



## Technical Memorandum

**To:** Kathy Pease, AICP, Planner, City of Marysville

**From:** Josh Ferris, Senior Analyst

**Date:** February 13, 2024

**Subject:** B Street Project Air Quality Analysis

On behalf of Engstrom Properties, Inc., Acorn Environmental conducted an air quality analysis of the proposed B Street Project located on B Street between 12<sup>th</sup> and 14<sup>th</sup> Streets in Marysville, California. The project consists of the development of a 113-room hotel (62,620 S.F.), 2,500 S.F. restaurant with drive thru, and 16,000 S.F. grocery market on an approximately 4.96-acre project site.

The analysis was conducted using the California Emissions Estimator Model (CalEEMod) Version 2022.1. Construction was assumed to begin in May 2024, with operation commencing in 2025. CalEEMod default values were used except for VOC content of architectural coatings which assumed compliance with Feather River Air Quality Management District (FRAQMD) Rule 3.15. CalEEMod default data for construction equipment and durations were used except that the demolition phase was deleted due to the lack of buildings on the project site, and site preparation equipment was adjusted to account for the existing conditions of the site being close to finish grade and without significant vegetation or debris. Without any mitigation measures identified in the CalEEMod analysis, the proposed project will not exceed FRAQMD thresholds of significance for construction or operation. The results of the CalEEMod analysis are summarized below. A detailed CalEEMod report is attached.

It should be noted that the developer will be required to comply with all applicable FRAQMD Rules and Regulations.

### Estimated Construction and Operation Emissions

Project Phase	NOx	ROG	PM10
<b>Construction</b>			
Maximum Construction Emissions (lbs/day)	18.3	21.0	8.07
Construction Emissions (tons/year)	1.33	0.22	-
Construction Threshold	25 lbs/day multiplied by project length, not to exceed 4.5 tons/year	25 lbs/day multiplied by project length, not to exceed 4.5 tons/year	80 lbs/day
Significant?	No	No	No
<b>Operation</b>			
Maximum Construction Emissions (lbs/day)	16.8	22.9	14.6
Operation Threshold	25 lbs/day	25 lbs/day	80 lbs/day
Significant?	No	No	No

# B Street Marysville 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. Site Preparation (2024) - Unmitigated
  - 3.3. Grading (2024) - Unmitigated
  - 3.5. Building Construction (2024) - Unmitigated
  - 3.7. Building Construction (2025) - Unmitigated

3.9. Paving (2025) - Unmitigated

3.11. Architectural Coating (2025) - 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

5.10.1.1. 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	B Street Marysville
Construction Start Date	5/1/2024
Operational Year	2025
Lead Agency	City of Marysville
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.40
Precipitation (days)	39.6
Location	39.149655355015454, -121.58679584938895
County	Yuba
City	Marysville
Air District	Feather River AQMD
Air Basin	Sacramento Valley
TAZ	338
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.21

## 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
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Hotel	113	Room	2.43	62,620	15,550	—	—	—
Supermarket	16.0	1000sqft	1.78	16,000	16,291	—	—	—
Fast Food Restaurant with Drive Thru	2.50	1000sqft	0.74	2,500	5,184	—	—	—

### 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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Unmit.	1.42	12.1	0.50	0.43	0.93	0.46	0.10	0.57	3,211
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	21.0	18.3	0.84	7.23	8.07	0.77	3.46	4.23	3,165
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	1.19	7.30	0.31	0.52	0.82	0.28	0.20	0.48	1,845
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	0.22	1.33	0.06	0.09	0.15	0.05	0.04	0.09	306
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—
Threshold	25.0	25.0	—	—	80.0	—	—	—	—
Unmit.	No	No	—	—	No	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—

Threshold	25.0	25.0	—	—	80.0	—	—	—	—
Unmit.	No	No	—	—	No	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—
Threshold	4.50	4.50	—	—	—	—	—	—	—
Unmit.	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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2024	1.42	12.1	0.50	0.43	0.93	0.46	0.10	0.57	3,211
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2024	1.98	18.3	0.84	7.23	8.07	0.77	3.46	4.23	3,165
2025	21.0	11.3	0.44	0.43	0.87	0.40	0.10	0.51	3,152
Average Daily	—	—	—	—	—	—	—	—	—
2024	0.84	7.30	0.31	0.52	0.82	0.28	0.20	0.48	1,845
2025	1.19	1.17	0.05	0.04	0.09	0.04	0.01	0.05	310
Annual	—	—	—	—	—	—	—	—	—
2024	0.15	1.33	0.06	0.09	0.15	0.05	0.04	0.09	306
2025	0.22	0.21	0.01	0.01	0.02	0.01	< 0.005	0.01	51.3

## 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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Unmit.	22.9	14.4	0.27	14.3	14.6	0.26	3.64	3.90	24,149
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	19.7	16.8	0.26	14.3	14.6	0.25	3.64	3.89	22,608
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	20.1	15.4	0.26	13.5	13.7	0.25	3.42	3.67	22,351
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	3.67	2.81	0.05	2.46	2.50	0.05	0.63	0.67	3,700
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—
Threshold	25.0	25.0	—	—	80.0	—	—	—	—
Unmit.	No	No	—	—	No	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—
Threshold	25.0	25.0	—	—	80.0	—	—	—	—
Unmit.	No	No	—	—	No	—	—	—	—

### 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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Mobile	20.3	13.6	0.21	14.3	14.5	0.20	3.64	3.83	18,686
Area	2.52	0.03	0.01	—	0.01	< 0.005	—	< 0.005	14.6
Energy	0.04	0.75	0.06	—	0.06	0.06	—	0.06	1,632
Water	—	—	—	—	—	—	—	—	56.3
Waste	—	—	—	—	—	—	—	—	341
Refrig.	—	—	—	—	—	—	—	—	3,419
Total	22.9	14.4	0.27	14.3	14.6	0.26	3.64	3.90	24,149

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Mobile	17.7	16.1	0.21	14.3	14.5	0.20	3.64	3.83	17,159
Area	1.94	—	—	—	—	—	—	—	—
Energy	0.04	0.75	0.06	—	0.06	0.06	—	0.06	1,632
Water	—	—	—	—	—	—	—	—	56.3
Waste	—	—	—	—	—	—	—	—	341
Refrig.	—	—	—	—	—	—	—	—	3,419
Total	19.7	16.8	0.26	14.3	14.6	0.25	3.64	3.89	22,608
Average Daily	—	—	—	—	—	—	—	—	—
Mobile	17.8	14.6	0.20	13.5	13.7	0.19	3.42	3.61	16,895
Area	2.23	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	7.18
Energy	0.04	0.75	0.06	—	0.06	0.06	—	0.06	1,632
Water	—	—	—	—	—	—	—	—	56.3
Waste	—	—	—	—	—	—	—	—	341
Refrig.	—	—	—	—	—	—	—	—	3,419
Total	20.1	15.4	0.26	13.5	13.7	0.25	3.42	3.67	22,351
Annual	—	—	—	—	—	—	—	—	—
Mobile	3.25	2.67	0.04	2.46	2.49	0.03	0.63	0.66	2,797
Area	0.41	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.19
Energy	0.01	0.14	0.01	—	0.01	0.01	—	0.01	270
Water	—	—	—	—	—	—	—	—	9.32
Waste	—	—	—	—	—	—	—	—	56.5
Refrig.	—	—	—	—	—	—	—	—	566
Total	3.67	2.81	0.05	2.46	2.50	0.05	0.63	0.67	3,700

### 3. Construction Emissions Details

### 3.1. Site Preparation (2024) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	14.0	0.62	—	0.62	0.57	—	0.57	2,257
Dust From Material Movement	—	—	—	6.55	6.55	—	3.37	3.37	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.19	0.01	—	0.01	0.01	—	0.01	30.9
Dust From Material Movement	—	—	—	0.09	0.09	—	0.05	0.05	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	5.12
Dust From Material Movement	—	—	—	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
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.00	0.10	0.10	0.00	0.02	0.02	104
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.47
Vendor	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
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.24
Vendor	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

### 3.3. Grading (2024) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	18.2	0.84	—	0.84	0.77	—	0.77	2,969
Dust From Material Movement	—	—	—	7.08	7.08	—	3.42	3.42	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.50	0.02	—	0.02	0.02	—	0.02	81.3
Dust From Material Movement	—	—	—	0.19	0.19	—	0.09	0.09	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.09	< 0.005	—	< 0.005	< 0.005	—	< 0.005	13.5
Dust From Material Movement	—	—	—	0.04	0.04	—	0.02	0.02	—
Onsite truck	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	0.08	0.09	0.00	0.15	0.15	0.00	0.04	0.04	156
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	4.40
Vendor	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
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 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
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.5. Building Construction (2024) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	0.50	—	0.50	0.46	—	0.46	2,406



B Street Marysville Detailed Report, 2/13/2024

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	0.50	—	0.50	0.46	—	0.46	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	6.10	0.27	—	0.27	0.25	—	0.25	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.11	0.05	—	0.05	0.05	—	0.05	217
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.20	0.15	0.00	0.33	0.33	0.00	0.08	0.08	383
Vendor	0.02	0.70	0.01	0.10	0.11	0.01	0.03	0.03	422
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.18	0.20	0.00	0.33	0.33	0.00	0.08	0.08	339
Vendor	0.02	0.75	0.01	0.10	0.11	0.01	0.03	0.03	421
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.00	0.17	0.17	0.00	0.04	0.04	189
Vendor	0.01	0.40	< 0.005	0.05	0.06	< 0.005	0.01	0.02	229
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.03	0.03	0.00	0.01	0.01	31.3

Vendor	< 0.005	0.07	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	37.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.7. Building Construction (2025) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	0.43	—	0.43	0.40	—	0.40	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.74	0.03	—	0.03	0.03	—	0.03	169
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.13	0.01	—	0.01	0.01	—	0.01	28.1
Onsite truck	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	0.17	0.18	0.00	0.33	0.33	0.00	0.08	0.08	332
Vendor	0.02	0.71	0.01	0.10	0.11	0.01	0.03	0.03	415
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.00	0.02	0.02	0.00	0.01	0.01	24.0
Vendor	< 0.005	0.05	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	29.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.97
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	4.84
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.9. Paving (2025) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	6.52	0.29	—	0.29	0.26	—	0.26	1,355
Paving	0.40	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.32	0.01	—	0.01	0.01	—	0.01	66.8
Paving	0.02	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	< 0.005	—	< 0.005	< 0.005	—	< 0.005	11.1
Paving	< 0.005	—	—	—	—	—	—	—	—
Onsite truck	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	0.11	0.00	0.20	0.20	0.00	0.05	0.05	204
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	10.4
Vendor	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
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.71
Vendor	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

### 3.11. Architectural Coating (2025) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	0.03	—	0.03	0.03	—	0.03	134
Architectural Coatings	20.8	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.04	< 0.005	—	< 0.005	< 0.005	—	< 0.005	6.61
Architectural Coatings	1.03	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.09
Architectural Coatings	0.19	—	—	—	—	—	—	—	—
Onsite truck	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	0.03	0.04	0.00	0.07	0.07	0.00	0.02	0.02	66.3
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.36
Vendor	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
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.56
Vendor	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

#### 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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Hotel	5.59	5.47	0.09	6.46	6.55	0.08	1.64	1.73	8,276
Supermarket	7.94	4.72	0.07	4.71	4.78	0.07	1.20	1.26	6,205
Fast Food Restaurant with Drive Thru	6.82	3.44	0.05	3.14	3.19	0.05	0.80	0.84	4,205
Total	20.3	13.6	0.21	14.3	14.5	0.20	3.64	3.83	18,686
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Hotel	4.99	6.44	0.09	6.46	6.55	0.09	1.64	1.73	7,578
Supermarket	6.89	5.56	0.07	4.71	4.78	0.07	1.20	1.26	5,706
Fast Food Restaurant with Drive Thru	5.87	4.05	0.05	3.14	3.19	0.05	0.80	0.84	3,876
Total	17.7	16.1	0.21	14.3	14.5	0.20	3.64	3.83	17,159
Annual	—	—	—	—	—	—	—	—	—
Hotel	0.92	1.10	0.02	1.15	1.17	0.02	0.29	0.31	1,279
Supermarket	1.25	0.88	0.01	0.75	0.76	0.01	0.19	0.20	869
Fast Food Restaurant with Drive Thru	1.09	0.69	0.01	0.56	0.56	0.01	0.14	0.15	650
Total	3.25	2.67	0.04	2.46	2.49	0.03	0.63	0.66	2,797

## 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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	217
Supermarket	—	—	—	—	—	—	—	—	462
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	56.7
Total	—	—	—	—	—	—	—	—	736
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	217
Supermarket	—	—	—	—	—	—	—	—	462
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	56.7
Total	—	—	—	—	—	—	—	—	736
Annual	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	35.9
Supermarket	—	—	—	—	—	—	—	—	76.6
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	9.38
Total	—	—	—	—	—	—	—	—	122

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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
----------	-----	-----	-------	-------	-------	--------	--------	--------	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Hotel	0.03	0.54	0.04	—	0.04	0.04	—	0.04	643
Supermarket	0.01	0.13	0.01	—	0.01	0.01	—	0.01	155
Fast Food Restaurant with Drive Thru	< 0.005	0.08	0.01	—	0.01	0.01	—	0.01	97.9
Total	0.04	0.75	0.06	—	0.06	0.06	—	0.06	896
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Hotel	0.03	0.54	0.04	—	0.04	0.04	—	0.04	643
Supermarket	0.01	0.13	0.01	—	0.01	0.01	—	0.01	155
Fast Food Restaurant with Drive Thru	< 0.005	0.08	0.01	—	0.01	0.01	—	0.01	97.9
Total	0.04	0.75	0.06	—	0.06	0.06	—	0.06	896
Annual	—	—	—	—	—	—	—	—	—
Hotel	0.01	0.10	0.01	—	0.01	0.01	—	0.01	106
Supermarket	< 0.005	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	25.7
Fast Food Restaurant with Drive Thru	< 0.005	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	16.2
Total	0.01	0.14	0.01	—	0.01	0.01	—	0.01	148

### 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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—



Consumer Products	1.74	—	—	—	—	—	—	—	—
Architectural Coatings	0.21	—	—	—	—	—	—	—	—
Landscape Equipment	0.58	0.03	0.01	—	0.01	< 0.005	—	< 0.005	14.6
Total	2.52	0.03	0.01	—	0.01	< 0.005	—	< 0.005	14.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Consumer Products	1.74	—	—	—	—	—	—	—	—
Architectural Coatings	0.21	—	—	—	—	—	—	—	—
Total	1.94	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Consumer Products	0.32	—	—	—	—	—	—	—	—
Architectural Coatings	0.04	—	—	—	—	—	—	—	—
Landscape Equipment	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.19
Total	0.41	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.19

#### 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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	28.8
Supermarket	—	—	—	—	—	—	—	—	19.9

Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	7.63
Total	—	—	—	—	—	—	—	—	56.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	28.8
Supermarket	—	—	—	—	—	—	—	—	19.9
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	7.63
Total	—	—	—	—	—	—	—	—	56.3
Annual	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	4.77
Supermarket	—	—	—	—	—	—	—	—	3.29
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	1.26
Total	—	—	—	—	—	—	—	—	9.32

#### 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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	117
Supermarket	—	—	—	—	—	—	—	—	170
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	54.3

Total	—	—	—	—	—	—	—	—	341
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	117
Supermarket	—	—	—	—	—	—	—	—	170
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	54.3
Total	—	—	—	—	—	—	—	—	341
Annual	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	19.3
Supermarket	—	—	—	—	—	—	—	—	28.2
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	8.99
Total	—	—	—	—	—	—	—	—	56.5

#### 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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	97.9
Supermarket	—	—	—	—	—	—	—	—	3,317
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	3.91
Total	—	—	—	—	—	—	—	—	3,419
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Hotel	—	—	—	—	—	—	—	—	97.9
Supermarket	—	—	—	—	—	—	—	—	3,317
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	3.91
Total	—	—	—	—	—	—	—	—	3,419
Annual	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	16.2
Supermarket	—	—	—	—	—	—	—	—	549
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	0.65
Total	—	—	—	—	—	—	—	—	566

#### 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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	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
Site Preparation	Site Preparation	3/8/2024	3/14/2024	5.00	5.00	—
Grading	Grading	3/15/2024	3/28/2024	5.00	10.0	—

Building Construction	Building Construction	3/29/2024	2/5/2025	5.00	224	—
Paving	Paving	2/6/2025	3/3/2025	5.00	18.0	—
Architectural Coating	Architectural Coating	3/4/2025	3/27/2025	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	1.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
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	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Tractors/Loaders/Backhoes	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
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
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



Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
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### 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	10.0	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	32.5	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	13.3	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—

Architectural Coating	Worker	6.49	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	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	0.00	0.00	121,265	40,422	—

## 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	—	—	1.00	0.00	—
Grading	—	—	5.00	0.00	—
Paving	0.00	0.00	0.00	0.00	2.90

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
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Hotel	0.80	95%
Supermarket	1.50	95%
Fast Food Restaurant with Drive Thru	0.60	95%

### 5.8. Construction Electricity Consumption and Emissions Factors

#### kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	204	0.03	< 0.005
2025	0.00	204	0.03	< 0.005

### 5.9. Operational Mobile Sources

#### 5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMТ/Weekday	VMТ/Saturday	VMТ/Sunday	VMТ/Year
Hotel	903	903	903	329,548	9,076	9,076	9,076	3,312,690
Supermarket	1,501	1,501	1,501	548,026	5,836	5,794	6,614	2,168,467
Fast Food Restaurant with Drive Thru	1,334	1,334	1,334	486,883	4,409	4,340	4,340	1,602,247

### 5.10. Operational Area Sources

#### 5.10.1. Hearths

##### 5.10.1.1. Unmitigated

#### 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)
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0	0.00	121,265	40,422	—
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### 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)
Hotel	383,739	204	0.0330	0.0040	2,001,147
Supermarket	819,467	204	0.0330	0.0040	483,803
Fast Food Restaurant with Drive Thru	100,384	204	0.0330	0.0040	304,627

### 5.12. Operational Water and Wastewater Consumption

#### 5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Hotel	2,866,445	181,980
Supermarket	1,972,291	190,652
Fast Food Restaurant with Drive Thru	758,834	60,668

### 5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Hotel	61.9	—
Supermarket	90.2	—
Fast Food Restaurant with Drive Thru	28.8	—

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
Hotel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Hotel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Hotel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Supermarket	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Supermarket	Supermarket refrigeration and condensing units	R-404A	3,922	26.5	16.5	16.5	18.0
Fast Food Restaurant with Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Fast Food Restaurant with Drive Thru	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Fast Food Restaurant with Drive Thru	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

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
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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
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5.16.2. Process Boilers

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

Equipment Type	Fuel Type
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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	28.2	annual days of extreme heat
Extreme Precipitation	4.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	8.14	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	5	0	0	N/A
Extreme Precipitation	1	0	0	N/A

Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	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	5	1	1	4
Extreme Precipitation	1	1	1	2
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	1	1	1	2
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	47.0
AQ-PM	37.6
AQ-DPM	42.5
Drinking Water	34.9
Lead Risk Housing	72.1
Pesticides	90.5
Toxic Releases	5.55
Traffic	11.5
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	28.4
Haz Waste Facilities/Generators	56.4
Impaired Water Bodies	72.2
Solid Waste	94.1
Sensitive Population	—
Asthma	77.5
Cardio-vascular	92.6
Low Birth Weights	35.0
Socioeconomic Factor Indicators	—
Education	54.6
Housing	24.9

Linguistic	14.3
Poverty	59.5
Unemployment	63.4

## 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	30.89952521
Employed	9.39304504
Median HI	28.32028744
Education	—
Bachelor's or higher	27.70435006
High school enrollment	100
Preschool enrollment	58.48838701
Transportation	—
Auto Access	23.27730014
Active commuting	44.12934685
Social	—
2-parent households	29.84729886
Voting	34.74913384
Neighborhood	—
Alcohol availability	42.92313615
Park access	81.35506224
Retail density	60.60567176
Supermarket access	55.47286026
Tree canopy	80.9829334

Housing	—
Homeownership	33.7482356
Housing habitability	45.7590145
Low-inc homeowner severe housing cost burden	44.23200308
Low-inc renter severe housing cost burden	60.09239061
Uncrowded housing	34.89028615
Health Outcomes	—
Insured adults	37.05889901
Arthritis	0.0
Asthma ER Admissions	43.6
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	11.8
Cognitively Disabled	4.2
Physically Disabled	16.6
Heart Attack ER Admissions	4.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	40.4
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—

Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	11.1
Elderly	45.2
English Speaking	58.2
Foreign-born	14.5
Outdoor Workers	22.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	38.4
Traffic Density	16.5
Traffic Access	0.0
Other Indices	—
Hardship	72.5
Other Decision Support	—
2016 Voting	26.8

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	62.0
Healthy Places Index Score for Project Location (b)	28.0
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 Plans dated 12/21/23
Construction: Architectural Coatings	Compliance with Rule 3.15
Construction: Paving	Site plan
Operations: Vehicle Data	VMT analysis
Operations: Architectural Coatings	Compliance with Rule 3.15
Construction: Construction Phases	No demolition of buildings is required. The project site is rough graded and minimal site preparation is required.
Construction: Dust From Material Movement	Total site = 4.96 acres
Construction: Off-Road Equipment	The project site is close to the expected finish grade. Minimal vegetation or debris is located on the project site.