

To: City of Torrance Planning Division

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Date: 1/5/2026

Re: Air Quality, Energy, and Greenhouse Gas Impact Analysis for the Torrance Townhomes, EPD Project Number 25-033

Project Overview

The Project (“Project,” or “proposed Project”) is located at 21171 South (S) Western Avenue, within the City of Torrance in Los Angeles County. The Project site is located in the eastern portion of the City of Torrance, bordered to the west by Bow Avenue, to the south by 213th Street, to the east by State Route 213 (SR 213) (Western Avenue), and to the north by Torrance Boulevard. To the east, the site shares a border with the City of Los Angeles. Regional access is available via Interstate 110 (I-110), approximately 1.25 miles east of the site. The proposed Project site location is identified in Figure 1, *Project Site Location*.

The Project site is currently developed with three existing office buildings totaling 145,420 square feet (SF); all three buildings are two stories in height. The proposed Project would redevelop the site with 98 townhomes and 237 multifamily units, for a total of 335 dwelling units at a net density of 42.8 dwelling units per acre, including associated landscaping, parking, and recreational areas, on approximately 7.82 acres. Access to the site would be provided via two driveway entrances; one driveway would permit right-turn ingress only from Torrance Boulevard, one would permit both right-in and right-out turns from S Western Avenue, and the third would provide egress only onto 213th Street. The proposed site layout is illustrated in Figure 2, *Conceptual Residential Site Plan*.

To support the CEQA document for the proposed Project, this report analyzes the proposed Project’s construction and net operational impacts related to air quality (emission of criteria pollutants), energy, and greenhouse gas (GHG) emissions using the California Emissions Estimator Model (CalEEMod Version 2022.1) and the Emission Factor model (EMFAC Version 2021). Table 1, *Construction Schedule*, shows the estimated construction schedule, which is expected to last about 14 months.

Table 1: Construction Schedule

Activity	Start Date	End Date	Total Working Days
Demolition	12/1/2028	1/18/2029	35
Site Preparation	1/22/2029	2/2/2029	10
Grading	2/5/2029	3/2/2029	20
Building Construction	3/5/2029	1/18/2030	230
Paving	3/5/2029	3/30/2029	20
Architectural Coating	7/3/2029	1/17/2030	143

Source: CalEEMod output sheets are provided in Attachment A.

CalEEMod Modeling Details

The following non-default assumptions were used in CalEEMod for this analysis:

- **Land Use:** The lot acreage was adjusted to match the site plan provided by the client.
- **Construction Schedule:** The demolition phase was extended from 20 days to 35 days to account for the size of the buildings and volume of debris during demolition. The building construction duration was shortened to meet the Project's anticipated operational year. Additionally, the paving phase was revised to begin concurrently with building construction. Architectural coating was set to begin 20 days before August of 2029 to meet the occupancy year of the first townhome units in August 2029, as provided by the client. The architectural coating phase was also set to begin 4 months after the initiation of paving and building construction, in July of 2029, and to complete concurrently with building construction, to account for ongoing coating throughout building construction. Overlapping phases during construction would also result in a conservative analysis.
- **Construction Equipment:** It was assumed that all equipment would be used for 8 hours per workday. Tractor/loaders/backhoes were replaced with crawler tractors in the site preparation and grading construction phases. Two tractors/loaders/backhoes were included in the grading phase to account for export volumes. The number of loaders were estimated from the anticipated daily haul truck demand (63 daily hauling trucks for the grading phase) for the daily loading capacity of one loader, divided by the typical loading rate of approximately 6 trucks per hour for 8 hours a day.
- **Demolition:** The demolition of the existing building and hardscape is anticipated to amount to 23,100 tons of debris. Demolition calculations of the three on-site structures can be found in Appendix C, *Demolition Calculations Sheet*.
- **Construction Earthmoving Activity:** Based on the preliminary grading plan, the Project would require the export of approximately 10,000 cubic yards (CY) of material during the grading phase.
- **Paved Area:** To account for ground level paving for townhome units' garages, approximately 4.52 acres were incorporated for the *Condo/Townhomes* land use. Additionally, approximately 2.13 acres of paved area were included in the *Enclosed Parking with Elevator* land use to account for the two-story garage located beneath the 237 multifamily dwelling units proposed for the Project.
- **Operation:** Hearths, wood stoves and wood fireplaces were removed in accordance with South Coast Air Quality Management District (SCAQMD) Rule 445, which prohibits the installation of wood-burning devices in an effort to reduce particulate matter and reduce production of volatile organic compounds (VOCs).¹ Gas and propane fireplaces were also removed as neither are proposed for the Project.
- **Operational Vehicle Data:** The trip rate was adjusted to match the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition*, auto trip rates for weekday, Saturday, and Sunday trip rates for Single-Family Attached Housing (ITE Land Use Code 215) for 98 units and Multifamily Housing Mid Rise (ITE Land Use Code 221) for the 237 multifamily dwelling units.²

¹ SCAQMD (2020). *Rule 445, Wood-Burning Devices*. Referenced at <https://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-445.pdf>

² EPD Solutions, Inc. (2025). *25-033 Torrance Townhomes Vehicles Miles Traveled (VMT) Screening Memo*.



Legend

 Project Boundary

0 150 300
US Feet





Summary of Air Quality, Energy and GHG Impacts

Air Quality

The proposed Project's maximum daily emissions (regional and local) for construction and operation would not exceed the SCAQMD's regional thresholds of significance. In addition, all construction activities would comply with applicable SCAQMD rules and regulations, including Rule 402, Rule 403, Rule 445, Rule 1113, and Rule 1403:

- Rule 402, *Public Nuisance*: Prohibits the discharge of air contaminants that cause injury, nuisance, or annoyance to the public or damage to property.
- Rule 403, *Fugitive Dust*: Aims to minimize fugitive particulate matter dust emissions during construction activities.
- Rule 445, *Wood-Burning Devices*: Reduce emission production of particulate matter and volatile organic compounds from wood burning devices.
- Rule 1113, *Architectural Coatings*: Allows only low-VOC paints to be used.
- Rule 1403, *Asbestos Demolition and Removal*: Establishes work practice requirements to limit asbestos emissions from building demolition or renovation. These requirements include asbestos surveying, public notification, removal and handling procedures, time schedules, and storage/disposal/landfill requirements. Records of compliance must be maintained and all appropriate warning labels, signs, and marking must be utilized.

The construction and operation of the proposed Project would not exceed SCAQMD thresholds for any of the six criteria pollutants. Projects that do not exceed the regional thresholds are assumed to not have a significant impact on both a project level and cumulative level. The proposed Project aligns with SCAQMD'S 2022 Air Quality Management Plan (AQMP), reflecting adherence to regional air quality management goals and standards. Furthermore, odors produced by construction and operation of the proposed Project would be minimal and comply with SCAQMD Rule 402. Therefore, the proposed Project would have a less-than-significant air quality impact. No mitigation would be required.

Energy

Construction activities related to the proposed Project and the associated infrastructure are not expected to result in demand for fuel greater on a per-unit-of-development basis than any other development projects in Southern California. The proposed Project's energy consumption during construction activities would comply with existing fuel standards, machinery efficiency requirements, and California Air Resources Board (CARB) regulations limiting truck idling. Additionally, for operation, the proposed Project would be required to meet the California Code of Regulations (CCR) Title 24 energy efficiency standards and comply with all applicable County energy codes. The Project buildings would also be solar ready in compliance with current Title 24 requirements. There are no unusual Project characteristics that would cause the construction or operation of the Project to be less energy-efficient when compared with other similar commercial developments throughout the state. Therefore, the proposed Project would not result in impacts related to inefficient, wasteful, or unnecessary consumption of energy, nor would the Project inhibit the use of, and would instead allow for future flexibility relating to, renewable energy.

GHG Emissions

The proposed Project's construction and operational GHG emissions would total 2,665 metric tons of carbon dioxide equivalent (MTCO_{2e}). Considering the emissions resulting from the existing office buildings, the net new emissions generated by the Project would be 1,456 MTCO_{2e} per year, which is below the SCAQMD significance threshold of 3,000 MTCO_{2e} per year. Additionally, the Project would be consistent with applicable policies and measures for reducing GHG emissions, including the 2022 CARB Scoping Plan. Therefore, the Project would have a less-than-significant impact on GHG emissions.

Air Quality

Regional Emissions

To calculate operational impacts, the air quality emissions from the existing land use were estimated using CalEEMod. The SCAQMD has adopted maximum daily emission thresholds (pounds/day) for criteria pollutants during the construction and operation of a project.³ While incremental regional air quality impacts of an individual project are generally very small and difficult to measure, SCAQMD's regional maximum emission thresholds set standards to reduce the burden of SCAQMD to attain and maintain ambient air quality standards. The regional thresholds apply to the criteria pollutants listed in Table 2, *Regional Construction Emission Estimates*, and Table 3, *Regional Operation Emission Estimates*.

Table 2 shows the CalEEMod estimated emissions for Project construction. The estimated Project emissions include those generated both from on-site sources (such as off-road construction equipment and fugitive dust) and off-site sources (vehicles traveling to and from the site). Tables 3 shows the CalEEMod estimated Project emissions for operation. As shown in Table 2, the proposed Project would not exceed SCAQMD's thresholds for construction emissions. Therefore, the Project would have less-than-significant regional air quality impacts related to construction. Additionally, as shown in Table 3, operation of the proposed Project would result in a net decrease in PM₁₀ and PM_{2.5} daily emissions, but would result in a net increase for ROG, NO_x, CO, and SO₂. However, the Project's operational emissions would not exceed the SCAQMD's thresholds for any of the criteria pollutants. Therefore, the Project would have a less-than-significant regional air quality impact related to operation.

Table 2: Regional Construction Emission Estimates

Maximum Daily Emissions	Maximum Daily Regional Emissions (pounds/day)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
2028	2.4	32.8	24.5	0.1	13.6	3.2
2029	34.2	31.3	37.9	0.1	13.6	4.1
2030	34.1	12.7	30.3	<0.1	5.2	1.4
Maximum Daily Emission (2028-2030)	34.2	32.8	37.9	0.1	13.6	4.1
SCAQMD Significance Thresholds	75	100	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Notes: ROG = reactive organic gases, NO_x = nitrogen oxides, CO = carbon monoxide, SO₂ = sulfur dioxide, PM₁₀ = particulate matter 10 microns in diameter, PM_{2.5} = particulate matter 2.5 microns in diameter

Source: CalEEMod output sheets are provided in Attachment A, and the detailed calculation sheets are provided in Attachment B.

³ SCAQMD. (March 2023). *South Coast AQMD Air Quality Significance Thresholds*. <https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25>

Table 3: Regional Operation Emission Estimates

Operational Activity	Maximum Daily Regional Emissions (pounds/day)*					
	ROG	NOx	CO	SO ₂	PM ₁₀	PM _{2.5}
Mobile	5.7	4.5	50.3	0.1	12.6	3.3
Area	19.1	0.2	23.2	<0.1	<0.1	<0.1
Energy	0.1	1.3	0.5	<0.1	0.1	0.1
Total Operational Emissions	24.9	6.0	74.1	0.1	12.7	3.4
Existing Operational Emissions	5.9	1.7	1.4	<0.1	13.5	3.5
Net Operational Emissions	18.9	4.3	72.7	0.1	-0.8	-0.1
SCAQMD Significance Thresholds	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Notes: ROG = reactive organic gases, NOx = nitrogen oxides, CO = carbon monoxide, SO₂ = sulfur dioxide, PM₁₀ = particulate matter 10 microns in diameter, PM_{2.5} = particulate matter 2.5 microns in diameter

* Values may vary slightly due to rounding.

CalEEMod output sheets are provided in Attachment A, and the detailed calculation sheets are provided in Attachment B.

Local Emissions

Localized significance thresholds (LSTs) were also adopted by the SCAQMD due to project-related construction or operational air emissions having the potential to exceed the State and national air quality standards in the project vicinity, while not exceeding the regional emission significance thresholds adopted by the SCAQMD. These thresholds set the maximum rates of daily construction or operational emissions from a project site that would not exceed a national or State ambient air quality standard.⁴ The differences between regional thresholds and LSTs are as follows:

1. Regional thresholds include all sources of project construction and operational emissions generated from on-site and off-site emission sources whereas the LSTs only consider the emissions generated from on-site emission sources.
2. LSTs only apply to carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM₁₀ and PM_{2.5}), while regional thresholds include both reactive organic gases (ROG) and sulfur dioxide (SO₂).
3. Regional thresholds apply to emission sources located anywhere within the SCAQMD whereas the LSTs are location dependent and rely on the size of the project and emission location relative to the nearest sensitive receptor.

SCAQMD provides screening tables (Appendix C of the SCAQMD 2008 *Final Localized Significance Threshold Methodology*) for projects that disturb less than or equal to 5 acres in a day.⁵ These tables were created to easily determine if the daily emissions of NOx, CO, PM₁₀, and PM_{2.5} from a project could result in a significant impact to the local air quality. The thresholds are determined by:

- Source receptor area (SRA), which is the geographic area within the SCAQMD that can act as both a source of emissions and a receptor of emission impacts (the Project is located within SRA 3, Southwest Coastal Los Angeles County);

⁴ SCAQMD. (2008). *Final Localized Significance Threshold Methodology*.

<http://www.aqmd.gov/docs/defaultsource/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf>

⁵ SCAQMD. (2008). *Final Localized Significance Threshold Methodology Appendix C*. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2>

- Size of grading disturbance (construction)/size of the project (operation); and
- Distance to the nearest sensitive receptor, which is defined as an individual who is most susceptible to negative health effects when exposed to air pollutants, and includes children, the elderly, and adults with chronic health issues. Locations for such receptors include residences, schools, elderly care centers, and hospitals.

The demolition, site preparation, and grading phases would result in approximately 1.0 acres, 3.5 acres, and 2.5 acres of ground disturbance, respectively, as can be found in Attachment B, *Detailed Calculation Sheets*. Therefore, the maximum ground disturbance would occur during the site preparation phase with a maximum of 3.5 acres disturbed. Pursuant to SCAQMD guidance, which recommends selecting thresholds based on the smaller of the total site area or the daily disturbed area, construction emissions were evaluated by interpolating between the 2-acre and 5-acre disturbance thresholds to estimate thresholds for 3.5 acres. The nearest sensitive receptor to the Project site is the residence located west of the Project site, at a distance of 20 meters (65 feet). The construction emission thresholds for 25 meters were used as an approximate distance, and per the methodology suggested by the SCAQMD, since 25-meter thresholds are the minimum distance provided.

Table 4, *Localized Construction Emission Estimates*, shows the thresholds and estimated maximum daily construction emissions for the proposed Project. As shown in Table 4, the proposed Project would not exceed applicable thresholds and therefore would result in a less-than-significant localized construction air quality impact.

Table 4: Localized Construction Emission Estimates

Construction Activity	Maximum Daily Localized Emissions (pounds/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
2028 (Year 1)				
Demolition	19.6	18.7	10.2	2.4
Maximum On-Site Emission (2028)	19.6	18.7	10.2	2.4
2029 (Year 2)				
Demolition	18.6	18.5	10.2	2.3
Site Preparation	29.9	30.1	7.1	4.0
Grading	17.9	25.1	3.1	1.7
Building Construction and Paving	16.7	38.8	4.2	1.4
Building Construction	10.2	28.8	4.0	1.1
Building Construction and Architectural Coating	11.3	30.3	4.0	1.2
Maximum On-Site Emission (2029)	29.9	38.8	10.2	4.0
2030 (Year 3)				
Building Construction and Architectural Coating	33.1	10.1	<0.1	<0.1
Architectural Coating	32.1	1.0	<0.1	<0.1
Maximum On-Site Emission (2030)	33.1	9.1	0.3	0.3
Maximum Daily Emissions	33.1	38.8	10.2	4.0
SCAQMD Screening Thresholds	164	1,381	11.5	6.5
Threshold Exceeded?	No	No	No	No

Notes: NO_x = nitrogen oxides, CO = carbon monoxide, PM₁₀ = particulate matter 10 microns in diameter, PM_{2.5} = particulate matter 2.5 microns in diameter. Source: CalEEMod output sheets are provided in Attachment A, and the detailed calculation sheets are provided in Attachment B.

According to the SCAQMD LST methodology, LSTs apply to a project's stationary and on-site mobile sources. Projects that involve mobile sources that spend long periods queuing and idling at a site, such as transfer facilities or warehousing and distribution buildings, have the potential to exceed the operational LSTs. The proposed Project would operate as a residential development, which does not typically involve diesel vehicles regularly idling or queuing for long periods. Therefore, due to the lack of significant stationary source emissions or idling diesel-powered vehicles, impacts related to operational LSTs are presumed to be less than significant.

Air Quality Management Plan Consistency

The SCAQMD's CEQA Handbook provides the following two criteria to determine whether a project would be consistent with the 2022 AQMP:

1. The Project would not generate population and employment growth that would be inconsistent with Southern California Association of Governments (SCAG)'s growth forecasts from the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS); and
2. The Project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

Consistency Criterion No. 1 refers to SCAG's growth forecasts and the associated assumptions included in the AQMP. The future air quality levels projected in the AQMP are based on SCAG's regional growth projections, which rely in part on the general plans of jurisdictions within the SCAG region. Implementation of the proposed Project would require both a General Plan Amendment (GPA) and zone change to change the General Plan Land Use Designation from Business Park (I-BP) to Medium High Density Residential (R-HMMH) and zoning from Limited Manufacturing (M1) to Planned Development District (P-D).

As a residential development consisting of 98 attached townhomes and 237 multifamily dwelling units, the Project does not include employment-generating uses beyond what is anticipated under the County's General Plan. Therefore, it would not induce substantial unplanned employee growth or exceed growth assumptions for the area. The population of Los Angeles County in 2025 as recorded by the California Department of Finance is approximately 9,876,811 persons.⁶ SCAG growth forecasts indicate an increase from 10,044,500 persons in 2016 to 10,258,000 persons in 2045.⁷ Based on the SCAG's Local Housing Data for the City of Torrance, the reported average household size for the City of Torrance is 2.587 persons per household; the Project's 98 townhome units and 237 multifamily dwelling units would thus add approximately 867 residents.⁸ This increase represents a negligible portion (0.4 percent increase) of the County's projected population growth over the 2016–2045 period. Accordingly, the Project would be consistent with the growth assumptions used in the development of the 2020–2045 RTP/SCS and would not jeopardize attainment of the air quality levels identified in the AQMP. With the required County approvals, the Project would be consistent with the applicable General Plan and zoning designations and thus satisfies Consistency Criterion No. 1.

⁶ Los Angeles County's Population Estimate (9,876,811 persons as of January 1, 2025): California Department of Finance. (January 2025). *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2025*. <https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2025>

⁷ SCAG Growth Forecasts (213,500 persons between 2016 and 2045): Southern California Association of Governments (SCAG). (September 2020). *Demographics and Growth Forecast*. [/https://scag.ca.gov/sites/default/files/old/file-attachments/0903fconnectsocial_demographics-and-gro...](https://scag.ca.gov/sites/default/files/old/file-attachments/0903fconnectsocial_demographics-and-gro...)

⁸ Average Household Size (2.58 persons for Torrance): SCAG (April 2021). *Local Housing Data*. <https://scag.ca.gov/sites/default/files/old/file-attachments/torrance-he-0421.pdf?1620766600=>

Consistency Criterion No. 2 refers to the California Ambient Air Quality Standards. An impact would occur if emissions associated with the proposed Project exceed SCAQMD's significance thresholds during construction or operation. As shown in Table 2 and Table 3, the Project's construction and operational emissions would not exceed any applicable SCAQMD thresholds. Therefore, the Project would be consistent with Consistency Criterion No. 2.

As the Project would be consistent with both Consistency Criteria No. 1 and 2, impacts related to the Project's consistency with the AQMP would be less than significant.

Odors

Odors would be produced during the construction of the proposed Project due to the operation of heavy-duty off-road equipment. The primary odor emitted would be diesel particulate matter (DPM) from the vendor trucks and heavy-duty off-road equipment. This odor may be noticeable by nearby residents; however, these odors would be expected and not necessarily objectionable. These odors would also dissipate quickly and would be temporary. Therefore, due to the nature of the odor produced during construction as temporary and non-objectionable to a substantial number of people, the odor impact from construction of the proposed Project would be less than significant.

For operational odor emissions, SCAQMD's *CEQA Air Quality Handbook* describes odor complaints associated with the following land uses:

- Agricultural uses
- Chemical plants
- Composting activities
- Dairies
- Fiberglass molding
- Food processing plants
- Landfills
- Refineries
- Wastewater treatment plants

The Project does not propose any of the above land uses and is required to comply with SCAQMD Rule 402, *Nuisance*, which states:

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

Thus, impacts associated with odor produced by operation of the proposed Project would be less than significant.

Conclusion

The proposed Project's maximum daily regional and localized construction and operational emissions would not exceed SCAQMD's regional thresholds of significance, as detailed in Tables 2 through 4. All construction activities would comply with applicable SCAQMD rules and regulations, ensuring minimal and temporary odor exposure during construction. Operational impacts are also anticipated to be minimal and consistent with surrounding land uses.

In addition, the proposed Project is consistent with SCAQMD'S 2022 AQMP, reflecting adherence to regional air quality management goals and standards. During construction, any odors produced will be temporary and not significantly objectionable. Additionally, the proposed Project involves land uses that do not typically generate significant odor complaints and complies with SCAQMD Rule 402, which addresses potential odor impacts.

Overall, the proposed Project's impacts related to air quality would be less than significant.

Energy

The CEQA Guidelines do not have specific numerical thresholds for energy consumption. Rather, the questions in Appendix G, (VI) Energy, ask: (a) “[Would the proposed Project] Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?” and (b) “[Would the project] Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?”⁹ Therefore, for the purpose of this analysis, a significant impact would occur if:

- a) The project design and/or location encourages wasteful, inefficient, and unnecessary consumption of energy, especially fossil fuels such as coal, natural gas, and petroleum, as well as the use of fuel by vehicles anticipated to travel to and from the project; or
- b) The project design impedes the growth of future renewable energy developments.

Southern California Edison and the Southern California Gas Company would provide electricity and natural gas, respectively, for construction and operation of the proposed Project. The following tools were used to calculate the energy (electricity, natural gas, and petroleum) consumption of the proposed Project:

- Construction equipment fuel consumption was derived from the CARB OffRoad2021 emission model.
- Fuel consumption from vehicle travel was derived from the CARB EMFAC2021 emission model.
- Electrical and natural gas usage was derived from CalEEMod (Version 2022.1).
- Electricity consumption was derived from CalEEMod (Version 2022.1).

Electricity and Natural Gas Usage

Due to the Project size and the fact that construction is temporary, the electricity used during construction of the proposed Project would be substantially less than that required for Project operation and would have a negligible contribution to the Project’s overall energy consumption. The electric power used would be for as-necessary lighting and electronic equipment such as computers inside temporary construction trailers. Natural gas is not anticipated to be needed for construction activities. Any natural gas consumption during construction would be minor and negligible in comparison with countywide consumption.

Petroleum Fuel Usage

Construction equipment associated with construction activities (off-road/heavy duty vehicles) would rely on diesel fuel, as would vendor and haul trucks involved in delivering building materials and removing demolition debris from the Project site. Construction workers would travel to and from the Project site throughout the duration of construction, and for a conservative analysis, it is assumed that construction workers would travel in gasoline-powered passenger vehicles. The proposed Project’s construction vehicle fuel usage is based on vehicle miles traveled (VMT) and fuel usage factors contained in the CARB EMFAC2021 model, which are included in Attachment B, *Detailed Calculation Sheets*. The trips included are those of worker vehicles, vendor vehicles, and haul vehicles. Construction equipment would be transported to the site and operated on-site only. Please refer to Attachment B for the total fuel consumption and horsepower-hour data contained within the CARB Off-Road 2021 emission model for specific types of diesel construction equipment.

As shown in Table 5, *Total Construction Fuel Usage*, construction of the proposed Project would require a total of 80,543.5 gallons of diesel fuel and 93,432.2 gallons of gasoline fuel from construction vehicles. As shown in Table 5, this would result in a 0.05 percent increase in countywide construction diesel fuel consumption and

⁹ California Energy Commission. (2023). *CEQA Statutes and Guidelines Attachment 10 Appendix G: Environmental Checklist Form*. https://www.energy.ca.gov/sites/default/files/2024-01/11_Attachment_10_-_Appendix_G_from_CEQA_Handbook_ada.docx

a <0.01 percent increase in countywide on-road gasoline consumption. Thus, increased energy consumption from the construction of the proposed Project would be nominal. Additionally, it should be noted that this total fuel consumption is a conservative analysis and would likely overstate the amount of fuel usage, as specific construction equipment (e.g., crane) is not expected to operate during the entire duration of the construction activity.

Table 5: Total Construction Fuel Usage

Construction Source	Gallons of Diesel Fuel	Gallons of Gasoline Fuel
Construction Vehicles	41,084.5	93,423.2
Off-Road Construction Equipment	39,459.0	-
Total	80,543.5	93,423.2
Los Angeles Countywide Consumption	170,608,267.7	2,576,030,802.1
Percentage Increase (%)	0.05%	<0.01%

Source: CalEEMod Output Sheets (see Attachment A) and Detailed Calculation Sheets (see Attachment B)

Operation

Operation of the proposed Project would consume electricity, natural gas, and gasoline. Electricity consumption for the proposed Project can be found in Attachment A, *CalEEMod Output Sheets*. The gasoline consumption rates utilize the same assumptions that were used for construction worker vehicles. The Project's estimated net energy consumption is shown in Table 6, *Project Net Annual Operational Energy Requirements*, below. The proposed Project is expected to require consumption of electricity, natural gas, and gasoline. However, the proposed Project's energy consumption would be consistent with similar sized projects and would not constitute an inefficient use of energy. Additionally, the Project is anticipated to result in a net decrease in consumption of electricity and natural gas but would result in an increase in gasoline fuel consumption in comparison to the existing site. As shown in Table 6, operation of the proposed Project would result in a net countywide electricity increase of 0.02 percent and a net countywide natural gas increase of <0.01 percent within Los Angeles County. The on-road fuel consumption from the Project would result in net a 0.01 percent increase in countywide gasoline consumption. Thus, the Project's operational energy consumption would be nominal at the countywide scale.

Table 6: Project Net Annual Operational Energy Requirements

Operational Source	Energy Usage	Los Angeles Countywide Energy Consumption	Percentage Increase
Electricity (Kilowatt-Hour)			
Proposed Project	1,675,269.5	9.98E+09	0.02%
Existing Use	4,461,734.5		
Net Electricity	-2,786,465.01		
Natural Gas (Thousands British Thermal Units)			
Proposed Project	4,987,296.9	4.29E+11	<0.01%
Existing Use	6,158,304.5		
Net Electricity	-1,171,007.6		
Petroleum (Gasoline) Consumption			
Gallons of Gasoline Fuel			
Proposed Project	5,934,216.3	2,576,030,802.1	0.01%
Existing Use	5,564,597.9		
Net Petroleum (Gasoline)	369,618.5		

Source: CalEEMod Output Sheets (see Attachment A) and Detailed Calculation Sheets (see Attachment B)

Future Renewable Energy Developments

The proposed Project would be required to meet the CCR Title 24 State Building Energy Efficiency Standards, appliance efficiency regulations, and green building standards in effect during permitting of the proposed Project and comply with all applicable County energy codes. The County's administration of energy efficiency requirements includes review of design components and energy conservation measures during the permitting process to ensure that all requirements are met. In addition, the Project buildings would be solar ready in compliance with current Title 24 requirements, which would allow for the future installation of rooftop solar. As such, the Project would not inhibit the use of and would allow for future flexibility relating to renewable energy.

Conclusion

As described above, the Project would not result in significant impacts related to energy. Construction activities associated with the proposed Project are not expected to result in fuel demand, on a per-unit-of-development basis, that exceeds that of comparable residential projects in Southern California. The Project does not include any unusual characteristics that would require the use of construction equipment with lower energy efficiency than that used for typical residential development. In addition, construction activities would comply with applicable regulations aimed at reducing energy consumption and emissions, including restrictions on vehicle idling, fuel standards, and equipment efficiency requirements, and estimated energy consumption from construction of the Project would be nominal compared to the energy consumption of the region.

During operation, the Project would consume less electricity and natural gas but would consume more gasoline than the site's previous use. However, operational energy demand would be consistent with that of similar residential developments and would not result in inefficient, wasteful, or unnecessary energy consumption, and energy consumption from the operation of the Project would be nominal compared to that of the region. Therefore, the Project would result in a less-than-significant energy impact during both construction and operation, and no mitigation would be required.

In addition, the operation of the Project would also be similar to other residential projects within the County and would be required to meet CCR Title 24 energy efficiency standards and comply with all applicable County energy codes. The Project buildings would also be solar-ready in compliance with current Title 24 requirements. Therefore, the Project would not inhibit the use of and would allow for future flexibility relating to renewable energy.

Overall, the Project would result in less-than-significant impacts related to wasteful, inefficient, and unnecessary consumption of energy and impediment of future renewable energy development.

Greenhouse Gas Emissions

Regulatory Background and Thresholds

California State Executive Order S-3-05, issued by Governor Arnold Schwarzenegger in June 2005, established comprehensive GHG reduction targets for the State.¹⁰ It mandated reducing GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. This Executive Order laid the foundation for subsequent climate change mitigation efforts in California, including the development of various policies and programs aimed at reducing emissions across sectors such as transportation, energy, and industry. The objective of the Executive Order is to contribute to capping worldwide CO₂ concentrations at 450 parts-per-million (ppm), stabilizing global climate change.

The SCAQMD convened a GHG Emissions CEQA Significance Threshold Working Group to help lead agencies determine significance thresholds for GHG emissions when the SCAQMD is not the lead agency. The last working group was held in September 2010 (Meeting No. 15) and proposed a tiered approach (Tier 1 to Tier 5), which involves different methods to determine significance of GHG emissions.¹¹ This assessment will apply the Tier 3 (Numerical Screening Thresholds) approach. Tier 3 consists of screening values which the lead agency can choose from, but it must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to the project's operational emissions. If a project's emissions are below one of the following screening thresholds, then the project impact would be less than significant:

- Option 1, all land use types: 3,000 metric tons of carbon dioxide equivalent (MTCO_{2e}) per year
- Option 2, based on land use type:
 - Residential: 3,500 MTCO_{2e} per year
 - Commercial: 1,400 MTCO_{2e} per year
 - Mixed-use: 3,000 MTCO_{2e} per year

The City of Torrance understands that the 3,000 MTCO_{2e} per year threshold was proposed by the SCAQMD a decade ago and was adopted as an interim policy; however, no permanent, superseding policy or threshold has since been adopted. The 3,000 MTCO_{2e} per year threshold was developed and recommended by SCAQMD, an expert agency, based on substantial evidence as provided in the *Draft Guidance Document – Interim CEQA Greenhouse Gas Significance Threshold* document and subsequent Working Group meetings (latest of which occurred in 2010).¹² The SCAQMD has not withdrawn its support of the interim threshold and all documentation supporting the interim threshold remains on the SCAQMD website on a page that provides guidance to CEQA practitioners for air quality analysis (and where all SCAQMD significance thresholds for regional and local criteria pollutants and toxic air contaminants also are listed). Further, as stated by SCAQMD, this threshold “uses the Executive Order S-3-05 goal [80 percent below 1990 levels by 2050] as the basis for deriving the screening level” and, thus, remains valid for use in 2025 and for purposes of this CEQA document. Lastly, this threshold has been used for hundreds, if not thousands of GHG analyses performed for projects located within the SCAQMD jurisdiction.

¹⁰ Executive Department State of California Executive Order S-3-05: <https://www.library.ca.gov/wp-content/uploads/GovernmentPublications/executive-order-proclamation/5129-5130.pdf>

¹¹ SCAQMD. (2010). *Minutes of the GHG CEQA Significance Threshold Stakeholder Working Group #15*. [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf)

¹² SCAQMD. (2008). *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans*. [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgboardsynopsis.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf)

Project GHG Emissions

The Project's construction GHG emissions are shown in Table 7, *Project Construction GHG Emissions*, and the overall construction and operational emissions are shown in Table 8, *Total Project GHG Emissions*, below. These emissions were calculated using the CalEEMod model. The construction emissions are amortized over 30 years and added to the operational GHG emissions. As shown in Table 8, the Project's construction and operational GHG emissions would total 2,665 MTCO₂e per year. Considering the emissions resulting from the existing buildings, the net new emissions generated by the Project would be 1,456 MTCO₂e per year, which are both below the SCAQMD significance threshold of 3,000 MTCO₂e per year. Therefore, the Project would result in a less-than-significant impact on GHG emissions.

Table 7: Project Construction GHG Emissions

Activity	Annual GHG Emissions (MTCO ₂ e)
2028	150
2029	1,012
2030	49
Total Emissions	1,211
Total Emissions Amortized Over 30 Years	40

Source: CalEEMod output sheets are provided in Attachment A, and the detailed calculation sheets are provided in Attachment B.

Table 8: Total Project GHG Emissions

Activity	Annual GHG Emissions (MTCO ₂ e)
Mobile	1,975
Area	8
Energy	530
Water	32
Waste	79
Refrigeration	1
Total Project Operation Emissions	2,624
Amortized Construction Emissions	40
Total Project Emissions	2,665
Existing Emissions	1,209
Net New Emissions	1,456
Significance Threshold	3,000
Threshold Exceeded?	No

Note: Numbers have been rounded.

Source: CalEEMod output sheets are provided in Attachment A, and the detailed calculation sheets are provided in Attachment B.

Greenhouse Gas Reduction Plans Consistency

Based on Project-specific emissions modeling, the proposed Project would result in annual GHG emissions of 2,665 MTCO₂e, and a net increase of approximately 1,456 MTCO₂e, as shown above in Table 8. This is below the SCAQMD's 3,000 MTCO₂e per year screening threshold; thus, the Project would not exceed the applicable GHG significance threshold.

The Project would comply with applicable plans and programs outline in the City of Torrance General Plan and the City's CAP, intended to reduce GHG emissions. Given that a project-specific quantitative analysis was prepared for the Project, and the Project was found to not result in total GHG emissions greater than the adopted GHG emission threshold of 3,000 MTCO₂e, a General Plan and CAP checklist are forgone for this memorandum. The proposed Project would not conflict with any plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs within the City of Torrance.

The Project would also follow applicable provisions of the 2022 CARB Scoping Plan, which establishes sector-specific regulations and actions necessary to achieve carbon neutrality by 2045, including emissions reductions from building energy, transportation, waste, and land use. The Project would implement all mandatory measures in effect at the time of construction and operation, including compliance with the California Building Standards Code (Title 24), which incorporates the California Energy Code and CALGreen Code.

The Project site lies within the SCAG region and is subject to the regional planning framework outlined in the SCAG 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (2020–2045 RTP/SCS). As a residential development consisting of 98 attached townhomes and 237 multifamily dwelling units, the Project would not generate population or employment growth beyond what is anticipated in the County's General Plan and would be consistent with the site's land use and zoning designations. Therefore, the Project would align with the growth assumptions used in the 2020–2045 RTP/SCS and would not conflict with SCAG's regional planning framework or projections. A detailed discussion of consistency with the 2045 CAP and the 2022 CARB Scoping Plan is provided in the following sections.

Project Consistency with the 2022 CARB Scoping Plan

CARB's 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) sets California's GHG emission reduction target for 2045 at 85 percent below 1990 levels, which was codified by SB 32.¹³ Table 9, *2022 Scoping Plan Consistency Summary*, demonstrates that the Project would comply with all applicable actions intended to reduce GHG emissions.

Table 9: 2022 Scoping Plan Consistency Summary

Action	Consistency
GHG Emissions Reductions Relative to the SB 32 Target	
40% Below 1990 levels by 2030.	Consistent. The Project would comply with Title 24, Part 6 building energy requirements along with other local and State initiatives that aim to achieve the 40 percent below 1990 levels by 2030 goal.
Smart Growth/Vehicle Miles Traveled VMT	
VMT per capita reduced 25% below 2019 levels by 2030, and 30% below 2019 levels by 2045.	Consistent. As previously discussed, the Project would be consistent with the growth and land use assumptions in the 2020-2045 RTP/SCS, so the Project would not interfere

¹³ California Air Resources Board. (2022). *California's 2022 Climate Change Scoping Plan Table 2-1: Actions for the Scoping Plan Scenario: AB 32 GHG Inventory Sectors*. Referenced at: <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>

Action	Consistency
	with the analysis completed for the 2020-2045 RTP/SCS report outlining VMT reduction targets and measures.
Light-Duty Vehicle (LDV) Zero-Emission Vehicles (ZEVs)	
100% of LDV sales are ZEV by 2035.	Not Applicable. The proposed Project is a residential development and does not propose the sale of vehicles.
Truck ZEVs	
100% of medium-duty (MDV)/HDC sales are ZEV by 2040 (AB 74 University of California Institute of Transportation Studies [ITS] report).	Not Applicable. The proposed Project is a residential development and does not propose the sale of trucks.
Aviation	
20% of aviation fuel demand is met by electricity (batteries) or hydrogen (fuel cells) in 2045. Sustainable aviation fuel meets most or the rest of the aviation fuel demand that has not already transitioned to hydrogen or batteries.	Not Applicable. The proposed Project is a residential development and would not utilize aviation fuel.
Ocean-Going Vessels (OGV)	
2020 OGV At-Berth regulation fully implemented, with most OGVs utilizing shore power by 2027. 25% of OGVs utilize hydrogen fuel cell electric technology by 2045.	Not Applicable. The proposed Project is a residential development and would not utilize any OGVs.
Port Operations	
100% of cargo handling equipment is zero-emission by 2037. 100% of drayage trucks are zero emission by 2035.	Not Applicable. The proposed Project is a residential development and would not impact any operations at any ports.
Freight and Passenger Rail	
100% of passenger and other locomotive sales are ZEV by 2030. 100% of line haul locomotive sales are ZEV by 2035. Line haul and passenger rail rely primarily on hydrogen fuel cell technology, and others primarily utilize electricity.	Not Applicable. The proposed Project is a residential development and would not involve any freight or passenger rail operations.
Oil and Gas Extraction	
Reduce oil and gas extraction operations in line with petroleum demand by 2045.	Not Applicable. The proposed Project is a residential development and would not involve oil and gas extraction operations.
Petroleum Refining	
CCS on majority of operations by 2030, beginning in 2028. Production reduced in line with petroleum demand.	Not Applicable. The proposed Project is a residential development and would not involve any petroleum refining.
Electricity Generation	
Sector GHG target of 38 million metric tons of carbon dioxide equivalent (MMTCO _{2e}) in 2030 and 30 MMTCO _{2e} in 2035. Retail sales load coverage 13420 gigawatts (GW) of offshore wind by 2045. Meet increased demand for electrification without new fossil gas-fired resources.	Not Applicable. The proposed Project is a residential development and would not be a source of electricity generation.
New Residential and Commercial Buildings	

Action	Consistency
All electric appliances beginning 2026 (residential) and 2029 (commercial), contributing to 6 million heat pumps installed statewide by 2030.	Consistent. The proposed project would comply with Title 24, Part 6 energy efficiency requirements, including the installation of electrical wiring for all built-in appliances. As a residential development, the project would not use natural gas on-site and would rely entirely on electricity to meet its energy needs.
Existing Residential Buildings	
80% of appliance sales are electric by 2030 and 100% of appliance sales are electric by 2035. Appliances are replaced at end of life such that by 2030 there are 3 million all-electric and electric-ready homes—and by 2035, 7 million homes—as well as contributing to 6 million heat pumps installed statewide by 2030.	Not Applicable. The Project site does not contain any existing residential buildings. Conversely, the proposed Project will introduce residential on the site which would be 100% electric.
Existing Commercial Buildings	
80% of appliance sales are electric by 2030, and 100% of appliance sales are electric by 2045. Appliances are replaced at end of life, contributing to 6 million heat pumps installed statewide by 2030.	Consistent. The Project site is currently occupied with three commercial office buildings, but, as the Project proposed residential townhomes and multifamily units, the Project would not propose or include the sales of appliances. Conversely, the proposed Project will introduce residential on the site which would be 100% electric.
Food Products	
7.5% of energy demand electrified directly and/or indirectly by 2030; 75% by 2045.	Not Applicable. The Project is a residential development and would not involve mass food production.
Construction Equipment	
25% of energy demand electrified by 2030 and 75% electrified by 2045.	Consistent. The proposed Project would be required to use construction equipment that is registered by CARB and meet CARB's standards. CARB sets its standards to be in line with the goal of reducing energy demand by 25 percent in 2030 and 75 percent in 2045.
Chemicals and Allied Products; Pulp and Paper	
Electrify 0% of boilers by 2030 and 100% of boilers by 2045. Hydrogen for 25% of process heat by 2035 and 100% by 2045. Electrify 100% of other energy demand by 2045.	Not Applicable. The proposed Project is a residential development and would not involve the production and/or storage of chemicals and allied products like pulp and paper.
Stone, Clay, Glass, and Cement	
CCS on 40% of operations by 2035 and on all facilities by 2045. Process emissions reduced through alternative materials and CCS.	Not Applicable. The proposed Project is a residential development and would not involve the production and/or storage of stone, clay, glass, and/or cement.
Other Industrial Manufacturing	
0 percent energy demand electrified by 2030 and 50% by 2045.	Not Applicable. The proposed Project is a residential development and does not include any industrial manufacturing uses.
Combined Heat and Power	
Facilities retire by 2040.	Not Applicable. The proposed Project is a residential development and would not involve any existing combined heat and power facilities.

Action	Consistency
Agriculture Energy Use	
25% energy demand electrified by 2030 and 75% by 2045.	Not Applicable. The proposed Project is a residential development and would not involve any agricultural uses.
Low Carbon Fuels for Transportation	
Biomass supply is used to produce conventional and advanced biofuels, as well as hydrogen.	Not Applicable. The proposed Project is a residential development and would not involve any production of biofuels.
Low Carbon Fuels for Buildings and Industry	
In 2030s, biomethane 135 blended in pipeline Renewable hydrogen blended in fossil gas pipeline at 7% energy (~20% by volume), ramping up between 2030 and 2040. In 2030s, dedicated hydrogen pipelines constructed to serve certain industrial clusters	Not Applicable. The proposed Project is a residential development and would not involve any production of fuels for buildings and industry.
Non-Combustion Methane Emissions	
Increase landfill and dairy digester methane capture. Some alternative manure management deployed for smaller dairies. Moderate adoption of enteric strategies by 2030. Divert 75% of organic waste from landfills by 2025. Oil and gas fugitive methane emissions reduced 50% by 2030 and further reductions as infrastructure components retire in line with reduced fossil gas demand	Not Applicable. The proposed Project is a residential development and would not involve any production of non-combustion methane emissions or organic waste.
High GWP Potential Emissions	
Low GWP refrigerants introduced as building electrification increases, mitigating HFC emissions.	Not Applicable. The proposed Project is a residential development and does not propose cold storage uses.

Source: CARB. (2022). *California's 2022 Climate Change Scoping Plan Table 2-1: Actions for the Scoping Plan Scenario: AB 32 GHG Inventory Sectors*. Referenced at: <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>.

Table 10, *Local Action Policies (Appendix D of the 2022 Scoping Plan)*, identifies GHG reduction measures for implementation by local governments. These local policies focus on climate action planning and approval of new land use development projects. The Project is consistent with these measures and would not conflict with any plan, policy, or regulation adopted for the purpose of reducing GHG emissions within the 2022 Scoping Plan.

Table 10: Local Actions Policies (Appendix D of the 2022 Scoping Plan)

Action	Consistency
VTM Reduction	
Adopt and implement Complete Streets policies and investments, consistent with general plan circulation element requirements.	Consistent. The proposed Project would maintain the existing sidewalks and include sidewalks throughout the site to provide pedestrian circulation within the Project and connections to adjacent off-site areas, enhancing existing conditions and supporting the County's Complete Streets goals.
Increase public access to shared clean mobility options (such as planning for and investing in electric shuttles, bike share, car share, transit).	Consistent. The proposed Project site, located at 21171 S Western Avenue, is in a developed urban area with sidewalks along all nearby roadways. The Project would maintain the existing sidewalks and include sidewalks throughout the site to provide pedestrian circulation within the project and connections to adjacent off-site areas. In addition, the nearest bus stop is located directly adjacent to the Project site on S Western Avenue, serviced by Torrance Transit Line 2, providing access to public transit.
Amend zoning or development codes to enable mixed-use, walkable, and compact infill development (such as increasing allowable density of the neighborhood).	Consistent. The Project site has a General Plan land use designation of I-BP and a zoning designation of M1 within the City's General Plan. The proposed Project is a residential development would require a GPA and zone change, but would change the current zoning of non-residential to (I-BP) to Medium High Density Residential, therefor increasing residential density.
Building Decarbonization	
Adopt all-electric new construction reach codes.	Consistent. The proposed Project would comply with Title 24 Parts 6 and 11, which includes electric heat pumps installed during construction and electric hookups for all appliances.
Adopt policies and incentive programs to reduce electrical loads from equipment plugged into outlets (such as purchasing Energy Star equipment for municipal buildings, occupancy sensors, smart power strips, equipment controllers, etc.).	Consistent. The proposed Project would be constructed in accordance with Title 24 CALGreen requirements, which includes installation of Energy Star equipment and appliances in new buildings.
Facilitate deployment of renewable energy production and distribution and energy storage.	Consistent. The proposed Project would be constructed in accordance with the California Energy Code (Title 24 Part 6) to meet all requirements related to solar energy production and the CALGreen Building Energy Efficiency Standards (Title 24 Part 11) to meet efficiency standards.

Source: California Air Resources Board. (2022). *California's 2022 Climate Change Scoping Plan Table 2-1: Actions for the Scoping Plan Scenario: AB 32 GHG Inventory Sectors*. Referenced at: <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>

Conclusion

The construction and operational GHG emissions of the proposed Project would result in a total of 2,665 MTCO₂e per year, a net increase of 1,456 MTCO₂e per year compared to existing conditions, which are both below the SCAQMD significance threshold of 3,000 MTCO₂e per year. Additionally, as shown in Tables 9 and 10, which summarize Project compliance with the 2022 CARB Scoping Plan, the Project would be consistent with applicable policies and measures for reducing GHG emissions and would not interfere with plans or policies established for reducing GHG emissions. Overall, the Project's GHG emissions impacts would be less than significant.

ATTACHMENT A – CALEEMOD OUTPUT SHEETS

25-033 Torrance Townhomes Detailed Report

Table of Contents

- 1. Basic Project Information
 - 1.1. Basic Project Information
 - 1.2. Land Use Types
 - 1.3. User-Selected Emission Reduction Measures by Emissions Sector
- 2. Emissions Summary
 - 2.1. Construction Emissions Compared Against Thresholds
 - 2.2. Construction Emissions by Year, Unmitigated
 - 2.4. Operations Emissions Compared Against Thresholds
 - 2.5. Operations Emissions by Sector, Unmitigated
- 3. Construction Emissions Details
 - 3.1. Demolition (2028) - Unmitigated
 - 3.3. Demolition (2029) - Unmitigated
 - 3.5. Site Preparation (2029) - Unmitigated
 - 3.7. Grading (2029) - Unmitigated
 - 3.9. Building Construction (2029) - Unmitigated

3.11. Building Construction (2030) - Unmitigated

3.13. Paving (2029) - Unmitigated

3.15. Architectural Coating (2029) - Unmitigated

3.17. Architectural Coating (2030) - Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

8.1. Justifications

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	25-033 Torrance Townhomes
Construction Start Date	12/1/2028
Operational Year	2029
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.5
Precipitation (days)	17
Location	21171 S Western Ave, Torrance, CA 90501, USA
County	Los Angeles-South Coast
City	Torrance
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4660
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.35

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Condo/Townhouse	98	Dwelling Unit	3.6	284,942	71,872	—	290	—

Apartments Mid Rise	237	Dwelling Unit	2.6	441,561	52,652	—	702	—
Parking Lot	19	Space	0.17	0.00	0.00	—	—	—
Enclosed Parking with Elevator	237	Space	0.00	94,800	0.00	—	—	—
Other Asphalt Surfaces	1.3	Acre	1.3	0.00	0.00	—	—	—
Recreational Swimming Pool	0.70	1000sqft	0.14	562	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Unmit.	34	13	34	0.04	5.2	1.5	8,772
Daily, Winter (Max)	—	—	—	—	—	—	—
Unmit.	34	33	38	0.11	14	4.1	14,913
Average Daily (Max)	—	—	—	—	—	—	—
Unmit.	13	11	22	0.03	3.8	1.2	6,113
Annual (Max)	—	—	—	—	—	—	—
Unmit.	2.4	2.0	4.0	0.01	0.70	0.21	1,012
Exceeds (Daily Max)	—	—	—	—	—	—	—
Threshold	75	100	550	150	150	55	—
Unmit.	No	No	No	No	No	No	—

Exceeds (Average Daily)	—	—	—	—	—	—	—
Threshold	75	100	550	150	150	55	—
Unmit.	No	No	No	No	No	No	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—
2029	34	13	34	0.04	5.2	1.5	8,772
Daily - Winter (Max)	—	—	—	—	—	—	—
2028	2.4	33	24	0.11	14	3.2	14,913
2029	34	31	38	0.11	14	4.1	14,631
2030	34	13	30	0.04	5.2	1.4	8,421
Average Daily	—	—	—	—	—	—	—
2028	0.15	2.0	1.5	0.01	0.82	0.19	905
2029	13	11	22	0.03	3.8	1.2	6,113
2030	1.1	0.44	1.1	< 0.005	0.18	0.05	297
Annual	—	—	—	—	—	—	—
2028	0.03	0.36	0.27	< 0.005	0.15	0.04	150
2029	2.4	2.0	4.0	0.01	0.70	0.21	1,012
2030	0.21	0.08	0.20	< 0.005	0.03	0.01	49

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Unmit.	25	5.6	74	0.14	13	3.4	17,330

Daily, Winter (Max)	—	—	—	—	—	—	—
Unmit.	23	5.7	47	0.13	13	3.4	16,692
Average Daily (Max)	—	—	—	—	—	—	—
Unmit.	24	5.6	60	0.12	12	3.1	15,851
Annual (Max)	—	—	—	—	—	—	—
Unmit.	4.3	1.0	11	0.02	2.1	0.56	2,624
Exceeds (Daily Max)	—	—	—	—	—	—	—
Threshold	55	55	550	150	150	55	3,000
Unmit.	No	No	No	No	No	No	Yes
Exceeds (Average Daily)	—	—	—	—	—	—	—
Threshold	55	55	550	150	150	55	3,000
Unmit.	No	No	No	No	No	No	Yes

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Mobile	5.7	4.1	50	0.13	13	3.3	13,386
Area	19	0.21	23	< 0.005	0.02	0.01	68
Energy	0.07	1.3	0.54	0.01	0.10	0.10	3,201
Water	—	—	—	—	—	—	195
Waste	—	—	—	—	—	—	475
Refrig.	—	—	—	—	—	—	5.2
Total	25	5.6	74	0.14	13	3.4	17,330
Daily, Winter (Max)	—	—	—	—	—	—	—
Mobile	5.6	4.5	46	0.12	13	3.3	12,816
Area	17	0.00	0.00	0.00	0.00	0.00	0.00

Energy	0.07	1.3	0.54	0.01	0.10	0.10	3,201
Water	—	—	—	—	—	—	195
Waste	—	—	—	—	—	—	475
Refrig.	—	—	—	—	—	—	5.2
Total	23	5.7	47	0.13	13	3.4	16,692
Average Daily	—	—	—	—	—	—	—
Mobile	5.1	4.2	44	0.11	11	3.0	11,928
Area	18	0.15	16	< 0.005	0.01	0.01	47
Energy	0.07	1.3	0.54	0.01	0.10	0.10	3,201
Water	—	—	—	—	—	—	195
Waste	—	—	—	—	—	—	475
Refrig.	—	—	—	—	—	—	5.2
Total	24	5.6	60	0.12	12	3.1	15,851
Annual	—	—	—	—	—	—	—
Mobile	0.94	0.76	8.0	0.02	2.1	0.54	1,975
Area	3.4	0.03	2.9	< 0.005	< 0.005	< 0.005	7.7
Energy	0.01	0.23	0.10	< 0.005	0.02	0.02	530
Water	—	—	—	—	—	—	32
Waste	—	—	—	—	—	—	79
Refrig.	—	—	—	—	—	—	0.86
Total	4.3	1.0	11	0.02	2.1	0.56	2,624

3. Construction Emissions Details

3.1. Demolition (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	2.2	20	19	0.03	0.78	0.71	3,440
Demolition	—	—	—	—	9.4	1.4	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.2	1.1	< 0.005	0.05	0.04	209
Demolition	—	—	—	—	0.57	0.09	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.22	0.21	< 0.005	0.01	0.01	35
Demolition	—	—	—	—	0.10	0.02	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.05	0.06	0.72	0.00	0.20	0.05	188
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.16	13	5.1	0.08	3.2	0.98	11,285
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.01	< 0.005	12
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.81	0.31	< 0.005	0.19	0.06	685
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005	1.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.15	0.06	< 0.005	0.04	0.01	113

3.3. Demolition (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	2.1	19	18	0.03	0.74	0.68	3,439
Demolition	—	—	—	—	9.4	1.4	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.65	0.65	< 0.005	0.03	0.02	121
Demolition	—	—	—	—	0.33	0.05	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.12	< 0.005	< 0.005	< 0.005	20
Demolition	—	—	—	—	0.06	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.05	0.05	0.67	0.00	0.20	0.05	185
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.16	13	4.9	0.08	3.2	0.98	11,008
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.01	< 0.005	6.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.45	0.18	< 0.005	0.11	0.03	388
Annual	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.08	0.03	< 0.005	0.02	0.01	64

3.5. Site Preparation (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	3.5	30	30	0.05	1.4	1.3	5,551
Dust From Material Movement	—	—	—	—	5.7	2.7	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.82	0.82	< 0.005	0.04	0.04	152
Dust From Material Movement	—	—	—	—	0.16	0.07	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.15	0.15	< 0.005	0.01	0.01	25
Dust From Material Movement	—	—	—	—	0.03	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.06	0.06	0.78	0.00	0.23	0.05	215
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.01	< 0.005	6.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.99
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Grading (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	2.2	18	25	0.04	0.88	0.81	4,154
Dust From Material Movement	—	—	—	—	2.3	0.94	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.98	1.4	< 0.005	0.05	0.04	228
Dust From Material Movement	—	—	—	—	0.12	0.05	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.25	< 0.005	0.01	0.01	38
Dust From Material Movement	—	—	—	—	0.02	0.01	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.06	0.07	0.89	0.00	0.26	0.06	246
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.06	4.8	1.9	0.03	1.2	0.37	4,170
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.01	< 0.005	14
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.27	0.10	< 0.005	0.07	0.02	229
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005	2.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.05	0.02	< 0.005	0.01	< 0.005	38

3.9. Building Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	1.0	9.3	14	0.03	0.30	0.28	2,638
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	1.0	9.3	14	0.03	0.30	0.28	2,638
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.62	5.5	8.3	0.02	0.18	0.16	1,559

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.0	1.5	< 0.005	0.03	0.03	258
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.92	0.84	15	0.00	3.7	0.86	3,658
Vendor	0.04	1.5	0.74	0.01	0.45	0.13	1,565
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.91	0.96	13	0.00	3.7	0.86	3,463
Vendor	0.03	1.6	0.76	0.01	0.45	0.13	1,563
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	0.54	0.57	7.8	0.00	2.1	0.50	2,078
Vendor	0.02	0.96	0.44	0.01	0.26	0.08	924
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	0.10	0.10	1.4	0.00	0.39	0.09	344
Vendor	< 0.005	0.17	0.08	< 0.005	0.05	0.01	153
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—

Off-Road Equipment	1.0	9.1	14	0.03	0.28	0.26	2,638
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.32	0.49	< 0.005	0.01	0.01	93
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.09	< 0.005	< 0.005	< 0.005	15
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.87	0.84	12	0.00	3.7	0.86	3,407
Vendor	0.03	1.5	0.73	0.01	0.45	0.13	1,515
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	0.03	0.03	0.44	0.00	0.13	0.03	122
Vendor	< 0.005	0.05	0.03	< 0.005	0.02	< 0.005	53
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.02	0.01	20
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	8.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Paving (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.67	6.5	9.9	0.01	0.24	0.22	1,516
Paving	0.47	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.35	0.54	< 0.005	0.01	0.01	83
Paving	0.03	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.10	< 0.005	< 0.005	< 0.005	14
Paving	< 0.005	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.05	0.05	0.67	0.00	0.20	0.05	185
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.01	< 0.005	10
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005	1.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.1	1.5	< 0.005	0.02	0.02	179
Architectural Coatings	32	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.1	1.5	< 0.005	0.02	0.02	179
Architectural Coatings	32	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.38	0.53	< 0.005	0.01	0.01	64
Architectural Coatings	11	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	< 0.005	11
Architectural Coatings	2.1	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.18	0.17	3.0	0.00	0.74	0.17	732
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.18	0.19	2.5	0.00	0.74	0.17	693
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—
Worker	0.06	0.07	0.94	0.00	0.26	0.06	251
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	0.01	0.01	0.17	0.00	0.05	0.01	41
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.0	1.5	< 0.005	0.01	0.01	179
Architectural Coatings	32	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.05	< 0.005	< 0.005	< 0.005	5.9
Architectural Coatings	1.1	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.98
Architectural Coatings	0.19	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.17	0.17	2.3	0.00	0.74	0.17	681
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.02	0.01	23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	< 0.005	< 0.005	3.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Condo/Townhouse	2.5	1.8	22	0.06	5.6	1.4	5,933
Apartments Mid Rise	3.2	2.3	28	0.07	7.0	1.8	7,453
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Recreational Swimming Pool	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	5.7	4.1	50	0.13	13	3.3	13,386
Daily, Winter (Max)	—	—	—	—	—	—	—
Condo/Townhouse	2.5	2.0	21	0.05	5.6	1.4	5,681
Apartments Mid Rise	3.1	2.5	26	0.07	7.0	1.8	7,136
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Recreational Swimming Pool	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	5.6	4.5	46	0.12	13	3.3	12,816
Annual	—	—	—	—	—	—	—
Condo/Townhouse	0.38	0.31	3.3	0.01	0.85	0.22	806
Apartments Mid Rise	0.55	0.45	4.7	0.01	1.2	0.32	1,168
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Recreational Swimming Pool	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.94	0.76	8.0	0.02	2.1	0.54	1,975

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
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Daily, Summer (Max)	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	429
Apartments Mid Rise	—	—	—	—	—	—	829
Parking Lot	—	—	—	—	—	—	6.2
Enclosed Parking with Elevator	—	—	—	—	—	—	334
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Recreational Swimming Pool	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	1,598
Daily, Winter (Max)	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	429
Apartments Mid Rise	—	—	—	—	—	—	829
Parking Lot	—	—	—	—	—	—	6.2
Enclosed Parking with Elevator	—	—	—	—	—	—	334
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Recreational Swimming Pool	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	1,598
Annual	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	71
Apartments Mid Rise	—	—	—	—	—	—	137
Parking Lot	—	—	—	—	—	—	1.0
Enclosed Parking with Elevator	—	—	—	—	—	—	55
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Recreational Swimming Pool	—	—	—	—	—	—	0.00

Total	—	—	—	—	—	—	265
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4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Condo/Townhouse	0.03	0.59	0.25	< 0.005	0.05	0.05	757
Apartments Mid Rise	0.04	0.66	0.28	< 0.005	0.05	0.05	846
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Recreational Swimming Pool	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.07	1.3	0.54	0.01	0.10	0.10	1,603
Daily, Winter (Max)	—	—	—	—	—	—	—
Condo/Townhouse	0.03	0.59	0.25	< 0.005	0.05	0.05	757
Apartments Mid Rise	0.04	0.66	0.28	< 0.005	0.05	0.05	846
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Recreational Swimming Pool	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.07	1.3	0.54	0.01	0.10	0.10	1,603
Annual	—	—	—	—	—	—	—
Condo/Townhouse	0.01	0.11	0.05	< 0.005	0.01	0.01	125
Apartments Mid Rise	0.01	0.12	0.05	< 0.005	0.01	0.01	140

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Recreational Swimming Pool	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.01	0.23	0.10	< 0.005	0.02	0.02	265

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	16	—	—	—	—	—	—
Architectural Coatings	1.3	—	—	—	—	—	—
Landscape Equipment	2.3	0.21	23	< 0.005	0.02	0.01	68
Total	19	0.21	23	< 0.005	0.02	0.01	68
Daily, Winter (Max)	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	16	—	—	—	—	—	—
Architectural Coatings	1.3	—	—	—	—	—	—
Total	17	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.8	—	—	—	—	—	—
Architectural Coatings	0.23	—	—	—	—	—	—

Landscape Equipment	0.29	0.03	2.9	< 0.005	< 0.005	< 0.005	7.7
Total	3.4	0.03	2.9	< 0.005	< 0.005	< 0.005	7.7

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	60
Apartments Mid Rise	—	—	—	—	—	—	135
Parking Lot	—	—	—	—	—	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Recreational Swimming Pool	—	—	—	—	—	—	0.61
Total	—	—	—	—	—	—	195
Daily, Winter (Max)	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	60
Apartments Mid Rise	—	—	—	—	—	—	135
Parking Lot	—	—	—	—	—	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Recreational Swimming Pool	—	—	—	—	—	—	0.61
Total	—	—	—	—	—	—	195
Annual	—	—	—	—	—	—	—

Condo/Townhouse	—	—	—	—	—	—	9.9
Apartments Mid Rise	—	—	—	—	—	—	22
Parking Lot	—	—	—	—	—	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Recreational Swimming Pool	—	—	—	—	—	—	0.10
Total	—	—	—	—	—	—	32

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	137
Apartments Mid Rise	—	—	—	—	—	—	331
Parking Lot	—	—	—	—	—	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Recreational Swimming Pool	—	—	—	—	—	—	7.5
Total	—	—	—	—	—	—	475
Daily, Winter (Max)	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	137
Apartments Mid Rise	—	—	—	—	—	—	331
Parking Lot	—	—	—	—	—	—	0.00

Enclosed Parking with Elevator	—	—	—	—	—	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Recreational Swimming Pool	—	—	—	—	—	—	7.5
Total	—	—	—	—	—	—	475
Annual	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	23
Apartments Mid Rise	—	—	—	—	—	—	55
Parking Lot	—	—	—	—	—	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Recreational Swimming Pool	—	—	—	—	—	—	1.2
Total	—	—	—	—	—	—	79

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	2.0
Apartments Mid Rise	—	—	—	—	—	—	3.2
Recreational Swimming Pool	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	5.2
Daily, Winter (Max)	—	—	—	—	—	—	—

Condo/Townhouse	—	—	—	—	—	—	2.0
Apartments Mid Rise	—	—	—	—	—	—	3.2
Recreational Swimming Pool	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	5.2
Annual	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	0.34
Apartments Mid Rise	—	—	—	—	—	—	0.52
Recreational Swimming Pool	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	0.86

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
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Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	12/1/2028	1/18/2029	5.0	35	—
Site Preparation	Site Preparation	1/22/2029	2/2/2029	5.0	10.0	—
Grading	Grading	2/5/2029	3/2/2029	5.0	20	—
Building Construction	Building Construction	3/5/2029	1/18/2030	5.0	230	—
Paving	Paving	3/5/2029	3/30/2029	5.0	20	—
Architectural Coating	Architectural Coating	7/3/2029	1/17/2030	5.0	143	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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Demolition	Rubber Tired Dozers	Diesel	Average	2.0	8.0	367	0.40
Demolition	Excavators	Diesel	Average	3.0	8.0	36	0.38
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.0	33	0.73
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.0	8.0	367	0.40
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	0.00	8.0	84	0.37
Site Preparation	Crawler Tractors	Diesel	Average	4.0	8.0	87	0.43
Grading	Graders	Diesel	Average	1.00	8.0	148	0.41
Grading	Excavators	Diesel	Average	1.00	8.0	36	0.38
Grading	Tractors/Loaders/Back hoes	Diesel	Average	0.00	8.0	84	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.0	367	0.40
Grading	Crawler Tractors	Diesel	Average	3.0	8.0	87	0.43
Grading	Rubber Tired Loaders	Diesel	Average	2.0	8.0	150	0.36
Building Construction	Forklifts	Diesel	Average	3.0	8.0	82	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.0	14	0.74
Building Construction	Cranes	Diesel	Average	1.00	8.0	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.0	46	0.45
Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.0	8.0	84	0.37
Paving	Pavers	Diesel	Average	2.0	8.0	81	0.42
Paving	Paving Equipment	Diesel	Average	2.0	8.0	89	0.36
Paving	Rollers	Diesel	Average	2.0	8.0	36	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.0	37	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
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Demolition	Worker	15	19	LDA,LDT1,LDT2
Demolition	Vendor	—	10	HHDT,MHDT
Demolition	Hauling	165	20	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	Worker	18	19	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10	HHDT,MHDT
Site Preparation	Hauling	0.00	20	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	20	19	LDA,LDT1,LDT2
Grading	Vendor	—	10	HHDT,MHDT
Grading	Hauling	63	20	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	281	19	LDA,LDT1,LDT2
Building Construction	Vendor	51	10	HHDT,MHDT
Building Construction	Hauling	0.00	20	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15	19	LDA,LDT1,LDT2
Paving	Vendor	—	10	HHDT,MHDT
Paving	Hauling	0.00	20	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	56	19	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10	HHDT,MHDT
Architectural Coating	Hauling	0.00	20	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	1,471,169	490,390	0.00	0.00	3,764

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	23,100	0.00
Site Preparation	—	—	35	0.00	0.00
Grading	—	10,000	50	0.00	0.00
Paving	0.00	0.00	0.00	0.00	8.1

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	Condo/Townhouse	4.5	0%
Paving	Apartments Mid Rise	—	0%
Paving	Parking Lot	0.17	100%
Paving	Enclosed Parking with Elevator	2.1	100%
Paving	Other Asphalt Surfaces	1.3	100%

Paving	Recreational Swimming Pool	0.00	0%
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5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2028	0.00	346	0.03	< 0.005
2029	0.00	346	0.03	< 0.005
2030	0.00	261	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Condo/Townhouse	706	858	703	265,362	6,444	7,840	6,417	2,423,331
Apartments Mid Rise	1,076	1,078	915	384,453	9,826	9,848	8,354	3,510,885
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Recreational Swimming Pool	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
Condo/Townhouse	Wood Fireplaces	0	0

Condo/Townhouse	Gas Fireplaces	0	0
Condo/Townhouse	Propane Fireplaces	0	0
Condo/Townhouse	Electric Fireplaces	0	0
Condo/Townhouse	No Fireplaces	78	78
Condo/Townhouse	Conventional Wood Stoves	0	0
Condo/Townhouse	Catalytic Wood Stoves	0	0
Condo/Townhouse	Non-Catalytic Wood Stoves	0	0
Condo/Townhouse	Pellet Wood Stoves	0	0
Apartments Mid Rise	Wood Fireplaces	0	0
Apartments Mid Rise	Gas Fireplaces	0	0
Apartments Mid Rise	Propane Fireplaces	0	0
Apartments Mid Rise	Electric Fireplaces	0	0
Apartments Mid Rise	No Fireplaces	237	237
Apartments Mid Rise	Conventional Wood Stoves	0	0
Apartments Mid Rise	Catalytic Wood Stoves	0	0
Apartments Mid Rise	Non-Catalytic Wood Stoves	0	0
Apartments Mid Rise	Pellet Wood Stoves	0	0
Parking Lot	Wood Fireplaces	0	0
Parking Lot	Gas Fireplaces	0	0
Parking Lot	Propane Fireplaces	0	0
Parking Lot	Electric Fireplaces	0	0
Parking Lot	No Fireplaces	0	0
Parking Lot	Conventional Wood Stoves	0	0
Parking Lot	Catalytic Wood Stoves	0	0
Parking Lot	Non-Catalytic Wood Stoves	0	0
Parking Lot	Pellet Wood Stoves	0	0
Enclosed Parking with Elevator	Wood Fireplaces	0	0
Enclosed Parking with Elevator	Gas Fireplaces	0	0

Enclosed Parking with Elevator	Propane Fireplaces	0	0
Enclosed Parking with Elevator	Electric Fireplaces	0	0
Enclosed Parking with Elevator	No Fireplaces	0	0
Enclosed Parking with Elevator	Conventional Wood Stoves	0	0
Enclosed Parking with Elevator	Catalytic Wood Stoves	0	0
Enclosed Parking with Elevator	Non-Catalytic Wood Stoves	0	0
Enclosed Parking with Elevator	Pellet Wood Stoves	0	0
Other Asphalt Surfaces	Wood Fireplaces	0	0
Other Asphalt Surfaces	Gas Fireplaces	0	0
Other Asphalt Surfaces	Propane Fireplaces	0	0
Other Asphalt Surfaces	Electric Fireplaces	0	0
Other Asphalt Surfaces	No Fireplaces	0	0
Other Asphalt Surfaces	Conventional Wood Stoves	0	0
Other Asphalt Surfaces	Catalytic Wood Stoves	0	0
Other Asphalt Surfaces	Non-Catalytic Wood Stoves	0	0
Other Asphalt Surfaces	Pellet Wood Stoves	0	0
Recreational Swimming Pool	Wood Fireplaces	0	0
Recreational Swimming Pool	Gas Fireplaces	0	0
Recreational Swimming Pool	Propane Fireplaces	0	0
Recreational Swimming Pool	Electric Fireplaces	0	0
Recreational Swimming Pool	No Fireplaces	0	0
Recreational Swimming Pool	Conventional Wood Stoves	0	0
Recreational Swimming Pool	Catalytic Wood Stoves	0	0
Recreational Swimming Pool	Non-Catalytic Wood Stoves	0	0
Recreational Swimming Pool	Pellet Wood Stoves	0	0

5.10.2. Architectural Coatings

—	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
undefined	1,471,169	490,390	0.00	0.00	3,764

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Condo/Townhouse	450,032	346	0.0330	0.0040	2,354,975
Apartments Mid Rise	868,803	346	0.0330	0.0040	2,632,322
Parking Lot	6,487	346	0.0330	0.0040	0.00
Enclosed Parking with Elevator	349,948	346	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00
Recreational Swimming Pool	0.00	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Condo/Townhouse	3,652,832	1,231,969
Apartments Mid Rise	8,833,891	902,516
Parking Lot	0.00	0.00

Enclosed Parking with Elevator	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
Recreational Swimming Pool	41,282	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Condo/Townhouse	72	0.00
Apartments Mid Rise	175	0.00
Parking Lot	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
Recreational Swimming Pool	4.0	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.5	2.5	10.0
Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.5	2.5	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

Recreational Swimming Pool	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.0	4.0	18
Recreational Swimming Pool	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	5.1	annual days of extreme heat
Extreme Precipitation	4.2	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about $\frac{3}{4}$ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A

Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	22
AQ-PM	75
AQ-DPM	60
Drinking Water	30
Lead Risk Housing	61
Pesticides	0.00
Toxic Releases	99
Traffic	60
Effect Indicators	—
CleanUp Sites	99
Groundwater	89
Haz Waste Facilities/Generators	99
Impaired Water Bodies	33
Solid Waste	80
Sensitive Population	—
Asthma	68
Cardio-vascular	50
Low Birth Weights	38
Socioeconomic Factor Indicators	—
Education	20
Housing	27
Linguistic	62
Poverty	32
Unemployment	46

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	69.98588477
Employed	76.78686
Median HI	54.71577056
Education	—
Bachelor's or higher	64.6862569
High school enrollment	100
Preschool enrollment	59.39946105
Transportation	—
Auto Access	48.80020531
Active commuting	66.6495573
Social	—
2-parent households	60.25920698
Voting	41.15231618
Neighborhood	—
Alcohol availability	26.35698704
Park access	81.35506224
Retail density	98.06236366
Supermarket access	76.35057103
Tree canopy	46.19530348
Housing	—
Homeownership	30.83536507
Housing habitability	59.34813294
Low-inc homeowner severe housing cost burden	77.5439497
Low-inc renter severe housing cost burden	83.16437829

Uncrowded housing	37.99563711
Health Outcomes	—
Insured adults	44.48864365
Arthritis	63.4
Asthma ER Admissions	31.7
High Blood Pressure	66.9
Cancer (excluding skin)	38.7
Asthma	80.2
Coronary Heart Disease	66.7
Chronic Obstructive Pulmonary Disease	68.2
Diagnosed Diabetes	65.9
Life Expectancy at Birth	58.1
Cognitively Disabled	96.3
Physically Disabled	73.0
Heart Attack ER Admissions	60.8
Mental Health Not Good	66.0
Chronic Kidney Disease	73.0
Obesity	63.7
Pedestrian Injuries	70.2
Physical Health Not Good	64.0
Stroke	70.4
Health Risk Behaviors	—
Binge Drinking	36.9
Current Smoker	65.4
No Leisure Time for Physical Activity	70.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0

Children	32.5
Elderly	55.1
English Speaking	47.8
Foreign-born	48.8
Outdoor Workers	44.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	16.7
Traffic Density	61.1
Traffic Access	71.3
Other Indices	—
Hardship	35.1
Other Decision Support	—
2016 Voting	30.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	66
Healthy Places Index Score for Project Location (b)	66
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	Adjusted to match the site plans provided by client.
Construction: Construction Phases	Construction schedule was adjusted to begin Building Construction and Paving concurrently, and Architectural Coating would begin once Paving phase ends, and would conclude one week after the Building Construction phase concludes. Extended demolition phase to account for size of buildings to be demolished.
Construction: Off-Road Equipment	Assumed all construction will be utilized 8 hours per work day as provided by client. Replaced Tractors/Loaders/Backhoes with 4 Crawler Tractors in the Site Preparation and 3 Crawler Tractors in the Grading Phases. Two Rubber Tired Loaders were included in the grading phase to account for export volumes. The number of loaders were estimated from the anticipated daily haul truck demand (63 daily hauling trucks for the grading phase) for the daily loading capacity of one loader, divided by the typical loading rate of approximately 6 trucks per hour for 8 hours a day.
Construction: Paving	Included 2.13 acres for the Enclosed parking with Elevator land use to incorporate the paving done for the enclosed parking garage, within the multifamily apartment building. Included 4.525 acres of paved area for the condo/townhouse land use to account for enclosed unit garage paving occurring on the ground level of each unit.
Operations: Vehicle Data	Adjusted trip rate to match ITE 11th edition trip rate for 215 Single Family Attached Housing (Condo/Townhouse) and 221 Multifamily Housing (Mid Rise) (Apartments Mid Rise) trips.
Operations: Hearths	No wood stove or fireplaces per SCAQMD Rule 445

25-033 Torrance Townhomes Existing Site Detailed Report

Table of Contents

- 1. Basic Project Information
 - 1.1. Basic Project Information
 - 1.2. Land Use Types
 - 1.3. User-Selected Emission Reduction Measures by Emissions Sector
- 2. Emissions Summary
 - 2.4. Operations Emissions Compared Against Thresholds
 - 2.5. Operations Emissions by Sector, Unmitigated
- 4. Operations Emissions Details
 - 4.1. Mobile Emissions by Land Use
 - 4.1.1. Unmitigated
 - 4.2. Energy
 - 4.2.1. Electricity Emissions By Land Use - Unmitigated
 - 4.2.3. Natural Gas Emissions By Land Use - Unmitigated
 - 4.3. Area Emissions by Source
 - 4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

8.1. Justifications

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	25-033 Torrance Townhomes Existing Site
Operational Year	2029
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.5
Precipitation (days)	17
Location	21171 S Western Ave, Torrance, CA 90501, USA
County	Los Angeles-South Coast
City	Torrance
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4660
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.33

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	243	1000sqft	2.8	242,965	72,710	—	—	—
Parking Lot	385	Space	3.5	0.00	0.00	—	—	—

Other Asphalt Surfaces	1.6	Acre	1.6	0.00	0.00	—	—	—
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1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Unmit.	5.9	1.7	1.4	0.01	14	3.5	7,303
Daily, Winter (Max)	—	—	—	—	—	—	—
Unmit.	5.9	1.7	1.4	0.01	14	3.5	7,303
Average Daily (Max)	—	—	—	—	—	—	—
Unmit.	5.9	1.7	1.4	0.01	10	2.6	7,303
Annual (Max)	—	—	—	—	—	—	—
Unmit.	1.1	0.30	0.25	< 0.005	1.8	0.48	1,209

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Mobile	—	—	—	—	13	3.4	—
Area	5.9	—	—	—	—	—	—
Energy	0.09	1.7	1.4	0.01	0.13	0.13	6,236
Water	—	—	—	—	—	—	641
Waste	—	—	—	—	—	—	426

Refrig.	—	—	—	—	—	—	0.59
Total	5.9	1.7	1.4	0.01	14	3.5	7,303
Daily, Winter (Max)	—	—	—	—	—	—	—
Mobile	—	—	—	—	13	3.4	—
Area	5.9	—	—	—	—	—	—
Energy	0.09	1.7	1.4	0.01	0.13	0.13	6,236
Water	—	—	—	—	—	—	641
Waste	—	—	—	—	—	—	426
Refrig.	—	—	—	—	—	—	0.59
Total	5.9	1.7	1.4	0.01	14	3.5	7,303
Average Daily	—	—	—	—	—	—	—
Mobile	—	—	—	—	10.0	2.5	—
Area	5.9	—	—	—	—	—	—
Energy	0.09	1.7	1.4	0.01	0.13	0.13	6,236
Water	—	—	—	—	—	—	641
Waste	—	—	—	—	—	—	426
Refrig.	—	—	—	—	—	—	0.59
Total	5.9	1.7	1.4	0.01	10	2.6	7,303
Annual	—	—	—	—	—	—	—
Mobile	—	—	—	—	1.8	0.46	—
Area	1.1	—	—	—	—	—	—
Energy	0.02	0.30	0.25	< 0.005	0.02	0.02	1,032
Water	—	—	—	—	—	—	106
Waste	—	—	—	—	—	—	71
Refrig.	—	—	—	—	—	—	0.10
Total	1.1	0.30	0.25	< 0.005	1.8	0.48	1,209

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
General Office Building	—	—	—	—	13	3.4	—
Parking Lot	—	—	—	—	0.00	0.00	—
Other Asphalt Surfaces	—	—	—	—	0.00	0.00	—
Total	—	—	—	—	13	3.4	—
Daily, Winter (Max)	—	—	—	—	—	—	—
General Office Building	—	—	—	—	13	3.4	—
Parking Lot	—	—	—	—	0.00	0.00	—
Other Asphalt Surfaces	—	—	—	—	0.00	0.00	—
Total	—	—	—	—	13	3.4	—
Annual	—	—	—	—	—	—	—
General Office Building	—	—	—	—	1.8	0.46	—
Parking Lot	—	—	—	—	0.00	0.00	—
Other Asphalt Surfaces	—	—	—	—	0.00	0.00	—
Total	—	—	—	—	1.8	0.46	—

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	4,131
Parking Lot	—	—	—	—	—	—	126
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	4,257
Daily, Winter (Max)	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	4,131
Parking Lot	—	—	—	—	—	—	126
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	4,257
Annual	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	684
Parking Lot	—	—	—	—	—	—	21
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	705

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
General Office Building	0.09	1.7	1.4	0.01	0.13	0.13	1,979
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.09	1.7	1.4	0.01	0.13	0.13	1,979
Daily, Winter (Max)	—	—	—	—	—	—	—
General Office Building	0.09	1.7	1.4	0.01	0.13	0.13	1,979
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.09	1.7	1.4	0.01	0.13	0.13	1,979
Annual	—	—	—	—	—	—	—
General Office Building	0.02	0.30	0.25	< 0.005	0.02	0.02	328
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.02	0.30	0.25	< 0.005	0.02	0.02	328

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Consumer Products	5.2	—	—	—	—	—	—
Architectural Coatings	0.63	—	—	—	—	—	—
Total	5.9	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Consumer Products	5.2	—	—	—	—	—	—
Architectural Coatings	0.63	—	—	—	—	—	—

Total	5.9	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Consumer Products	0.95	—	—	—	—	—	—
Architectural Coatings	0.12	—	—	—	—	—	—
Total	1.1	—	—	—	—	—	—

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	641
Parking Lot	—	—	—	—	—	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	641
Daily, Winter (Max)	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	641
Parking Lot	—	—	—	—	—	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	641
Annual	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	106
Parking Lot	—	—	—	—	—	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	0.00

Total	—	—	—	—	—	—	106
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4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	426
Parking Lot	—	—	—	—	—	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	426
Daily, Winter (Max)	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	426
Parking Lot	—	—	—	—	—	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	426
Annual	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	71
Parking Lot	—	—	—	—	—	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	71

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	0.59
Total	—	—	—	—	—	—	0.59
Daily, Winter (Max)	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	0.59
Total	—	—	—	—	—	—	0.59
Annual	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	0.10
Total	—	—	—	—	—	—	0.10

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Office Building	2,634	537	170	723,520	20,256	4,130	1,308	5,564,598
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
General Office Building	Wood Fireplaces	0	0
General Office Building	Gas Fireplaces	0	0
General Office Building	Propane Fireplaces	0	0
General Office Building	Electric Fireplaces	0	0
General Office Building	No Fireplaces	0	0
General Office Building	Conventional Wood Stoves	0	0
General Office Building	Catalytic Wood Stoves	0	0
General Office Building	Non-Catalytic Wood Stoves	0	0
General Office Building	Pellet Wood Stoves	0	0
Parking Lot	Wood Fireplaces	0	0
Parking Lot	Gas Fireplaces	0	0
Parking Lot	Propane Fireplaces	0	0
Parking Lot	Electric Fireplaces	0	0
Parking Lot	No Fireplaces	0	0
Parking Lot	Conventional Wood Stoves	0	0
Parking Lot	Catalytic Wood Stoves	0	0
Parking Lot	Non-Catalytic Wood Stoves	0	0
Parking Lot	Pellet Wood Stoves	0	0
Other Asphalt Surfaces	Wood Fireplaces	0	0
Other Asphalt Surfaces	Gas Fireplaces	0	0
Other Asphalt Surfaces	Propane Fireplaces	0	0
Other Asphalt Surfaces	Electric Fireplaces	0	0
Other Asphalt Surfaces	No Fireplaces	0	0
Other Asphalt Surfaces	Conventional Wood Stoves	0	0

Other Asphalt Surfaces	Catalytic Wood Stoves	0	0
Other Asphalt Surfaces	Non-Catalytic Wood Stoves	0	0
Other Asphalt Surfaces	Pellet Wood Stoves	0	0

5.10.2. Architectural Coatings

—	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
undefined	0.00	0.00	364,448	121,483	13,094

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBtu/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBtu/yr)
General Office Building	4,329,706	346	0.0330	0.0040	6,158,304
Parking Lot	132,029	346	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	43,183,080	1,019,727

Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	226	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.0	4.0	18

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	5.1	annual days of extreme heat
Extreme Precipitation	4.2	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about $\frac{3}{4}$ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2

Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	22
AQ-PM	75
AQ-DPM	60
Drinking Water	30
Lead Risk Housing	61
Pesticides	0.00
Toxic Releases	99
Traffic	60
Effect Indicators	—
CleanUp Sites	99
Groundwater	89

Haz Waste Facilities/Generators	99
Impaired Water Bodies	33
Solid Waste	80
Sensitive Population	—
Asthma	68
Cardio-vascular	50
Low Birth Weights	38
Socioeconomic Factor Indicators	—
Education	20
Housing	27
Linguistic	62
Poverty	32
Unemployment	46

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	69.98588477
Employed	76.78686
Median HI	54.71577056
Education	—
Bachelor's or higher	64.6862569
High school enrollment	100
Preschool enrollment	59.39946105
Transportation	—
Auto Access	48.80020531
Active commuting	66.6495573

Social	—
2-parent households	60.25920698
Voting	41.15231618
Neighborhood	—
Alcohol availability	26.35698704
Park access	81.35506224
Retail density	98.06236366
Supermarket access	76.35057103
Tree canopy	46.19530348
Housing	—
Homeownership	30.83536507
Housing habitability	59.34813294
Low-inc homeowner severe housing cost burden	77.5439497
Low-inc renter severe housing cost burden	83.16437829
Uncrowded housing	37.99563711
Health Outcomes	—
Insured adults	44.48864365
Arthritis	63.4
Asthma ER Admissions	31.7
High Blood Pressure	66.9
Cancer (excluding skin)	38.7
Asthma	80.2
Coronary Heart Disease	66.7
Chronic Obstructive Pulmonary Disease	68.2
Diagnosed Diabetes	65.9
Life Expectancy at Birth	58.1
Cognitively Disabled	96.3
Physically Disabled	73.0

Heart Attack ER Admissions	60.8
Mental Health Not Good	66.0
Chronic Kidney Disease	73.0
Obesity	63.7
Pedestrian Injuries	70.2
Physical Health Not Good	64.0
Stroke	70.4
Health Risk Behaviors	—
Binge Drinking	36.9
Current Smoker	65.4
No Leisure Time for Physical Activity	70.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	32.5
Elderly	55.1
English Speaking	47.8
Foreign-born	48.8
Outdoor Workers	44.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	16.7
Traffic Density	61.1
Traffic Access	71.3
Other Indices	—
Hardship	35.1
Other Decision Support	—
2016 Voting	30.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	66
Healthy Places Index Score for Project Location (b)	66
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	Adjusted land uses to match client provided data for existing site.
Operations: Vehicle Data	Adjusted trip rates to match the 11th Generation ITE Trip Rates for 710 General Office Building as generated by the Project's Trip Generation.

ATTACHMENT B – DETAILED CALCULATION SHEETS

Construction Emissions						
Construction Activity	Maximum Daily Regional Emissions (pounds/day)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2028						
Demolition	2.4	32.8	24.5	0.1	13.6	3.2
Off-Road Equipment	0.45012080	18.5853474	15.4618623	0.032554162	0.252554162	0.252554162
Demolition					9.422181584	1.426787497
Onsite truck						0
Worker	0.00000000	0.00000000	0.00000000	0	0.1960641	0.045957111
Vendor					0	0
Hauling	0.016345724	13.120971728	8.081763622	0.002350172	0.204201624	0.083013220
Maximum Daily Emissions (2028)	2.4	32.8	24.5	0.1	13.6	3.2
2029						
Demolition	2.4	31.3	24.1	0.1	13.6	3.1
Off-Road Equipment	0.449340000	18.6064674	16.46769128	0.032554162	0.252554162	0.252554162
Demolition					9.422181584	1.426787497
Onsite truck					0	0
Worker	0.00000000	0.00000000	0.00000000	0	0.1960641	0.045957111
Vendor					0	0
Hauling	0.016345724	13.120971728	8.081763622	0.002350172	0.204201624	0.083013220
Site Preparation	3.5	30.0	30.9	0.1	7.3	4.1
Off-Road Equipment	0.450178840	20.8945423	30.08791993	0.091097159	1.435111343	1.300305431
Dust From Material Movement					5.662287480	0.288180731
Onsite truck						0
Worker	0.00000000	0.00000000	0.00000000	0	0.20574103	0.053614847
Vendor					0	0
Hauling					0	0
Grading	2.4	22.7	27.9	0.1	4.6	2.2
Off-Road Equipment	0.227350480	17.8307368	25.07980634	0.038222153	0.882833708	0.812207008
Dust From Material Movement					2.754550079	0.060672920
Onsite truck						0
Worker	0.00000000	0.00000000	0.00000000	0	0.20574103	0.053614847
Vendor					0	0
Hauling	0.042005011	4.795054199	1.871173444	0.028935672	1.213865016	0.372360711
Building Construction	2.0	11.9	29.6	0.0	4.4	1.3
Off-Road Equipment	0.00000000					
Onsite truck					0	0
Worker	0.00000000	0.00000000	0.00000000	0	0.167622706	0.081701738
Vendor	0.00000000	0.00000000	0.00000000	0.01156768	0.45169468	0.13316711
Hauling					0	0
Paving	1.2	6.5	10.6	0.0	0.4	0.3
Off-Road Equipment	0.672617089	6.458170892	9.918405595	0.013949801	0.239042761	0.219919341
Paving	0.46767					
Onsite truck	0	0	0	0	0	0
Worker	0.048611929	0.051422823	0.669654121	0	0.1960641	0.045957111
Vendor	0	0	0	0	0	0
Hauling	0	0	0	0	0	0
Architectural Coating	32.2	1.3	4.4	0.0	0.8	0.2
Off-Road Equipment	0.136475155	1.058875555	1.482875446	0.002301262	0.017121295	0.015751591
Architectural Coatings	31.92075603					
Onsite truck	0	0	0	0	0	0
Worker	0.184776199	0.192836904	2.966960109	0	0.735245413	0.172340348
Vendor	0	0	0	0	0	0
Hauling	0	0	0	0	0	0
Maximum Daily Emissions (2029)	32.2	31.3	30.9	0.1	13.6	4.1
2030						
Building Construction	1.9	11.5	26.5	0.0	4.4	1.3
Off-Road Equipment	1.016201320	9.072043254	13.98051407	0.025544162	0.282605017	0.259996615
Onsite truck	0	0	0	0	0	0
Worker	0.874276647	0.843273929	11.74382957	0	3.676227064	0.861701738
Vendor	0.031981233	1.541676851	0.731485639	0.01156768	0.45169468	0.13316711
Hauling	0	0	0	0	0	0
Architectural Coating	32.2	1.2	3.8	0.0	0.7	0.2
Off-Road Equipment	0.131187248	1.046304476	1.47624819	0.002301317	0.014625112	0.013455103
Architectural Coatings	31.92075603					
Onsite truck	0	0	0	0	0	0
Worker	0.174855329	0.168654786	2.348765913	0	0.735245413	0.172340348
Vendor	0	0	0	0	0	0
Hauling	0	0	0	0	0	0
Maximum Daily Emissions (2030)	32.2	11.5	26.5	0.0	4.4	1.3
Maximum Daily Emissions	32.2	32.8	30.9	0.1	13.6	4.1
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Notes: ROG = reactive organic gases, NO_x = nitrogen oxides, CO = carbon monoxide, SO_x = sulfur oxides, PM₁₀ = particulate matter 10 microns in diameter, PM_{2.5} = particulate matter 2.5 microns in diameter

Source: CalEEMod Output Sheets.

34.24410613 12.88153406 34.02336673 0.039412591 5.179451162 1.45819048

2.408146743 32.76235849 24.46407608 0.108937054 13.59869858 3.169558194
34.22695665 31.29982932 37.89990243 0.108921606 13.55917572 4.06009793
34.14925781 12.6719533 30.28084338 0.039413159 5.160397286 1.440660913

2.4 32.8 24.5 0.1 13.6 3.2
34.2 31.3 37.9 0.1 13.6 4.1
34.1 12.7 30.3 0.0 5.2 1.4

Operational Emissions

Operational Activity	Maximum Daily Regional Emissions (pounds/day)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Winter						
Mobile	5.624639873	4.490225887	46.25728474	0.123567871	12.61833047	3.255391859
Area	16.80269153	0	0	0	0	0
Energy	0.073677501	1.259215467	0.535836377	0.008037541	0.101808904	0.101808904
Total Winter Proposed Project Operational Emissions	22.50	5.75	46.79	0.13	12.72	3.36
Summer						
Mobile	5.682128071	4.107814236	50.33775949	0.128959624	12.61828624	3.255349546
Area	19.12891331	0.213319773	23.1791634	0.001070336	0.016084661	0.012154568
Energy	0.073677501	1.259215467	0.535836377	0.008037541	0.101808904	0.101808904
Total Summer Proposed Project Operational Emissions	24.88	5.58	74.05	0.14	12.74	3.37
Maximum						
Mobile	5.7	4.5	50.3	0.1	12.6	3.3
Area	19.1	0.2	23.2	0.0	0.0	0.0
Energy	0.1	1.3	0.5	0.0	0.1	0.1
Maximum Operational Emissions	24.9	6.0	74.1	0.1	12.7	3.4
SCAQMD Significance Thresholds	55.0	55.0	550.0	150.0	150.0	55.0
Existing	5.9	1.7	1.4	0.0	13.5	3.5
Net	18.9	4.3	72.7	0.1	-0.8	-0.1
Threshold Exceeded?	No	No	No	No	No	No

Construction Equipment Modeled in CalEEMod and Acres Disturbed Per Day

Activity	Equipment Type	Equipment Quantity	Operating Hours per Day	Acres Disturbed per Piece of Equipment per Day	Acres Disturbed per Day
Total Acres Disturbed Per Day					
Demolition	Rubber Tired Dozers	2	8	0.5	1
	Excavators	3	8	0	0
	Concrete/Industrial Saws	1	8	0.5	0.5
Total Acres Disturbed Per Day					1.5
Site Preparation	Rubber Tired Dozers	3	8	0.5	1.5
	Tractors/Loaders/Backhoes	0	8	0	0
	Crawler Tractors	4	8	0.5	2
Total Acres Disturbed Per Day					3.5
Grading	Excavators	1	8	0.5	0.5
	Excavators	1	8	0	0
	Tractors/Loaders/Backhoes	0	8	0	0
	Rubber Tired Dozers	1	8	0.5	0.5
	Crawler Tractors	3	8	0.5	1.5
Total Acres Disturbed Per Day					2.5
Maximum Acres Disturbed Per Day					3.5

Source: CalEEMod Output Sheets.

Localized Construction Emission Estimates

Construction Activity	Maximum Daily Localized Emissions (pounds/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
2028				
Demolition	19.6	18.7	10.2	2.1
Maximum On-site Emission (2028)	19.6	18.7	10.2	2.1
2029				
Demolition	18.6	18.5	10.2	2.1
Site Preparation	29.9	30.1	7.1	4.0
Grading	17.9	25.1	3.1	1.7
Building Construction and Paving	16.7	38.8	4.2	1.4
Paving	6.5	9.9	0.2	0.2
Building Construction	10.2	28.8	4.0	1.1
Building Construction and Architectural Coating	11.3	30.3	4.0	1.2
Architectural Coating	1.1	1.5	0.0	0.0
Maximum On-site Emission (2029)	29.9	38.8	10.2	4.0
2030				
Building Construction and Architectural Coating	33.1	9.1	0.3	0.3
Architectural Coating	32.1	1.0	0.0	0.0
Maximum On-site Emission (2030)	33.1	9.1	0.3	0.3
Maximum Daily Emissions	33.1	38.8	10.2	4.0
SCAQMD Screening Thresholds	164	1381	11.5	6.5
Threshold Exceeded?	No	No	No	No

Construction Equipment Fuel Usage (Off-Road)									
Activity	Equipment	Number	Hours per day	Horsepower	Load Factor	Days of Construction	Total Horsepower-hours	Fuel Rate (gal/hp-hr)	Fuel Use (gallons)
Demolition	Rubber Tired Dozers	2	8	367	0.4	35	82208	0.050742896	4,171
	Excavators	3	8	36	0.38	35	11491.2	0.05140821	591
	Concrete/Industrial Saws	1	8	33	0.73	35	6745.2	0.042017052	283
Site Preparation	Rubber Tired Dozers	3	8	367	0.4	10	35232	0.050742896	1,788
	Tractors/Loaders/Backhoes	0	8	84	0.37	10	0	0.052939043	-
	Crawler Tractors	4	8	87	0.43	10	11971.2	0.050921821	610
Grading	Graders	1	8	148	0.41	20	9708.8	0.050684039	492
	Excavators	1	8	36	0.38	20	2188.8	0.05140821	113
	Tractors/Loaders/Backhoes	0	8	84	0.37	20	0	0.052939043	-
	Rubber Tired Dozers	1	8	367	0.4	20	23488	0.050742896	1,192
	Crawler Tractors	3	8	87	0.43	20	17956.8	0.050921821	914
	Rubber Tired Loaders	2	8	150	0.36	20	17280	0.050793546	878
Building Construction	Forklifts	3	8	82	0.2	230	90528	0.052876419	4,787
	Generator Sets	1	8	14	0.74	230	19062.4	0.078598863	1,498
	Cranes	1	8	367	0.29	230	195831.2	0.050676644	9,924
	Welders	1	8	46	0.45	230	38088	0.031797496	1,211
	Tractors/Loaders/Backhoes	3	8	84	0.37	230	171561.6	0.052939043	9,082
	Pavers	2	8	81	0.42	20	10886.4	0.05159134	562
Paving	Paving Equipment	2	8	89	0.36	20	10252.8	0.051137395	524
	Rollers	2	8	36	0.38	20	4377.6	0.052201295	229
Architectural Coating	Air Compressors	1	8	37	0.48	143	20317.44	0.03002068	610
								Total	39,459

Source: Fuel Calculation Sheets (see Attachment C)

Model Output: OFFROAD2021 (v1.0.9) Emissions Inventory

Region Type: Sub-Area

Region: Los Angeles (SC)

Calendar Year: 2028

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: Off-Road Web Query Equipment Types

Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for Horsepower-hours

Region	Calendar Year	Vehicle Category	Model Year	Horsepower Bin	Fuel	Fuel Consumpt	Horsepower_Hours_hhp	Fuel Rate
Los Angeles (SC)	2028	Cranes	Aggregate	Aggregate	Diesel	591172.018	11665571.47	0.050677
Los Angeles (SC)	2028	Crawler Tractors	Aggregate	Aggregate	Diesel	1740664.58	34183077.66	0.050922
Los Angeles (SC)	2028	Excavators	Aggregate	Aggregate	Diesel	5459882.58	106206433.1	0.051408
Los Angeles (SC)	2028	Graders	Aggregate	Aggregate	Diesel	791446.435	15615299.34	0.050684
Los Angeles (SC)	2028	Misc - Concrete/Industrial Saws	Aggregate	Aggregate	Diesel	9656.3	229818.6	0.042017
Los Angeles (SC)	2028	Pavers	Aggregate	Aggregate	Diesel	351963.783	6822148.569	0.051591
Los Angeles (SC)	2028	Paving Equipment	Aggregate	Aggregate	Diesel	388588.776	7598916.123	0.051137
Los Angeles (SC)	2028	Rollers	Aggregate	Aggregate	Diesel	924712.533	17714360	0.052201
Los Angeles (SC)	2028	Rough Terrain Forklifts	Aggregate	Aggregate	Diesel	1147804.38	22078255.9	0.051988
Los Angeles (SC)	2028	Rubber Tired Dozers	Aggregate	Aggregate	Diesel	220187.998	4339287.15	0.050743
Los Angeles (SC)	2028	Scrapers	Aggregate	Aggregate	Diesel	2235980.05	44246477.75	0.050535
Los Angeles (SC)	2028	Forklifts	Aggregate	Aggregate	Diesel	3071381.4	58086032.05	0.052876
Los Angeles (SC)	2028	Air Compressors	Aggregate	Aggregate	Diesel	245771.229	8186731	0.030021
Los Angeles (SC)	2028	Welders	Aggregate	Aggregate	Diesel	1276138.6	40133304.9	0.031797
Los Angeles (SC)	2028	Construction and Mining - Rubber Tired Loaders	Aggregate	Aggregate	Diesel	4018018.66	79104904.98	0.050794
Los Angeles (SC)	2028	Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Diesel	5323261.76	100554552.3	0.052939
Los Angeles (SC)	2028	Light Commercial - Misc - Generator Sets	Aggregate	Aggregate	Diesel	1155239.12	14697911.25	0.078599

5.2. Off-Road Equipment

5.2.1 Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per C	Hours Per D	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Average	2	8	367	0.4
Demolition	Excavators	Diesel	Average	3	8	36	0.38
Demolition	Concrete/Industrial Saws	Diesel	Average	1	8	33	0.73
Site Preparation	Rubber Tired Dozers	Diesel	Average	3	8	367	0.4
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	0	8	84	0.37
Site Preparation	Crawler Tractors	Diesel	Average	4	8	87	0.43
Grading	Graders	Diesel	Average	1	8	148	0.41
Grading	Excavators	Diesel	Average	1	8	36	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	0	8	84	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1	8	367	0.4
Grading	Crawler Tractors	Diesel	Average	3	8	87	0.43
Grading	Rubber Tired Loaders	Diesel	Average	2	8	150	0.36
Building Construction	Forklifts	Diesel	Average	3	8	82	0.2
Building Construction	Generator Sets	Diesel	Average	1	8	14	0.74
Building Construction	Cranes	Diesel	Average	1	8	367	0.29
Building Construction	Welders	Diesel	Average	1	8	46	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3	8	84	0.37
Paving	Pavers	Diesel	Average	2	8	81	0.42
Paving	Paving Equipment	Diesel	Average	2	8	89	0.36
Paving	Rollers	Diesel	Average	2	8	36	0.38
Architectural Coating	Air Compressors	Diesel	Average	1	8	37	0.48

5. Activity Data

5.1 Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per We	Work Days	Phase Description	
Demolition	Demolition	12/1/2028	1/18/2029	5	35		412 13.733333 months
Site Preparation	Site Preparation	1/22/2029	2/2/2029	5	10		1.144444 years
Grading	Grading	2/5/2029	3/2/2029	5	20		
Building Construction	Building Construction	3/5/2029	1/18/2030	5	230		
Paving	Paving	3/5/2029	3/30/2029	5	20		
Architectural Coating	Architectural Coating	7/3/2029	1/17/2030	5	143		

Construction On-Road Fuel Consumption					
Construction Source	Total Trips	VTM	Fuel Rate (Miles/Gallons)	Gallons of Diesel Fuel	Gallons of Gasoline Fuel
Haul Trucks	3,312.5	66250.0	6.4	10,356.0	-
Vendor Trucks	23,663.0	241362.5	7.9	30,728.5	-
Worker Vehicles	148,263.5	2742874.7	29.4	-	93,423.2
Total				41,084.5	93,423.2

Source: CalEEMod Output Sheets (see Attachment B)

		Demo trips	demo VMT		D		35
5.3. Construction Vehicles		11550	231000		SP		10
5.3.1 Unmitigated					GR		20
Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix	BC		230
Demolition	Worker	15	18.5	LDA,LDT1,LDT2	PV		20
Demolition	Vendor		10.2	HHDT,MHDT	C		143
Demolition	Hauling	165	20	HHDT			
Demolition	Onsite truck			HHDT		Weighted Vendor	
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2	MHDT	1.119367592	0.547617
Site Preparation	Vendor		10.2	HHDT,MHDT	HHDT	0.92470441	0.452383
Site Preparation	Hauling	0	20	HHDT			
Site Preparation	Onsite truck			HHDT		Weighted Worker	
Grading	Worker	20	18.5	LDA,LDT1,LDT2	LDA	48.18853438	0.625317
Grading	Vendor		10.2	HHDT,MHDT	LDT1	4.100927711	0.053216
Grading	Hauling	62.5	20	HHDT	LDT2	24.77304637	0.321467
Grading	Onsite truck			HHDT		77.06250846	
Building Construction	Worker	281.2519266	18.5	LDA,LDT1,LDT2			
Building Construction	Vendor	51.44128755	10.2	HHDT,MHDT			
Building Construction	Hauling	0	20	HHDT	HHDT	Hauling Rate	6.40
Building Construction	Onsite truck			HHDT			
Paving	Worker	15	18.5	LDA,LDT1,LDT2			
Paving	Vendor		10.2	HHDT,MHDT			
Paving	Hauling	0	20	HHDT			
Paving	Onsite truck			HHDT			
Architectural Coating	Worker	56.25038532	18.5	LDA,LDT1,LDT2			
Architectural Coating	Vendor		10.2	HHDT,MHDT			
Architectural Coating	Hauling	0	20	HHDT			
Architectural Coating	Onsite truck			HHDT			

HAULING TRIPS

	CalEEMod Daily Trucks	CY/per truck	CY	Total Trucks	Miles	Truck Miles		
Demolition	0	16	16500	1031	20.0	41250		
Grading	0	16	10000	625	20.0	25000	mpg	gal fuel
				1656		66250	6.4	10,356.01

Source: EMFAC2021 (v1.0.2) Emissions Inventory

Region Type: Sub-Area								
Region: Los Angeles (SC)								
Calendar Year: 2028								
Season: Annual								
Vehicle Classification: EMFAC2007 Categories								
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption								
Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	VTM	Fuel Consumption	Fuel Rate
Los Angeles (SC)	2028	MHDT	Aggregate	Aggregate	Diesel	2532865.166	279.6077417	9.06
Los Angeles (SC)	2028	HHDT	Aggregate	Aggregate	Diesel	7006667.238	1095.262107	6.40
Weighted Vendor								7.85467

Source: EMFAC2021 (v1.0.2) Emissions Inventory

Region Type: Sub-Area								
Region: Los Angeles (SC)								
Calendar Year: 2028								
Season: Annual								
Vehicle Classification: EMFAC2007 Categories								
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption								
Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	VTM	Fuel Consumption	Fuel Rate
Los Angeles (SC)	2028	LDA	Aggregate	Aggregate	Gasoline	121531275.9	3875.571643	31.36

Controlled Fuel Consumption Summary			
Construction Source	Gallons of Diesel Fuel	Gallons of Gasoline Fuel	
Construction Vehicles	41,088.4		93,423.2
Off-Road Construction Equipment	59,459.0		
Total	100,547.3		93,423.2
Construction	179,608,267.7	2,578,039,862.1	
Percentage Increase	8.85%	9.85%	

Model Output: Off-Road Web Query (x1.1.2) Emissions Inventory

Region Type: Sub-Area

Region: Los Angeles (SC)

Calendar Year: 2008, 2009, 2030

Scenario: All Adopted Rules: Exhaust

Vehicle Classification: Off-Road Web Query Equipment Types

Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, horsepower-hours/year for Horsepower-hours

Region	Calendar Year	Vehicle Category	Model Year Horsepower	Fuel Consumption	Total Activity_Hrs	Total Population	Horsepower_Hours_Hrs
Los Angeles (SC)	2008	Construction and Mining - Back-Ditch Rigs	Aggregates Aggregates Diesel	679,305.4261	203,776.4089	20,020.99931	132643333.81
Los Angeles (SC)	2008	Construction and Mining - Backfill	Aggregates Aggregates Diesel	12734.31996	6073.573272	8.53598861	30468.1703
Los Angeles (SC)	2008	Construction and Mining - Conveyor	Aggregates Aggregates Diesel	23391.84315	98908.5401	13,992.51463	20207.72064
Los Angeles (SC)	2008	Construction and Mining - Concrete Mixer	Aggregates Aggregates Diesel	23771.20659	1445.62516	2.379045202	46308.10893
Los Angeles (SC)	2008	Construction and Mining - Concrete Pump	Aggregates Aggregates Diesel	24242.16761	8386.149764	12,353.13875	47476.1848
Los Angeles (SC)	2008	Construction and Mining - Crane less than 25ton	Aggregates Aggregates Diesel	11627.68716	5730.780849	24,630.0483	224993.4581
Los Angeles (SC)	2008	Construction and Mining - Cranes	Aggregates Aggregates Diesel	39117.23181	139713.1298	548,226.7514	1168327.147
Los Angeles (SC)	2008	Construction and Mining - Crusher/Tractors	Aggregates Aggregates Diesel	176864.578	52716.12488	845,849.7869	24183077.46
Los Angeles (SC)	2008	Construction and Mining - Crushing/Processing Equipment	Aggregates Aggregates Diesel	91352.26422	24634.16714	34.41153834	1801481.829
Los Angeles (SC)	2008	Construction and Mining - Excavators	Aggregates Aggregates Diesel	549882.378	227096.135	3191.14472	10626843.11
Los Angeles (SC)	2008	Construction and Mining - Graders	Aggregates Aggregates Diesel	791446.4331	288051.6239	495,603.7706	15613299.34
Los Angeles (SC)	2008	Construction and Mining - Hopper/Traffic Trailer	Aggregates Aggregates Diesel	11643.58634	394.1293794	0.559409032	30544036.67
Los Angeles (SC)	2008	Construction and Mining - Misc - Asphalt Pavers	Aggregates Aggregates Gasoline	37841.45	9614.1	69.50133349	40615.1
Los Angeles (SC)	2008	Construction and Mining - Misc - Back-Ditch Rigs	Aggregates Aggregates Gasoline	24864.3	3514.96	68.36498314	30247.1
Los Angeles (SC)	2008	Construction and Mining - Misc - Back-Ditch Rigs	Aggregates Aggregates Diesel	171.2	0	27.98719184	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Cement And Mortar Mixers	Aggregates Aggregates Gasoline	118770	0	647.6409011	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Cement And Mortar Mixers	Aggregates Aggregates Diesel	247.3	0	19.0272967	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Concrete/Industrial Saws	Aggregates Aggregates Gasoline	1446773.85	17363.8	941.201128	813084.95
Los Angeles (SC)	2008	Construction and Mining - Misc - Concrete/Industrial Saws	Aggregates Aggregates Diesel	9456.3	6946.2	177881.1802	220818.6
Los Angeles (SC)	2008	Construction and Mining - Misc - Compres	Aggregates Aggregates Gasoline	200818.5	71.994	17.15	431866.35
Los Angeles (SC)	2008	Construction and Mining - Misc - Crushing/Proc. Equipment	Aggregates Aggregates Gasoline	808	0	5.674610864	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Dumpers/Tenders	Aggregates Aggregates Gasoline	12669.15	503.7	436.1010835	32344.2
Los Angeles (SC)	2008	Construction and Mining - Misc - Dumpers/Tenders	Aggregates Aggregates Diesel	26	0	8.86620978	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Excavators	Aggregates Aggregates Diesel	142	0	12,649.46501	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Other	Aggregates Aggregates Gasoline	31784.2	5799.85	26,446.6909	732078.1
Los Angeles (SC)	2008	Construction and Mining - Misc - Other	Aggregates Aggregates Diesel	331.8	0	12313564.62	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Pavers	Aggregates Aggregates Diesel	37.5	0	4.999453298	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Paving Equipment	Aggregates Aggregates Gasoline	229107.5	9203.15	4664.11005	409331.15
Los Angeles (SC)	2008	Construction and Mining - Misc - Paving Equipment	Aggregates Aggregates Diesel	63.5	0	12.3844665	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Paving Equipment	Aggregates Aggregates Gasoline	87360	0	2544.60079	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Pave Compactors	Aggregates Aggregates Diesel	178	0	110.5788031	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Rollers	Aggregates Aggregates Gasoline	123699.8	19934.35	501.7771052	123360.1
Los Angeles (SC)	2008	Construction and Mining - Misc - Rollers	Aggregates Aggregates Diesel	1093	0	3344.83952	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Rough Terrain Forklifts	Aggregates Aggregates Diesel	147297.7	28915.3	7504	243906.2
Los Angeles (SC)	2008	Construction and Mining - Misc - Rubber Tired Loaders	Aggregates Aggregates Gasoline	780531.23	2183.65	4,608.9846	14802.2
Los Angeles (SC)	2008	Construction and Mining - Misc - Rubber Tired Loaders	Aggregates Aggregates Diesel	25.9	0	3,265.18678	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Signal Boards	Aggregates Aggregates Gasoline	2315.4	0	66,604.8013	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Signal Boards	Aggregates Aggregates Diesel	7033.9	2466.6	971.536792	9507.2
Los Angeles (SC)	2008	Construction and Mining - Misc - Skid Steer Loaders	Aggregates Aggregates Diesel	274330	754.629	5993.97428	376896.8
Los Angeles (SC)	2008	Construction and Mining - Misc - Skid Steer Loaders	Aggregates Aggregates Gasoline	7270	0	1,289.797356	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Surfacing Equipment	Aggregates Aggregates Gasoline	98860	0	1,260.42741	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Tamping Rollers	Aggregates Aggregates Diesel	13360	0	141.17752	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Trenchers/Loaders/Backhoes	Aggregates Aggregates Gasoline	50024.65	17006.25	23.3136277	107855.85
Los Angeles (SC)	2008	Construction and Mining - Misc - Trenchers/Loaders/Backhoes	Aggregates Aggregates Diesel	482	0	53.3384944	0
Los Angeles (SC)	2008	Construction and Mining - Misc - Trenchers	Aggregates Aggregates Gasoline	228740.3	54707.4	520,934.133	2119000.2
Los Angeles (SC)	2008	Construction and Mining - Misc - Trenchers	Aggregates Aggregates Diesel	917	0	144.57855	0
Los Angeles (SC)	2008	Construction and Mining - Misc - New Rig Other	Aggregates Aggregates Diesel	146,647,0598	97,188281.67	0.139914763	2884,644327
Los Angeles (SC)	2008	Construction and Mining - Off-Highway Tractors	Aggregates Aggregates Diesel	98418.1063	421,360,3391	386,262,2466	19722113.33
Los Angeles (SC)	2008	Construction and Mining - Off-Highway Trucks	Aggregates Aggregates Diesel	233774.034	34,1997,2735	344,1127279	4667763.82
Los Angeles (SC)	2008	Construction and Mining - Other Construction Equipment	Aggregates Aggregates Diesel	112844.929	370,679,3382	695,060,0911	2201183.67
Los Angeles (SC)	2008	Construction and Mining - Other Construction Equipment	Aggregates Aggregates Gasoline	34074.7987	111,834.8391	181.1213748	4790771.633
Los Angeles (SC)	2008	Construction and Mining - Pavers	Aggregates Aggregates Diesel	331,963,7929	153,291,6892	22,343,83271	6822148.369
Los Angeles (SC)	2008	Construction and Mining - Paving Equipment	Aggregates Aggregates Diesel	388888.7763	1,80688,5607	3733,324148	71989161.23
Los Angeles (SC)	2008	Construction and Mining - Rollers	Aggregates Aggregates Diesel	924712.3334	633,687,0843	1132,397229	17714360
Los Angeles (SC)	2008	Construction and Mining - Rough Terrain Forklifts	Aggregates Aggregates Diesel	114786.376	700523,806	1,292,931.978	2297324.9
Los Angeles (SC)	2008	Construction and Mining - Rubber Tired Cycles	Aggregates Aggregates Diesel	220187.9981	52846,32727	70,38490799	4339287.13
Los Angeles (SC)	2008	Construction and Mining - Rubber Tired Loaders	Aggregates Aggregates Diesel	401,801,844	126,107,7398	1,484,702016	79104904.98
Los Angeles (SC)	2008	Construction and Mining - Scrapers	Aggregates Aggregates Diesel	2233861022	408,915,2892	1,425,623862	14844977.75
Los Angeles (SC)	2008	Construction and Mining - Skid Steer Loaders	Aggregates Aggregates Diesel	1871737.065	1544964,333	2760,78187	32732390.53
Los Angeles (SC)	2008	Construction and Mining - Spray Trucks	Aggregates Aggregates Diesel	22019,38822	103,495,47625	1,431,9041.5	449752,5658
Los Angeles (SC)	2008	Construction and Mining - Spreader/Traffic Trailer	Aggregates Aggregates Diesel	2933273633	719,762,2784	1,3991,4763	27021,27304
Los Angeles (SC)	2008	Construction and Mining - Spreaders	Aggregates Aggregates Diesel	18055,6367	48501,15330	4,296,16435	320487.511
Los Angeles (SC)	2008	Construction and Mining - Surfacing Equipment	Aggregates Aggregates Diesel	186204,1999	401,041,8086	66,09817417	368864,732
Los Angeles (SC)	2008	Construction and Mining - Tanker Trucks	Aggregates Aggregates Diesel	29115,19768	109,921,5495	1,212,258,288	77580,8485
Los Angeles (SC)	2008	Construction and Mining - Tanker Truck Trailers	Aggregates Aggregates Diesel	2975,582648	151,534842	1,818891917	27104,42687
Los Angeles (SC)	2008	Construction and Mining - Takeaway Hauler	Aggregates Aggregates Diesel	78138,13279	43,588,07993	99,900,3699	1496393,362
Los Angeles (SC)	2008	Construction and Mining - Trenchers/Loaders/Backhoes	Aggregates Aggregates Diesel	932201,762	305,448,8126	476,538,8889	10014652.3
Los Angeles (SC)	2008	Construction and Mining - Tractors	Aggregates Aggregates Diesel	185843,801	117412,8745	211,7872329	3211982.12
Los Angeles (SC)	2008	Construction and Mining - Vacuum Trucks	Aggregates Aggregates Diesel	60115,58827	26487,84912	27,86816884	117878,369
Los Angeles (SC)	2008	Construction and Mining - Water Truck	Aggregates Aggregates Diesel	180158,3991	36781,28373	47,45358878	3357884,687
Los Angeles (SC)	2008	Industrial - Aerial Lifts	Aggregates Aggregates Diesel	493747,9621	637,433,9903	2311,877518	1356314.04
Los Angeles (SC)	2008	Industrial - Booms	Aggregates Aggregates Diesel	688018,1446	669,456,2704	129,707133	12294122.48
Los Angeles (SC)	2008	Industrial - Facilities	Aggregates Aggregates Diesel	307138,1396	199084,971	6242,4063	38684022.33
Los Angeles (SC)	2008	Industrial - Garbage Refuse	Aggregates Aggregates Diesel	33141,54386	501,372363	17868,4707	454814,9703
Los Angeles (SC)	2008	Industrial - Garbage Transfer	Aggregates Aggregates Diesel	9773,24439	107,482441	1,1371,85664	11830,3837
Los Angeles (SC)	2008	Industrial - Misc - Aerial Lifts	Aggregates Aggregates Gasoline	4494,4725	238182	1,172,171,066	129279.35
Los Angeles (SC)	2008	Industrial - Misc - Facilities	Aggregates Aggregates Diesel	993	0	463.079031	0
Los Angeles (SC)	2008	Industrial - Misc - Facilities	Aggregates Aggregates Gasoline	20432619.7	99794,42	5337,7651.5	456538886.9
Los Angeles (SC)	2008	Industrial - Misc - Other General Industrial Equipment	Aggregates Aggregates Gasoline	274748.2	110960	757,827,4897	5015450.4
Los Angeles (SC)	2008	Industrial - Misc - Other General Industrial Equipment	Aggregates Aggregates Diesel	777	0	93,523,33858	0
Los Angeles (SC)	2008	Industrial - Misc - Other Material Handling Equipment	Aggregates Aggregates Gasoline	133088.3	56465.5	146.24	3033004
Los Angeles (SC)	2008	Industrial - Misc - Sweepers/Scrubbers	Aggregates Aggregates Gasoline	1101800.73	216188.35	101,266,467	1589251.50
Los Angeles (SC)	2008	Industrial - Misc - Sweepers/Scrubbers	Aggregates Aggregates Diesel	206	0	36.8149164	0
Los Angeles (SC)	2008	Industrial - Pavers	Aggregates Aggregates Diesel	368022,9831	433,666,2756	695,2683628	6641199.012
Los Angeles (SC)	2008	Industrial - Other General Industrial Equipment	Aggregates Aggregates Diesel	938407,3531	45324,7334	885,9601193	18101917.32
Los Angeles (SC)	2008	Industrial - Other Trucks	Aggregates Aggregates Diesel	331477,6349	134313,2129	13,932,5746	1063273.37
Los Angeles (SC)	2008	Industrial - Rollers or Truck Cans	Aggregates Aggregates Diesel	42295,83065	151,407,3069	15,389,8604	833711,8905
Los Angeles (SC)	2008	Industrial - Sweepers/Scrubbers	Aggregates Aggregates Diesel	181386.85	177139,4933	386,7687424	3301104,087
Los Angeles (SC)	2008	Industrial - Tow Trucks	Aggregates Aggregates Diesel	1246,34609	201,205,3753	0.299297161	2434,08869
Los Angeles (SC)	2008	Industrial - Yard Cans	Aggregates Aggregates Diesel	147234,602	548451.147	3891,2758	29073133.33
Los Angeles (SC)	2008	Light Commercial - Misc - Air Compressors	Aggregates Aggregates Gasoline	8618027,389	35351,195	8319,80919	1688106.73
Los Angeles (SC)	2008	Light Commercial - Misc - Air Compressors	Aggregates Aggregates Diesel	245771,2293	271263	3172481199	818807.31
Los Angeles (SC)	2008	Light Commercial - Misc - Generators	Aggregates Aggregates Gasoline	14143892.84	84206.8	560109,7324	22703478.15
Los Angeles (SC)	2008	Light Commercial - Misc - Generators	Aggregates Aggregates Diesel	11332351.19	443591.28	3002,760234	14607911.25
Los Angeles (SC)	2008	Light Commercial - Misc - Pressure Washers	Aggregates Aggregates Gasoline	3920187,384	3993.1	27447,23495	115799.9
Los Angeles (SC)	2008	Light Commercial - Misc - Pressure Washers	Aggregates Aggregates Diesel	3994570227	4388.09	118,426284	115245.9
Los Angeles (SC)	2008	Light Commercial - Misc - Pumps	Aggregates Aggregates Gasoline	19272059	18888.85	47991,78347	10618167.55
Los Angeles (SC)	2008	Light Commercial - Misc - Pumps	Aggregates Aggregates Diesel	638133,0199	223497.7	2063,42883	862141.69
Los Angeles (SC)	2008	Light Commercial - Misc - Welders	Aggregates Aggregates Gasoline	3836611,842	26894,295	6389,50781	16133201
Los Angeles (SC)	2008	Light Commercial - Misc - Welders	Aggregates Aggregates Diesel	1276138,596	874663.15	2331,22688	40133304.9

Diesel

Gasoline

170608267.7

177162360.6

Operational Energy Consumption (2029)		
Operational Source	Energy Usage	
Electricity (Kilowatt-Hour)		
Proposed Project	1675269.47	
Existing	4461734.48	
Net	-2786465.01	
Natural Gas (Thousands British Thermal Units)		
Proposed Project	4987296.9	
Existing	6158304.5	
Net	-1171007.6	
Petroleum (Gasoline) Consumption		
	Annual VMT	Gallons of Gasoline Fuel
Proposed Project	5934216.31	248099.28
Existing	5564597.86	232646.17
Net	369618.45	15453.11
Countywide Energy Consumption		2576030802.13
Percentage Increase		0.01%

Source: CalEEMod Output Sheets (see Attachment B)

CalEEMod Output

Land Use Type	VMT/Year	
Condo/Townhouse	2423330.821	
Apartments Mid Rise	3510885.488	
Parking Lot	0	
Enclosed Parking with Elevator	0	
Other Asphalt Surfaces	0	
Recreational Swimming Pool	0	

5.11.1 Unmitigated

Land Use	Electricity (kWh/yr)	Natural Gas (kBtu/yr)	
Condo/Townhouse	450032.12		2354975.131
Apartments Mid Rise	868802.6817		2632321.767
Parking Lot	6486.9552		0
Enclosed Parking with Elevator	349947.7126		0
Other Asphalt Surfaces	0		0
Recreational Swimming Pool	0		0
	1675269.47		4987296.898

Source: EMFAC2025 (v2.0.0) Emissions Inventory

Region Type: Sub-Area

Region: Los Angeles (SC)

Calendar Year: 2029 <first phase operational homes

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption, kWh/day for Energy Consumption, kg/day for Hydrogen Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Total VMT	Fuel Consumption
Los Angeles (SC)	2029	HHDT	Aggregate	Aggregate	Gasoline	2976.957866	0.75125665
Los Angeles (SC)	2029	HHDT	Aggregate	Aggregate	Diesel	5835466.866	879.9416025
Los Angeles (SC)	2029	LDA	Aggregate	Aggregate	Gasoline	64453293.59	2425.330426
Los Angeles (SC)	2029	LDA	Aggregate	Aggregate	Diesel	80033.07801	2.252953354
Los Angeles (SC)	2029	LDT1	Aggregate	Aggregate	Gasoline	7409538.591	329.9380776
Los Angeles (SC)	2029	LDT1	Aggregate	Aggregate	Diesel	472.8950964	0.021548524
Los Angeles (SC)	2029	LDT2	Aggregate	Aggregate	Gasoline	49102782.64	2158.25131
Los Angeles (SC)	2029	LDT2	Aggregate	Aggregate	Diesel	83769.43156	2.609704047
Los Angeles (SC)	2029	LHDT1	Aggregate	Aggregate	Gasoline	3568922.833	250.9874189
Los Angeles (SC)	2029	LHDT1	Aggregate	Aggregate	Diesel	1612235.339	77.82790122
Los Angeles (SC)	2029	LHDT2	Aggregate	Aggregate	Gasoline	865394.1589	65.50748972
Los Angeles (SC)	2029	LHDT2	Aggregate	Aggregate	Diesel	2140919.604	116.2527766
Los Angeles (SC)	2029	MCY	Aggregate	Aggregate	Gasoline	906015.1366	23.4666562
Los Angeles (SC)	2029	MDV	Aggregate	Aggregate	Gasoline	29744932.41	1595.689712
Los Angeles (SC)	2029	MDV	Aggregate	Aggregate	Diesel	1178251.44	48.44924448
Los Angeles (SC)	2029	MH	Aggregate	Aggregate	Gasoline	155787.5168	32.20319927
Los Angeles (SC)	2029	MH	Aggregate	Aggregate	Diesel	59505.55142	5.984525729
Los Angeles (SC)	2029	MHDT	Aggregate	Aggregate	Gasoline	797359.8343	147.7365647
Los Angeles (SC)	2029	MHDT	Aggregate	Aggregate	Diesel	2141994.382	238.93256
Los Angeles (SC)	2029	OBUS	Aggregate	Aggregate	Gasoline	76882.18068	15.19963896
Los Angeles (SC)	2029	OBUS	Aggregate	Aggregate	Diesel	108707.2515	14.36529847
Los Angeles (SC)	2029	SBUS	Aggregate	Aggregate	Gasoline	58937.80099	6.275376363
Los Angeles (SC)	2029	SBUS	Aggregate	Aggregate	Diesel	19066.75405	2.600474683
Los Angeles (SC)	2029	UBUS	Aggregate	Aggregate	Gasoline	23537.11855	6.281509283
Los Angeles (SC)	2029	UBUS	Aggregate	Aggregate	Diesel	783.9029569	0.135925531
Diesel	1389.374515		507121698				
Gasoline	7057.618636		2576030802				

Percent Increase
9.98E+09
0.02% <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity>

4.29E+11
0.001% <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity>

Existing

5.11. Operational Energy Consumption

5.11.1 Unmitigated

Land Use	Electricity (kWh/yr)	Natural Gas (kBtu/yr)
General Office Building	4329705.861	6158304.462
Parking Lot	132028.6176	0
Other Asphalt Surfaces	0	0

5.9. Operational Mobile Sources

5.9.1 Unmitigated

Land Use Type	VMT/Year	
General Office Building	5564597.861	
Parking Lot	0	
Other Asphalt Surfaces	0	

Project Construction GHG Emissions

Activity	
	CO2e
2028	150
2029	1012
2030	49
Total Emissions	1211
Total Emissions Amortized Over 30 Years	40

Source: CalEEMod Output Sheets

Total Project GHG Emissions

Activity	Operational
	MTCO2e
Project Operation	
Mobile	1975
Area	8
Energy	530
Water	32
Waste	79
Refrigeration	1
Total Project Gross Operation Emissions	2624
Project Construction	
Amortized Construction Emissions	40
Project Construction and Operation	
Project Total Emissions	2,665
Existing	1,209
Net	1,456
Significance Threshold	3,000
Threshold Exceeded?	No

Notes: 1. Numbers may vary due to rounding.

Source: CalEEMod Output Sheets

Fleet Mix

Land Use Subtype	HHD	LDA	LDT1	LDT2	LHD1	LHD2	MCY	MDV	MH	MHD	OBUS	SBUS	UBUS	Total
CalEEMod default	0.924704	48.18853	4.100928	24.77305	2.78405	0.730755	2.259754	14.63827	0.271332	1.119368	0.082574	0.065283	0.061403	100

<Updated

Passenger	
LDA	0.481885
LDT1	0.041009
LDT2	0.24773
MCY	0.022598
MDV	0.146383
Sum	0.939605
Trucks	
LHD1	0.02784
LHD2	0.007308
MHD	0.011194
HHD	0.009247
Sum	0.055589
	0.995194

ATTACHMENT C – DEMOLITION CALCULATIONS SHEET

25-033 Torrance Townhomes

Estimates of Demolition Debris Demo Building tons

Building Demolition

Building	Height(ft)	Area (ft2)	Volume (ft3)	Volume (cy)	Footprints:	
1	15	53134	797010	9741		26567
2	15	46856	702840	8590		23428
3	15	45430	681450	8329		22715
Total		145420	2181300	26660		72710

Weight of the Building Demolition Debris (ton/cy): 0.5

Total Weight of Building Debris 13330 tons

Note 1: Total square footage of existing school buildings contained in the project description
Note 2: FEMA Debris Estimating Field Guide, FEMA 329, September 2010
Note 3: CalEEMod User Guide

Hardscape Demolition

Weight of Hardscape 145 lb/ft3

Area	Height (ft)	Area (ft2)	Volume (cf)	Weight (lbs)	Weight (tons)	
1	0.5	267931	133965	19424966	9712	
2	0	0	0	0	0	
3	0	0	0	0	0	
Total		267930.5626	133965	19424966	9712	tons

Total Demolition Weight 23043 tons