

## Appendix A

Air Quality, Greenhouse, and Energy Letter Report for Tamarisk 2
Apartments in Hesperia, CA;
Assessor's Parcel Number 3057-121-08-0000

Yorke Engineering

October 15, 2024



October 15, 2024

Mr. Mark Maida Maida Holdings 13302 Ranchero Road Oak Hills, CA 92344 Work: (760) 964-7936

E-mail: Maida5150@gmail.com

Subject: Air Quality, Greenhouse, and Energy Letter Report for Tamarisk 2 Apartments

in Hesperia, CA; Assessor's Parcel Number 3057-121-08-0000

Dear Mr. Maida:

Yorke Engineering, LLC (Yorke) is pleased to provide this Air Quality (AQ), Greenhouse Gas (GHG), and Energy Letter Report. This report includes California Emissions Estimator Model® (CalEEMod) emissions estimates, criteria pollutant analyses, and GHG analyses for the proposed residential development in Hesperia, California. These evaluations will support the Applicant's submittal of a California Environmental Quality Act (CEQA) Initial Study (IS)or a Mitigated Negative Declaration (MND), as applicable.

#### PROJECT DESCRIPTION

Maida Holdings is proposing to develop an apartment complex to be located on a 4.91 gross acre site in Assessor's Parcel Number 3057-121-08-0000 within Hesperia, CA (the City). The Project Site is located north of Orange Street and west of Tamarisk Avenue. The City is located within the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD), which implements regulations and programs to reduce air pollution and assist the region in attaining ambient air quality standards, and provides guidance on CEQA air quality studies. The proposed apartment complex will include eight two-story eightplex multi-tenant dwellings (8 units per building) for a total of 64 residential units and a single-story clubhouse.

A total of 160 parking spaces will be provided. Since the construction will be on vacant and generally flat desert land, site preparation and grading activities are expected to be nominal. In order to fulfill City land entitlement requirements, an air quality and GHGimpact study is required.

### REGULATORY BACKGROUND

#### Pollutants and Standards

The U.S. Environmental Protection Agency (USEPA) defines seven "criteria" air pollutants: ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), respirable particulate matter with a diameter of 10 microns or less (PM<sub>10</sub>), fine particulate matter with a diameter of 2.5 microns or less (PM<sub>2.5</sub>), and lead. These pollutants are called criteria pollutants because the USEPA has established National Ambient Air Quality Standards (NAAQS) for the concentrations of these pollutants. The California Air Resources Board (CARB) has also established standards

for the criteria pollutants, known as California Ambient Air Quality Standards (CAAQS), and the State standards are generally more restrictive than the NAAQS. When a region has air quality that fails to meet the standards, the USEPA and the CARB designate the region as "nonattainment" and the regional air quality agency must develop plans to attain the standards. Table 1 shows the attainment status of the MDAQMD. As identified in Table 1, the air basin is a nonattainment area for O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>.

Table 1: MDAQMD Attainment Status						
		California Star	idards	Federal Star	dards	
Pollutant	Averaging Time	Concentration	Attainment Status	Concentration	Attainment Status	
Ozone (O <sub>3</sub> )	1 Hour	$0.09 \text{ ppm} (180 \text{ µg/m}^3)$	Non-attainment	-		
020HC (03)	8 Hour	$0.070 \text{ ppm} (137 \text{ µg/m}^3)$	T VOIT detailmineme	$0.070 \text{ ppm} (137  \mu\text{g/m}^3)$	Non-attainment*	
Respirable	24 Hour	50 μg/m <sup>3</sup>		$150 \ \mu g/m^3$		
Particulate Matter (PM <sub>10</sub> )	Annual Arithmetic Mean	$20~\mu g/m^3$	Non-attainment	-	Non- attainment***	
Fine Particulate	24 Hour	No State Standard		$35 \mu g/m^3$		
Matter (PM <sub>2.5</sub> )	Annual Arithmetic Mean  Annual 12 μg/m³ 12 μg/m³		Non- attainment*	$12 \mu g/m^3$	Unclassified/ Attainment	
Carbon	8 Hour	9.0 ppm (10 mg/m <sup>3</sup> )	Attainment	9 ppm (10 mg/m <sup>3</sup> ) Unclass		
Monoxide (CO)	1 Hour	Hour 20 ppm (23 mg/m <sup>3</sup> )		35 ppm (40 mg/m <sup>3</sup> )	Attainment	
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic Mean	0.030 ppb (57 μg/m <sup>3</sup> )	Attainment	0.053 ppm (100 μg/m³)	Unclassified/ Attainment	
	1 Hour	0.18 ppm (330 μg/m <sup>3</sup> )		100 ppm (196 μg/m <sup>3</sup> )	Attailillelit	
C. If Discile (CO)	Annual Arithmetic Mean	-	A 44 - i	0.030 ppm (80 μg/m <sup>3</sup> )		
Sulfur Dioxide (SO2)	24 Hour	0.04 ppm (105 μg/m <sup>3</sup> )	Attainment	$0.14 \text{ ppm} (365 \mu\text{g/m}^3)$	Unclassified/	
	3 Hour	-		$0.5 \text{ ppm} (1300 \mu\text{g/m}^3)$	Attainment	
	1 Hour	0.25 ppm (655 μg/m <sup>3</sup> )		75 ppb (196 μg/m <sup>3</sup> )		
	30 Day Average	$1.5 \ \mu g/m^3$		-		
Lead (Pb)	Calendar Quarter	-	Attainment	$1.5  \mu g/m^3$	Unclassified/	
Leau (1 b)	Rolling 3-Month Average	-	Attainment	$0.15~\mu g/m^3$	Attainment	
Visibility Reducing Particles	8 Hour	Extinction Coefficient of 0.24 per kilometer - visibility of ten miles or more due to particles when relative humidity is less than 70 percent	Unclassified	No Federal Sta	No Federal Standards	
Sulfates	24 Hour	$25 \mu g/m^3$	Attainment			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m <sup>3</sup> )	Non- attainment**			
Vinyl Chloride	24 Hour	$0.01 \text{ ppm } (26 \mu\text{g/m}^3)$	Unclassified			

<sup>\*</sup>Southwest corner of desert portion of San Bernardino County only

<sup>\*\*</sup>Searles Valley (northwest corner of San Bernardino County) only

<sup>\*\*\*</sup>San Bernardino County portion only

### SIGNIFICANCE THRESHOLDS

Based on the MDAQMD's CEQA Guidelines, any project is significant if it triggers or exceeds the most appropriate evaluation criteria. The District will clarify upon request which threshold is most appropriate for a given project; in general, the emissions comparison (criteria number 1) is sufficient (MDAQMD 2020):

- 1. Generates total emissions (direct and indirect) in excess of the thresholds given in Table 2;
- 2. Generates a violation of any ambient air quality standard when added to the local background;
- 3. Does not conform with the applicable attainment or maintenance plan(s);
- 4. Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 1.

## AIR QUALITY AND GREENHOUSE GAS IMPACTS ANALYSES

To evaluate the potential for Air Quality and Greenhouse Gas impacts of a proposed project, quantitative significance criteria established by the local air quality agency, such as the MDAQMD, may be relied upon to make significance determinations based on mass emissions of criteria pollutants and GHGs, as presented in this report.

#### **Project Emissions Estimation**

The construction and operation analysis were performed using the California Emissions Estimator Model (CalEEMod Version 2022.1.1.28), the official statewide land use computer model designed to provide a uniform platform for estimating potential criteria pollutant and GHG emissions associated with both construction and operations of land use projects under CEOA. The model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The mobile source emission factors used in the model – published by the California Air Resources Board (CARB) – include the Pavley standards and Low Carbon Fuel standards. The model also identifies project design features, regulatory measures, and control measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from the selected measures. CalEEMod was developed by the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the South Coast Air Quality Management District (SCAQMD), the Bay Area Air Quality Management District (BAAQMD), the San Joaquin Valley Air Pollution Control District (SJVAPCD), and other California air districts. Default land use data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) were provided by the various California air districts to account for local requirements and conditions. As the official assessment methodology for land use projects in California, CalEEMod is relied upon herein for construction and operational emissions quantification, which forms the basis for the impact analysis.

The MDAQMD quantitative significance thresholds shown in Table 2 were used to evaluate project emissions impacts (MDAQMD 2020).

Table 2: MDAQMD CEQA Thresholds of Significance					
Dallastant	Annual Threshold	Daily Threshold			
Pollutant	tons/year (MT/year)	Pounds/day (lbs/day)			
VOC	25	137			
$NO_X$	25	137			
CO	100	548			
$SO_X$	25	137			
$PM_{10}$	15	82			
$PM_{2.5}$	12	65			
$H_2S$	10	54			
Lead (Pb)	0.6	3			
GHG (CO <sub>2</sub> e)	100,000 (90,720)	548,000			

Source: MDAQMD 2020

### Criteria Pollutants from Project Construction

Air pollutant emissions would occur from construction equipment exhaust; fugitive dust from site grading; exhaust and particulate emissions from trucks hauling and construction debris, soil and materials to and from the Project site and from vehicles driven to and from the Project site by construction workers; and VOCs from painting and asphalt paving operations. Project construction would be required to comply with rules such as MDAQMD Rule 403, Fugitive Dust, which requires watering of active grading areas, have been incorporated into the proposed Project and are included in the emissions calculations. CEQA significance thresholds address the impacts of construction activity emissions on air quality. Tables 3 and 4 shows project construction phase daily and annual criteria emissions and evaluates those emissions against the respective MDAQMD construction significance thresholds. Because Project related emissions are below both the daily and annual significance thresholds adopted by the MDAQMD, the Project would result in less than significant impacts to air quality from construction related emissions.

Table 3: Daily Construction Emissions Summary and Significance Evaluation						
Criteria Pollutants	Criteria Pollutants Project Emissions (lbs/day)		Significant?			
ROG (VOC)	14	137	No			
$NO_X$	32	137	No			
СО	31	548	No			
$SO_X$	<1	137	No			
Total PM <sub>10</sub>	9	82	No			
Total PM <sub>2.5</sub>	5	65	No			

Sources: MDAQMD 2020, CalEEMod Version 2022.1.1.28

Notes:

lbs/day are winter or summer maxima for planned land use

Total  $PM_{10}$  /  $PM_{2.5}$  comprises fugitive dust plus engine exhaust

Table 4: Annual Construction Emissions Summary and Significance Evaluation						
Criteria Pollutants	Project Emissions (tons/year)	Threshold (tons/year)	Significant?			
ROG (VOC)	<1	25	No			
$NO_X$	1.4	25	No			
CO	2.0	100	No			
$SO_X$	<1	25	No			
Total PM <sub>10</sub>	<1	15	No			
Total PM <sub>2.5</sub>	<1	12	No			

Sources: MDAQMD 2020, CalEEMod Version 2022.1.1.28

Notes:

Total PM<sub>10</sub> / PM<sub>2.5</sub> comprises fugitive dust plus engine exhaust

## Criteria Pollutants from Project Operation

The term "project operations" refers to the full range of activities that occur for the planned land use. For projects, such as office parks, shopping centers, apartment buildings, residential subdivisions, and other indirect sources, motor vehicles traveling to and from the project represents the primary source of air pollutant emissions. Other sources of emissions are comprised of area (natural gas, consumer product usage, landscaping...) and energy. CEQA significance thresholds address the impacts of operational emission sources on air quality. Tables 5 and 6 shows operational phase daily and annual criteria emissions and evaluates those emissions against the respective MDAQMD operational thresholds. As shown in these Tables, Project related emissions are below both the daily and annual significance thresholds adopted by the air district. Consequently, the air district does not consider emissions occurring during the operations phase of the Project to generate substantial amounts of air pollution and would result in less than significant impacts to air quality.

PROJECTED IMPACT: Less Than Significant (LTS)

Table 5: Daily Operational Emissions Summary and Significance Evaluation						
Criteria Pollutants	Project Emissions (lbs/day)	Threshold (lbs/day)	Significant?			
ROG (VOC)	4	137	No			
$NO_X$	3	137	No			
CO	21	548	No			
$SO_X$	<1	137	No			
Total PM <sub>10</sub>	3	82	No			
Total PM <sub>2.5</sub>	1	65	No			

Sources: MDAQMD 2020, CalEEMod Version 2022.1.1.28

Notes:

lbs/day are winter or summer maxima for planned land use Total PM10 / PM2.5 comprises fugitive dust plus engine exhaust

Table 6: Annual Operational Emissions Summary and Significance Evaluation						
Criteria Pollutants	Project Emissions (tons/year)	Threshold (tons/year)	Significant?			
ROG (VOC)	5	25	No			
$NO_X$	<1	25	No			
CO	8	100	No			
$SO_X$	<1	25	No			
Total PM <sub>10</sub>	1	15	No			
Total PM <sub>2.5</sub>	<1	12	No			

Sources: MDAQMD 2020, CalEEMod Version 2022.1.1.28

Notes:

Total PM<sub>10</sub> / PM<sub>2.5</sub> comprises fugitive dust plus engine exhaust

#### Greenhouse Gas Emissions from Construction and Operation

Greenhouse gases – primarily carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous (N<sub>2</sub>O) oxide, collectively reported as carbon dioxide equivalents (CO<sub>2</sub>e) – are directly emitted from stationary source combustion of natural gas in equipment such as water heaters, boilers, process heaters, and furnaces. GHGs are also emitted from mobile sources such as on-road vehicles and off-road construction equipment burning fuels such as gasoline, diesel, biodiesel, propane, or natural gas (compressed or liquefied). Indirect GHG emissions result from electric power generated elsewhere (i.e., power plants) used to operate process equipment, lighting, and utilities at a facility. Also, included in GHG quantification is electric power used to pump the water supply (e.g., aqueducts, wells, pipelines) and disposal and decomposition of municipal waste in landfills. (CARB 2017)

California's Building Energy Efficiency Standards are updated on an approximately three-year cycle. The 2022 standards improved upon the 2019 standards for new construction of, and additions and alterations to, residential, commercial, and industrial buildings. The 2022 standards went into effect on January 1, 2023 (CEC 2022).

Since the Title 24 standards require energy conservation features in new construction (e.g., high-efficiency lighting, high-efficiency heating, ventilating, and air-conditioning (HVAC) systems, thermal insulation, double-glazed windows, water conserving plumbing fixtures, etc.), they indirectly regulate and reduce GHG emissions.

Using CalEEMod, direct onsite and offsite GHG emissions were estimated for construction and operation, and indirect offsite GHG emissions were estimated to account for electric power used by the proposed project, water conveyance, and solid waste disposal. CalEEMod also quantifies common refrigerant GHGs (abbreviated as "R" in the model output) used in air conditioning and refrigeration equipment, some of which are HFCs.

The MDAQMD mass emissions threshold is 100,000 short tons (90,720 metric tons (MT)) of CO<sub>2</sub>e per year (MDAQMD 2020). Table 7 shows GHG emissions associated with both the construction and operations phases of the Project. Construction emissions are amortized over the assumed useful life of the Project of 30 years and added to the operations phase emissions. These emissions are evaluated against the MDAQMD adopted GHG significance threshold. As shown in Table 7, GHG emissions attributable to the Project are substantially less than the significance threshold



adopted by the MDAQMD. As such, the air district does not consider the Project to result in excessive levels of the GHG emissions and would result in less than significant GHG impacts.

PROJECTED IMPACT: Less Than Significant (LTS)

Table 7: Greenhouse Gas Emissions Summary and Significance Evaluation						
Greenhouse Gases Project Emissions <sup>1</sup> (MT/yr)		Threshold (MT/yr)	Significance			
CO <sub>2</sub>	702	_	_			
CH <sub>4</sub>	<1	_	_			
$N_2O$	<1	_	_			
R	<1	_	_			
CO <sub>2</sub> e	728	90,720	No			

Sources: MDAQMD 2020, CalEEMod Version 2022.1.1.28

Notes:

#### **ENERGY IMPACT ANALYSIS**

Residential project energy consumption primarily comprises 1) mobile source fuels (i.e., diesel and gasoline) used for construction, 2) area and mobile source fuels used for operation (e.g., residents' commutes and deliveries), and 3) building utilities (natural gas and electric power).

### **Project Construction Fuel Consumption**

The fuel consumption from the mobiles sources used for construction was calculated using the CalEEMod outputs. CalEEMod calculates mass emissions of GHGs, including CO<sub>2</sub>, from offroad and onroad mobile sources associated with project construction. For construction, CalEEMod aggregates mobile source CO<sub>2</sub> emissions into four broad categories (typical fuel types assumed):

- Offroad equipment [diesel (Tiers 1-4)];
- Hauling [heavy-heavy duty diesel trucks (HHDT)];
- Vendor [medium-heavy and heavy-heavy duty diesel trucks (MHDT, HHDT)]; and
- Worker [light duty gasoline automobiles and trucks (LDA, LDT1, LDT2)].

For each category, diesel and gasoline fuel consumption can be estimated (back-calculated) using 2020 Climate Registry (40 CFR 98 Subpart C) emission factors for those fuels:

- Diesel Fuel Oil No. 2: 10.21 kg CO<sub>2</sub> per gallon [22.51 lbs CO<sub>2</sub> per gallon]; and
- Motor Gasoline: 8.78 kg CO<sub>2</sub> per gallon [19.36 lbs CO<sub>2</sub> per gallon].

Using the CalEEMod annual emissions results (MT CO<sub>2</sub>) for each of the four mobile source categories (offroad, hauling, vendor, worker) and the corresponding CO<sub>2</sub> emission factors, Table 8 shows estimated fuel consumption during Project construction. As shown in Table 8, based on CalEEMod, Project construction would consume approximately 38,010 gallons of liquid fuels.

<sup>&</sup>lt;sup>1</sup>Comprises annual operational emissions plus construction emissions amortized over 30 years

Table 8: Construction Mobile Source Energy Use							
Mobile Sources	Types	Fuels	MT CO <sub>2</sub>	CO <sub>2</sub> Emission Factor (kg/gal)	Fuel Consumption (gallons)		
Off-Road	Tiers 1-4	Diesel	286	10.21	27,990		
Hauling	HHDT	Diesel	0	10.21	0		
Vendor	MHDT, HHDT	Diesel	23	10.21	2,230		
Worker	LDA, LDT1, LDT2	Gasoline	68	8.78	7,790		
Totals			377	_	38,010		

Sources: CalEEMod, TCR 2020, 40 CFR 98 Subpart C

## **Project Operation Fuel Consumption**

Similar to construction, CalEEMod calculates mass emissions of CO<sub>2</sub> from area and mobile sources associated with project operation. For operation, CalEEMod aggregates area and mobile source CO<sub>2</sub> emissions into three broad categories (typical fuel types assumed):

- Utility equipment [gasoline];
- Heavy Mobile [light-heavy, medium-heavy and heavy-heavy duty diesel trucks (LHDT, MHDT, HHDT)]; and
- Light Mobile [light and medium duty gasoline automobiles and trucks (LDA, LDT1, LDT2, MDV)].

For each category, diesel and gasoline fuel consumption can be estimated (back-calculated) using 2020 Climate Registry (40 CFR 98 Subpart C) emission factors for those fuels. Consistent with CalEEMod, residential land use operational vehicle fleet mixes comprise approximately 95% gasoline and 5% diesel fuel usage.

Using the CalEEMod annual emissions results (MT CO<sub>2</sub>) for the area and mobile source categories and the corresponding CO<sub>2</sub> emission factors, Table 9 shows estimated fuel consumption during Project operation. As shown in Table 9, based on CalEEMod, project operation would consume approximately 65,330 gallons of liquid fuels annually.

Table 9: Operational Area and Mobile Source Energy Use							
Sources	Types Fuel		MT CO2/year	CO <sub>2</sub> Emission Factor (kg/gal)	Fuel Consumption (gallons/year)		
Area	Utility Equipment	Gasoline	67	8.78	7,630		
Heavy Mobile	LHDT, MHDT, HHDT	Diesel	26	10.21	2,500		
Light Mobile LDA, LDT1, LDT2, MDV Gasoline			485	8.78	55,200		
	Totals		577	_	65,330		

Sources: CalEEMod, TCR 2020, 40 CFR 98 Subpart C

## Project Operation Utilities Consumption

Based on CalEEMod for the defined land use, Table 10 shows estimated natural gas and electric power usage for the proposed Project.

As shown in Table 10, Project operation would result in natural gas usage of approximately 1 million cubic feet per year (MMcf/year), and utilization of approximately 317 megawatt-hours per year (MWh/year) of electric power.

Table 10: Operational Utility Energy Use					
Component Type Quantity Units					
Utilities	Natural Gas	1.02	MMcf/year		
Utilities	Electric Power <sup>1</sup>	317	MWh/year		

Source: CalEEMod

### Analysis of Energy Significance Criteria

Impacts to energy resources would be considered significant if any of the following criteria are met. Would the project:

- a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
  - No. The proposed Project would not use energy in a wasteful and/or inefficient manner. Project construction would be performed by contractors with an economic incentive to minimize costs, one element of which is fuel conservation. The proposed residential project would be required by code to comply with the latest energy efficiency standards detailed within the Title 24 Building Standards. These standards include energy efficiency measures that includes minimizing direct operational energy usage by means of thermal wall insulation, insulating double-pane windows, high-efficiency HVAC equipment, LED lighting, motion-detector light switches, and other modern energy-saving features. In addition, low-flow plumbing fixtures conserve both water and energy, as less electric power would be needed for water conveyance and treatment. In addition, there are no characteristics of the proposed Project that would involve atypical usage of energy for the construction and operations phases of the project. As such, the proposed Project would not result in a wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation and would result in less than significant impacts.
- b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?
  - No. The proposed Project would not conflict with or obstruct any adopted energy conservation plans, state or local plans for renewable energy, or energy efficiency. The California Building Energy Efficiency Standards (California Code of Regulations, Title 24, Parts 6 and 11) are designed to reduce unnecessary energy consumption in newly constructed and existing buildings, such as residential and commercial structures. The Building Energy Efficiency Standards are applicable to the proposed Project, which is designed for human habitation (CEC 2022).

The City of Hesperia General Plan 2010 also has an Energy Section of the Conservation Element. The Energy Section establishes Goal: CN-6 Provide programs and incentives to encourage residents, businesses and developers to reduce consumption and efficiently use energy resources. The proposed Project is consistent with the Implementation Policies of this Goal by including energy efficiency to reduce energy consumption and conserve resources. The proposed Project would also include solar photovoltaic electricity generation which is also consistent with Implementation Policy CN-7.4 which promotes the development of renewable energy generation.

<sup>&</sup>lt;sup>1</sup> includes electricity consumption for building and water processes.

The proposed Project would include electric vehicle (EV) charging stations, which would reduce transportation fuel consumption and consistent with the goals of the electrification of vehicles detailed under the CARB Advanced Clean Cars II Rule and transition to renewable energy goals of the Renewable Portfolio Standards. Thus, the proposed Project would not conflict with renewable energy goals established under the Renewable Portfolio Standards or the energy efficiency goals set by California's Title 24 Energy Efficiency Standards. Impacts would be less than significant.

PROJECTED IMPACT: Less Than Significant (LTS)

#### **CLOSING**

The air quality and GHG impacts of the proposed Project were evaluated based on the significance thresholds and guidelines adopted by the MDAQMD. Both the construction and operations phases resulted in criteria pollutant emissions that are below the MDAQMD significance thresholds and consequently are considered to result in less than significant impacts related to air quality. GHG emissions for the proposed Project were likewise found to result in emissions that are below the MDAQMD's significance threshold and consequently would result in less than significant impacts. As such, the Project would result in less than significant impacts related to air quality and GHG emissions. Energy consumption associated with the construction and operations phases of the proposed Project was also evaluated against the CEQA Appendix G checklist questions and found to be consistent with the goals and policies adopted by both the State of California and the City of Hesperia. As such, energy related impacts attributable to the proposed Project would result in less than significant impacts.

Thank you very much for the opportunity to be of assistance to Maida Holdings. Should you have any questions, please contact me at (949) 979-1372 (mobile) or (949) 979-1372 (office).

Sincerely,

Tin Cheung

Principal Scientist

Yorke Engineering, LLC

TCheung@YorkeEngr.com

cc: Tina Darjazanie, Yorke Engineering, LLC

Enclosures/Attachments:

1. CalEEMod Outputs

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## **ATTACHMENT 1 – CALEEMOD OUTPUTS**

# Hesperia Apartment Buildings Detailed Report

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  - 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
    - 5.10.1.1. Unmitigated
  - 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

# 1. Basic Project Information

# 1.1. Basic Project Information

Data Field	Value
Project Name	Hesperia Apartment Buildings
Construction Start Date	1/2/2025
Operational Year	2026
Lead Agency	_
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	1.40
Location	34.424141370228895, -117.35280899935994
County	San Bernardino-Mojave Desert
City	Hesperia
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5183
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.
App Version	2022.1.1.28

# 1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)		Special Landscape Area (sq ft)	Population	Description
Apartments Low Rise	64.0	Dwelling Unit	4.91	39,196	52,296	_	212	_

## 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.	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	1.63	1.39	10.9	17.0	0.03	0.43	0.66	1.10	0.40	0.16	0.56	_	3,288	3,288	0.12	0.07	3.05	3,315
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	13.8	13.8	31.7	31.2	0.05	1.37	7.89	9.26	1.26	3.99	5.25	_	5,521	5,521	0.23	0.07	0.08	5,542
Average Daily (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	1.08	0.91	7.54	10.7	0.02	0.30	0.58	0.88	0.28	0.18	0.46	_	2,135	2,135	0.08	0.05	0.83	2,151
Annual (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	0.20	0.17	1.38	1.95	< 0.005	0.06	0.11	0.16	0.05	0.03	0.08	_	353	353	0.01	0.01	0.14	356

## 2.2. Construction Emissions by Year, Unmitigated

Year	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily -	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Summer (Max)																		
(iviax)																		
2025	1.63	1.39	10.9	17.0	0.03	0.43	0.66	1.10	0.40	0.16	0.56	_	3,288	3,288	0.12	0.07	3.05	3,315

Daily - Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
2025	4.03	3.39	31.7	31.2	0.05	1.37	7.89	9.26	1.26	3.99	5.25	_	5,521	5,521	0.23	0.07	0.08	5,542
2026	13.8	13.8	10.3	15.4	0.03	0.38	0.66	1.04	0.35	0.16	0.51	_	3,195	3,195	0.11	0.07	0.07	3,219
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
2025	1.08	0.91	7.54	10.7	0.02	0.30	0.58	0.88	0.28	0.18	0.46	_	2,135	2,135	0.08	0.05	0.83	2,151
2026	0.75	0.74	0.52	0.82	< 0.005	0.02	0.03	0.05	0.02	0.01	0.03	_	142	142	< 0.005	< 0.005	0.05	143
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
2025	0.20	0.17	1.38	1.95	< 0.005	0.06	0.11	0.16	0.05	0.03	0.08	_	353	353	0.01	0.01	0.14	356
2026	0.14	0.13	0.09	0.15	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	_	23.5	23.5	< 0.005	< 0.005	0.01	23.7

# 2.4. Operations Emissions Compared Against Thresholds

Un/Mit.	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	3.91	3.70	2.71	20.5	0.04	0.10	3.03	3.13	0.10	0.77	0.87	30.6	5,086	5,117	3.29	0.18	12.8	5,267
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	3.27	3.07	2.82	13.5	0.04	0.10	3.03	3.13	0.10	0.77	0.86	30.6	4,756	4,786	3.30	0.19	0.61	4,926
Average Daily (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	25.5	25.0	2.39	41.7	0.08	3.78	2.71	6.49	3.76	0.69	4.45	430	3,733	4,162	3.64	0.20	5.13	4,319
Annual (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_		_	_	_
Unmit.	4.65	4.56	0.44	7.62	0.01	0.69	0.50	1.18	0.69	0.13	0.81	71.2	618	689	0.60	0.03	0.85	715

# 2.5. Operations Emissions by Sector, Unmitigated

Sector	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	2.57	2.42	1.82	16.5	0.04	0.03	3.03	3.06	0.03	0.77	0.80	_	3,689	3,689	0.14	0.17	12.6	3,754
Area	1.31	1.26	0.62	3.88	< 0.005	0.05	_	0.05	0.05	_	0.05	0.00	751	751	0.01	< 0.005	_	752
Energy	0.03	0.02	0.27	0.11	< 0.005	0.02	_	0.02	0.02	_	0.02	_	626	626	0.06	< 0.005	_	629
Water	_	_	_	_	_	_	_	_	_	_	_	5.11	20.3	25.4	0.53	0.01	_	42.3
Waste	_	_	_	_	_	_	_	_	_	_	_	25.5	0.00	25.5	2.55	0.00	_	89.3
Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.28	0.28
Total	3.91	3.70	2.71	20.5	0.04	0.10	3.03	3.13	0.10	0.77	0.87	30.6	5,086	5,117	3.29	0.18	12.8	5,267
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	2.26	2.11	1.97	13.2	0.03	0.03	3.03	3.06	0.03	0.77	0.80	_	3,368	3,368	0.15	0.17	0.33	3,424
Area	0.97	0.94	0.58	0.25	< 0.005	0.05	_	0.05	0.05	_	0.05	0.00	741	741	0.01	< 0.005	_	742
Energy	0.03	0.02	0.27	0.11	< 0.005	0.02	_	0.02	0.02	_	0.02	_	626	626	0.06	< 0.005	_	629
Water	_	_	_	_	_	_	_	_	_	_	_	5.11	20.3	25.4	0.53	0.01	_	42.3
Waste	_	_	_	_	_	_	_	_	_	_	_	25.5	0.00	25.5	2.55	0.00	_	89.3
Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.28	0.28
Total	3.27	3.07	2.82	13.5	0.04	0.10	3.03	3.13	0.10	0.77	0.86	30.6	4,756	4,786	3.30	0.19	0.61	4,926
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	2.04	1.91	1.80	12.7	0.03	0.03	2.71	2.74	0.02	0.69	0.71	_	3,081	3,081	0.14	0.16	4.85	3,136
Area	23.4	23.1	0.32	28.9	0.05	3.73	_	3.73	3.72	_	3.72	399	4.79	404	0.37	0.03	_	422
Energy	0.03	0.02	0.27	0.11	< 0.005	0.02	_	0.02	0.02	_	0.02	_	626	626	0.06	< 0.005	_	629
Water	_	_	_	_	_	_	_	_	_	_	_	5.11	20.3	25.4	0.53	0.01	_	42.3
Waste	_	_	_	_	_	_	_	_	_	_	_	25.5	0.00	25.5	2.55	0.00	_	89.3

Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.28	0.28
Total	25.5	25.0	2.39	41.7	0.08	3.78	2.71	6.49	3.76	0.69	4.45	430	3,733	4,162	3.64	0.20	5.13	4,319
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	0.37	0.35	0.33	2.32	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	_	510	510	0.02	0.03	0.80	519
Area	4.28	4.21	0.06	5.27	0.01	0.68	_	0.68	0.68	_	0.68	66.1	0.79	66.9	0.06	< 0.005	_	69.8
Energy	0.01	< 0.005	0.05	0.02	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	104	104	0.01	< 0.005	_	104
Water	_	_	_	_	_	_	_	_	_	_	_	0.85	3.35	4.20	0.09	< 0.005	_	7.00
Waste	_	_	_	_	_	_	_	_	_	_	_	4.23	0.00	4.23	0.42	0.00	_	14.8
Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.05	0.05
Total	4.65	4.56	0.44	7.62	0.01	0.69	0.50	1.18	0.69	0.13	0.81	71.2	618	689	0.60	0.03	0.85	715

# 3. Construction Emissions Details

## 3.1. Site Preparation (2025) - Unmitigated

Location	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_		_	_	_	_	_	_	_	_	_
Off-Roa d Equipm ent	3.94	3.31	31.6	30.2	0.05	1.37	_	1.37	1.26	_	1.26	_	5,295	5,295	0.21	0.04		5,314
Dust From Material Movemer	 nt	_	_	_	_	_	7.67	7.67	_	3.94	3.94	_	_	_	_	_	_	_

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	-	_	_	_	_	_	_	_	_
Off-Roa d Equipm ent	0.05	0.05	0.43	0.41	< 0.005	0.02	_	0.02	0.02	_	0.02	_	72.5	72.5	< 0.005	< 0.005	_	72.8
Dust From Material Movemer		_	_	_	_	_	0.11	0.11	_	0.05	0.05	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Roa d Equipm ent	0.01	0.01	0.08	0.08	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	12.0	12.0	< 0.005	< 0.005	_	12.1
Dust From Material Movemer	—	_	_	_	_	_	0.02	0.02	_	0.01	0.01	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.09	0.08	0.09	0.98	0.00	0.00	0.23	0.23	0.00	0.05	0.05	_	226	226	0.01	0.01	0.02	229
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	_	3.19	3.19	< 0.005	< 0.005	0.01	3.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	_	0.53	0.53	< 0.005	< 0.005	< 0.005	0.54
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

# 3.3. Grading (2025) - Unmitigated

Location	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Roa d Equipm ent	2.07	1.74	16.3	17.9	0.03	0.72	_	0.72	0.66	_	0.66	_	2,959	2,959	0.12	0.02	_	2,970
Dust From Material Movemer	—	_	_	_	-	_	2.76	2.76	_	1.34	1.34	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Off-Roa d	0.05	0.04	0.36	0.39	< 0.005	0.02	_	0.02	0.01	_	0.01	_	64.9	64.9	< 0.005	< 0.005	_	65.1
Dust From Material Movemer	—	_	_	_	_	_	0.06	0.06	_	0.03	0.03	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Roa d Equipm ent	0.01	0.01	0.07	0.07	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	10.7	10.7	< 0.005	< 0.005	_	10.8
Dust From Material Movemer	—	_	_	_	-	_	0.01	0.01	_	0.01	0.01	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	-	-	-	_	_	_	_	_	_	_	-	_	-	_	_	_	-
Daily, Winter (Max)	_	-	-	-	_	_	_	_	_	_	_	-	_	-	_	_	_	-
Worker	0.07	0.07	0.08	0.84	0.00	0.00	0.20	0.20	0.00	0.05	0.05	_	194	194	0.01	0.01	0.02	196
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	_	4.37	4.37	< 0.005	< 0.005	0.01	4.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	_	0.72	0.72	< 0.005	< 0.005	< 0.005	0.73
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

# 3.5. Building Construction (2025) - Unmitigated

Ontonia	· Onate	X1110 (107	aay ioi	adily, to	" y 1 101	ariiridai) c	111G OI 1	30 (1b/ at	ay ioi ac	(11y, 1v11/	yi ioi ai	maaij						
Location	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Roa d Equipm ent	1.35	1.13	10.4	13.0	0.02	0.43	_	0.43	0.40	_	0.40	_	2,398	2,398	0.10	0.02		2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Roa d Equipm ent	1.35	1.13	10.4	13.0	0.02	0.43	_	0.43	0.40	_	0.40	_	2,398	2,398	0.10	0.02	_	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	-	_	_	_	_	_	_	_	_	_
Off-Roa d Equipm ent	0.83	0.69	6.44	8.04	0.01	0.27	_	0.27	0.24	_	0.24	_	1,478	1,478	0.06	0.01	_	1,483
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Roa d Equipm ent	0.15	0.13	1.17	1.47	< 0.005	0.05	_	0.05	0.04	_	0.04	_	245	245	0.01	< 0.005	_	246
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	-
Worker	0.28	0.25	0.22	3.83	0.00	0.00	0.60	0.60	0.00	0.14	0.14	_	672	672	0.03	0.02	2.46	682
Vendor	0.01	0.01	0.22	0.10	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	_	218	218	< 0.005	0.03	0.60	227
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	-
Worker	0.23	0.21	0.24	2.57	0.00	0.00	0.60	0.60	0.00	0.14	0.14	_	595	595	0.03	0.02	0.06	603
Vendor	0.01	0.01	0.23	0.10	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	_	218	218	< 0.005	0.03	0.02	227
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.14	0.13	0.16	1.77	0.00	0.00	0.37	0.37	0.00	0.09	0.09	_	378	378	0.02	0.01	0.65	383
Vendor	0.01	0.01	0.14	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	_	134	134	< 0.005	0.02	0.16	140
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	<u> </u>	_	_	_	<u> </u>	_	_	_	_	_	_	_	_	_
Worker	0.03	0.02	0.03	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	_	62.5	62.5	< 0.005	< 0.005	0.11	63.4
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	_	22.3	22.3	< 0.005	< 0.005	0.03	23.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

# 3.7. Building Construction (2026) - Unmitigated

Location		ROG	NOx	CO CO	SO2		PM10D	PM10T			PM2.5T		NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	-	_	_	_	_	_	_	_	_	_	-	-	-	_	-	_	_
Daily, Winter (Max)	_	-	_	_	_	-	_	_	_	_	_	-	-	-	_	-	_	_
Off-Roa d Equipm ent	1.28	1.07	9.85	13.0	0.02	0.38	_	0.38	0.35	_	0.35	_	2,397	2,397	0.10	0.02	_	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	-	_	_	_	_	_	_	_	_	_	_	_	-	_	_	-	-
Off-Roa d Equipm ent	0.02	0.02	0.15	0.20	< 0.005	0.01	_	0.01	0.01	_	0.01	_	37.5	37.5	< 0.005	< 0.005	_	37.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Roa d Equipm ent	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	6.21	6.21	< 0.005	< 0.005	_	6.23
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.22	0.20	0.22	2.37	0.00	0.00	0.60	0.60	0.00	0.14	0.14	_	583	583	0.01	0.02	0.06	590
Vendor	0.01	0.01	0.23	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	_	214	214	< 0.005	0.03	0.01	223
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	_	9.40	9.40	< 0.005	< 0.005	0.02	9.53
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	3.35	3.35	< 0.005	< 0.005	< 0.005	3.49
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	_	1.56	1.56	< 0.005	< 0.005	< 0.005	1.58
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	0.55	0.55	< 0.005	< 0.005	< 0.005	0.58
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

# 3.9. Paving (2026) - Unmitigated

Location	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	всо2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_		_
Off-Roa d Equipm ent	0.81	0.68	6.23	8.81	0.01	0.26	_	0.26	0.24	_	0.24	_	1,350	1,350	0.05	0.01	_	1,355
Paving	0.00	0.00	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	-	_	-	_	-	-	-	_	-	-	-	_	-	_	-	_	_
Off-Roa d Equipm ent	0.04	0.03	0.31	0.43	< 0.005	0.01	_	0.01	0.01	_	0.01	_	66.6	66.6	< 0.005	< 0.005	_	66.8
Paving	0.00	0.00	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Roa d Equipm ent	0.01	0.01	0.06	0.08	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	11.0	11.0	< 0.005	< 0.005	_	11.1
Paving	0.00	0.00	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	-	_	_	_	_	_	_	_	_	-	_	_	_	_	-	-
Daily, Winter (Max)	_	_	-	_	_	-	_	_	_	_	_	_	_	_	_	_	-	-
Worker	0.10	0.08	0.10	1.03	0.00	0.00	0.26	0.26	0.00	0.06	0.06	_	253	253	< 0.005	0.01	0.03	256
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	_	12.9	12.9	< 0.005	< 0.005	0.02	13.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	_	2.13	2.13	< 0.005	< 0.005	< 0.005	2.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

# 3.11. Architectural Coating (2026) - Unmitigated

Location	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Roa d Equipm ent	0.15	0.12	0.86	1.13	< 0.005	0.02	_	0.02	0.02	_	0.02	_	134	134	0.01	< 0.005	_	134
Architect ural Coating s	13.6	13.6	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Roa d Equipm ent	0.01	0.01	0.04	0.06	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	6.58	6.58	< 0.005	< 0.005	_	6.61
Architect ural Coating s	0.67	0.67	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Roa d Equipm ent	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	1.09	1.09	< 0.005	< 0.005	_	1.09
Architect ural Coating s	0.12	0.12	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.04	0.04	0.04	0.47	0.00	0.00	0.12	0.12	0.00	0.03	0.03	_	117	117	< 0.005	< 0.005	0.01	118
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	-	_	_	_
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	_	5.92	5.92	< 0.005	< 0.005	0.01	6.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	_	0.98	0.98	< 0.005	< 0.005	< 0.005	0.99
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	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)

				· <b>J</b> , · -	,				,		,							
Land Use	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Apartme nts Low Rise		2.42	1.82	16.5	0.04	0.03	3.03	3.06	0.03	0.77	0.80	_	3,689	3,689	0.14	0.17	12.6	3,754
Total	2.57	2.42	1.82	16.5	0.04	0.03	3.03	3.06	0.03	0.77	0.80	_	3,689	3,689	0.14	0.17	12.6	3,754
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Apartme nts Low Rise		2.11	1.97	13.2	0.03	0.03	3.03	3.06	0.03	0.77	0.80	-	3,368	3,368	0.15	0.17	0.33	3,424
Total	2.26	2.11	1.97	13.2	0.03	0.03	3.03	3.06	0.03	0.77	0.80	_	3,368	3,368	0.15	0.17	0.33	3,424
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Apartme nts Low Rise		0.35	0.33	2.32	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	_	510	510	0.02	0.03	0.80	519
Total	0.37	0.35	0.33	2.32	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	_	510	510	0.02	0.03	0.80	519

## 4.2. Energy

## 4.2.1. Electricity Emissions By Land Use - Unmitigated

Land Use	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Apartme nts Low Rise		_	_	_	_	_	_	_	_	_	_	_	284	284	0.03	< 0.005	_	286
Total	_	_	_	_	_	_	_	_	_	_	_	_	284	284	0.03	< 0.005	_	286
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Apartme nts Low Rise		_	_	_	_	_	_	_	_	_	_	_	284	284	0.03	< 0.005	_	286
Total	_	_	_	_	_	_	_	_	_	_	_	_	284	284	0.03	< 0.005	_	286
Annual	_	_	_	_	-	_	_	_	_	_	_	_	_	_	_	_	_	_
Apartme nts Low Rise		_	-	_	_	_	_	_	_	_	_	_	47.1	47.1	< 0.005	< 0.005	_	47.4
Total	_	_	_	_	_	_	_	_	_	_	_	_	47.1	47.1	< 0.005	< 0.005	_	47.4

## 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Land Use	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Apartme nts Low Rise		0.02	0.27	0.11	< 0.005	0.02	_	0.02	0.02	_	0.02	_	342	342	0.03	< 0.005	_	343
Total	0.03	0.02	0.27	0.11	< 0.005	0.02	_	0.02	0.02	_	0.02	_	342	342	0.03	< 0.005	_	343

Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Apartme nts Low Rise		0.02	0.27	0.11	< 0.005	0.02	_	0.02	0.02	_	0.02	_	342	342	0.03	< 0.005	_	343
Total	0.03	0.02	0.27	0.11	< 0.005	0.02	_	0.02	0.02	_	0.02	_	342	342	0.03	< 0.005	_	343
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Apartme nts Low Rise		< 0.005	0.05	0.02	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	56.6	56.6	0.01	< 0.005	_	56.7
Total	0.01	< 0.005	0.05	0.02	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	56.6	56.6	0.01	< 0.005	_	56.7

# 4.3. Area Emissions by Source

## 4.3.1. Unmitigated

Source	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Hearths	0.07	0.03	0.58	0.25	< 0.005	0.05	_	0.05	0.05	_	0.05	0.00	741	741	0.01	< 0.005	_	742
Consum er Product s	0.84	0.84	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Architect ural Coating s	0.07	0.07	-	_	-	_	_	_	_	_	_	_	_	_	_	_	_	_
Landsca pe Equipm ent	0.34	0.32	0.04	3.63	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	9.71	9.71	< 0.005	< 0.005	_	9.74
Total	1.31	1.26	0.62	3.88	< 0.005	0.05	_	0.05	0.05	_	0.05	0.00	751	751	0.01	< 0.005	_	752

Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_		_	_
Hearths	0.07	0.03	0.58	0.25	< 0.005	0.05	_	0.05	0.05	_	0.05	0.00	741	741	0.01	< 0.005	_	742
Consum er Product s	0.84	0.84	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Architect ural Coating s	0.07	0.07	_	_	_	_	_	_		_	_	_	_	_	_	_		_
Total	0.97	0.94	0.58	0.25	< 0.005	0.05	_	0.05	0.05	_	0.05	0.00	741	741	0.01	< 0.005	_	742
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Hearths	4.08	4.01	0.05	4.95	0.01	0.68	_	0.68	0.68	_	0.68	66.1	0.00	66.1	0.06	< 0.005	_	69.0
Consum er Product s	0.15	0.15	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Architect ural Coating s	0.01	0.01	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Landsca pe Equipm ent	0.03	0.03	< 0.005	0.33	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	0.79	0.79	< 0.005	< 0.005	_	0.80
Total	4.28	4.21	0.06	5.27	0.01	0.68	_	0.68	0.68	_	0.68	66.1	0.79	66.9	0.06	< 0.005	_	69.8

# 4.4. Water Emissions by Land Use

#### 4.4.1. Unmitigated

		(,	,	<b>,</b> ,	<i>y</i>	,		- (	.,	,,	,	,						
Land	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Use																		

Daily, Summer (Max)	_	_	_	_	_	_	_	_		_	_	_	_	_	_	_	_	_
Apartme nts Low Rise		_	_	_	_	_	_	_	_	_	_	5.11	20.3	25.4	0.53	0.01	_	42.3
Total	_	_	_	_	_	_	_	_	_	_	_	5.11	20.3	25.4	0.53	0.01	_	42.3
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Apartme nts Low Rise		_	_	_	_	_		_			_	5.11	20.3	25.4	0.53	0.01		42.3
Total	_	_	_	_	_	_	_	_	_	_	_	5.11	20.3	25.4	0.53	0.01	_	42.3
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Apartme nts Low Rise		_	_	_	_	_	_	_	_	_	_	0.85	3.35	4.20	0.09	< 0.005	_	7.00
Total	_	_	_	_	_	_	_	_	_	_	_	0.85	3.35	4.20	0.09	< 0.005	_	7.00

## 4.5. Waste Emissions by Land Use

## 4.5.1. Unmitigated

				<b>J</b> ,						<i>J</i> ,								
Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Apartme nts Low Rise	_	_	_	_	_	_	_	_	_	_	_	25.5	0.00	25.5	2.55	0.00	_	89.3
Total	_	_	_	_	_	_	_	_	_	_	_	25.5	0.00	25.5	2.55	0.00	_	89.3

Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Apartme nts Low Rise		_	_	_	_	_	_		_	_	_	25.5	0.00	25.5	2.55	0.00	_	89.3
Total	_	_	_	_	_	_	_	_	_	_		25.5	0.00	25.5	2.55	0.00	_	89.3
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Apartme nts Low Rise		_	_	_	_	_	_	_	_	_	_	4.23	0.00	4.23	0.42	0.00	_	14.8
Total	_	_	_	_	_	_	_	_	_	_	_	4.23	0.00	4.23	0.42	0.00	_	14.8

# 4.6. Refrigerant Emissions by Land Use

## 4.6.1. Unmitigated

Land Use	TOG	ROG		СО			PM10D		PM2.5E				NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Apartme nts Low Rise		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.28	0.28
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.28	0.28
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Apartme nts Low Rise		_		_	_	_	_	_	_	_	_	_		_	_	_	0.28	0.28
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.28	0.28
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Apartme Low Rise	_	_	_	_	_	_	_	_	_	_	_	_	_		_	_	0.05	0.05
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.05	0.05

## 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)

Equipm ent Type	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

### 4.8. Stationary Emissions By Equipment Type

#### 4.8.1. Unmitigated

Equipm ent Type	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	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)

Equipm ent Type	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	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

Vegetati	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
on																		

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	TOG	ROG	NOx	СО		PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_		_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

		, , ,	.,	<b>J</b> ,	J	, ,		(	,	<i>J</i> , .		/						
Species	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily,	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Summer																		
(Max)																		

Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Sequest ered	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Remove d	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Sequest ered	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Remove d	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Sequest ered	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Remove d	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
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
Site Preparation	Site Preparation	1/31/2025	2/7/2025	5.00	5.00	_
Grading	Grading	2/8/2025	2/19/2025	5.00	8.00	_
Building Construction	Building Construction	2/20/2025	1/8/2026	5.00	230	_
Paving	Paving	1/9/2026	2/3/2026	5.00	18.0	_
Architectural Coating	Architectural Coating	2/4/2026	3/1/2026	5.00	18.0	_

# 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
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Back hoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42

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Paving	Paving Equipment	Diesel	Average	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	6.00	36.0	0.38
Paving	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

# 5.3. Construction Vehicles

## 5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	_	_	_	_
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	_	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	_	_	HHDT
Grading	_	_	_	_
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	_	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	_	_	HHDT
Building Construction	_	_	_	_
Building Construction	Worker	46.1	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	6.84	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	_	_	HHDT
Paving	_	_	_	_
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2

Paving	Vendor	_	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	_	_	HHDT
Architectural Coating	_	_	_	_
Architectural Coating	Worker	9.22	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	_	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	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	79,372	26,457	0.00	0.00	_

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	_	_	7.50	0.00	_
Grading	_	_	8.00	0.00	_
Paving	0.00	0.00	0.00	0.00	_

### 5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied Frequency (per day) PM10 Reduction PM2.5 Reduction
-------------------------------------------------------------------------------

Water Exposed Area	2	61%	61%
·			t contract the second contract to the second

## 5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Low Rise	_	0%

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005
2026	0.00	532	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
Apartments Low Rise	468	521	402	170,261	3,864	4,296	3,315	1,404,160

## 5.10. Operational Area Sources

#### 5.10.1. Hearths

### 5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Low Rise	_
Wood Fireplaces	22
Gas Fireplaces	35

Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	6
Conventional Wood Stoves	0
Catalytic Wood Stoves	3
Non-Catalytic Wood Stoves	3
Pellet Wood Stoves	0

#### 5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)		Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
79371.9	26,457	0.00	0.00	_

#### 5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

## 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)
Apartments Low Rise	299,888	346	0.0330	0.0040	1,066,020

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Low Rise	2,667,595	1,415,036

## 5.13. Operational Waste Generation

#### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Low Rise	47.4	_

## 5.14. Operational Refrigeration and Air Conditioning Equipment

#### 5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

## 5.15. Operational Off-Road Equipment

#### 5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
- 1 1 1 21 21 21 21 A	''			· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	

## 5.16. Stationary Sources

#### 5.16.1. Emergency Generators and Fire Pumps

Eqι	uipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Lqu	alpitionic Typo	i dei Type	radificer per bay	riodis poi Day	riours por rour	1 lorsopower	Load ractor

#### 5.16.2. Process Boilers

Equipment Type Fuel Type Number Boiler Rating (MMBtu/hr) Daily Heat Input (MMBtu/day) Annual Heat Input (MMBtu/yr)

#### 5.17. User Defined

Equipment Type

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

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type Initial Acres Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type Number Electricity Saved (kWh/year) Natural Gas Saved (btu/year)

## 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	33.8	annual days of extreme heat
Extreme Precipitation	3.50	annual days with precipitation above 20 mm
Sea Level Rise	_	meters of inundation depth
Wildfire	10.8	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 ¾ 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	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	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	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	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 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.

	Result for Project Census Tract
Exposure Indicators	_
AQ-Ozone	95.3
AQ-PM	41.4
AQ-DPM	14.5
Drinking Water	17.9
Lead Risk Housing	28.0

Pesticides	0.00
Toxic Releases	27.7
Traffic	90.1
Effect Indicators	_
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	50.1
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	_
Asthma	43.8
Cardio-vascular Cardio-vascular	78.1
Low Birth Weights	61.7
Socioeconomic Factor Indicators	_
Education	67.6
Housing	47.6
Linguistic	53.9
Poverty	66.6
Unemployment	47.0

## 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.

	Result for Project Census Tract
Economic	_
Above Poverty	31.8747594
Employed	8.828435776
Median HI	38.08546131
Education	_

Bachelor's or higher	23.23880405
High school enrollment	13.19132555
Preschool enrollment	55.10073143
Transportation	_
Auto Access	70.20402926
Active commuting	34.31284486
Social	_
2-parent households	46.79840883
Voting	34.99294238
Neighborhood	_
Alcohol availability	73.86115745
Park access	2.194276915
Retail density	15.80905941
Supermarket access	27.08841268
Tree canopy	11.9209547
Housing	_
Homeownership	64.54510458
Housing habitability	35.39073528
Low-inc homeowner severe housing cost burden	43.82137816
Low-inc renter severe housing cost burden	2.091620685
Uncrowded housing	43.53907353
Health Outcomes	_
Insured adults	42.7691518
Arthritis	29.1
Asthma ER Admissions	49.7
High Blood Pressure	40.5
Cancer (excluding skin)	49.7
Asthma	19.7

Coronary Heart Disease	34.0
Chronic Obstructive Pulmonary Disease	19.2
Diagnosed Diabetes	36.9
Life Expectancy at Birth	25.5
Cognitively Disabled	17.4
Physically Disabled	17.3
Heart Attack ER Admissions	37.7
Mental Health Not Good	26.2
Chronic Kidney Disease	45.1
Obesity	29.7
Pedestrian Injuries	71.1
Physical Health Not Good	28.8
Stroke	29.9
Health Risk Behaviors	_
Binge Drinking	45.1
Current Smoker	23.0
No Leisure Time for Physical Activity	37.6
Climate Change Exposures	_
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	39.2
Elderly	59.3
English Speaking	46.1
Foreign-born	26.4
Outdoor Workers	14.0
Climate Change Adaptive Capacity	_
Impervious Surface Cover	84.0
Traffic Density	12.1

Traffic Access	23.0
Other Indices	_
Hardship	77.5
Other Decision Support	_
2016 Voting	47.9

#### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	42.0
Healthy Places Index Score for Project Location (b)	25.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
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

Screen	Justification
Land Use	Based on Site Plan
Construction: Construction Phases	No Demolition
Operations: Hearths	No fireplaces