

April 15, 2024

04193.00001.001

Anthony Ybarra, Vice President
Walton Global
8800 North Gainey Center Drive, Suite 345
Scottsdale, AZ 85258

Subject: **Riverside Views Grading Permit Air Quality and Greenhouse Gas Assessment**

Dear Mr. Ybarra:

HELIX Environmental Planning, Inc. (HELIX) conducted an assessment of potential air quality and greenhouse gas (GHG) emission impacts for the movement of soil associated with the proposed grading permit for the Riverside Views Project (project). This letter report provides the anticipated construction emissions for comparison with the applicable regional and localized emissions standards.

PROJECT DESCRIPTION

Walton Global (Applicant) is proposing a grading permit for a 25.6-acre area (herein referred to as “grading permit site”) within an approximately 79.2-acre property located at the northeast corner of Old Newport Road at Briggs Road, immediately east of the City of Menifee (Assessor’s Parcel Number 461-170-001). The proposed grading permit would allow for the excavation of approximately 184,000 cubic yards (CY) of soil from the grading permit site, which would be exported to an adjacent property located immediately northwest of the grading permit site (herein referred to as the “receiving site”). Refer to Figure 1, *Aerial Photograph*.

Construction activities are ongoing at the receiving site, and all soil material exported from the grading permit site will be stockpiled in the portions of the receiving site that have been fully disturbed by ongoing grading and construction activities. Following completion of grading activities, the grading permit site would be hydroseeded to provide soil stability and reduce the potential for soil erosion. The proposed grading permit would not authorize any new development or construction activities at the grading permit site beyond the grading activities that would be required to facilitate the export of 184,000 CY of soil material.

METHODOLOGY AND ASSUMPTIONS

Criteria pollutant, precursor, and GHG emissions from the project were calculated using the California Emissions Estimator Model (CalEEMod), Version 2022.1. CalEEMod is a statewide land use emissions

computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. The model was developed by the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts. CalEEMod allows for the use of default data (e.g., emission factors, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions and/or user-defined inputs. The calculation methodology and input data used in CalEEMod can be found in the CalEEMod User's Guide Appendices A, D, and E (CAPCOA 2022). CalEEMod output files for the project are included in Attachment A to this report.

Construction input data for CalEEMod include but are not limited to (1) the anticipated start and finish dates of construction activity; (2) inventories of construction equipment to be used; (3) areas to be excavated and graded; and (4) volumes of materials to be exported from and imported to the Project area. The CalEEMod calculations for the project are based on a combination of default data, as described above, and Applicant-provided project assumptions. The project Applicant identified the off-road equipment fleet mix would include five scrapers, two dozers, and one water truck. The scrapers would facilitate the export of 184,000 CY of soil from the grading permit site to the adjacent receiving site via approximately 425 scraper trips per day. The grading activity would occur between May 27, 2024, and June 7, 2024, with work occurring eight hours per day and five days per week.

CalEEMod has the capability to calculate reductions in construction emissions from the effects of dust control, diesel-engine classifications, and other selected emissions reduction measures. Construction emission calculations presented herein assume exposed surfaces would be watered two times daily during grading in accordance with South Coast Air Quality Management District (SCAQMD) Rule 403. These calculations also assume the scrapers and dozers required for the proposed grading activity would have Tier 4 Final engines based on information provided by the project Applicant.

THRESHOLDS

The SCAQMD has established significance thresholds to assess the regional and localized impacts of project-related air pollutant emissions. The significance thresholds are updated, as needed, to appropriately represent the most current technical information and attainment status in the South Coast Air Basin (SCAB). Table 1, *SCAQMD Regional Significance Thresholds*, presents the current regional daily thresholds for short-term construction emissions. A project with daily emission rates below these thresholds would not obstruct the attainment of air quality standards for the SCAB.

Table 1
SCAQMD REGIONAL SIGNIFICANCE THRESHOLDS

Pollutant	Mass Daily Construction Thresholds (pounds per day)
VOC	75
NO _x	100
CO	550
PM ₁₀	150
PM _{2.5}	55

Pollutant	Mass Daily Construction Thresholds (pounds per day)
SO _x	150
Lead	3

Source: SCAQMD 2023

VOC = volatile organic compound; NO_x = nitrogen oxides; CO = carbon monoxide;

PM₁₀ = respirable particulate matter with a diameter of 10 microns or less;

PM_{2.5} = fine particulate matter with a diameter of 2.5 microns or less; SO_x = sulfur oxides

In addition to regional thresholds identified for the attainment of air quality standards, SCAQMD has developed the localized significance threshold (LST) methodology based on mass rate look-up tables by source receptor area (SRA) that can be used by public agencies to determine whether a project may generate significant adverse localized air quality impacts for sensitive receptors. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard; they are developed based on the ambient concentrations of that pollutant for each SRA (SCAQMD 2009). The LST methodology translates the concentration standards into emissions thresholds that are a function of project site area, source-to-receptor distance, and the location within the SCAB. The LST methodology is recommended to be limited to projects of five acres or less and to avoid the need for complex dispersion modeling. For projects that exceed five acres, such as the proposed grading permit site, the five-acre LST look-up values can be used as a screening tool to determine the need for more detailed analysis. This approach is conservative as it assumes that all on-site emissions would occur within a five-acre area and over-predicts potential localized impacts (i.e., more pollutant emissions occurring within a smaller area and within closer proximity to potential sensitive receptors). If a project exceeds the LST look-up values, then the SCAQMD recommends that project-specific localized air quality modeling be performed.

The proposed project is within SRA 24, Perris Valley (SCAQMD 1999). The closest sensitive receptors are the single-family residences approximately 66 feet (20 meters) west of the project site, across Briggs Road. Therefore, the LSTs in SRA 24 for receptors located within 82 feet (25 meters) and for project sites less than or equal to five acres were used in the project LST analysis. The applicable LSTs for the project are shown in Table 2, *SCAQMD Localized Significance Thresholds*.

Table 2
SCAQMD LOCALIZED SIGNIFICANCE THRESHOLDS

Pollutant	Maximum On-Site Construction Emissions (pounds per day)
NO _x	270
CO	1,577
PM ₁₀	13
PM _{2.5}	8

Source: SCAQMD 2009

NO_x = nitrogen oxides; CO = carbon monoxide; PM₁₀ = respirable particulate matter with a diameter of 10 microns or less; PM_{2.5} = fine particulate matter with a diameter of 2.5 microns or less

The Riverside County Climate Action Plan, Appendix D, establishes a screening level threshold of 3,000 metric tons (MT) of carbon dioxide equivalents (CO₂e) per year. County guidance also recommends including construction emissions (amortized over a typical duration of 30 years) in the comparison to the screening threshold. The 3,000 MT CO₂e per year value is used in defining small projects' GHG emissions that are considered less than significant, requiring no further screening or alternative GHG mitigation analysis.

RESULTS

The project's construction emissions were estimated using CalEEMod Version 2022.1, Applicant-provided project assumptions, and default model settings, as described above. The results of the calculations for maximum daily emissions during grading are shown in Table 3, *Maximum Daily Grading Emissions*. The data is presented as the maximum anticipated daily emissions for comparison with the SCAQMD regional thresholds shown in Table 1.

Table 3
MAXIMUM DAILY GRADING EMISSIONS

Construction Activity	Pollutant Emissions (pounds/day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Grading Maximum Daily Emissions	1.7	9.2	64.7	0.1	8.2	3.3
<i>SCAQMD Regional Thresholds</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
<i>Exceed Threshold?</i>	No	No	No	No	No	No

Source: CalEEMod (output data is provided in Attachment A)

VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = oxides of sulfur;

PM₁₀ = particulate matter less than 10 microns in diameter; PM_{2.5} = particulate matter less than 2.5 microns in diameter;

SCAQMD = South Coast Air Quality Management District

As shown in Table 3, the maximum daily emissions of criteria pollutants and precursors related to the proposed grading activity would not exceed the SCAQMD regional significance thresholds. Therefore, criteria pollutants generated during project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment.

The localized effects from the on-site portion of daily construction emissions were evaluated at sensitive receptor locations west of the grading permit site in accordance with the SCAQMD's LST methodology. Consistent with the LST guidelines, when quantifying mass emissions for localized analysis, only emissions that occur on-site are considered. Emissions related to off-site construction worker trips are not considered in the evaluation of localized impacts, as these emissions are distributed throughout the region. Table 4, *Maximum Daily Localized Emissions*, provides the maximum on-site daily emissions calculated in CalEEMod and compares these emissions with the applicable LSTs for SRA 24, receptors located within 82 feet (25 meters), and project sites less than or equal to five acres.

Table 4
MAXIMUM DAILY LOCALIZED EMISSIONS

Construction Phase	Pollutant Emissions (pounds/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Grading Maximum On-Site Daily Emissions	9.1	63.0	7.9	3.2
SCAQMD LST	270	1,577	13	8
Exceed Threshold?	No	No	No	No

Source: CalEEMod (output data is provided in Attachment A)

NO_x = oxides of nitrogen; CO = carbon monoxide; PM₁₀ = particulate matter less than 10 microns; PM_{2.5} = particulate matter less than 2.5 microns; SCAQMD = South Coast Air Quality Management District; LST = Localized Significance Threshold

As shown in Table 4, localized project construction emissions would remain below their respective SCAQMD LSTs. Therefore, on-site project construction emissions of criteria pollutants would not expose sensitive receptors to substantial pollutant concentrations.

Construction activities were estimated to generate a total of 62.9 MT CO₂e. This value can be compared to, and is less than, the County's screening level threshold of 3,000 MT CO₂e per year. Therefore, the project would not result in substantial GHG emissions.

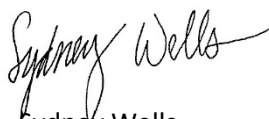
CONCLUSION

Soil export that would occur under the proposed grading permit would not result in emissions exceeding the applicable regional or localized thresholds established by the SCAQMD and County. Therefore, impacts associated with the proposed grading permit would be less than significant, and no new or significant impacts related to construction on the grading permit site would occur.

Sincerely,



Victor Ortiz
Senior Air Quality Specialist



Sydney Wells
Air Quality Specialist

Attachments:

Figure 1: Aerial Photograph
Attachment A: CalEEMod Output

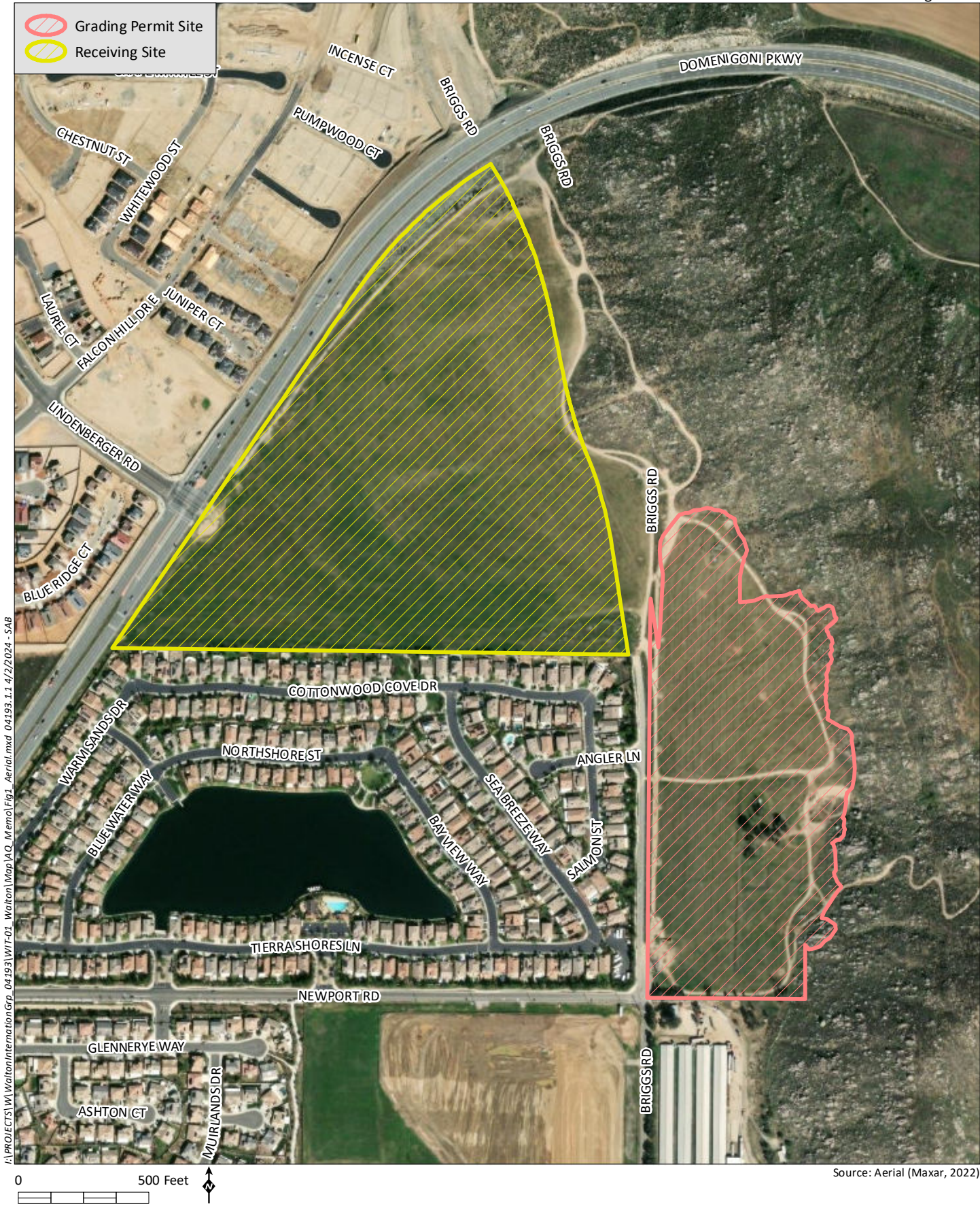
REFERENCES

California Air Pollution Control Officers Association (CAPCOA). 2022. California Emissions Estimator Model User's Guide. March 28. Available at: <http://www.caleemod.com/>.

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

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Attachment A

CalEEMod Output

Riverside Views Grading Permit 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
- 3. Construction Emissions Details
 - 3.1. Grading (2024) - Unmitigated
- 4. Operations Emissions Details
 - 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

5.18. 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	Riverside Views Grading Permit
Construction Start Date	5/27/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	14.0
Location	33.68991193565557, -117.13397652600426
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5508
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

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
Other Non-Asphalt Surfaces	25.6	Acre	25.6	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.82	1.72	9.21	64.7	0.13	0.34	7.82	8.16	0.33	2.97	3.30	—	13,845	13,845	0.56	0.12	1.14	13,896
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.05	0.05	0.25	1.76	< 0.005	0.01	0.21	0.22	0.01	0.08	0.09	—	379	379	0.02	< 0.005	0.01	380
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.01	0.05	0.32	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.02	—	62.7	62.7	< 0.005	< 0.005	< 0.005	62.9

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.82	1.72	9.21	64.7	0.13	0.34	7.82	8.16	0.33	2.97	3.30	—	13,845	13,845	0.56	0.12	1.14	13,896
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.05	0.05	0.25	1.76	< 0.005	0.01	0.21	0.22	0.01	0.08	0.09	—	379	379	0.02	< 0.005	0.01	380
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.01	0.01	0.05	0.32	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.02	—	62.7	62.7	< 0.005	< 0.005	< 0.005	62.9

3. Construction Emissions Details

3.1. Grading (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.70	1.62	9.12	63.0	0.13	0.34	—	0.34	0.33	—	0.33	—	13,557	13,557	0.55	0.11	—	13,604
Dust From Material Movement	—	—	—	—	—	—	7.56	7.56	—	2.91	2.91	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.25	1.73	< 0.005	0.01	—	0.01	0.01	—	0.01	—	371	371	0.02	< 0.005	—	373

Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.08	0.08	—	—	—	—	—	—	—
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-Road Equipment	0.01	0.01	0.05	0.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	61.5	61.5	< 0.005	< 0.005	—	61.7
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.67	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	288	288	0.01	0.01	1.14	292
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	7.34	7.34	< 0.005	< 0.005	0.01	7.44
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	—	1.22	1.22	< 0.005	< 0.005	< 0.005	1.23
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	0.00
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4. Operations Emissions Details

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																		
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	CO	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. 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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Grading	Grading	5/27/2024	6/7/2024	5.00	10.0	—

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
Grading	Rubber Tired Dozers	Diesel	Tier 4 Final	2.00	8.00	367	0.40
Grading	Scrapers	Diesel	Tier 4 Final	5.00	8.00	423	0.48
Grading	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	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)
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5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Grading	—	184,000	60.0	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
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Water Exposed Area	2	61%	61%
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5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Non-Asphalt Surfaces	25.6	0%

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	532	0.03	< 0.005

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	27.8	annual days of extreme heat
Extreme Precipitation	2.60	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	9.89	annual hectares burned

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

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

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

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

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	0	0	0	N/A
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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	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—

AQ-Ozone	84.6
AQ-PM	38.8
AQ-DPM	5.48
Drinking Water	10.2
Lead Risk Housing	12.9
Pesticides	86.4
Toxic Releases	17.2
Traffic	20.9
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	47.4
Haz Waste Facilities/Generators	4.94
Impaired Water Bodies	58.7
Solid Waste	0.00
Sensitive Population	—
Asthma	37.1
Cardio-vascular	71.4
Low Birth Weights	54.8
Socioeconomic Factor Indicators	—
Education	49.8
Housing	33.2
Linguistic	11.3
Poverty	22.2
Unemployment	48.3

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	69.48543565
Employed	22.67419479
Median HI	66.84203773
Education	—
Bachelor's or higher	36.23764917
High school enrollment	100
Preschool enrollment	4.311561658
Transportation	—
Auto Access	98.98626973
Active commuting	32.61901707
Social	—
2-parent households	85.07635057
Voting	31.88759143
Neighborhood	—
Alcohol availability	97.0101373
Park access	5.864237136
Retail density	1.180546644
Supermarket access	6.493006544
Tree canopy	3.592968048
Housing	—
Homeownership	82.47144874
Housing habitability	88.42551007
Low-inc homeowner severe housing cost burden	83.22853843
Low-inc renter severe housing cost burden	54.20248941
Uncrowded housing	96.93314513

Health Outcomes	—
Insured adults	73.18105993
Arthritis	93.3
Asthma ER Admissions	70.5
High Blood Pressure	94.9
Cancer (excluding skin)	77.2
Asthma	49.0
Coronary Heart Disease	95.4
Chronic Obstructive Pulmonary Disease	86.1
Diagnosed Diabetes	95.0
Life Expectancy at Birth	80.5
Cognitively Disabled	25.4
Physically Disabled	45.1
Heart Attack ER Admissions	10.0
Mental Health Not Good	51.7
Chronic Kidney Disease	93.4
Obesity	49.6
Pedestrian Injuries	19.6
Physical Health Not Good	81.0
Stroke	93.8
Health Risk Behaviors	—
Binge Drinking	2.0
Current Smoker	37.0
No Leisure Time for Physical Activity	68.2
Climate Change Exposures	—
Wildfire Risk	12.5
SLR Inundation Area	0.0

Children	0.3
Elderly	68.4
English Speaking	81.2
Foreign-born	18.1
Outdoor Workers	30.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	83.8
Traffic Density	7.3
Traffic Access	23.0
Other Indices	—
Hardship	34.8
Other Decision Support	—
2016 Voting	57.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	30.0
Healthy Places Index Score for Project Location (b)	49.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Only grading activity is proposed.
Construction: Off-Road Equipment	Equipment mix provided by project applicant.
Construction: Trips and VMT	Soil to be moved to adjacent site via scrapers, no haul trips required.