APPENDIX A – AIR QUALITY SCREENING

23811 Washington Ave, C110-333, Murrieta, CA 92562 phone 760-473-1253

September 26, 2024

Eunice Bagwan
Chambers Group, Inc.
3151 Airway Ave Suite F208
Costa Mesa, CA 92626

SUBJECT: Construction Air Quality Screening Evaluation for the Cherry Valley Drainage Project - City of Beaumont CA

The purpose of this Air Quality (AQ) screening letter is to identify any impacts, if any, which may be created from the construction improvements to the Cherry Avenue Channel that runs adjacent to Cherry Avenue in the City of Beaumont, Riverside County, California. The channel has sloped sides, at about a 30-degree angle, with a flat bottom approximately 10 feet wide. The project area is approximately 2,500 feet long running from Oak Valley Parkway in the south, to Cougar Way in the north. The Project would require over-excavation of the channel and then engineered fill to replace it. After this, the channel would be prepared with a 6-inch concrete lining. Based on a review of the construction site would be roughly 3.5-4.5 acres depending on if the Project stockpiles over-excavated materials. Construction of the channel improvements is expected to commence early 2025 and be completed in and be completed in roughly four months.

Project Location/Description

The proposed project is generally located north of Interstate 10 (I-10) between Beaumont Avenue and Highland Springs Avenue. More specifically, the project runs adjacent to the east side of Cherry Avenue and is approximately 2,500 feet long running from Oak Valley Parkway to the south to Cougar Way to the north. The project vicinity can be seen in Figure 1.

The project consists of improvements to the existing Cherry Avenue Channel that runs adjacent to Cherry Avenue to the east. The proposed improvements include the construction of a concrete-lined open channel to replace the existing graded open channel. The project construction primarily consists of three phases: remediation of the existing soils, import and grading of engineered soil, and construction of the concrete lined open channel. The project site configuration is provided in Figure 2 and shows the proposed site configuration.

Eunice Bagwan
Chambers Group, Inc.
3151 Airway Ave Suite F208
Costa Mesa, CA 92626

23811 Washington Ave, C110-333
Murrieta CA 92562
phone 760-473-1253

Figure 1: Project Vicinity

Project

Vicinity

Eunice Bagwan
Chambers Group, Inc.
3151 Airway Ave Suite F208
Costa Mesa, CA 92626

23811 Washington Ave, C110-333
Murrieta CA 92562
phone 760-473-1253

Figure 2: Proposed Project Configuration

Eunice Bagwan
Chambers Group, Inc.
3151 Airway Ave Suite F208
Costa Mesa, CA 92626

Ldn Consulting, Inc.
23811 Washington Ave, C110-333
Murrieta CA 92562
phone 760-473-1253

City of Beaumont Thresholds of Significance

To determine whether a project would create potential air quality impacts, the City of Beaumont uses South Coast Air Quality Management District's (SQAQMD) Air Quality Thresholds. The screening thresholds for construction and daily operations are shown in Table 1.

Table 1: Screening Threshold for Criteria Pollutants

Pollutant	Total Emissions - Pounds per Day (lb/day)
Respirable Particulate Matter (PM_{10} and $PM_{2.5}$)	150 and 55
Nitrogen Oxide (NO_x) - Construction	100
Sulfur Oxide (SO_x)	150
Carbon Monoxide (CO)	550
Volatile Organic Compounds (VOCs) - Construction	75

The U.S. Environmental Protection Agency (U.S. EPA) uses the term Volatile Organic Compounds (VOC) and the California Air Resources Board's (CARB's) Emission Inventory Branch (EIB) uses the term Reactive Organic Gases (ROG) to essentially define the same thing. There are minor deviations between compounds that define each term however for purposes of this study we will assume they are essentially the same due to the fact SCAQMD interchanges these words and because CalEEMod 2022.1 directly calculates ROG in place of VOC.

In addition, the SCAQMD requires compliance with localized significance thresholds (LSTs) for NO2, CO, PM2.5 and PM10. The LST methodology was developed to be used as a tool to assist lead agencies to analyze localized impacts associated with project-specific level proposed projects and would not be applicable to regional projects such as general plans.

The LST methodology was last updated to incorporate the most recent ambient air quality standards (South Coast Air Quality Management District, 2008). The LST methodology is often utilized by most agencies governed under SCAQMD CEQA review. SCAQMD developed mass rate look-up tables for projects to assist agencies with development of LSTs (South Coast Air Quality Management District, 2014)

The LSTs derived by SCAQMD which differentiate by source receptor areas. The Project would be represented by SRA #29 since the Project area is Nearest to the Banning Airport area. LSTs are provided for project areas which could be best represented by any size ranging between 1 and 5 acres. Projects larger than this would be required to generate site specific LST models.

Ldn Consulting, Inc.
23811 Washington Ave, C110-333
Murrieta CA 92562
phone 760-473-1253

The project site area will likely only have up to 2 acres of exposed materials, so a 2-acre sized mass look table threshold should be applied to the Project which is conservative.

The Project boundary is roughly adjacent to homes in some cases so the recommendations by SCAQMD is use the 25-meter LST threshold for all receptors up to 25 meters away. Table 2 below shows the worst-case project LST at the nearest receptor from the Project boundary (25 meters) (SCAQMD, 2009).

Table 2: LST Emission Thresholds (2-Acre Site) – lb/day

Pollutant	LST @ 25 meters
CO	1,541
PM_{10} (Construction)	10
$PM_{2.5}$ (Construction)	6
NO_2 (Corrected utilizing NO_2/NO_x Ratio)	149

Construction CO_2e Emissions Calculation Methodology

Air Quality impacts related to construction will be calculated using the latest CalEEMod 2022.1 air quality model which was developed by the South Coast Air Quality Management District (SCAQMD). The CalEEMod input/output are provided in ***Attachment A*** to this report. Based on review of the site, the Project area could be as much as 4.5 acres and could export as much as 5,000 Cubic Yards (CY) of materials offsite and import as much as 5,000 CY of engineered fill onsite (10,000 CY total haulage). This estimate is considered conservative and would likely be less. The estimated construction equipment, phasing and durations are provided below in Table 3.

Table 3: Expected Construction Equipment

Equipment Identification	Start Dates	Completion Dates	Quantity
Site Preparation - Linear, Grubbing & Land Clearing	1/1/2025	1/9/2025	
Excavators			2
Off-Highway Trucks (Dump Truck)			1
Linear, Grading & Excavation	1/10/2025	2/12/2025	
Excavators			2
Off-Highway Trucks (Dump Truck)			1
Linear, Drainage, Utilities, & Sub-Grade Construction	2/13/2025	3/14/2025	
Tractors/Loaders/Backhoes			1
Graders			1
Skid Steer Loaders			1
Linear, Concrete Placement	3/15/2025	4/11/2025	
Other Material Handling Equipment			1
Off-Highway Trucks			1

The California Air Resources Board (CARB) regulations required that – starting in 2012 – all off-road equipment produced needs to meet the basic requirements for Tier 4 compliance (Tier 4 Interim) (CARB, 2023). Offroad equipment fleets are managed by CARB and are typically based on total horsepower owned. Owners are limited to what types of equipment they must maintain as their fleet and can include equipment from rental companies. After 2023, no fleet owner can add equipment less than Tier 3 to their fleet (California Air Resouces Board, 2022).

Based on this, the Project would at a minimum use Tier 3 construction equipment having diesel particulate filters installed and would wet the soil daily during grading operations. These design features were incorporated in all modeling and though it is expected that all equipment used for the construction of this Project meets this assumption without intervention, it is recommended that these design features be included in the conditions of approval for the Grading Permits which would be issued by the City of Beaumont.

Construction Findings

Utilizing the CalEEMod inputs for the model as discussed above and shown in ***Attachment A*** to this report, we find that construction of the project generate less than significant impacts based on SCAQMD's significance thresholds and localized significance thresholds applied at 25 meters from the Project boundary (See Table 4 below). These emission calculations assume design features discussed above are included. Based on this, air quality mitigation for

Ldn Consulting, Inc.
23811 Washington Ave, C110-333
Murrieta CA 92562
phone 760-473-1253

construction would not be required. Cumulative impacts would not be expected since calculated emissions are so low relative to the City's significance thresholds.

Table 4: Expected Construction Emissions Summary (lb/day)

	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Construction Emissions	0.47	9.62	9.73	0.03	1.07	0.43
City Screening Threshold	75	100	550	150	150	55
LST at 25 meters from Project		149	1,541		10	6
Exceeds Screening Threshold	**No**	**No**	**No**	**No**	**No**	**No**

The Project would have the potential to generate onsite odors during construction which normally include short term activities such as paving and possibly painting. Impacts associated with these sources are short term in terms of durations which is identified in Table 3 above. Given this, odor impacts would therefore be considered less than significant.

Conflict with or obstruct implementation of the SCAQMD AQMP or applicable portions of the State Implementation Plan (SIP)?

The project is a repair project and would not modify any existing uses and would be consistent with the City's General Plan. The Project has been shown to generate emissions that would be less than significant when compared to the City's air quality significance thresholds. Therefore, since the project would not create a new land use nor increase air quality emissions during construction in excess of the city's approved significance thresholds, the Project would not conflict with the implementation of the City's or SCAQMD air quality management plans.

Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation?

The Project would generate less than significant construction emissions when compared to SCAQMD air quality thresholds, given this, the project would not violate any applicable air quality standards.

Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable Federal or State ambient air quality standard (PM10, PM2.5 or exceed quantitative thresholds for O3 precursors, oxides of nitrogen [NOX] and Volatile Organic Compounds [VOCs])?

Ldn Consulting, Inc.
23811 Washington Ave, C110-333
Murrieta CA 92562
phone 760-473-1253

Based on this analysis, the expected construction and emissions were found to be less than significant when compared to SCAQMD air quality thresholds. In addition, the emissions expected would be small when compared to SCAQMD thresholds. Given this, cumulative impacts or impacts which would be additive between the proposed Project and any nearby Project would not likely increase emissions to a point where SCAQMD thresholds would be exceeded in the general vicinity of the proposed Project. Given this, the project would have a less than significant cumulative impact.

Expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations?

The proposed Project construction would be adjacent to homes along the channel which would be cleaned, graded and improved with a concrete surface. The project is relatively small and would not generate significant levels of air quality emissions when compared to City thresholds based on screening thresholds developed by SCAQMD including LSTs for the closest residential receptors using a 25-meter LST. In addition, as a design feature, all construction equipment would be Tier 3 or better and diesel particulates would be filtered. Therefore, the proposed Project would not expose sensitive receptors to significant air quality emissions and impacts to human health would not be expected.

Create objectionable odors affecting a substantial number of people?

The Project would have the potential to generate onsite odors during construction which normally include short term activities such as paving and possibly painting. Impacts associated with these sources are short term and would therefore be considered less than significant. Also, since operational odors are not typically generated from drainage facilities, a less than significant odor impact would be expected from Operations. Given this, the Project would not create a significant odor impact affecting a substantial number of people.

Given this, the project would be considered to generate less than significant AQ emissions. If you have any questions, please do not hesitate to contact me directly at (760) 473-1253.

Sincerely,
Ldn Consulting, Inc.

Draft

Jeremy Louden

Ldn Consulting, Inc.
23811 Washington Ave, C110-333
Murrieta CA 92562
phone 760-473-1253

Attachments: CalEEMod Model Results

References:

California Air Resouces Board. (2022). *Guide to Off-Road Vehicle & Equipment Regulations.* Retrieved from https://ww2.arb.ca.gov/sites/default/files/offroadzone/pdfs/offroad_booklet.pdf

CARB. (2023). *Non-road Diesel Engine Certification Tier Chart*. Retrieved from https://ww2.arb.ca.gov/resources/documents/non-road-diesel-engine-certification-tier-chart

SCAQMD. (2009, Oct 21). *Localized Significance Thresholds Lookup Tables.* Retrieved 2015, from http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2

South Coast Air Quality Management District. (2014). *Localized Significance Thresholds*. Retrieved 2014, from http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds

Cherry Channel Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Cherry Channel
Construction Start Date	1/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	19.2
Location	Cougar Way, Beaumont, CA 92223, USA
County	Riverside-South Coast
City	Beaumont
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5630
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.28

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
User Defined Linear	0.47	Mile	4.50	0.00	—	—	—	Relign Channel with Concrete

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-6	Use Diesel Particulate Filters

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.34	7.87	9.73	0.02	0.30	0.26	0.55	0.26	0.07	0.33	—	2,172	2,172	0.08	0.08	1.66	2,198
Mit.	0.34	7.87	9.73	0.02	0.05	0.26	0.31	0.04	0.07	0.11	—	2,172	2,172	0.08	0.08	1.66	2,198
% Reduced	—	—	—	—	83%	—	44%	83%	—	67%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.47	9.62	9.51	0.03	0.31	0.85	1.07	0.28	0.20	0.43	—	3,489	3,489	0.10	0.36	0.13	3,580
Mit.	0.47	9.62	9.51	0.03	0.08	0.85	0.92	0.07	0.20	0.27	—	3,489	3,489	0.10	0.36	0.13	3,580
% Reduced	—	—	—	—	76%	—	14%	75%	—	38%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.07	1.56	1.72	< 0.005	0.05	0.10	0.15	0.05	0.03	0.07	—	563	563	0.02	0.04	0.29	577
Mit.	0.07	1.56	1.72	< 0.005	0.01	0.10	0.11	0.01	0.03	0.04	—	563	563	0.02	0.04	0.29	577
% Reduced	—	—	—	—	77%	—	27%	76%	—	50%	—	—	—	—	—	—	—

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.28	0.31	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	—	93.2	93.2	< 0.005	0.01	0.05	95.5
Mit.	0.01	0.28	0.31	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	93.2	93.2	< 0.005	0.01	0.05	95.5
% Reduced	—	—	—	—	77%	—	27%	76%	—	50%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.34	7.87	9.73	0.02	0.30	0.26	0.55	0.26	0.07	0.33	—	2,172	2,172	0.08	0.08	1.66	2,198
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.47	9.62	9.51	0.03	0.31	0.85	1.07	0.28	0.20	0.43	—	3,489	3,489	0.10	0.36	0.13	3,580
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.07	1.56	1.72	< 0.005	0.05	0.10	0.15	0.05	0.03	0.07	—	563	563	0.02	0.04	0.29	577
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.01	0.28	0.31	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	—	93.2	93.2	< 0.005	0.01	0.05	95.5

2.3. Construction Emissions by Year, Mitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.34	7.87	9.73	0.02	0.05	0.26	0.31	0.04	0.07	0.11	—	2,172	2,172	0.08	0.08	1.66	2,198

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.47	9.62	9.51	0.03	0.08	0.85	0.92	0.07	0.20	0.27	—	3,489	3,489	0.10	0.36	0.13	3,580
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.07	1.56	1.72	< 0.005	0.01	0.10	0.11	0.01	0.03	0.04	—	563	563	0.02	0.04	0.29	577
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.01	0.28	0.31	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	93.2	93.2	< 0.005	0.01	0.05	95.5

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (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	CO	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-Road Equipment	0.36	6.05	6.95	0.01	0.22	—	0.22	0.20	—	0.20	—	1,282	1,282	0.05	0.01	—	1,287
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.10	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.1	21.1	< 0.005	< 0.005	—	21.2
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.49	3.49	< 0.005	< 0.005	—	3.50
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.35	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	77.7	77.7	< 0.005	< 0.005	0.01	78.7
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.29	1.29	< 0.005	< 0.005	< 0.005	1.31
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.21	0.21	< 0.005	< 0.005	< 0.005	0.22

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
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

3.2. Linear, Grubbing & Land Clearing (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	6.05	6.95	0.01	0.03	—	0.03	0.03	—	0.03	—	1,282	1,282	0.05	0.01	—	1,287
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.1	21.1	< 0.005	< 0.005	—	21.2
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.49	3.49	< 0.005	< 0.005	—	3.50

Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.35	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	77.7	77.7	< 0.005	< 0.005	0.01	78.7
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.29	1.29	< 0.005	< 0.005	< 0.005	1.31
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.21	0.21	< 0.005	< 0.005	< 0.005	0.22
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
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

3.3. Linear, Grading & Excavation (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	CO	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-Road Equipment	0.42	7.51	8.58	0.01	0.28	—	0.28	0.25	—	0.25	—	1,615	1,615	0.07	0.01	—	1,621
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.49	0.56	< 0.005	0.02	—	0.02	0.02	—	0.02	—	106	106	< 0.005	< 0.005	—	107
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.09	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.6	17.6	< 0.005	< 0.005	—	17.6
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.35	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	77.7	77.7	< 0.005	< 0.005	0.01	78.7
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
Hauling	0.03	2.08	0.49	0.01	0.03	0.47	0.51	0.03	0.13	0.17	—	1,796	1,796	0.03	0.28	0.10	1,881
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.18	5.18	< 0.005	< 0.005	0.01	5.25
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
Hauling	< 0.005	0.14	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	118	118	< 0.005	0.02	0.11	124
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.86	0.86	< 0.005	< 0.005	< 0.005	0.87
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
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.5	19.5	< 0.005	< 0.005	0.02	20.5

3.4. Linear, Grading & Excavation (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	7.51	8.58	0.01	0.04	—	0.04	0.04	—	0.04	—	1,615	1,615	0.07	0.01	—	1,621
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.49	0.56	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	106	106	< 0.005	< 0.005	—	107
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.09	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.6	17.6	< 0.005	< 0.005	—	17.6
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.35	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	77.7	77.7	< 0.005	< 0.005	0.01	78.7
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
Hauling	0.03	2.08	0.49	0.01	0.03	0.47	0.51	0.03	0.13	0.17	—	1,796	1,796	0.03	0.28	0.10	1,881
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.18	5.18	< 0.005	< 0.005	0.01	5.25
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

Hauling	< 0.005	0.14	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	118	118	< 0.005	0.02	0.11	124
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.86	0.86	< 0.005	< 0.005	< 0.005	0.87
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
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.5	19.5	< 0.005	< 0.005	0.02	20.5

3.5. Linear, Drainage, Utilities, & Sub-Grade (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	CO	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-Road Equipment	0.26	4.14	6.88	0.01	0.17	—	0.17	0.16	—	0.16	—	1,033	1,033	0.04	0.01	—	1,036
Dust From Material Movement	—	—	—	—	—	0.19	0.19	—	0.02	0.02	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.24	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	59.4	59.4	< 0.005	< 0.005	—	59.6
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.84	9.84	< 0.005	< 0.005	—	9.87
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.35	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	77.7	77.7	< 0.005	< 0.005	0.01	78.7
Vendor	< 0.005	0.21	0.06	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	184	184	< 0.005	0.03	0.01	192
Hauling	0.03	2.38	0.56	0.01	0.04	0.54	0.58	0.04	0.15	0.19	—	2,052	2,052	0.04	0.32	0.11	2,149
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.53	4.53	< 0.005	< 0.005	0.01	4.59
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.01	11.1
Hauling	< 0.005	0.14	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	118	118	< 0.005	0.02	0.11	124
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.75	0.75	< 0.005	< 0.005	< 0.005	0.76
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.75	1.75	< 0.005	< 0.005	< 0.005	1.83
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.5	19.5	< 0.005	< 0.005	0.02	20.5

3.6. Linear, Drainage, Utilities, & Sub-Grade (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	4.14	6.88	0.01	0.03	—	0.03	0.02	—	0.02	—	1,033	1,033	0.04	0.01	—	1,036
Dust From Material Movement	—	—	—	—	—	0.19	0.19	—	0.02	0.02	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.24	0.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	59.4	59.4	< 0.005	< 0.005	—	59.6
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.84	9.84	< 0.005	< 0.005	—	9.87
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.35	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	77.7	77.7	< 0.005	< 0.005	0.01	78.7
Vendor	< 0.005	0.21	0.06	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	184	184	< 0.005	0.03	0.01	192
Hauling	0.03	2.38	0.56	0.01	0.04	0.54	0.58	0.04	0.15	0.19	—	2,052	2,052	0.04	0.32	0.11	2,149
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.53	4.53	< 0.005	< 0.005	0.01	4.59
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.01	11.1
Hauling	< 0.005	0.14	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	118	118	< 0.005	0.02	0.11	124
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.75	0.75	< 0.005	< 0.005	< 0.005	0.76
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.75	1.75	< 0.005	< 0.005	< 0.005	1.83
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.5	19.5	< 0.005	< 0.005	0.02	20.5

3.7. Linear, 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	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	0.28	7.42	8.68	0.02	0.29	—	0.29	0.26	—	0.26	—	1,636	1,636	0.07	0.01	—	1,641
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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	7.42	8.68	0.02	0.29	—	0.29	0.26	—	0.26	—	1,636	1,636	0.07	0.01	—	1,641
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.41	0.48	< 0.005	0.02	—	0.02	0.01	—	0.01	—	89.6	89.6	< 0.005	< 0.005	—	89.9
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.07	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.8	14.8	< 0.005	< 0.005	—	14.9
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.93	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	169	169	0.01	0.01	0.62	172
Vendor	0.01	0.40	0.13	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	367	367	0.01	0.06	1.04	385
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.06	0.70	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	155	155	0.01	0.01	0.02	157
Vendor	0.01	0.42	0.13	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	367	367	0.01	0.06	0.03	384
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.63	8.63	< 0.005	< 0.005	0.01	8.75

Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.1	20.1	< 0.005	< 0.005	0.02	21.1
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.43	1.43	< 0.005	< 0.005	< 0.005	1.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.33	3.33	< 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

3.8. Linear, Paving (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	7.42	8.68	0.02	0.04	—	0.04	0.04	—	0.04	—	1,636	1,636	0.07	0.01	—	1,641
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	7.42	8.68	0.02	0.04	—	0.04	0.04	—	0.04	—	1,636	1,636	0.07	0.01	—	1,641
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.41	0.48	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	89.6	89.6	< 0.005	< 0.005	—	89.9
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	0.07	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.8	14.8	< 0.005	< 0.005	—	14.9
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.93	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	169	169	0.01	0.01	0.62	172
Vendor	0.01	0.40	0.13	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	367	367	0.01	0.06	1.04	385
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.06	0.70	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	155	155	0.01	0.01	0.02	157
Vendor	0.01	0.42	0.13	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	367	367	0.01	0.06	0.03	384
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.63	8.63	< 0.005	< 0.005	0.01	8.75
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.1	20.1	< 0.005	< 0.005	0.02	21.1
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.43	1.43	< 0.005	< 0.005	< 0.005	1.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.33	3.33	< 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

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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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

Land Use	ROG	NOx	CO	SO2	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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

Vegetation	ROG	NOx	CO	SO2	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

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

Land Use	ROG	NOx	CO	SO2	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

Species	ROG	NOx	CO	SO2	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	1/1/2025	1/9/2025	5.00	6.00	—
Linear, Grading & Excavation	Linear, Grading & Excavation	1/10/2025	2/12/2025	5.00	24.0	Overexcavate and remove matierals offsite
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	2/13/2025	3/14/2025	5.00	21.0	Import engineered soils
Linear, Paving	Linear, Paving	3/15/2025	4/11/2025	5.00	20.0	concrete

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
Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Grubbing & Land Clearing	Off-Highway Trucks	Diesel	Tier 3	1.00	6.00	376	0.38
Linear, Grading & Excavation	Off-Highway Trucks	Diesel	Tier 3	1.00	8.00	376	0.38

Linear, Grading & Excavation	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Tier 3	1.00	7.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Linear, Paving	Other Material Handling Equipment	Diesel	Tier 3	1.00	7.00	93.0	0.40
Linear, Paving	Off-Highway Trucks	Diesel	Tier 3	1.00	8.00	376	0.38

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Grubbing & Land Clearing	Off-Highway Trucks	Diesel	Tier 3	1.00	6.00	376	0.38
Linear, Grading & Excavation	Off-Highway Trucks	Diesel	Tier 3	1.00	8.00	376	0.38
Linear, Grading & Excavation	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Tier 3	1.00	7.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Linear, Paving	Other Material Handling Equipment	Diesel	Tier 3	1.00	7.00	93.0	0.40
Linear, Paving	Off-Highway Trucks	Diesel	Tier 3	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
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	6.00	18.5	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	0.00	10.2	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	6.00	18.5	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	0.00	10.2	HHDT,MHDT
Linear, Grading & Excavation	Hauling	26.0	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	6.00	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	6.00	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	29.8	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	12.0	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	12.0	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	6.00	18.5	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	0.00	10.2	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	6.00	18.5	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	0.00	10.2	HHDT,MHDT
Linear, Grading & Excavation	Hauling	26.0	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	6.00	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	6.00	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	29.8	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	12.0	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	12.0	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%

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)

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)
Linear, Grubbing & Land Clearing	0.00	0.00	4.50	0.00	—
Linear, Grading & Excavation	0.00	5,000	4.50	0.00	—
Linear, Drainage, Utilities, & Sub-Grade	5,000	0.00	4.50	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%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Linear	4.50	100%

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

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

5.18.1.2. Mitigated

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

5.18.1.2. Mitigated

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)

5.18.2.2. Mitigated

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	29.7	annual days of extreme heat
Extreme Precipitation	6.80	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	25.7	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	1	0	0	N/A
Wildfire	1	0	0	N/A

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
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	98.7
AQ-PM	38.7
AQ-DPM	6.55
Drinking Water	23.6
Lead Risk Housing	15.1
Pesticides	27.7
Toxic Releases	34.4
Traffic	2.83
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	0.00
Impaired Water Bodies	0.00
Solid Waste	75.7
Sensitive Population	—
Asthma	64.2
Cardio-vascular	91.3
Low Birth Weights	80.7
Socioeconomic Factor Indicators	—
Education	27.6
Housing	20.3
Linguistic	1.81
Poverty	47.1
Unemployment	65.6

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	53.17592711
Employed	84.60156551
Median HI	36.27614526
Education	—
Bachelor's or higher	46.97805723
High school enrollment	100
Preschool enrollment	23.46978057
Transportation	—
Auto Access	61.56807391
Active commuting	67.49647119
Social	—
2-parent households	96.40703195
Voting	88.77197485
Neighborhood	—
Alcohol availability	97.0101373
Park access	20.14628513
Retail density	4.324393687
Supermarket access	2.399589375
Tree canopy	15.82189144
Housing	—
Homeownership	93.98177852
Housing habitability	96.58668035
Low-inc homeowner severe housing cost burden	84.51174131
Low-inc renter severe housing cost burden	85.83344027

Uncrowded housing	88.2586937
Health Outcomes	—
Insured adults	48.58206082
Arthritis	0.0
Asthma ER Admissions	36.1
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	32.4
Cognitively Disabled	26.7
Physically Disabled	6.0
Heart Attack ER Admissions	3.9
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
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	40.8
SLR Inundation Area	0.0

Children	96.5
Elderly	0.6
English Speaking	62.0
Foreign-born	22.5
Outdoor Workers	33.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	91.5
Traffic Density	3.1
Traffic Access	23.0
Other Indices	—
Hardship	48.4
Other Decision Support	—
2016 Voting	88.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	33.0
Healthy Places Index Score for Project Location (b)	64.0
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	Estimated Work Schedule
Construction: Off-Road Equipment	Construction Schedule
Construction: Trips and VMT	Increased trips to account for estimated workers. 12 Trucks per day concrete was assumed during concrete lining