	1.6700e-003	0.0000	6.9934

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3.7 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
Vendor											0.0000	35.7965	35.7965	1.5900e-003	0.0000	35.8363
Worker											0.0000	38.8111	38.8111	8.2000e-004	0.0000	38.8317
Total											0.0000	74.6076	74.6076	2.4100e-003	0.0000	74.6679

3.7 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											0.0000	301.3462	301.3462	0.0717	0.0000	303.1383
Total											0.0000	301.3462	301.3462	0.0717	0.0000	303.1383

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3.7 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
Vendor											0.0000	1,508.003 2	1,508.003 2	0.0567	0.0000	1,509.421 3
Worker											0.0000	1,616.480 7	1,616.480 7	0.0319	0.0000	1,617.277 7
Total											0.0000	3,124.483 9	3,124.483 9	0.0886	0.0000	3,126.699 1

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											0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total											0.0000	301.3458	301.3458	0.0717	0.0000	303.1380

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3.7 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
Vendor											0.0000	1,508.003 2	1,508.003 2	0.0567	0.0000	1,509.421 3
Worker											0.0000	1,616.480 7	1,616.480 7	0.0319	0.0000	1,617.277 7
Total											0.0000	3,124.483 9	3,124.483 9	0.0886	0.0000	3,126.699 1

3.7 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											0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total											0.0000	303.7223	303.7223	0.0718	0.0000	305.5179

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3.7 Building Construction - 2024**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,509.677 0	1,509.677 0	0.0556	0.0000	1,511.0675
Worker											0.0000	1,563.497 9	1,563.497 9	0.0289	0.0000	1,564.219 8
Total											0.0000	3,073.174 9	3,073.174 9	0.0845	0.0000	3,075.287 2

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											0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total											0.0000	303.7220	303.7220	0.0718	0.0000	305.5175

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3.7 Building Construction - 2024**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,509.677 0	1,509.677 0	0.0556	0.0000	1,511.0675
Worker											0.0000	1,563.497 9	1,563.497 9	0.0289	0.0000	1,564.219 8
Total											0.0000	3,073.174 9	3,073.174 9	0.0845	0.0000	3,075.287 2

3.7 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											0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total											0.0000	302.6549	302.6549	0.0711	0.0000	304.4335

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3.7 Building Construction - 2025**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,494.3974	1,494.3974	0.0539	0.0000	1,495.7457
Worker											0.0000	1,493.2540	1,493.2540	0.0260	0.0000	1,493.9045
Total											0.0000	2,987.6514	2,987.6514	0.0800	0.0000	2,989.6502

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											0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total											0.0000	302.6545	302.6545	0.0711	0.0000	304.4331

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3.7 Building Construction - 2025**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,494.3974	1,494.3974	0.0539	0.0000	1,495.7457
Worker											0.0000	1,493.2540	1,493.2540	0.0260	0.0000	1,493.9045
Total											0.0000	2,987.6514	2,987.6514	0.0800	0.0000	2,989.6502

3.7 Building Construction - 2026**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											0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total											0.0000	302.6549	302.6549	0.0711	0.0000	304.4335

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3.7 Building Construction - 2026**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
Vendor											0.0000	1,485.7378	1,485.7378	0.0526	0.0000	1,487.0517
Worker											0.0000	1,436.9296	1,436.9296	0.0237	0.0000	1,437.5208
Total											0.0000	2,922.6673	2,922.6673	0.0762	0.0000	2,924.5725

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											0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total											0.0000	302.6545	302.6545	0.0711	0.0000	304.4331

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3.7 Building Construction - 2026**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
Vendor											0.0000	1,485.7378	1,485.7378	0.0526	0.0000	1,487.0517
Worker											0.0000	1,436.9296	1,436.9296	0.0237	0.0000	1,437.5208
Total											0.0000	2,922.6673	2,922.6673	0.0762	0.0000	2,924.5725

3.7 Building Construction - 2027**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											0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total											0.0000	302.6549	302.6549	0.0711	0.0000	304.4335

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3.7 Building Construction - 2027**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
Vendor											0.0000	1,477.586 0	1,477.586 0	0.0513	0.0000	1,478.867 5
Worker											0.0000	1,387.190 0	1,387.190 0	0.0216	0.0000	1,387.729 1
Total											0.0000	2,864.776 0	2,864.776 0	0.0728	0.0000	2,866.596 5

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											0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total											0.0000	302.6545	302.6545	0.0711	0.0000	304.4331

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3.7 Building Construction - 2027**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
Vendor											0.0000	1,477.586 0	1,477.586 0	0.0513	0.0000	1,478.867 5
Worker											0.0000	1,387.190 0	1,387.190 0	0.0216	0.0000	1,387.729 1
Total											0.0000	2,864.776 0	2,864.776 0	0.0728	0.0000	2,866.596 5

3.7 Building Construction - 2028**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											0.0000	277.1438	277.1438	0.0652	0.0000	278.7724
Total											0.0000	277.1438	277.1438	0.0652	0.0000	278.7724

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3.7 Building Construction - 2028**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
Vendor											0.0000	1,346.838 1	1,346.838 1	0.0459	0.0000	1,347.984 8
Worker											0.0000	1,230.316 4	1,230.316 4	0.0181	0.0000	1,230.768 9
Total											0.0000	2,577.154 4	2,577.154 4	0.0640	0.0000	2,578.753 7

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											0.0000	277.1434	277.1434	0.0652	0.0000	278.7721
Total											0.0000	277.1434	277.1434	0.0652	0.0000	278.7721

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3.7 Building Construction - 2028**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
Vendor											0.0000	1,346.838 1	1,346.838 1	0.0459	0.0000	1,347.984 8
Worker											0.0000	1,230.316 4	1,230.316 4	0.0181	0.0000	1,230.768 9
Total											0.0000	2,577.154 4	2,577.154 4	0.0640	0.0000	2,578.753 7

3.8 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	87.8319	87.8319	5.2500e- 003	0.0000	87.9633
Total											0.0000	87.8319	87.8319	5.2500e- 003	0.0000	87.9633

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3.8 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	106.8296	106.8296	2.1100e-003	0.0000	106.8823
Total											0.0000	106.8296	106.8296	2.1100e-003	0.0000	106.8823

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	87.8318	87.8318	5.2500e-003	0.0000	87.9632
Total											0.0000	87.8318	87.8318	5.2500e-003	0.0000	87.9632

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3.8 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	106.8296	106.8296	2.1100e-003	0.0000	106.8823
Total											0.0000	106.8296	106.8296	2.1100e-003	0.0000	106.8823

3.8 Architectural Coating - 2024**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	24.5112	24.5112	1.3800e-003	0.0000	24.5457
Total											0.0000	24.5112	24.5112	1.3800e-003	0.0000	24.5457

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3.8 Architectural Coating - 2024**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	28.6156	28.6156	5.3000e-004	0.0000	28.6288
Total											0.0000	28.6156	28.6156	5.3000e-004	0.0000	28.6288

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	24.5112	24.5112	1.3800e-003	0.0000	24.5457
Total											0.0000	24.5112	24.5112	1.3800e-003	0.0000	24.5457

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3.8 Architectural Coating - 2024**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	28.6156	28.6156	5.3000e-004	0.0000	28.6288
Total											0.0000	28.6156	28.6156	5.3000e-004	0.0000	28.6288

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Point Molate GHGRP Unmitigated - New Land Uses - Contra Costa County, Annual

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	0.00	0.00	0.00		
City Park	0.00	0.00	0.00		
City Park	0.00	0.00	0.00		
Condo/Townhouse	0.00	0.00	0.00		
Convenience Market (24 Hour)	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Point Molate GHGRP Unmitigated - New Land Uses - Contra Costa County, Annual

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Convenience Market (24 Hour)	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
City Park	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Condo/Townhouse	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Convenience Market (24 Hour)	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
General Office Building	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Parking Lot	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Quality Restaurant	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Regional Shopping Center	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Single Family Housing	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	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	519.4979	519.4979	0.0871	0.0109	524.9189
Electricity Unmitigated											0.0000	530.3341	530.3341	0.0889	0.0111	535.8682
NaturalGas Mitigated											0.0000	1,098.8440	1,098.8440	0.0211	0.0202	1,105.3738
NaturalGas Unmitigated											0.0000	1,098.8440	1,098.8440	0.0211	0.0202	1,105.3738

Point Molate GHGRP Unmitigated - New Land Uses - Contra Costa County, Annual

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	7.07509e+006											0.0000	377.5538	377.5538	7.2400e-003	6.9200e-003	379.7974
City Park	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	5.13617e+006											0.0000	274.0855	274.0855	5.2500e-003	5.0200e-003	275.7142
Convenience Market (24 Hour)	51450											0.0000	2.7456	2.7456	5.0000e-005	5.0000e-005	2.7619
General Office Building	431413											0.0000	23.0218	23.0218	4.4000e-004	4.2000e-004	23.1587
Parking Lot	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	3.119e+006											0.0000	166.4417	166.4417	3.1900e-003	3.0500e-003	167.4308
Regional Shopping Center	34300											0.0000	1.8304	1.8304	4.0000e-005	3.0000e-005	1.8413
Single Family Housing	4.74414e+006											0.0000	253.1652	253.1652	4.8500e-003	4.6400e-003	254.6696
Total												0.0000	1,098.8440	1,098.8440	0.0211	0.0201	1,105.3738

Point Molate GHGRP Unmitigated - New Land Uses - Contra Costa County, Annual

5.2 Energy by Land Use - NaturalGas**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	7.07509e+006											0.0000	377.5538	377.5538	7.2400e-003	6.9200e-003	379.7974
City Park	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	5.13617e+006											0.0000	274.0855	274.0855	5.2500e-003	5.0200e-003	275.7142
Convenience Market (24 Hour)	51450											0.0000	2.7456	2.7456	5.0000e-005	5.0000e-005	2.7619
General Office Building	431413											0.0000	23.0218	23.0218	4.4000e-004	4.2000e-004	23.1587
Parking Lot	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	3.119e+006											0.0000	166.4417	166.4417	3.1900e-003	3.0500e-003	167.4308
Regional Shopping Center	34300											0.0000	1.8304	1.8304	4.0000e-005	3.0000e-005	1.8413
Single Family Housing	4.74414e+006											0.0000	253.1652	253.1652	4.8500e-003	4.6400e-003	254.6696
Total												0.0000	1,098.8440	1,098.8440	0.0211	0.0201	1,105.3738

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	4.20051e+006	272.7843	0.0457	5.7200e-003	275.6308
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1.2017e+006	78.0394	0.0131	1.6400e-003	78.8538
Convenience Market (24 Hour)	147150	9.5560	1.6000e-003	2.0000e-004	9.6558
General Office Building	344694	22.3847	3.7500e-003	4.7000e-004	22.6183
Parking Lot	367780	23.8839	4.0000e-003	5.0000e-004	24.1332
Quality Restaurant	563600	36.6007	6.1400e-003	7.7000e-004	36.9826
Regional Shopping Center	98100	6.3707	1.0700e-003	1.3000e-004	6.4372
Single Family Housing	1.24289e+006	80.7144	0.0135	1.6900e-003	81.5566
Total		530.3341	0.0889	0.0111	535.8682

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	4.09159e+006	265.7110	0.0445	5.5700e-003	268.4838
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1.16998e+006	75.9795	0.0127	1.5900e-003	76.7724
Convenience Market (24 Hour)	147150	9.5560	1.6000e-003	2.0000e-004	9.6558
General Office Building	344694	22.3847	3.7500e-003	4.7000e-004	22.6183
Parking Lot	367780	23.8839	4.0000e-003	5.0000e-004	24.1332
Quality Restaurant	563600	36.6007	6.1400e-003	7.7000e-004	36.9826
Regional Shopping Center	98100	6.3707	1.0700e-003	1.3000e-004	6.4372
Single Family Housing	1.21667e+006	79.0113	0.0132	1.6600e-003	79.8358
Total		519.4979	0.0871	0.0109	524.9189

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	92.2117	92.2117	0.0181	1.3700e-003	93.0732
Unmitigated											0.0000	92.2117	92.2117	0.0181	1.3700e-003	93.0732

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
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	74.9036	74.9036	1.4400e-003	1.3700e-003	75.3487
Landscaping											0.0000	17.3082	17.3082	0.0167	0.0000	17.7245
Total											0.0000	92.2117	92.2117	0.0181	1.3700e-003	93.0732

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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
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	74.9036	74.9036	1.4400e-003	1.3700e-003	75.3487
Landscaping											0.0000	17.3082	17.3082	0.0167	0.0000	17.7245
Total											0.0000	92.2117	92.2117	0.0181	1.3700e-003	93.0732

7.0 Water Detail**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	54.5329	2.6564	0.0632	139.7810
Unmitigated	68.1358	3.3205	0.0790	174.6956

Point Molate GHGRP Unmitigated - New Land Uses - Contra Costa County, Annual

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	41.1939 / 0	27.5443	1.3447	0.0320	70.6979
City Park	0 / 0.08	0.0182	0.0000	0.0000	0.0184
Condo/Townhouse	14.5142 / 0	9.7049	0.4738	0.0113	24.9097
Convenience Market (24 Hour)	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	20.3774 / 0	13.6253	0.6652	0.0158	34.9722
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	10.0375 / 0	6.7116	0.3277	7.8000e-003	17.2266
Regional Shopping Center	0.740725 / 0.453993	0.5985	0.0242	5.8000e-004	1.3755
Single Family Housing	14.8555 / 0	9.9331	0.4849	0.0115	25.4954
Total		68.1358	3.3205	0.0790	174.6956

Point Molate GHGRP Unmitigated - New Land Uses - Contra Costa County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	32.9551 / 0	22.0354	1.0758	0.0256	56.5583
City Park	0 / 0.08	0.0182	0.0000	0.0000	0.0184
Condo/Townhouse	11.6114 / 0	7.7639	0.3790	9.0200e-003	19.9277
Convenience Market (24 Hour)	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	16.3019 / 0	10.9003	0.5322	0.0127	27.9777
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	8.03 / 0	5.3693	0.2621	6.2400e-003	13.7813
Regional Shopping Center	0.59258 / 0.453993	0.4994	0.0194	4.6000e-004	1.1213
Single Family Housing	11.8844 / 0	7.9465	0.3880	9.2300e-003	20.3963
Total		54.5329	2.6564	0.0632	139.7810

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

Point Molate GHGRP Unmitigated - New Land Uses - Contra Costa County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	402.8580	23.8082	0.0000	998.0637
Unmitigated	741.9117	43.8457	0.0000	1,838.0548

Point Molate GHGRP Unmitigated - New Land Uses - Contra Costa County, Annual

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	3240.83	657.8592	38.8784	0.0000	1,629.8183
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000
General Office Building	414.07	84.0525	4.9674	0.0000	208.2364
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		741.9117	43.8457	0.0000	1,838.0548

Point Molate GHGRP Unmitigated - New Land Uses - Contra Costa County, Annual

8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	1759.77	357.2176	21.1110	0.0000	884.9914
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000
General Office Building	224.84	45.6405	2.6973	0.0000	113.0724
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		402.8580	23.8082	0.0000	998.0637

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

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Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
----------------	--------

11.0 Vegetation

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Point Molate GHGRP Unmitigated - Mobile Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	403.77	1000sqft	9.27	403,775.00	0
Parking Lot	100.00	Space	0.90	40,000.00	0
City Park	2.73	Acre	2.73	118,918.80	0
City Park	30.00	Acre	30.00	1,306,800.00	0
Quality Restaurant	20.00	1000sqft	0.46	20,000.00	0
Apartments Mid Rise	1,026.00	Dwelling Unit	27.00	1,026,000.00	2934
Condo/Townhouse	241.00	Dwelling Unit	15.06	241,000.00	689
Single Family Housing	185.00	Dwelling Unit	60.06	333,000.00	529
Convenience Market (24 Hour)	15.00	1000sqft	0.34	15,000.00	0
Regional Shopping Center	10.00	1000sqft	0.23	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	5			Operational Year	2029
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	143.17	CH4 Intensity (lb/MW hr)	0.024	N2O Intensity (lb/MW hr)	0.003

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - 2029 EF adjusted for RPS

Land Use - Land uses from Exhibit 7a/b

Parking spaces from Exhibit 6b - Off Street Parking

Strip mall represents neighborhood serving retail

Construction Phase - Operational mobile only

Off-road Equipment - Operational mobile only

Off-road Equipment - Operational mobile only

Off-road Equipment - Operational mobile only

Off-road Equipment - Operational mobile only

Off-road Equipment - Operational mobile only

Off-road Equipment - Operational mobile only

Off-road Equipment - Operational mobile only

Trips and VMT - Operational mobile only

Grading -

Architectural Coating - Operational mobile only

Vehicle Trips - Trip rates match TIA with TDM, no retail or restaurant passby trips to avoid double counting

Woodstoves - Operational mobile only

Area Coating -

Energy Use - Operational mobile only

Water And Wastewater - Operational mobile only

Solid Waste - Operational mobile only

Construction Off-road Equipment Mitigation - Tier 4 for all off-road equipment over 50 hp except paving equipment, electric for off-road equipment under 50 hp

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps -

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Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	224,388.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	673,163.00	0.00
tblArchitecturalCoating	ConstArea_Parking	2,400.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	1,080,000.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	3,240,000.00	0.00
tblAreaCoating	Area_Nonresidential_Exterior	224388	38097
tblAreaCoating	Area_Nonresidential_Interior	673163	114291
tblAreaCoating	Area_Parking	2400	63048
tblAreaCoating	Area_Residential_Exterior	1080000	1044765
tblAreaCoating	Area_Residential_Interior	3240000	3134295
tblConstructionPhase	NumDays	220.00	0.00
tblConstructionPhase	NumDays	3,100.00	0.00
tblConstructionPhase	NumDays	200.00	0.00
tblConstructionPhase	NumDays	310.00	0.00
tblConstructionPhase	NumDays	310.00	0.00
tblConstructionPhase	NumDays	220.00	0.00
tblConstructionPhase	NumDays	120.00	0.00
tblEnergyUse	LightingElect	741.44	0.00
tblEnergyUse	LightingElect	1,001.10	0.00
tblEnergyUse	LightingElect	4.88	0.00
tblEnergyUse	LightingElect	3.58	0.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	LightingElect	5.34	0.00
tblEnergyUse	LightingElect	4.88	0.00
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	3,054.10	0.00

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tblEnergyUse	NT24E	3,795.01	0.00
tblEnergyUse	NT24E	3.36	0.00
tblEnergyUse	NT24E	4.80	0.00
tblEnergyUse	NT24E	20.97	0.00
tblEnergyUse	NT24E	3.36	0.00
tblEnergyUse	NT24E	6,155.97	0.00
tblEnergyUse	NT24NG	2,615.00	0.00
tblEnergyUse	NT24NG	2,615.00	0.00
tblEnergyUse	NT24NG	0.70	0.00
tblEnergyUse	NT24NG	1.01	0.00
tblEnergyUse	NT24NG	128.02	0.00
tblEnergyUse	NT24NG	0.70	0.00
tblEnergyUse	NT24NG	2,615.00	0.00
tblEnergyUse	T24E	426.45	0.00
tblEnergyUse	T24E	204.52	0.00
tblEnergyUse	T24E	2.24	0.00
tblEnergyUse	T24E	4.10	0.00
tblEnergyUse	T24E	2.67	0.00
tblEnergyUse	T24E	2.24	0.00
tblEnergyUse	T24E	217.68	0.00
tblEnergyUse	T24NG	6,115.43	0.00
tblEnergyUse	T24NG	20,104.20	0.00
tblEnergyUse	T24NG	3.90	0.00
tblEnergyUse	T24NG	18.32	0.00
tblEnergyUse	T24NG	39.90	0.00
tblEnergyUse	T24NG	3.90	0.00
tblEnergyUse	T24NG	39,708.76	0.00

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tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	153.90	0.00
tblFireplaces	NumberGas	36.15	0.00
tblFireplaces	NumberGas	46.25	0.00
tblFireplaces	NumberNoFireplace	41.04	0.00
tblFireplaces	NumberNoFireplace	9.64	0.00
tblFireplaces	NumberNoFireplace	14.80	0.00
tblFireplaces	NumberWood	174.42	0.00
tblFireplaces	NumberWood	40.97	0.00
tblFireplaces	NumberWood	79.55	0.00
tblLandUse	LandUseSquareFeet	403,770.00	403,775.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00

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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.024
tblProjectCharacteristics	CO2IntensityFactor	641.35	143.17
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblSolidWaste	SolidWasteGenerationRate	471.96	0.00
tblSolidWaste	SolidWasteGenerationRate	2.81	0.00
tblSolidWaste	SolidWasteGenerationRate	110.86	0.00
tblSolidWaste	SolidWasteGenerationRate	45.08	0.00
tblSolidWaste	SolidWasteGenerationRate	375.51	0.00
tblSolidWaste	SolidWasteGenerationRate	18.25	0.00
tblSolidWaste	SolidWasteGenerationRate	10.50	0.00
tblSolidWaste	SolidWasteGenerationRate	222.18	0.00
tblTripsAndVMT	VendorTripNumber	469.00	0.00
tblTripsAndVMT	WorkerTripNumber	1,740.00	0.00

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tblTripsAndVMT	WorkerTripNumber	348.00	0.00
tblVehicleTrips	DV_TP	18.00	40.00
tblVehicleTrips	DV_TP	35.00	40.50
tblVehicleTrips	PB_TP	44.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	38.00	60.00
tblVehicleTrips	PR_TP	54.00	59.50
tblVehicleTrips	ST_TR	6.39	3.80
tblVehicleTrips	ST_TR	22.75	23.00
tblVehicleTrips	ST_TR	5.67	5.90
tblVehicleTrips	ST_TR	863.10	27.00
tblVehicleTrips	ST_TR	2.46	0.85
tblVehicleTrips	ST_TR	0.00	2.00
tblVehicleTrips	ST_TR	94.36	24.00
tblVehicleTrips	ST_TR	49.97	27.00
tblVehicleTrips	ST_TR	9.91	7.20
tblVehicleTrips	SU_TR	5.86	3.50
tblVehicleTrips	SU_TR	16.74	17.00
tblVehicleTrips	SU_TR	4.84	5.00
tblVehicleTrips	SU_TR	758.45	14.00
tblVehicleTrips	SU_TR	1.05	0.39
tblVehicleTrips	SU_TR	0.00	2.00
tblVehicleTrips	SU_TR	72.16	18.00
tblVehicleTrips	SU_TR	25.24	14.00
tblVehicleTrips	SU_TR	8.62	6.30
tblVehicleTrips	WD_TR	6.65	3.90
tblVehicleTrips	WD_TR	1.89	1.90

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tblVehicleTrips	WD_TR	5.81	5.40
tblVehicleTrips	WD_TR	737.99	23.00
tblVehicleTrips	WD_TR	11.03	5.90
tblVehicleTrips	WD_TR	0.00	2.00
tblVehicleTrips	WD_TR	89.95	23.00
tblVehicleTrips	WD_TR	42.70	23.00
tblVehicleTrips	WD_TR	9.52	6.90
tblWater	IndoorWaterUseRate	66,848,030.29	0.00
tblWater	IndoorWaterUseRate	15,702,120.17	0.00
tblWater	IndoorWaterUseRate	1,111,087.82	0.00
tblWater	IndoorWaterUseRate	71,763,555.43	0.00
tblWater	IndoorWaterUseRate	6,070,674.25	0.00
tblWater	IndoorWaterUseRate	740,725.21	0.00
tblWater	IndoorWaterUseRate	12,053,494.74	0.00
tblWater	OutdoorWaterUseRate	42,143,323.44	0.00
tblWater	OutdoorWaterUseRate	38,997,184.57	0.00
tblWater	OutdoorWaterUseRate	9,899,162.72	0.00
tblWater	OutdoorWaterUseRate	680,989.31	0.00
tblWater	OutdoorWaterUseRate	43,984,114.62	0.00
tblWater	OutdoorWaterUseRate	387,489.85	0.00
tblWater	OutdoorWaterUseRate	453,992.87	0.00
tblWater	OutdoorWaterUseRate	7,598,942.34	0.00
tblWoodstoves	NumberCatalytic	20.52	0.00
tblWoodstoves	NumberCatalytic	4.82	0.00
tblWoodstoves	NumberCatalytic	7.40	0.00
tblWoodstoves	NumberNoncatalytic	20.52	0.00
tblWoodstoves	NumberNoncatalytic	4.82	0.00

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tblWoodstoves	NumberNoncatalytic	7.40	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	21.06	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	0.00

2.0 Emissions Summary

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					
2021											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2023											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2024											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2036											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2037											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

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2.1 Overall Construction**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					
2021											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2023											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2024											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2036											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2037											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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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)
		Highest		

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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	17.6214	17.6214	0.0169	0.0000	18.0437
Energy											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile											0.0000	6,705.9688	6,705.9688	0.2061	0.0000	6,711.1216
Waste											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
Total											0.0000	6,723.5902	6,723.5902	0.2230	0.0000	6,729.1653

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	17.6214	17.6214	0.0169	0.0000	18.0437
Energy											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile											0.0000	6,705.9688	6,705.9688	0.2061	0.0000	6,711.1216
Waste											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
Total											0.0000	6,723.5902	6,723.5902	0.2230	0.0000	6,729.1653

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/2/2021	2/1/2021	5	0	
2	Site Preparation	Site Preparation	11/9/2021	11/8/2021	5	0	
3	Grading	Grading	4/26/2022	4/25/2022	5	0	
4	Bay Trail Grading	Grading	7/4/2023	7/3/2023	5	0	
5	Building Construction	Building Construction	9/10/2024	9/9/2024	5	0	
6	Paving	Paving	7/29/2036	7/28/2036	5	0	
7	Architectural Coating	Architectural Coating	6/2/2037	6/1/2037	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.9

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
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48

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Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Bay Trail Grading	Excavators	0	6.00	158	0.38
Bay Trail Grading	Graders	0	6.00	187	0.41
Bay Trail Grading	Off-Highway Trucks	0	8.00	402	0.38
Bay Trail Grading	Paving Equipment	0	8.00	132	0.36
Bay Trail Grading	Plate Compactors	0	8.00	8	0.43
Bay Trail Grading	Rubber Tired Dozers	0	6.00	247	0.40
Bay Trail Grading	Scrapers	0	8.00	367	0.48
Bay Trail Grading	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	8.00	132	0.36
Paving	Rollers	0	8.00	80	0.38
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Bay Trail Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

[illegible]

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

3.2 Demolition - 2021

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

3.2 Demolition - 2021

Mitigated Construction Off-Site

[illegible]

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

[illegible]

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

[illegible]

3.4 Grading - 2022

Unmitigated Construction On-Site

[illegible]

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

3.4 Grading - 2022

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

3.4 Grading - 2022

Mitigated Construction Off-Site

[illegible]

3.5 Bay Trail Grading - 2023

Unmitigated Construction On-Site

[illegible]

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

3.5 Bay Trail Grading - 2023

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

3.5 Bay Trail Grading - 2023

Mitigated Construction Off-Site

[illegible]

3.6 Building Construction - 2024

Unmitigated Construction On-Site

[illegible]

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

3.6 Building Construction - 2024

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

3.6 Building Construction - 2024

Mitigated Construction Off-Site

[illegible]

3.7 Paving - 2036

Unmitigated Construction On-Site

[illegible]

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

3.7 Paving - 2036

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

3.7 Paving - 2036

Mitigated Construction Off-Site

[illegible]

3.8 Architectural Coating - 2037

Unmitigated Construction On-Site

[illegible]

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

3.8 Architectural Coating - 2037

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

3.8 Architectural Coating - 2037**Mitigated Construction Off-Site**

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

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	6,705.9688	6,705.9688	0.2061	0.0000	6,711.1216
Unmitigated											0.0000	6,705.9688	6,705.9688	0.2061	0.0000	6,711.1216

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	4,001.40	3,898.80	3591.00	9,072,401	9,072,401
City Park	5.19	62.79	46.41	41,213	41,213
City Park	57.00	690.00	510.00	452,894	452,894
Condo/Townhouse	1,301.40	1,421.90	1205.00	3,013,675	3,013,675
Convenience Market (24 Hour)	345.00	405.00	210.00	254,584	254,584
General Office Building	2,382.24	343.20	157.47	4,237,336	4,237,336
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	460.00	480.00	360.00	864,535	864,535
Regional Shopping Center	230.00	270.00	140.00	432,556	432,556
Single Family Housing	1,276.50	1,332.00	1165.50	2,929,902	2,929,902
Total	10,058.73	8,903.69	7,385.38	21,299,096	21,299,096

4.3 Trip Type Information

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Convenience Market (24 Hour)	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	60	40	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	59.5	40.5	0
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
City Park	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Condo/Townhouse	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Convenience Market (24 Hour)	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
General Office Building	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Parking Lot	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Quality Restaurant	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Regional Shopping Center	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Single Family Housing	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

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

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
City Park	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0											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
Quality Restaurant	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0											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

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

5.2 Energy by Land Use - NaturalGas**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
City Park	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0											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
Quality Restaurant	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0											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

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	17.6214	17.6214	0.0169	0.0000	18.0437
Unmitigated											0.0000	17.6214	17.6214	0.0169	0.0000	18.0437

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
Consumer Products											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
Landscaping											0.0000	17.6214	17.6214	0.0169	0.0000	18.0437
Total											0.0000	17.6214	17.6214	0.0169	0.0000	18.0437

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	17.6214	17.6214	0.0169	0.0000	18.0437
Total											0.0000	17.6214	17.6214	0.0169	0.0000	18.0437

7.0 Water Detail**7.1 Mitigation Measures Water**

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

	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

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	0 / 0	0.0000	0.0000	0.0000	0.0000
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0 / 0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	0 / 0	0.0000	0.0000	0.0000	0.0000
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0 / 0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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**

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

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

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Point Molate GHGRP Unmitigated - Mobile - Contra Costa County, Annual

Fire Pumps and Emergency Generators

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

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

User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Point Molate GHGRP Unmitigated - Renovated Land Uses - Contra Costa County, Annual

Point Molate GHGRP Unmitigated - Renovated Land Uses
Contra Costa County, Annual

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	29.00	Dwelling Unit	9.42	52,200.00	83
General Office Building	372.58	1000sqft	8.55	372,581.00	0
Convenience Market (24 Hour)	5.00	1000sqft	0.11	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	5			Operational Year	2029
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	143.17	CH4 Intensity (lb/MWhr)	0.024	N2O Intensity (lb/MWhr)	0.003

1.3 User Entered Comments & Non-Default Data

Point Molate GHGRP Unmitigated - Renovated Land Uses - Contra Costa County, Annual

Project Characteristics - 2029 EF adjusted for RPS

Land Use - Land uses to be renovated from existing and historic structures

Construction Phase - Construction included in new land uses CalEEMod run

Off-road Equipment - Construction included in new land uses CalEEMod run

Off-road Equipment - Construction included in new land uses CalEEMod run

Off-road Equipment - Construction included in new land uses CalEEMod run

Off-road Equipment - Construction included in new land uses CalEEMod run

Off-road Equipment - Construction included in new land uses CalEEMod run

Off-road Equipment - Construction included in new land uses CalEEMod run

Trips and VMT - Construction included in new land uses CalEEMod run

Grading -

Architectural Coating - Construction included in new land uses CalEEMod run

Vehicle Trips - Mobile emissions quantified separately

Woodstoves - No fireplaces in existing structures

Energy Use -

Water And Wastewater - Water demand included in new land uses model run

Solid Waste - Solid waste emissions included in new land uses model run

Construction Off-road Equipment Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	188,791.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	566,372.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	35,235.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	105,705.00	0.00
tblConstructionPhase	NumDays	20.00	0.00

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tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	30.00	0.00
tblConstructionPhase	NumDays	300.00	0.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	7/7/2020	6/9/2020
tblConstructionPhase	PhaseEndDate	7/21/2020	7/7/2020
tblConstructionPhase	PhaseEndDate	9/1/2020	7/21/2020
tblConstructionPhase	PhaseEndDate	10/26/2021	9/1/2020
tblConstructionPhase	PhaseEndDate	11/23/2021	10/26/2021
tblConstructionPhase	PhaseEndDate	12/21/2021	11/23/2021
tblEnergyUse	T24E	321.72	321.72
tblEnergyUse	T24NG	49,807.87	49,807.87
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	7.25	0.00
tblFireplaces	NumberNoFireplace	2.32	0.00
tblFireplaces	NumberWood	12.47	0.00
tblLandUse	LandUseSquareFeet	372,580.00	372,581.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.024
tblProjectCharacteristics	CO2IntensityFactor	641.35	143.17
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblSolidWaste	SolidWasteGenerationRate	15.03	0.00
tblSolidWaste	SolidWasteGenerationRate	34.86	0.00
tblSolidWaste	SolidWasteGenerationRate	346.50	0.00
tblTripsAndVMT	VendorTripNumber	65.00	0.00
tblTripsAndVMT	WorkerTripNumber	131.00	0.00
tblTripsAndVMT	WorkerTripNumber	26.00	0.00
tblVehicleTrips	ST_TR	863.10	0.00
tblVehicleTrips	ST_TR	9.91	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	SU_TR	758.45	0.00
tblVehicleTrips	SU_TR	8.62	0.00
tblVehicleTrips	SU_TR	1.05	0.00

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tblVehicleTrips	WD_TR	737.99	0.00
tblVehicleTrips	WD_TR	9.52	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblWater	IndoorWaterUseRate	370,362.61	0.00
tblWater	IndoorWaterUseRate	1,889,466.74	0.00
tblWater	IndoorWaterUseRate	66,220,039.83	0.00
tblWater	OutdoorWaterUseRate	226,996.44	0.00
tblWater	OutdoorWaterUseRate	1,191,185.56	0.00
tblWater	OutdoorWaterUseRate	40,586,476.02	0.00
tblWoodstoves	NumberCatalytic	1.16	0.00
tblWoodstoves	NumberNoncatalytic	1.16	0.00
tblWoodstoves	WoodstoveDayYear	21.06	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	0.00

2.0 Emissions Summary

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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					
2020											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021											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

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					
2020											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021											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

[illegible]

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

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	0.3585	0.3585	3.5000e-004	0.0000	0.3673
Energy											0.0000	926.5893	926.5893	0.0726	0.0180	933.7555
Mobile											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
Water											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											0.0000	926.9478	926.9478	0.0730	0.0180	934.1228

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	0.3585	0.3585	3.5000e-004	0.0000	0.3673
Energy											0.0000	926.1528	926.1528	0.0725	0.0180	933.3144
Mobile											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
Water											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											0.0000	926.5113	926.5113	0.0729	0.0180	933.6818

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.10	0.06	0.05

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/10/2020	6/9/2020	5	0	
2	Site Preparation	Site Preparation	7/8/2020	7/7/2020	5	0	
3	Grading	Grading	7/22/2020	7/21/2020	5	0	
4	Building Construction	Building Construction	9/2/2020	9/1/2020	5	0	
5	Paving	Paving	10/27/2021	10/26/2021	5	0	
6	Architectural Coating	Architectural Coating	11/24/2021	11/23/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

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

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	8.00	132	0.36
Paving	Rollers	0	8.00	80	0.38
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

[illegible]

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3.2 Demolition - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

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3.2 Demolition - 2020

Mitigated Construction Off-Site

[illegible]

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

[illegible]

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3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

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3.3 Site Preparation - 2020

Mitigated Construction Off-Site

[illegible]

3.4 Grading - 2020

Unmitigated Construction On-Site

[illegible]

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3.4 Grading - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

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3.4 Grading - 2020

Mitigated Construction Off-Site

[illegible]

3.5 Building Construction - 2020

Unmitigated Construction On-Site

[illegible]

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3.5 Building Construction - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

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3.5 Building Construction - 2020

Mitigated Construction Off-Site

[illegible]

3.6 Paving - 2021

Unmitigated Construction On-Site

[illegible]

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3.6 Paving - 2021

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

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3.6 Paving - 2021

Mitigated Construction Off-Site

[illegible]

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

[illegible]

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3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

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3.7 Architectural Coating - 2021**Mitigated Construction Off-Site**

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

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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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	0.0000	0.0000	0.0000	0.0000
Unmitigated											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market (24 Hour)	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market (24 Hour)	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market (24 Hour)	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Single Family Housing	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
General Office Building	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	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	369.0289	369.0289	0.0619	7.7300e-003	372.8798
Electricity Unmitigated											0.0000	369.4654	369.4654	0.0619	7.7400e-003	373.3208
NaturalGas Mitigated											0.0000	557.1240	557.1240	0.0107	0.0102	560.4347
NaturalGas Unmitigated											0.0000	557.1240	557.1240	0.0107	0.0102	560.4347

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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					
Convenience Market (24 Hour)	26900											0.0000	1.4355	1.4355	3.0000e-005	3.0000e-005	1.4440
General Office Building	8.78919e+006											0.0000	469.0244	469.0244	8.9900e-003	8.6000e-003	471.8116
Single Family Housing	1.62402e+006											0.0000	86.6641	86.6641	1.6600e-003	1.5900e-003	87.1791
Total												0.0000	557.1240	557.1240	0.0107	0.0102	560.4347

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market (24 Hour)	26900											0.0000	1.4355	1.4355	3.0000e-005	3.0000e-005	1.4440
General Office Building	8.78919e+006											0.0000	469.0244	469.0244	8.9900e-003	8.6000e-003	471.8116
Single Family Housing	1.62402e+006											0.0000	86.6641	86.6641	1.6600e-003	1.5900e-003	87.1791
Total												0.0000	557.1240	557.1240	0.0107	0.0102	560.4347

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market (24 Hour)	60700	3.9419	6.6000e-004	8.0000e-005	3.9830
General Office Building	5.42478e+006	352.2896	0.0591	7.3800e-003	355.9658
Single Family Housing	203783	13.2338	2.2200e-003	2.8000e-004	13.3719
Total		369.4654	0.0619	7.7400e-003	373.3208

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market (24 Hour)	60700	3.9419	6.6000e-004	8.0000e-005	3.9830
General Office Building	5.42478e+006	352.2896	0.0591	7.3800e-003	355.9658
Single Family Housing	197062	12.7974	2.1500e-003	2.7000e-004	12.9309
Total		369.0289	0.0619	7.7300e-003	372.8798

6.0 Area Detail

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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											0.0000	0.3585	0.3585	3.5000e-004	0.0000	0.3673
Unmitigated											0.0000	0.3585	0.3585	3.5000e-004	0.0000	0.3673

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6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	0.3585	0.3585	3.5000e-004	0.0000	0.3673
Total											0.0000	0.3585	0.3585	3.5000e-004	0.0000	0.3673

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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
Consumer Products											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
Landscaping											0.0000	0.3585	0.3585	3.5000e-004	0.0000	0.3673
Total											0.0000	0.3585	0.3585	3.5000e-004	0.0000	0.3673

7.0 Water Detail**7.1 Mitigation Measures Water**

Point Molate GHGRP Unmitigated - Renovated Land Uses - Contra Costa County, Annual

	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			
Convenience Market (24 Hour)	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Point Molate GHGRP Unmitigated - Renovated Land Uses - Contra Costa County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market (24 Hour)	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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

Point Molate GHGRP Unmitigated - Renovated Land Uses - Contra Costa County, Annual

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

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Point Molate GHGRP Unmitigated - Renovated Land Uses - Contra Costa County, Annual

8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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
----------------	--------	-----------	-----------	-------------	-------------	-----------

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
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Point Molate GHGRP Unmitigated - Renovated Land Uses - Contra Costa County, Annual

11.0 Vegetation

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

Point Molate GHGRP Mitigated - New Land Uses Operational
Contra Costa County, Annual

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	31.19	1000sqft	0.72	31,194.00	0
Parking Lot	2,627.00	Space	23.64	1,050,800.00	0
City Park	2.73	Acre	2.73	118,918.80	0
City Park	30.00	Acre	30.00	1,306,800.00	0
Quality Restaurant	20.00	1000sqft	0.46	20,000.00	0
Apartments Mid Rise	1,026.00	Dwelling Unit	27.00	1,026,000.00	2934
Condo/Townhouse	241.00	Dwelling Unit	15.06	241,000.00	689
Single Family Housing	156.00	Dwelling Unit	50.65	280,800.00	446
Convenience Market (24 Hour)	15.00	1000sqft	0.34	15,000.00	0
Regional Shopping Center	10.00	1000sqft	0.23	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	5			Operational Year	2029
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	143.17	CH4 Intensity (lb/MW hr)	0.024	N2O Intensity (lb/MW hr)	0.003

1.3 User Entered Comments & Non-Default Data

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

Project Characteristics - 2029 EF adjusted for RPS

Land Use - Land uses from Exhibit 7a/b

Parking spaces from Exhibit 6b - Off Street Parking

Strip mall represents neighborhood serving retail

Construction Phase - Construction remains same as unmitigated run

Off-road Equipment - Construction remains same as unmitigated run

Off-road Equipment - Construction remains same as unmitigated run

Off-road Equipment -

Off-road Equipment - Construction remains same as unmitigated run

Off-road Equipment - Construction remains same as unmitigated run

Off-road Equipment - Construction remains same as unmitigated run

Off-road Equipment - Construction remains same as unmitigated run

Trips and VMT - Construction remains same as unmitigated run

Grading - Construction remains same as unmitigated run

Vehicle Trips - Mobile emissions quantified separately

Woodstoves - 600 natural gas fireplaces would operate for 3.5 hours per day for 11.14 days per year assumed per SEIR modeling

Energy Use - 2019 Title 24 reduces nonresidential and mid-rise residential energy consumption by 30%. Low-rise residential energy consumption is reduced 7% before onsite solar requirement.

Water And Wastewater - Water demand calculated from rates included in refined WSA

Solid Waste - Solid waste generation rates derived from Table 3-2 of SEIR

Construction Off-road Equipment Mitigation - Tier 4 for all off-road equipment over 50 hp except paving equipment, electric for off-road equipment under 50 hp

Waste Mitigation - 75 percent diversion rate to align with State efforts

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps -

Area Mitigation -

Architectural Coating -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	220.00	0.00

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tblConstructionPhase	NumDays	3,100.00	0.00
tblConstructionPhase	NumDays	200.00	0.00
tblConstructionPhase	NumDays	310.00	0.00
tblConstructionPhase	NumDays	310.00	0.00
tblConstructionPhase	NumDays	220.00	0.00
tblConstructionPhase	NumDays	120.00	0.00
tblConstructionPhase	PhaseEndDate	4/5/2038	6/1/2037
tblConstructionPhase	PhaseEndDate	7/28/2036	9/9/2024
tblConstructionPhase	PhaseEndDate	11/8/2021	2/1/2021
tblConstructionPhase	PhaseEndDate	7/3/2023	4/25/2022
tblConstructionPhase	PhaseEndDate	9/9/2024	7/3/2023
tblConstructionPhase	PhaseEndDate	6/1/2037	7/28/2036
tblConstructionPhase	PhaseEndDate	4/25/2022	11/8/2021
tblEnergyUse	T24E	426.45	298.52
tblEnergyUse	T24E	204.52	190.20
tblEnergyUse	T24E	2.24	1.57
tblEnergyUse	T24E	4.10	2.67
tblEnergyUse	T24E	2.67	1.87
tblEnergyUse	T24E	2.24	1.57
tblEnergyUse	T24E	217.68	202.44
tblEnergyUse	T24NG	6,115.43	4,280.80
tblEnergyUse	T24NG	20,104.20	18,696.90
tblEnergyUse	T24NG	3.90	2.73
tblEnergyUse	T24NG	18.32	12.82
tblEnergyUse	T24NG	39.90	27.93
tblEnergyUse	T24NG	3.90	2.73
tblEnergyUse	T24NG	39,708.76	27,796.13

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tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	153.90	600.00
tblFireplaces	NumberGas	36.15	0.00
tblFireplaces	NumberGas	39.00	0.00
tblFireplaces	NumberNoFireplace	41.04	0.00
tblFireplaces	NumberNoFireplace	9.64	0.00
tblFireplaces	NumberNoFireplace	12.48	0.00
tblFireplaces	NumberWood	174.42	0.00
tblFireplaces	NumberWood	40.97	0.00
tblFireplaces	NumberWood	67.08	0.00
tblGrading	AcresOfGrading	1,696.50	0.00
tblGrading	AcresOfGrading	622.25	0.00
tblGrading	PhaseName	Bay Trail Grading	Paving
tblLandUse	LandUseSquareFeet	31,190.00	31,194.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00

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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	PhaseName	Bay Trail Grading	Paving
tblOffRoadEquipment	PhaseName	Bay Trail Grading	Paving
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName	Bay Trail Grading	Paving
tblOffRoadEquipment	PhaseName	Bay Trail Grading	Paving
tblOffRoadEquipment	PhaseName	Bay Trail Grading	Paving
tblOffRoadEquipment	PhaseName	Building Construction	Paving
tblOffRoadEquipment	PhaseName	Building Construction	Paving
tblOffRoadEquipment	PhaseName	Building Construction	Paving
tblOffRoadEquipment	PhaseName	Building Construction	Paving
tblOffRoadEquipment	PhaseName	Building Construction	Paving
tblOffRoadEquipment	UsageHours	8.00	6.00

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tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOnRoadDust	PhaseName	Bay Trail Grading	Paving
tblOnRoadDust	PhaseName	Building Construction	Paving
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.024
tblProjectCharacteristics	CO2IntensityFactor	641.35	143.17
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblSolidWaste	SolidWasteGenerationRate	471.96	3,240.83
tblSolidWaste	SolidWasteGenerationRate	2.81	0.00
tblSolidWaste	SolidWasteGenerationRate	110.86	0.00
tblSolidWaste	SolidWasteGenerationRate	45.08	0.00
tblSolidWaste	SolidWasteGenerationRate	29.01	414.07
tblSolidWaste	SolidWasteGenerationRate	18.25	0.00
tblSolidWaste	SolidWasteGenerationRate	10.50	0.00
tblSolidWaste	SolidWasteGenerationRate	187.32	0.00
tblTripsAndVMT	PhaseName	Bay Trail Grading	Paving
tblTripsAndVMT	PhaseName	Building Construction	Paving
tblTripsAndVMT	VendorTripNumber	571.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	30.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	2,035.00	0.00
tblTripsAndVMT	WorkerTripNumber	407.00	0.00
tblVehicleTrips	ST_TR	6.39	0.00

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tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	5.67	0.00
tblVehicleTrips	ST_TR	863.10	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	94.36	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	ST_TR	9.91	0.00
tblVehicleTrips	SU_TR	5.86	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	4.84	0.00
tblVehicleTrips	SU_TR	758.45	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	72.16	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	SU_TR	8.62	0.00
tblVehicleTrips	WD_TR	6.65	0.00
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	5.81	0.00
tblVehicleTrips	WD_TR	737.99	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	89.95	0.00
tblVehicleTrips	WD_TR	42.70	0.00
tblVehicleTrips	WD_TR	9.52	0.00
tblWater	IndoorWaterUseRate	66,848,030.29	41,193,900.00
tblWater	IndoorWaterUseRate	15,702,120.17	14,514,225.00
tblWater	IndoorWaterUseRate	1,111,087.82	0.00
tblWater	IndoorWaterUseRate	5,543,515.60	20,377,403.00

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tblWater	IndoorWaterUseRate	6,070,674.25	10,037,500.00
tblWater	IndoorWaterUseRate	10,164,028.00	14,855,500.00
tblWater	OutdoorWaterUseRate	42,143,323.44	0.00
tblWater	OutdoorWaterUseRate	38,997,184.57	80,000.00
tblWater	OutdoorWaterUseRate	9,899,162.72	0.00
tblWater	OutdoorWaterUseRate	680,989.31	0.00
tblWater	OutdoorWaterUseRate	3,397,638.59	0.00
tblWater	OutdoorWaterUseRate	387,489.85	0.00
tblWater	OutdoorWaterUseRate	6,407,756.78	0.00
tblWoodstoves	NumberCatalytic	20.52	0.00
tblWoodstoves	NumberCatalytic	4.82	0.00
tblWoodstoves	NumberCatalytic	6.24	0.00
tblWoodstoves	NumberNoncatalytic	20.52	0.00
tblWoodstoves	NumberNoncatalytic	4.82	0.00
tblWoodstoves	NumberNoncatalytic	6.24	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	21.06	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	0.00

2.0 Emissions Summary

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

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					
2021											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2036											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2037											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

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

2.1 Overall Construction**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					
2021											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2036											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2037											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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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)
		Highest		

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

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	92.2117	92.2117	0.0181	1.3700e-003	93.0732
Energy											0.0000	1,629.1780	1,629.1780	0.1100	0.0313	1,641.2420
Mobile											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste											741.9117	0.0000	741.9117	43.8457	0.0000	1,838.0548
Water											32.2708	35.8650	68.1358	3.3205	0.0790	174.6956
Total											774.1825	1,757.2548	2,531.4372	47.2943	0.1116	3,747.0656

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

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	12.1036	12.1036	8.7100e-003	0.0000	12.3213
Energy											0.0000	1,618.3418	1,618.3418	0.1082	0.0310	1,630.2927
Mobile											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste											185.4779	0.0000	185.4779	10.9614	0.0000	459.5137
Water											25.8167	28.7163	54.5329	2.6564	0.0632	139.7810
Total											211.2946	1,659.1616	1,870.4562	13.7347	0.0942	2,241.9087

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.71	5.58	26.11	70.96	15.59	40.17

3.0 Construction Detail**Construction Phase**

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/2/2021	2/1/2021	5	0	
2	Site Preparation	Site Preparation	11/9/2021	11/8/2021	5	0	
3	Grading	Grading	4/26/2022	4/25/2022	5	0	
4	Bay Trail Grading	Grading	7/4/2023	7/3/2023	5	0	
5	Building Construction	Building Construction	9/10/2024	9/9/2024	5	0	
6	Paving	Paving	7/29/2036	7/28/2036	5	0	
7	Architectural Coating	Architectural Coating	6/2/2037	6/1/2037	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 23.64

Residential Indoor: 3,134,295; Residential Outdoor: 1,044,765; Non-Residential Indoor: 114,291; Non-Residential Outdoor: 38,097; Striped Parking Area: 63,048 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48

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Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	8.00	132	0.36
Paving	Rollers	0	8.00	80	0.38
Paving	Excavators	0	6.00	158	0.38
Paving	Graders	0	6.00	187	0.41
Paving	Off-Highway Trucks	0	8.00	402	0.38
Paving	Paving Equipment	0	8.00	132	0.36
Paving	Plate Compactors	0	8.00	8	0.43
Paving	Rubber Tired Dozers	0	6.00	247	0.40
Paving	Scrapers	0	8.00	367	0.48
Paving	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Paving	Cranes	0	7.00	231	0.29
Paving	Forklifts	0	8.00	89	0.20
Paving	Generator Sets	0	8.00	84	0.74
Paving	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Paving	Welders	0	8.00	46	0.45
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

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	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	12	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	8	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

[illegible]

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

3.2 Demolition - 2021

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

3.2 Demolition - 2021

Mitigated Construction Off-Site

[illegible]

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

[illegible]

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

[illegible]

3.4 Grading - 2022

Unmitigated Construction On-Site

[illegible]

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

3.4 Grading - 2022

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

3.4 Grading - 2022

Mitigated Construction Off-Site

[illegible]

3.7 Paving - 2036

Unmitigated Construction On-Site

[illegible]

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

3.7 Paving - 2036

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

3.7 Paving - 2036

Mitigated Construction Off-Site

[illegible]

3.8 Architectural Coating - 2037

Unmitigated Construction On-Site

[illegible]

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

3.8 Architectural Coating - 2037

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

3.8 Architectural Coating - 2037**Mitigated Construction Off-Site**

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

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	0.00	0.00	0.00		
City Park	0.00	0.00	0.00		
City Park	0.00	0.00	0.00		
Condo/Townhouse	0.00	0.00	0.00		
Convenience Market (24 Hour)	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Convenience Market (24 Hour)	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
City Park	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Condo/Townhouse	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Convenience Market (24 Hour)	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
General Office Building	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Parking Lot	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Quality Restaurant	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Regional Shopping Center	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672
Single Family Housing	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	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	519.4979	519.4979	0.0871	0.0109	524.9189
Electricity Unmitigated											0.0000	530.3341	530.3341	0.0889	0.0111	535.8682
NaturalGas Mitigated											0.0000	1,098.8440	1,098.8440	0.0211	0.0202	1,105.3738
NaturalGas Unmitigated											0.0000	1,098.8440	1,098.8440	0.0211	0.0202	1,105.3738

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	7.07509e+006											0.0000	377.5538	377.5538	7.2400e-003	6.9200e-003	379.7974
City Park	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	5.13617e+006											0.0000	274.0855	274.0855	5.2500e-003	5.0200e-003	275.7142
Convenience Market (24 Hour)	51450											0.0000	2.7456	2.7456	5.0000e-005	5.0000e-005	2.7619
General Office Building	431413											0.0000	23.0218	23.0218	4.4000e-004	4.2000e-004	23.1587
Parking Lot	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	3.119e+006											0.0000	166.4417	166.4417	3.1900e-003	3.0500e-003	167.4308
Regional Shopping Center	34300											0.0000	1.8304	1.8304	4.0000e-005	3.0000e-005	1.8413
Single Family Housing	4.74414e+006											0.0000	253.1652	253.1652	4.8500e-003	4.6400e-003	254.6696
Total												0.0000	1,098.8440	1,098.8440	0.0211	0.0201	1,105.3738

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

5.2 Energy by Land Use - NaturalGas**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	7.07509e+006											0.0000	377.5538	377.5538	7.2400e-003	6.9200e-003	379.7974
City Park	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	5.13617e+006											0.0000	274.0855	274.0855	5.2500e-003	5.0200e-003	275.7142
Convenience Market (24 Hour)	51450											0.0000	2.7456	2.7456	5.0000e-005	5.0000e-005	2.7619
General Office Building	431413											0.0000	23.0218	23.0218	4.4000e-004	4.2000e-004	23.1587
Parking Lot	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	3.119e+006											0.0000	166.4417	166.4417	3.1900e-003	3.0500e-003	167.4308
Regional Shopping Center	34300											0.0000	1.8304	1.8304	4.0000e-005	3.0000e-005	1.8413
Single Family Housing	4.74414e+006											0.0000	253.1652	253.1652	4.8500e-003	4.6400e-003	254.6696
Total												0.0000	1,098.8440	1,098.8440	0.0211	0.0201	1,105.3738

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	4.20051e+006	272.7843	0.0457	5.7200e-003	275.6308
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1.2017e+006	78.0394	0.0131	1.6400e-003	78.8538
Convenience Market (24 Hour)	147150	9.5560	1.6000e-003	2.0000e-004	9.6558
General Office Building	344694	22.3847	3.7500e-003	4.7000e-004	22.6183
Parking Lot	367780	23.8839	4.0000e-003	5.0000e-004	24.1332
Quality Restaurant	563600	36.6007	6.1400e-003	7.7000e-004	36.9826
Regional Shopping Center	98100	6.3707	1.0700e-003	1.3000e-004	6.4372
Single Family Housing	1.24289e+006	80.7144	0.0135	1.6900e-003	81.5566
Total		530.3341	0.0889	0.0111	535.8682

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	4.09159e+006	265.7110	0.0445	5.5700e-003	268.4838
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1.16998e+006	75.9795	0.0127	1.5900e-003	76.7724
Convenience Market (24 Hour)	147150	9.5560	1.6000e-003	2.0000e-004	9.6558
General Office Building	344694	22.3847	3.7500e-003	4.7000e-004	22.6183
Parking Lot	367780	23.8839	4.0000e-003	5.0000e-004	24.1332
Quality Restaurant	563600	36.6007	6.1400e-003	7.7000e-004	36.9826
Regional Shopping Center	98100	6.3707	1.0700e-003	1.3000e-004	6.4372
Single Family Housing	1.21667e+006	79.0113	0.0132	1.6600e-003	79.8358
Total		519.4979	0.0871	0.0109	524.9189

6.0 Area Detail**6.1 Mitigation Measures Area**

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

No Hearths Installed

	ROG	NOx	CO	SO2	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	12.1036	12.1036	8.7100e-003	0.0000	12.3213
Unmitigated											0.0000	92.2117	92.2117	0.0181	1.3700e-003	93.0732

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

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
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	74.9036	74.9036	1.4400e-003	1.3700e-003	75.3487
Landscaping											0.0000	17.3082	17.3082	0.0167	0.0000	17.7245
Total											0.0000	92.2117	92.2117	0.0181	1.3700e-003	93.0732

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	12.1036	12.1036	8.7100e-003	0.0000	12.3213
Total											0.0000	12.1036	12.1036	8.7100e-003	0.0000	12.3213

7.0 Water Detail**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	54.5329	2.6564	0.0632	139.7810
Unmitigated	68.1358	3.3205	0.0790	174.6956

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	41.1939 / 0	27.5443	1.3447	0.0320	70.6979
City Park	0 / 0.08	0.0182	0.0000	0.0000	0.0184
Condo/Townhouse	14.5142 / 0	9.7049	0.4738	0.0113	24.9097
Convenience Market (24 Hour)	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	20.3774 / 0	13.6253	0.6652	0.0158	34.9722
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	10.0375 / 0	6.7116	0.3277	7.8000e-003	17.2266
Regional Shopping Center	0.740725 / 0.453993	0.5985	0.0242	5.8000e-004	1.3755
Single Family Housing	14.8555 / 0	9.9331	0.4849	0.0115	25.4954
Total		68.1358	3.3205	0.0790	174.6956

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	32.9551 / 0	22.0354	1.0758	0.0256	56.5583
City Park	0 / 0.08	0.0182	0.0000	0.0000	0.0184
Condo/Townhouse	11.6114 / 0	7.7639	0.3790	9.0200e-003	19.9277
Convenience Market (24 Hour)	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	16.3019 / 0	10.9003	0.5322	0.0127	27.9777
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	8.03 / 0	5.3693	0.2621	6.2400e-003	13.7813
Regional Shopping Center	0.59258 / 0.453993	0.4994	0.0194	4.6000e-004	1.1213
Single Family Housing	11.8844 / 0	7.9465	0.3880	9.2300e-003	20.3963
Total		54.5329	2.6564	0.0632	139.7810

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	185.4779	10.9614	0.0000	459.5137
Unmitigated	741.9117	43.8457	0.0000	1,838.0548

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	3240.83	657.8592	38.8784	0.0000	1,629.8183
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000
General Office Building	414.07	84.0525	4.9674	0.0000	208.2364
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		741.9117	43.8457	0.0000	1,838.0548

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	810.207	164.4648	9.7196	0.0000	407.4546
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000
General Office Building	103.518	21.0131	1.2418	0.0000	52.0591
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		185.4779	10.9614	0.0000	459.5137

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

Point Molate GHGRP Mitigated - New Land Uses Operational - Contra Costa County, Annual

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Point Molate Beach Park Mobile - Contra Costa County, Annual

Point Molate Beach Park Mobile
Contra Costa County, Annual**1.0 Project Characteristics**

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	18.00	Acre	18.00	784,080.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	5			Operational Year	2029
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Point Molate Beach Park Mobile - Contra Costa County, Annual

Project Characteristics -

Land Use -

Construction Phase - Mobile operations only

Off-road Equipment - Mobile operations only

Off-road Equipment - Mobile operations only

Off-road Equipment - Mobile operations only

Off-road Equipment - Mobile operations only

Off-road Equipment - Mobile operations only

Off-road Equipment - Mobile operations only

Trips and VMT - Mobile operations only

Grading -

Water And Wastewater - Mobile operations only

Solid Waste - Mobile operations only

Architectural Coating -

Vehicle Trips -

Woodstoves -

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	30.00	0.00
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tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	8/12/2020	7/15/2020
tblConstructionPhase	PhaseEndDate	8/26/2020	8/12/2020

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tblConstructionPhase	PhaseEndDate	10/7/2020	8/26/2020
tblConstructionPhase	PhaseEndDate	12/1/2021	10/7/2020
tblConstructionPhase	PhaseEndDate	12/29/2021	12/1/2021
tblConstructionPhase	PhaseEndDate	1/26/2022	12/29/2021
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblSolidWaste	SolidWasteGenerationRate	1.55	0.00
tblTripsAndVMT	VendorTripNumber	129.00	0.00
tblTripsAndVMT	WorkerTripNumber	329.00	0.00
tblTripsAndVMT	WorkerTripNumber	66.00	0.00

Point Molate Beach Park Mobile - Contra Costa County, Annual

tblWater	OutdoorWaterUseRate	21,446,664.29	0.00
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2.0 Emissions Summary

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					
2020											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021											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

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					
2020											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021											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

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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
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)
		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	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Energy											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile											0.0000	84.9356	84.9356	2.6400e-003	0.0000	85.0016
Waste											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
Total											0.0000	84.9360	84.9360	2.6400e-003	0.0000	85.0019

Point Molate Beach Park Mobile - Contra Costa County, Annual

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	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Energy											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile											0.0000	84.9356	84.9356	2.6400e-003	0.0000	85.0016
Waste											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
Total											0.0000	84.9360	84.9360	2.6400e-003	0.0000	85.0019

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Point Molate Beach Park Mobile - Contra Costa County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/16/2020	7/15/2020	5	0	
2	Site Preparation	Site Preparation	8/13/2020	8/12/2020	5	0	
3	Grading	Grading	8/27/2020	8/26/2020	5	0	
4	Building Construction	Building Construction	10/8/2020	10/7/2020	5	0	
5	Paving	Paving	12/2/2021	12/1/2021	5	0	
6	Architectural Coating	Architectural Coating	12/30/2021	12/29/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

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

Point Molate Beach Park Mobile - Contra Costa County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	8.00	132	0.36
Paving	Rollers	0	8.00	80	0.38
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

Point Molate Beach Park Mobile - Contra Costa County, Annual

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	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

[illegible]

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3.2 Demolition - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Point Molate Beach Park Mobile - Contra Costa County, Annual

3.2 Demolition - 2020

Mitigated Construction Off-Site

[illegible]

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

[illegible]

Point Molate Beach Park Mobile - Contra Costa County, Annual

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Point Molate Beach Park Mobile - Contra Costa County, Annual

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

[illegible]

3.4 Grading - 2020

Unmitigated Construction On-Site

[illegible]

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3.4 Grading - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

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3.4 Grading - 2020

Mitigated Construction Off-Site

[illegible]

3.5 Building Construction - 2020

Unmitigated Construction On-Site

[illegible]

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3.5 Building Construction - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Point Molate Beach Park Mobile - Contra Costa County, Annual

3.5 Building Construction - 2020

Mitigated Construction Off-Site

[illegible]

3.6 Paving - 2021

Unmitigated Construction On-Site

[illegible]

Point Molate Beach Park Mobile - Contra Costa County, Annual

3.6 Paving - 2021

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

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3.6 Paving - 2021

Mitigated Construction Off-Site

[illegible]

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

[illegible]

Point Molate Beach Park Mobile - Contra Costa County, Annual

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Point Molate Beach Park Mobile - Contra Costa County, Annual

3.7 Architectural Coating - 2021**Mitigated Construction Off-Site**

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

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Point Molate Beach Park Mobile - Contra Costa County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	84.9356	84.9356	2.6400e-003	0.0000	85.0016
Unmitigated											0.0000	84.9356	84.9356	2.6400e-003	0.0000	85.0016

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	34.02	409.50	301.32	268,662	268,662
Total	34.02	409.50	301.32	268,662	268,662

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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672

5.0 Energy Detail

Historical Energy Use: N

Point Molate Beach Park Mobile - Contra Costa County, Annual

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	0.0000
Electricity Unmitigated											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
NaturalGas Unmitigated											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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					
City Park	0											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

Point Molate Beach Park Mobile - Contra Costa County, Annual

5.2 Energy by Land Use - NaturalGas**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0											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

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Point Molate Beach Park Mobile - Contra Costa County, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Unmitigated											0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004

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6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Total											0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004

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
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Total											0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004

7.0 Water Detail

Point Molate Beach Park Mobile - Contra Costa County, Annual

7.1 Mitigation Measures Water

	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			
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	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

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	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			
City Park	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
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Boilers

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

Equipment Type	Number
----------------	--------

11.0 Vegetation

Existing Point Molate Buildings - Contra Costa County, Annual

Existing Point Molate Buildings
Contra Costa County, Annual**1.0 Project Characteristics**

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	176.00	1000sqft	4.04	176,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	5			Operational Year	2029
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	143.17	CH4 Intensity (lb/MWhr)	0.024	N2O Intensity (lb/MWhr)	0.003

1.3 User Entered Comments & Non-Default Data

Existing Point Molate Buildings - Contra Costa County, Annual

Project Characteristics - 2029 EF adjusted for RPS

Land Use - Building 1: 130,000 sq ft leased as warehouse/storage

Building 6: 40,000 sq ft leased as warehouse/storage

Building 12: 6,000 sq ft leased as maintenance office/storage

Construction Phase - Existing operational emissions only

Off-road Equipment - Existing operational emissions only

Off-road Equipment - Existing operational emissions only

Off-road Equipment - Existing operational emissions only

Off-road Equipment - Existing operational emissions only

Off-road Equipment - Existing operational emissions only

Off-road Equipment - Existing operational emissions only

Grading -

Trips and VMT - Existing operational emissions only

Energy Use - Assumed no natural gas at existing buildings

Waste Mitigation - Diversion rate of 45.7 percent assumed based on current Richmond diversion rates.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	0.00
tblConstructionPhase	NumDays	230.00	0.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	8.00	0.00
tblConstructionPhase	NumDays	18.00	0.00
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	PhaseEndDate	9/8/2021	8/13/2021
tblConstructionPhase	PhaseEndDate	7/20/2021	9/1/2020
tblConstructionPhase	PhaseEndDate	8/13/2020	7/16/2020
tblConstructionPhase	PhaseEndDate	9/1/2020	8/20/2020
tblConstructionPhase	PhaseEndDate	8/13/2021	7/20/2021

Existing Point Molate Buildings - Contra Costa County, Annual

tblConstructionPhase	PhaseEndDate	8/20/2020	8/13/2020
tblEnergyUse	NT24E	1.38	0.00
tblEnergyUse	NT24NG	0.21	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.024
tblProjectCharacteristics	CO2IntensityFactor	641.35	143.17
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblTripsAndVMT	VendorTripNumber	29.00	0.00

Existing Point Molate Buildings - Contra Costa County, Annual

tblTripsAndVMT	WorkerTripNumber	74.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00

2.0 Emissions Summary

Existing Point Molate Buildings - Contra Costa County, Annual

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					
2020											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021											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

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					
2020											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021											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

[illegible]

Existing Point Molate Buildings - Contra Costa County, Annual

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	3.1400e-003	3.1400e-003	1.0000e-005	0.0000	3.3500e-003
Energy											0.0000	47.7194	47.7194	6.0100e-003	9.6000e-004	48.1570
Mobile											0.0000	266.4595	266.4595	7.7600e-003	0.0000	266.6535
Waste											33.5828	0.0000	33.5828	1.9847	0.0000	83.2000
Water											12.9122	14.3018	27.2140	1.3286	0.0316	69.8503
Total											46.4951	328.4838	374.9788	3.3271	0.0326	467.8642

Existing Point Molate Buildings - Contra Costa County, Annual

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	3.1400e-003	3.1400e-003	1.0000e-005	0.0000	3.3500e-003
Energy											0.0000	47.7194	47.7194	6.0100e-003	9.6000e-004	48.1570
Mobile											0.0000	266.4595	266.4595	7.7600e-003	0.0000	266.6535
Waste											18.2355	0.0000	18.2355	1.0777	0.0000	45.1776
Water											12.9122	14.3018	27.2140	1.3286	0.0316	69.8503
Total											31.1477	328.4838	359.6315	2.4201	0.0326	429.8418

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.01	0.00	4.09	27.26	0.00	8.13

3.0 Construction Detail**Construction Phase**

Existing Point Molate Buildings - Contra Costa County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/17/2020	7/16/2020	5	0	
2	Site Preparation	Site Preparation	8/14/2020	8/13/2020	5	0	
3	Grading	Grading	8/21/2020	8/20/2020	5	0	
4	Building Construction	Building Construction	9/2/2020	9/1/2020	5	0	
5	Paving	Paving	7/21/2021	7/20/2021	5	0	
6	Architectural Coating	Architectural Coating	8/14/2021	8/13/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 264,000; Non-Residential Outdoor: 88,000; Striped Parking Area: 0
(Architectural Coating – sqft)

OffRoad Equipment

Existing Point Molate Buildings - Contra Costa County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Grading	Excavators	0	8.00	158	0.38
Paving	Pavers	0	8.00	130	0.42
Paving	Rollers	0	6.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Generator Sets	0	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Graders	0	8.00	187	0.41
Paving	Paving Equipment	0	6.00	132	0.36
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Welders	0	8.00	46	0.45

Trips and VMT

Existing Point Molate Buildings - Contra Costa County, Annual

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	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

[illegible]

Existing Point Molate Buildings - Contra Costa County, Annual

3.2 Demolition - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Existing Point Molate Buildings - Contra Costa County, Annual

3.2 Demolition - 2020

Mitigated Construction Off-Site

[illegible]

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

[illegible]

Existing Point Molate Buildings - Contra Costa County, Annual

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Existing Point Molate Buildings - Contra Costa County, Annual

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

[illegible]

3.4 Grading - 2020

Unmitigated Construction On-Site

[illegible]

Existing Point Molate Buildings - Contra Costa County, Annual

3.4 Grading - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Existing Point Molate Buildings - Contra Costa County, Annual

3.4 Grading - 2020

Mitigated Construction Off-Site

[illegible]

3.5 Building Construction - 2020

Unmitigated Construction On-Site

[illegible]

Existing Point Molate Buildings - Contra Costa County, Annual

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Existing Point Molate Buildings - Contra Costa County, Annual

3.5 Building Construction - 2020

Mitigated Construction Off-Site

[illegible]

3.6 Paving - 2021

Unmitigated Construction On-Site

[illegible]

Existing Point Molate Buildings - Contra Costa County, Annual

3.6 Paving - 2021

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Existing Point Molate Buildings - Contra Costa County, Annual

3.6 Paving - 2021

Mitigated Construction Off-Site

[illegible]

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

[illegible]

Existing Point Molate Buildings - Contra Costa County, Annual

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Existing Point Molate Buildings - Contra Costa County, Annual

3.7 Architectural Coating - 2021**Mitigated Construction Off-Site**

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

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Existing Point Molate Buildings - Contra Costa County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	266.4595	266.4595	7.7600e-003	0.0000	266.6535
Unmitigated											0.0000	266.4595	266.4595	7.7600e-003	0.0000	266.6535

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	295.68	295.68	295.68	863,241	863,241
Total	295.68	295.68	295.68	863,241	863,241

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.605339	0.035098	0.184390	0.109343	0.012453	0.004847	0.010836	0.026012	0.001659	0.001558	0.005128	0.002664	0.000672

5.0 Energy Detail

Existing Point Molate Buildings - Contra Costa County, Annual

Historical Energy Use: Y

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	34.2888	34.2888	5.7500e-003	7.2000e-004	34.6466
Electricity Unmitigated											0.0000	34.2888	34.2888	5.7500e-003	7.2000e-004	34.6466
NaturalGas Mitigated											0.0000	13.4306	13.4306	2.6000e-004	2.5000e-004	13.5104
NaturalGas Unmitigated											0.0000	13.4306	13.4306	2.6000e-004	2.5000e-004	13.5104

Existing Point Molate Buildings - Contra Costa County, Annual

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	251680											0.0000	13.4306	13.4306	2.6000e-004	2.5000e-004	13.5104
Total												0.0000	13.4306	13.4306	2.6000e-004	2.5000e-004	13.5104

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					
Unrefrigerated Warehouse-No Rail	251680											0.0000	13.4306	13.4306	2.6000e-004	2.5000e-004	13.5104
Total												0.0000	13.4306	13.4306	2.6000e-004	2.5000e-004	13.5104

Existing Point Molate Buildings - Contra Costa County, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	528000	34.2888	5.7500e-003	7.2000e-004	34.6466
Total		34.2888	5.7500e-003	7.2000e-004	34.6466

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	528000	34.2888	5.7500e-003	7.2000e-004	34.6466
Total		34.2888	5.7500e-003	7.2000e-004	34.6466

6.0 Area Detail**6.1 Mitigation Measures Area**

Existing Point Molate Buildings - Contra Costa County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	3.1400e-003	3.1400e-003	1.0000e-005	0.0000	3.3500e-003
Unmitigated											0.0000	3.1400e-003	3.1400e-003	1.0000e-005	0.0000	3.3500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	3.1400e-003	3.1400e-003	1.0000e-005	0.0000	3.3500e-003
Total											0.0000	3.1400e-003	3.1400e-003	1.0000e-005	0.0000	3.3500e-003

Existing Point Molate Buildings - Contra Costa County, Annual

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	3.1400e-003	3.1400e-003	1.0000e-005	0.0000	3.3500e-003
Total											0.0000	3.1400e-003	3.1400e-003	1.0000e-005	0.0000	3.3500e-003

7.0 Water Detail**7.1 Mitigation Measures Water**

Existing Point Molate Buildings - Contra Costa County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	27.2140	1.3286	0.0316	69.8503
Unmitigated	27.2140	1.3286	0.0316	69.8503

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	40.7 / 0	27.2140	1.3286	0.0316	69.8503
Total		27.2140	1.3286	0.0316	69.8503

Existing Point Molate Buildings - Contra Costa County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	40.7 / 0	27.2140	1.3286	0.0316	69.8503
Total		27.2140	1.3286	0.0316	69.8503

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Existing Point Molate Buildings - Contra Costa County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18.2355	1.0777	0.0000	45.1776
Unmitigated	33.5828	1.9847	0.0000	83.2000

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	165.44	33.5828	1.9847	0.0000	83.2000
Total		33.5828	1.9847	0.0000	83.2000

Existing Point Molate Buildings - Contra Costa County, Annual

8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	89.8339	18.2355	1.0777	0.0000	45.1776
Total		18.2355	1.0777	0.0000	45.1776

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
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Boilers

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

Equipment Type	Number
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11.0 Vegetation

Existing Point Molate Buildings - Contra Costa County, Annual



Cautions: 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.

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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

4,218,844 kWh/Year*

System output may range from 4,053,887 to 4,290,564 kWh per year near this location.

Month	Solar Radiation (kWh / m ² / day)	AC Energy (kWh)	Value (\$)
January	3.20	207,006	32,272
February	4.13	241,188	37,601
March	5.64	357,522	55,738
April	6.75	409,069	63,774
May	7.28	453,584	70,714
June	7.90	470,541	73,357
July	7.74	474,365	73,953
August	7.24	443,264	69,105
September	6.48	381,224	59,433
October	5.25	326,018	50,826
November	4.06	249,775	38,940
December	3.17	205,289	32,005
Annual	5.74	4,218,845	\$ 657,718

Location and Station Identification

Requested Location	richmond, ca
Weather Data Source	Lat, Lon: 37.93, -122.34 0.6 mi
Latitude	37.93° N
Longitude	122.34° W

PV System Specifications (Residential)

DC System Size	2600 kW
Module Type	Premium
Array Type	Fixed (open rack)
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	0.156 \$/kWh
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Performance Metrics

Capacity Factor	18.5%
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