I-580 and Corral Hollow Road Interchange Bridge Improvement Project

San Joaquin County, California

DISTRICT 10 –SJ–580 (PM R 7.61 to PM R 8.61)

EA 10-1Q550/EFIS 1023000035

Climate Change and Greenhouse Gas Memorandum

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Project Description

Caltrans, in cooperation with the City of Tracy proposes the I-580/Corral Hollow Road Interchange Bridge Improvement Project (project) to enhance local and regional traffic circulation and reduce existing and future congestion at the I-580/Corral Hollow Road interchange resulting from build out of the Tracy Hills Specific Plan.

The current I-580/Corral Hollow Road Interchange is a Type L-1 Tight Diamond configuration with single-lane on- and off-ramps. Two-way stops control the intersections of Corral Hollow Road and the ramp terminals.

The project proposes reconfiguring the existing Tight Diamond with a Diverging Diamond interchange. The project includes the following improvements:

- Widen and upgrade the Corral Hollow Road Overpass structure (Bridge No. 29-0080) to match the existing 4-lane capacity along Corral Hollow Road on either side of the interchange and construct a new concrete barrier between the vehicle lanes and a new center-running multi-purpose bike/pedestrian path.

- Reconfigure the eastbound and westbound I-580 ramp termini intersections to a Diverging Diamond configuration and install a new two-phase signal.

- Install new traffic signals at the EB and WB ramp terminus intersections.

- Stripe crosswalks on the north leg of the westbound I-580 ramp terminus intersection and the south leg of the eastbound I-580 ramp terminus intersection.

The Eastbound on-ramp crosses Corral Hollow Creek. The proposed project would involve widening the existing bridge over the Corral Hollow Creek (Bridge No. 29-0081L) to accommodate the eastbound on-ramp, including an additional lane and paved shoulder.

The proposed project would require right of way (ROW) to be acquired along I-580 and Corral Hollow Road to accommodate the planned upgrades.

Project construction is expected to occur over 24 months and is estimated to begin in April 2028. Earthwork (grading, etc.) would occur between April and August 2028 and work on the interchange structure would commence after completion of the earthwork, spanning a period of approximately 13 months. Final finishing work would occur over the following 5 months, with estimated completion of construction in March 2030.

Purpose and Need

The purpose of the Interstate 580 (I-580)/Corral Hollow Road Interchange Improvement Project is to:

- Implement operational enhancements to accommodate the expected increase in traffic from ongoing developments.

- Improve bicycle and pedestrian access on Corral Hollow Road at the interchange.
- Enhance traffic flow and mobility for vehicles, bicycles, and pedestrians.
- Strengthen connectivity for residents, businesses, and regional travelers while minimizing traffic delays and improving overall roadway functionality.

Need: The current interchange is insufficient to handle future traffic demands and provide easy access. The project area also lacks multimodal access and connectivity. To improve this, sidewalks and bike lanes are needed through the interchange to link the existing facilities on both the north and south sides of the Corral Hollow Road.

CLIMATE CHANGE

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to GHG emissions reduction and climate change research and policy. Research published by the Intergovernmental Panel on Climate Change and other scientists over recent decades has shown an accelerated rate of climatological changes over the past 150 years, attributed to GHG emissions generated from the production and use of fossil fuels.

The impacts of climate change are already being observed in the form of sea level rise, drought, extended and severe fire seasons, and historic flooding from changing storm patterns. The most important strategy to address climate change is to reduce GHG emissions. Additional strategies are necessary to mitigate and adapt to these impacts.

In the context of climate change, “mitigation” involves actions to reduce GHG emissions to lessen adverse impacts that are likely to occur. “Adaptation” is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation project.

Regulatory Setting

For a full list of laws, regulations, and guidance related to climate change (GHGs and adaptation), please refer to Caltrans’ Standard Environmental Reference (SER), Chapter 16, Climate Change. (Caltrans 2026c)

Environmental Setting

The proposed project is near and in the City of Tracy in western San Joaquin County, in the northern part of the San Joaquin Valley. Land uses within the project corridor are primarily residential, agriculture, and transportation, sited amid gently rolling terrain and mostly weedy vegetation and agricultural fields. Interstate 580 (I-580) is an officially designated scenic route in the project area.(Caltrans 2026b) Under existing conditions,

the I-580/Corral Hollow Road Interchange serves traffic to and from the Tracy Hills Specific Plan area (located to the east and west of I-580) in the City of Tracy, facilitating a significant amount of commuter traffic to and from the San Francisco Bay Area.

The San Joaquin Council of Governments (San Joaquin COG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) guides transportation development in the region (San Joaquin COG 2022a) and the proposed project is included in SJCOG's RTP, as noted in the SJCOG 2022 FTIP Formal Amendment No. 23 /RTP Administrative Modification No. 2. (San Joaquin COG 2022b). The City of Tracy General Plan Air Quality Element addresses GHGs in the project area.

GHG Inventories

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals.

National GHG Inventory

The annual GHG inventory submitted by the EPA to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the United States. Total national GHG emissions from all sectors in 2022 were 5,489.0 million metric tons (MMT), factoring in deductions for carbon sequestration in the land sector. (Land Use, Land Use Change, and Forestry provide a carbon sink equivalent to 15 percent of total U.S. emissions in 2022 [EPA 2024a]). While total GHG emissions in 2022 were 17 percent below 2005 levels, they increased by 1 percent over 2021 levels. Of these, 80 percent were CO_2, 11 percent were CH_4, and 6 percent were N_2O; and the balance consisted of fluorinated gases. From 1990 to 2022, CO_2 emissions decreased by only 2 percent (EPA 2024a).

The transportation sector's share of total GHG emissions remained at 28 percent in 2022 and continues to be the largest contributing sector (**Figure 1**). Transportation activities accounted for 37 percent of U.S. CO_2 emissions from fossil fuel combustion in 2022. This is a decrease of 0.5 percent from 2021 (EPA 2024a, 2024b).

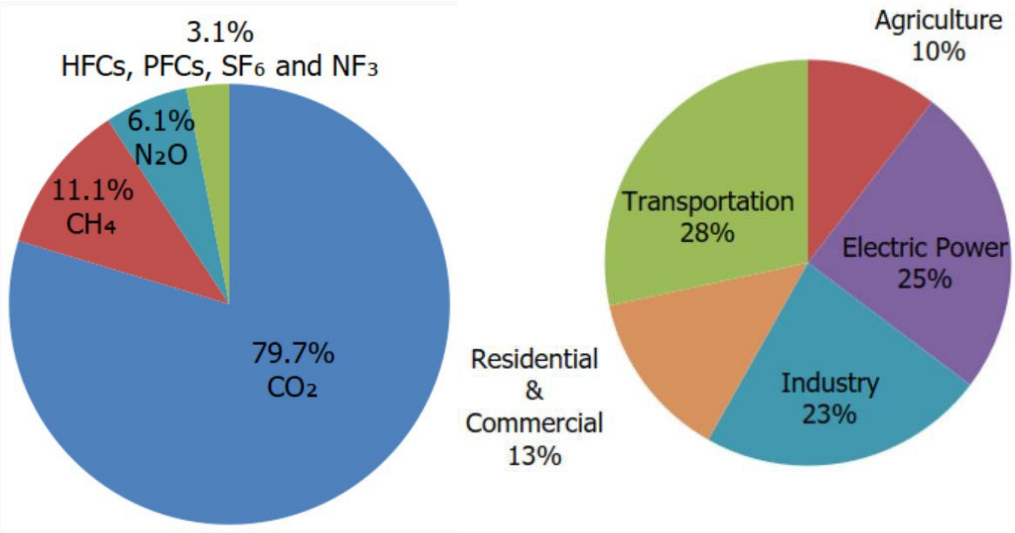

Figure 1. U.S. 2022 Greenhouse Gas Emissions

(Source: EPA 2024b)

State GHG Inventory

ARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the State's progress in meeting its GHG reduction goals. Overall Statewide GHG emissions declined from 2000 to 2023 despite growth in State economic output (**Figure 2**). Transportation emissions remain the largest contributor to GHG emissions in the State **(Figure 3)**

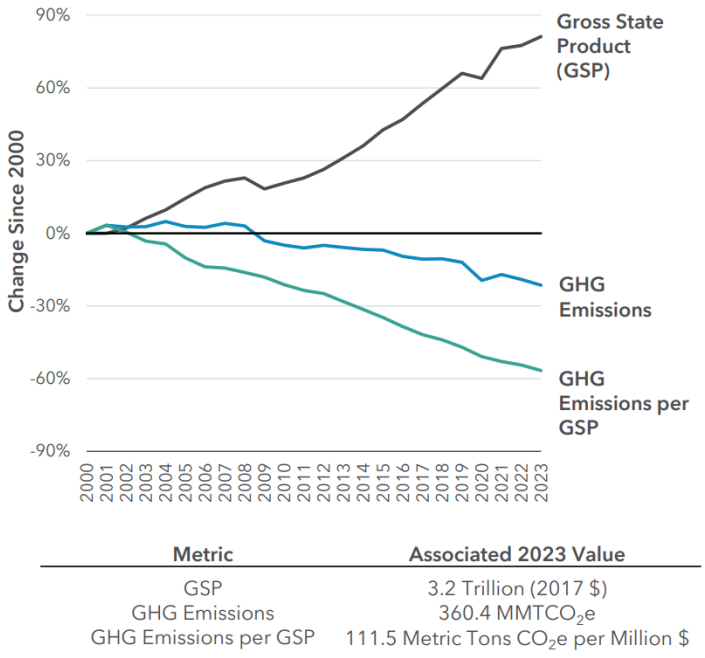

Figure 2. Change in California Gross Domestic Product and GHG Emissions since 2000

(Source: ARB 2025)

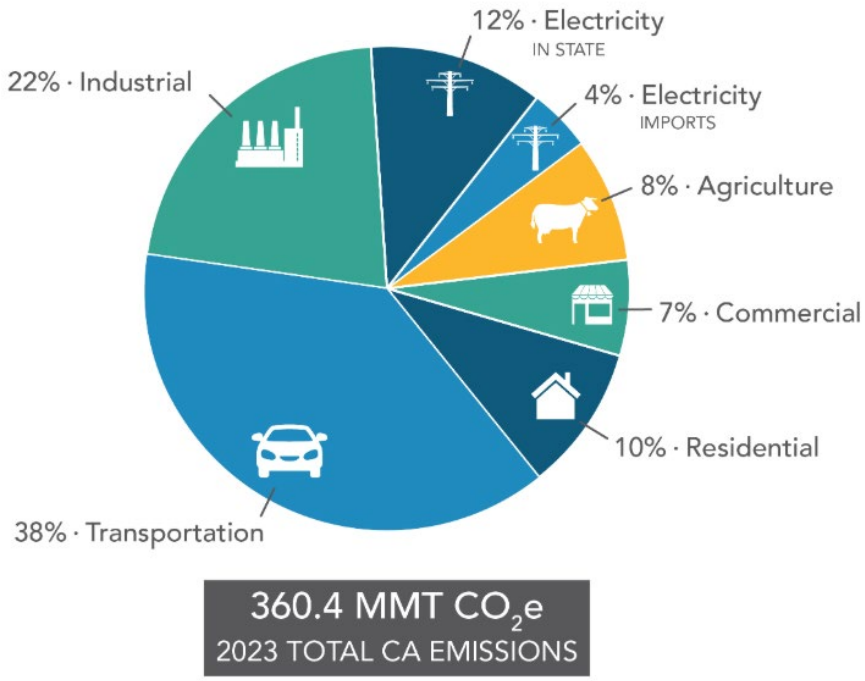

Figure 3. California 2023 Greenhouse Gas Emissions by Economic Sector

(Source: ARB 2025)

Assembly Bill (AB) 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020 and to update it every 5 years. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. ARB adopted the first Scoping Plan in 2008. The second updated plan, California's 2017 Climate Change Scoping Plan, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and Senate Bill (SB) 32. The 2022 Scoping Plan for Achieving Carbon Neutrality, adopted September 2022, assesses progress toward the statutory 2030 reduction goal and defines a path to reduce human-caused emissions to 85 percent below 1990 levels and achieve carbon neutrality no later than 2045, in accordance with AB 1279 (ARB 2022a).

Regional Plans

As required by *The Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375)*, California Air Resources Board sets regional GHG reduction targets for California's 18 metropolitan planning organizations (MPOs) to achieve through planning future projects that will cumulatively achieve those goals and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Targets are set as a percentage reduction in passenger vehicle GHG

emissions per person, based on 2005 levels.

The proposed project is included in the RTP/SCS for San Joaquin Council of Governments (San Joaquin COG). The regional reduction target for San Joaquin COG is 16 percent by 2035 (ARB 2021). In addition to the San Joaquin COG RTP/SCS, the San Joaquin County General Plan 2035 (County of San Joaquin 2016), the City of Tracy Transportation Master Plan (2012), the City of Tracy General Plan (2011), and the City of Tracy Sustainability Action Plan (2011) contain goals and policies related to GHGs and climate change.

These goals are summarized in Table 1.

Table 1: Regional Plans and Greenhouse Gas Reduction Strategies

Title	Greenhouse Gas Reduction Policies or Strategies

San Joaquin Council of Governments (San Joaquin COG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (San Joaquin COG 2022a)	• Policy: Enhance the Environment for Existing and Future Generations and Conserve Energy
	  ○ Strategy No. 4: Improve Regional Air Quality by Reducing Transportation-Related Emissions
	• Policy: Maximize Mobility and Accessibility
	  ○ Strategy No. 7: Provide transportation improvements to facilitate non-motorized travel, including the incorporation of complete streets elements as appropriate.
	• Policy: Increase Safety and Security
	  ○ Strategy No. 11: Support local and State efforts for transportation network resiliency, reliability, and climate adaptation.
	• Policy: Preserve the Efficiency of the Existing Transportation System
	  ○ Strategy No. 12: Prioritize projects that make more efficient use of the existing road network.

San Joaquin County General Plan 2035 Policy Document (San Joaquin County 2016)	• Public Facilities and Services Element—Transportation and Mobility
	  ○ TM-2.4: Rural Complete Streets. The County shall strive to serve all users on rural roadways in the County and shall design and construct rural roadways to serve safely bicyclists, transit passengers, and agricultural machinery operators.
	• Appendix A (A-2: GHG Reductions from County Actions Summary)
	  ○ Goal PHS-6. To reduce greenhouse gas emissions as part of the Statewide effort to combat climate change. Transportation Greenhouse Gas Reduction Strategies: 0.05 percent reduction in vehicle miles traveled based on percentage of streets with planned improvements.

Title	**Greenhouse Gas Reduction Policies or Strategies**
	○ TM-4.3 Bicycle Safety. The County shall support bicycle safety programs for children and commuters in the County. ○ TM-4.4 Safe Pedestrian Crossings ○ TM-4.12 Sidewalk Design

City of Tracy Transportation Master Plan (City of Tracy 2012)	• Recommended Actions for City of Tracy General Plan Circulation Element
	  ○ Goal 1: Roadway System with Access and Mobility for all Residents and Businesses
	  ▪ Implement a complete streets policy
	  ▪ Incorporate context-sensitive design
	  ▪ Utilize access management techniques to provide appropriate spacing based on travel mode
	  ▪ Strive for Level of Service (LOS) D on all streets and intersections
	  ▪ Use sustainable transportation system operation elements to improve system efficiency
	  ▪ Implement traffic calming on residential or collector streets
	  ▪ Implement Intelligent Transportation Systems (ITS) technologies to manage traffic and reduce speeds
	  ▪ Implement roundabouts instead of traffic signals to reduce delays and emissions
	  ▪ Use sustainable materials (e.g., recycled materials) for roadway projects
	  ▪ Utilize light-emitting diodes (LEDs) or solar panels during traffic signals to reduce energy consumption
	  ○ Goal 3: Safe and Convenient Bicycle and Pedestrian Travel
	  ▪ Provide bike trails consistent with roadway type
	  ▪ Seek funding opportunities for pedestrian improvements and projects
	  ▪ Provide pedestrian enhancements at intersections
	  ▪ Consider preparation of a streetscape plan when planning a walkable thoroughfare

Title	**Greenhouse Gas Reduction Policies or Strategies**

	▪ Create a pedestrian and bicycle safety action plan ○ Goal 4: Increase Use of Public Transit and High Occupancy Vehicle (HOV) Lanes ▪ Implement sustainable transportation system operation elements ▪ Require new employers to participate in trip-reducing or Transportation Demand Management (TDM) strategies ▪ Seek reconstruction opportunities to provide and improve multimodal access and circulation • Smart Growth Design Principles ○ Opportunities for Multimodal Travel at Railroad Crossings ○ Installation of off-street bicycle paths ○ Incorporation of new bicycle facilities consistent with Complete Street Design principles ○ Safety and efficiency improvements for multimodal travel across bridges ○ Incorporation of trails and bikeways within bridges, culverts, and over/underpasses ○ Integration with Context Sensitive Design Principles
City of Tracy General Plan (City of Tracy 2011a)	• Air Quality Element ○ Goal AQ-1: Improved air quality and reduced greenhouse gas emissions • Circulation Element ○ Objective CIR-1.8: Minimize transportation-related energy use and impacts on the environment. • Land Use Element ○ Goal LU-9: Leadership in environmental, economic and social sustainability.
City of Tracy Sustainability Action Plan (City of Tracy 2011b)	• Measure C. Transportation and Land Use ○ Measure T-3: Support for Bicycling ○ Measure T-6: Traffic Smoothing through Congestion Management ○ Measure T-9: Comprehensive Signal Coordination Program ○ Measure T-13: Reduce Commute Trips ○ Measure T-17: Increased Use of Low Carbon Fueled Vehicles ○ T-18: Carbon Sequestration on Municipal Property

	○ Measure T-21: Compressed Natural Gas Buses for the City's Fleet

Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation and use of the State Highway System (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are carbon dioxide (CO_2), methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, and various hydrofluorocarbons. CO_2 emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of methane and nitrous oxide. Additionally, the transportation sector emits a minor amount of hydrofluorocarbon emissions, which are related to refrigeration and air conditioning systems used in vehicles.

GHGs vary in their ability to trap heat in the atmosphere, a characteristic known as global warming potential. CO_2 is the most significant GHG due to its abundance and impact, and thus, the amounts of other gases are expressed relative to CO_2 using a metric called "carbon dioxide equivalent" (CO_2e). The global warming potential of CO_2 is assigned as a value of 1, and the global warming potential of other gases is assigned as multiples of CO_2. Both operational and construction emissions associated with the proposed project are analyzed in the sections below and emission values, if required, are expressed in CO_2e to provide a standardized measure of their impact.

The CEQA Guidelines generally address GHG emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself." (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512). In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130).

To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions

The purpose of the proposed project is to provide operational improvements to address anticipated traffic generated from ongoing developments; improve bicycle and pedestrian accessibility on both sides of the interchange; enhance traffic circulation and mobility for vehicular traffic, bicycles, and pedestrians; and enhance connectivity for residents, businesses, and regional travelers while minimizing traffic delays and improving overall roadway functionality. As such, the proposed project would result in minimal or no increase in operational GHG emissions, given that the proposed project would result in improved Level of Service (LOS) at the interchange, reducing idling emissions.

Although the proposed project would entail the widening of the I-580/Corral Hollow overpass, this is to match the number of travel lanes on either side of Corral Hollow Road. This work would be accompanied by complementary improvements designed to maximize circulation, including the signalization of the eastbound and westbound ramp terminuses to

reduce delay generated from stop-and-go traffic. Because the proposed project would target interchange improvements in order to accommodate existing growth, the proposed project would not result in induced demand that would trigger an increase in Vehicle Miles Traveled (VMT). While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected given that the proposed project would enhance delay and reduce idling times.

Construction Emissions

Construction GHG emissions would result from material processing and transportation, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. While construction GHG emissions are only produced for a short time, they have long-term effects in the atmosphere, so cannot be considered “temporary” in the same way as criteria pollutants that subside after construction is completed.

Use of long-life pavement, improved traffic management plans, and changes in materials can also help offset GHG emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities. The table below summarizes estimated construction-related GHG emissions in metric tons per year.

According to the California Emissions Estimator Model (CAPCOA 2022) analysis prepared for the proposed project (Attachment A), the proposed project would generate a total of approximately 1,254 metric tons of CO_2e during the entire construction over the 2-year construction duration. Please note that the modeling analysis assumed a more intensive construction method which is to replace the existing Corral Hollow Creek bridge. The proposed project would now only involve widening the bridge and would not involve a replacement. Therefore, the CO2e emissions presented in Table 2, below, is conservative.

Table2: Construction-related CO2e Emissions

Year	Carbon Dioxide (metric tons)	Methane (metric tons)	Nitrous Oxide (metric tons)	Carbon Dioxide Equivalent (metric tons)
2028	631	0.02	0.02	639
2029	571	0.02	0.02	576
2030	38	<0.01	<0.01	39
Total	1,240	0.04	0.04	1,254

All construction contracts include Caltrans Standard Specifications related to air quality. Section 7-1.02A and 7 1.02C, Emissions Reduction, requires contractors to comply with

all laws applicable to the proposed project and to certify they are aware of and would comply with all ARB emission reduction regulations. Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes.

To mitigate project-specific impacts associated with equipment idling, mobile emissions, and fuel usage, the proposed project would implement Mitigation Measure (MM) GHG-1 through MM GHG-4 as described below under Project-level GHG Reduction Strategies.

CEQA Conclusion

Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

Greenhouse Gas Reduction Strategies

Statewide Efforts

In response to AB 32, the Global Warming Solutions Act, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Additionally, Caltrans has enacted policies and initiatives to reduce GHG emissions in transportation to reach the state's climate goals. For a full list of statewide and Caltrans GHG reduction strategies, refer to SER, Chapter 16, Climate Change.

Project-level GHG Reduction Strategies

The following measures will also be implemented in the proposed project to reduce GHG emissions and potential climate change impacts from the proposed project.

- Bicycle and pedestrian facility improvements included in the project design support these alternative modes of transportation to reduce vehicle use emissions.
- Caltrans Standard Specifications such as Sections 7- 1.02A and 7 1.02C would require contractors to comply with all laws applicable to the proposed project and to certify that they are aware of and comply with all ARB emission reduction regulations. Section 14-9.02, Air Pollution Control would require contractors to comply with all federal, State, and local air pollution control rules, regulations, and ordinances. Requirements such as idling restrictions and keeping engines properly tuned reduce emissions, including GHG emissions.
- A Construction Traffic Management Plan in compliance with Caltrans Standard Specifications 12-4 Traffic Control will be prepared during the design phase of the proposed project to minimize traffic disruptions from project construction. Minimizing traffic delays during construction will help reduce GHG emissions from idling vehicles.
- MM GHG-1: Limit equipment idling: All on-road and off-road diesel equipment shall not idle for more than 5 minutes. The contractor shall post signs in the designated queueing areas and/or job sites to remind drivers and operators of the 5-minute

idling limit. For non-diesel equipment, idling time for lane closure during construction shall be restricted to 10 minutes in each direction.

- MM GHG-2: Schedule truck trips: The contractor would schedule truck trips and routes outside of peak travel times as much as possible to avoid vehicles idling along local roads.
- MM GHG-3: Equipment fuel efficiency: The contractor would improve fuel efficiency from construction equipment by maintaining equipment in proper working conditions, using the right size equipment for the job, and using equipment with new technologies where feasible.
- MM GHG-4: Energy Efficient Lighting Fixtures: LED lighting fixtures would be installed alongside project roadways in accordance with Caltrans Standard specifications for a nominal correlated color temperature (CCT) of 3,000 kelvins. All LED lighting fixtures would be installed in accordance with the Caltrans standards listed in Chapter 205 of the Caltrans Traffic Operations Manual.

Adaptation

While reducing GHG emissions is crucial in combating climate change, it is only one part of the solution. Caltrans must proactively plan for the impact of climate change on California's transportation infrastructure. This involves modifying and protecting facilities to reduce potential damage and build resilience against future climate-related challenges.

Caltrans has conducted District Climate Change Vulnerability Assessments to identify segments of the State Highway System that are vulnerable to climate change impacts, such as sea level rise, increased temperatures, and extreme weather events. These assessments help prioritize areas for adaptation efforts and inform the development of strategies to enhance the resilience of critical infrastructure.

Additionally, Caltrans periodically prepares a Sustainability Roadmap, which outlines the agency's strategic plans and progress reports aimed at achieving state sustainability goals. The roadmap is a two-year progress report on several important milestones achieved by Caltrans while implementing Executive Orders B-16-12, B-18-12, and the adaptation planning process of Executive Orders B-30-15, N-19-19, and N-82-20.

Refer to SER, Chapter 16, Climate Change for additional information regarding federal, state, and Caltrans adaptation efforts.

Project Adaptation Analysis

Sea Level Rise

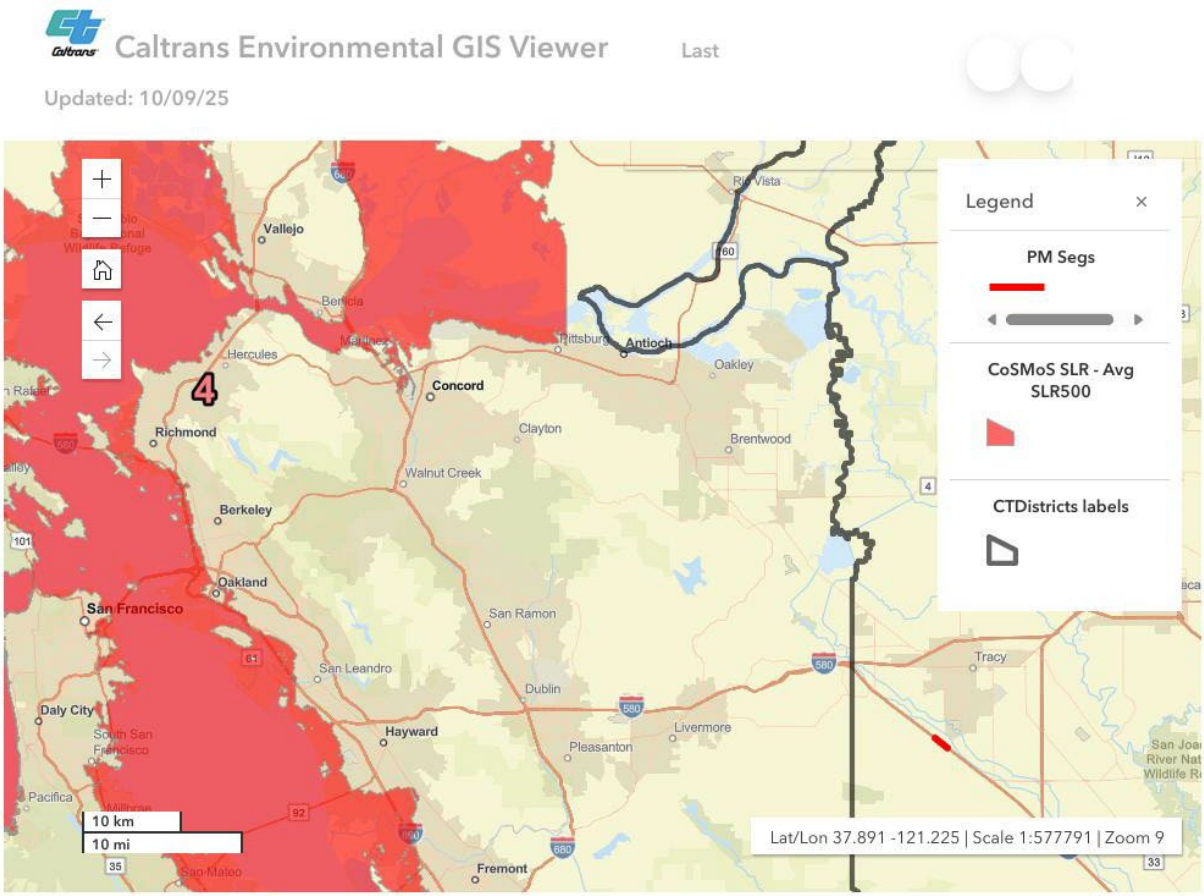

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Figure SLR 1: 500-Year Sea Level Rise Scenarios (Caltrans 2025a)

As shown in Figure SLR 1, the proposed project is outside the coastal zone and not in an area subject to sea level rise. Accordingly, direct impacts to transportation facilities due to projected sea level rise are not expected.

Precipitation and Flooding

The project area is intersected by Corral Hollow Creek, which runs along the eastern portion of the project area. ; Additionally, the California Aqueduct is a built feature immediately east of the project area. Most stormwater runoff from the existing interchange is conveyed as sheet flow and percolates into adjacent unpaved areas; berms along the California Aqueduct prevent runoff from reaching it.
Per the findings of the Bridge Hydraulics Study, the project site contains Corral Hollow Creek, a Federal Emergency Management Agency (FEMA)-designated regulatory floodway; Corral Hollow Creek, within several FEMA-designated flood hazard zones: Zone X, which has a 0.2 percent annual chance flood hazard (200-year floodplain) and Zone AE, which has a 1 percent annual chance flood hazard (100-year floodplain). (FEMA 2025) While future climate change is projected to bring less frequent but more intense storms in California, specific projections for the local project area include an increase in between 0.0 to 4.9 percent for the frequency of 100-year storms between 2025 and 2085 expected to result in (Caltrans 2026). Additionally, according to the Caltrans Climate Change Vulnerability Assessment prepared for District 10, there is also a 66 percent chance that the project area would experience a sea level rise inundation of at least 1.74 feet by 2060. (Caltrans, 2019) Nonetheless, the proposed project would incorporate temporary and permanent stormwater best management practices including construction and maintenance of biofiltration strips and biofiltration swales to treat stormwater runoff, as identified in the Stormwater Data Report prepared for the proposed project and the planned SWPPP. The proposed project would also be required to incorporate new stormwater runoff best management practices as required by the Caltrans Municipal Separate Stormwater Sewer System (MS4) permit and Statewide Storm Water Management Plan during operations. Materials and design features would be selected for their resilience to extremes in precipitation and temperature.

Wildfire

The majority of the project site is located within a High Fire Hazard Severity Zone (FHSZ) within either a Local Responsibility Area (LRA) or a State Responsibility Area (SRA). A smaller portion of the project site occurs within a Moderate FHSZ within either a, LRA or SRA. (CAL FIRE 2025) Since the project site lies within a FHSZ, there is uncertainty related to the timing and intensity of wildfires. Wildfire risks and risk responses per the analysis below will be incorporated into the project risk register. Prevailing wind direction shifts with seasons, driven by large scale atmospheric conditions, topography, and diurnal patterns. The area contains moderate wind speeds of 6 to 8 miles per hour (mph) which blow predominantly in the southeast direction. (NOAA 2026a; NOAA 2026b)

The proposed project would provide interchange improvements to the I-580/Corral Hollow intersection that are designed to reduce delay and to accommodate anticipated growth within the Tracy Hills Specific Plan area. Therefore, the proposed project is unlikely to worsen conditions for wildfires and related hazards in the project area

because it would not increase fuel loads or introduce new vegetated areas, and would be constructed primarily with non-combustible materials; moreover, it would result in improved travel times, including for emergency response. Additionally, construction personnel would be trained on the Emergency Action Plan to ensure that employees understand emergency procedures, evacuation routes, and their responsibilities in the event of a fire or other emergency, consistent with California Code of Regulations, Title 8 §3220. To minimize the potential for wildfire spread, the proposed project would be required to comply with mandatory Caltrans Standard Specifications requiring the use of non-combustible building materials for all bridges, barriers, pavements, drainage structures, and sign supports cited in Caltrans Standard Specification 40 (Concrete Pavement) and Standard Section 51 (Concrete Structures). The proposed project would also be required to prepare and submit a fire prevention plan prepared by California Division of Occupational Safety and Health and to cooperate with fire authorities pursuant to Caltrans Standard 7-1.02M(2) (Fire Protection). In addition to review by Caltrans, the proposed project would be required to submit all project plans to the South San Joaquin Fire Authority for review to ensure conformance with applicable California Fire Code guidelines pursuant to City of Tracy Municipal Code Chapter 9.06 (Fire Protection and Prevention). (City of Tracy 2026a) During construction, the proposed project would be required to facilitate coordination with the South San Joaquin Fire Authority on the location of construction staging to reduce impacts on emergency access pursuant to Municipal Chapter 9.06 (Fire Protection and Prevention). (City of Tracy 2026a) To further enhance wildfire resiliency, the proposed project would underground all utilities which would reduce the potential for wildfire spread via overhead utility lines. All undergrounding of utilities would be conducted pursuant to Municipal Code Chapter 11.08, Regulations for Undergrounding Utilities. (City of Tracy 2026b)

As noted within the Caltrans Climate Change Vulnerability Assessment for District 10 (Caltrans 2019), the entirety of the project site is marked as exposed roadway under level of wildfire concern. However, the proposed project is an interchange improvements project and will not have an impact on an emergency response or evacuation plans, including during construction where a Construction Traffic Management Plan would be implemented. During construction, Caltrans' Standard Specification 7-1.02M(2) mandates fire prevention procedures, including a fire prevention plan, to avoid accidental fire starts. The proposed project would not alter slope in the vicinity of the project site in a manner that would induce prevailing winds that would increase wildfire spread. The proposed project would also not alter slopes in a manner that would cause the maximum expected flood height during 100-year, 200-year, and 500-year stormflow events to be exceeded, including following wildfire events. The proposed project would reduce delay and congestion over time, maximizing circulation and reducing response times for emergency vehicles. Therefore, the proposed project would improve wildfire response efforts from No-Build conditions.

Temperature

The District Climate Change Vulnerability Assessment indicates that the project area would experience an increase of 8.0 to 9.9 degrees Fahrenheit over an average 7-day maximum temperatures. (Caltrans 2026) As a result, the proposed project is at risk of

pavement contracting and cracking in the event temperatures are too hot. (Caltrans 2019) The proposed project would be required to conform with the latest Caltrans design standards for pavement materials properties, which require consideration of climatic conditions, and thermal stressors to ensure adequate pavement performance under hot conditions. The proposed project would be required to comply with applicable Caltrans Standard Specifications, including Standard 40 (Concrete Pavement) and Section 51 (Concrete Structures). To address impacts specifically associated with anticipated temperature increases, the proposed project would also be required to comply with standards for binder selection, pavement thickness design, and surface treatments specified in Caltrans Highway Design Manual Chapter 630 (Flexible Pavement). (Caltrans 2022) Therefore, it is anticipated that the proposed project would be designed to manage anticipated increases in regional temperatures that may result in potential impacts to pavement performance.

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ATTACHMENT A

GHG EMISSIONS
SUPPORTING INFORMATION

I580 Corral Hollow Interchange Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	I580 Corral Hollow Interchange
Construction Start Date	3/6/2028
Lead Agency	CALTRANS
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.40000
Precipitation (days)	6.60000
Location	37.67296, -121.456248
County	San Joaquin
City	Tracy
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2114
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.41

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
Road Construction	2.00000	Mile	22.8700	0.00000	0.00000	—	—	—

2. Emissions Summary

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	3.50034	2.91912	24.9862	31.2689	0.07686	0.94404	75.8097	76.7537	0.87233	7.73214	8.60446	—	9,213.57	9,213.57	0.31024	0.44307	5.88941	9,359.25
2029	2.75119	2.30299	18.4481	24.5266	0.05967	0.66090	75.0826	75.7435	0.60893	7.57037	8.17930	—	6,678.34	6,678.34	0.25032	0.15470	1.99482	6,732.70
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	2.83319	2.37332	19.7089	24.5571	0.05968	0.71629	75.0826	75.7989	0.65989	7.57037	8.23026	—	6,675.71	6,675.71	0.25271	0.24536	0.08875	6,731.61
2029	2.74182	2.29351	18.5286	24.2507	0.05967	0.66090	75.0826	75.7435	0.60893	7.57037	8.17930	—	6,650.60	6,650.60	0.25187	0.16464	0.05181	6,706.01
2030	0.97430	0.81672	7.29103	11.7602	0.01808	0.21828	73.9016	74.1199	0.20137	7.42076	7.62213	—	2,222.47	2,222.47	0.07781	0.08296	0.03061	2,249.17
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	1.51144	1.25973	10.7814	13.2304	0.03286	0.39658	43.4660	43.8626	0.36598	4.39750	4.76348	—	3,810.99	3,810.99	0.13501	0.14786	0.86475	3,859.29
2029	1.44757	1.21159	9.93143	13.6474	0.03034	0.34602	52.0481	52.3942	0.31888	5.23984	5.55872	—	3,450.06	3,450.06	0.12851	0.09350	0.52886	3,481.67
2030	0.10120	0.08477	0.75368	1.22109	0.00187	0.02264	7.52680	7.54944	0.02089	0.75586	0.77675	—	231.011	231.011	0.00801	0.00860	0.05293	233.828
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.27584	0.22990	1.96761	2.41455	0.00600	0.07238	7.93255	8.00492	0.06679	0.80254	0.86933	—	630.953	630.953	0.02235	0.02448	0.14317	638.950
2029	0.26418	0.22112	1.81249	2.49065	0.00554	0.06315	9.49879	9.56193	0.05820	0.95627	1.01447	—	571.198	571.198	0.02128	0.01548	0.08756	576.430
2030	0.01847	0.01547	0.13755	0.22285	0.00034	0.00413	1.37364	1.37777	0.00381	0.13795	0.14176	—	38.2465	38.2465	0.00133	0.00142	0.00876	38.7129

2.2.2. Onsite 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	3.26176	2.73697	22.3206	28.9698	0.06130	0.89975	74.8508	75.7506	0.82803	7.48283	8.31087	—	6,669.97	6,669.97	0.26763	0.08069	0.33891	6,701.05
2029	2.60738	2.18222	17.7896	22.9626	0.05566	0.65287	74.6359	75.2887	0.60091	7.45927	8.06018	—	5,860.86	5,860.86	0.23499	0.07306	0.30896	5,888.81
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	2.69170	2.25207	18.9600	23.1889	0.05567	0.70827	74.6359	75.3441	0.65187	7.45927	8.11114	—	5,866.99	5,866.99	0.23504	0.07417	0.00878	5,894.98
2029	2.60628	2.18134	17.8088	22.9661	0.05566	0.65287	74.6359	75.2887	0.60091	7.45927	8.06018	—	5,861.28	5,861.28	0.23499	0.07306	0.00802	5,888.93
2030	0.88100	0.73744	6.95576	10.8759	0.01627	0.21467	73.6019	73.8166	0.19776	7.34763	7.54539	—	1,785.82	1,785.82	0.06986	0.04003	0.00730	1,799.50
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	1.41897	1.18809	9.93948	12.3796	0.02818	0.38436	43.1215	43.5059	0.35377	4.30937	4.66314	—	3,006.89	3,006.89	0.12024	0.04005	0.08607	3,021.92
2029	1.36245	1.14029	9.54170	12.8197	0.02813	0.34160	51.7745	52.1161	0.31446	5.17220	5.48665	—	2,984.44	2,984.44	0.11911	0.04233	0.09484	3,000.12
2030	0.09142	0.07653	0.72052	1.12783	0.00169	0.02227	7.49584	7.51811	0.02051	0.74831	0.76882	—	185.197	185.197	0.00725	0.00415	0.01259	186.627
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.25896	0.21683	1.81395	2.25928	0.00514	0.07015	7.86968	7.93983	0.06456	0.78646	0.85102	—	497.825	497.825	0.01991	0.00663	0.01425	500.313
2029	0.24865	0.20810	1.74136	2.33959	0.00513	0.06234	9.44885	9.51119	0.05739	0.94393	1.00131	—	494.107	494.107	0.01972	0.00701	0.01570	496.705
2030	0.01668	0.01397	0.13150	0.20583	0.00031	0.00406	1.36799	1.37205	0.00374	0.13657	0.14031	—	30.6614	30.6614	0.00120	0.00069	0.00208	30.8983

2.2.3. Offsite 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.23858	0.18215	2.66564	2.29911	0.01556	0.04429	0.95885	1.00315	0.04429	0.24930	0.29360	—	2,543.60	2,543.60	0.04261	0.36239	5.55050	2,658.20
2029	0.14381	0.12077	0.65849	1.56402	0.00401	0.00802	0.44669	0.45471	0.00802	0.11110	0.11912	—	817.486	817.486	0.01533	0.08164	1.68587	843.884

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.14150	0.12126	1.68132	1.36813	0.00926	0.02646	0.49681	0.52327	0.02646	0.13106	0.15751	—	1,425.93	1,425.93	0.02464	0.21338	0.07997	1,490.21
2029	0.13555	0.11217	0.71981	1.28460	0.00401	0.00802	0.44669	0.45471	0.00802	0.11110	0.11912	—	789.323	789.323	0.01687	0.09159	0.04379	817.081
2030	0.09330	0.07928	0.33527	0.88430	0.00181	0.00361	0.29972	0.30333	0.00361	0.07313	0.07674	—	436.653	436.653	0.00795	0.04293	0.02331	449.668
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.09247	0.07164	0.84195	0.85079	0.00468	0.01221	0.34449	0.35670	0.01221	0.08813	0.10034	—	804.101	804.101	0.01477	0.10781	0.77867	837.377
2029	0.08512	0.07130	0.38973	0.82775	0.00221	0.00442	0.27364	0.27806	0.00442	0.06765	0.07207	—	465.629	465.629	0.00940	0.05116	0.43402	481.545
2030	0.00978	0.00824	0.03315	0.09326	0.00019	0.00037	0.03096	0.03133	0.00037	0.00755	0.00793	—	45.8145	45.8145	0.00076	0.00445	0.04034	47.2008
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.01688	0.01307	0.15366	0.15527	0.00085	0.00223	0.06287	0.06510	0.00223	0.01608	0.01831	—	133.128	133.128	0.00245	0.01785	0.12892	138.637
2029	0.01553	0.01301	0.07112	0.15106	0.00040	0.00081	0.04994	0.05075	0.00081	0.01235	0.01315	—	77.0902	77.0902	0.00156	0.00847	0.07186	79.7253
2030	0.00179	0.00150	0.00605	0.01702	0.00003	0.00007	0.00565	0.00572	0.00007	0.00138	0.00145	—	7.58512	7.58512	0.00013	0.00074	0.00668	7.81462

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2028)

3.1.1. Onsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37242	0.31294	2.82409	3.43958	0.00453	0.14206	—	0.14206	0.13070	—	0.13070	—	490.511	490.511	0.01990	0.00398	—	492.195

Dust From Material Movement	—	—	—	—	—	—	0.20680	0.20680	—	0.02233	0.02233	—	—	—	—	—	—	—
Onsite truck	0.01477	0.00860	0.30159	0.12787	0.00132	0.00331	73.6019	73.6052	0.00331	7.34763	7.35093	—	175.506	175.506	0.00419	0.02800	0.33891	184.293
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37242	0.31294	2.82409	3.43958	0.00453	0.14206	—	0.14206	0.13070	—	0.13070	—	490.511	490.511	0.01990	0.00398	—	492.195
Dust From Material Movement	—	—	—	—	—	—	0.20680	0.20680	—	0.02233	0.02233	—	—	—	—	—	—	—
Onsite truck	0.01367	0.00772	0.32210	0.13140	0.00132	0.00331	73.6019	73.6052	0.00331	7.34763	7.35093	—	175.928	175.928	0.00419	0.02800	0.00878	184.385
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04081	0.03429	0.30949	0.37694	0.00050	0.01557	—	0.01557	0.01432	—	0.01432	—	53.7547	53.7547	0.00218	0.00044	—	53.9391
Dust From Material Movement	—	—	—	—	—	—	0.02266	0.02266	—	0.00245	0.00245	—	—	—	—	—	—	—
Onsite truck	0.00157	0.00089	0.03433	0.01416	0.00014	0.00036	7.92014	7.92050	0.00036	0.79067	0.79103	—	19.2530	19.2530	0.00046	0.00307	0.01601	20.1948
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00745	0.00626	0.05648	0.06879	0.00009	0.00284	—	0.00284	0.00261	—	0.00261	—	8.89970	8.89970	0.00036	0.00007	—	8.93024

Dust From Material Movement	—	—	—	—	—	—	0.00414	0.00414	—	0.00045	0.00045	—	—	—	—	—	—	—
Onsite truck	0.00029	0.00016	0.00627	0.00258	0.00003	0.00007	1.44542	1.44549	0.00007	0.14430	0.14436	—	3.18755	3.18755	0.00008	0.00051	0.00265	3.34348

3.1.2. Offsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05416	0.05317	0.03252	0.62510	0.00000	0.00000	0.12601	0.12601	0.00000	0.02954	0.02954	—	131.107	131.107	0.00231	0.00492	0.37503	133.007
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.05600	0.02381	1.53574	0.37479	0.00926	0.02646	0.37080	0.39726	0.02646	0.10152	0.12797	—	1,306.19	1,306.19	0.02161	0.20812	2.71124	1,371.46
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05019	0.04494	0.03844	0.49416	0.00000	0.00000	0.12601	0.12601	0.00000	0.02954	0.02954	—	118.567	118.567	0.00298	0.00525	0.00973	120.217
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.05379	0.02205	1.64288	0.38184	0.00926	0.02646	0.37080	0.39726	0.02646	0.10152	0.12797	—	1,307.03	1,307.03	0.02161	0.20812	0.07024	1,369.66
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00554	0.00496	0.00410	0.05521	0.00000	0.00000	0.01375	0.01375	0.00000	0.00322	0.00322	—	13.3168	13.3168	0.00029	0.00054	0.01775	13.5026
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00604	0.00251	0.17593	0.04136	0.00101	0.00290	0.04050	0.04340	0.00290	0.01109	0.01399	—	143.183	143.183	0.00237	0.02281	0.12811	150.166
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00101	0.00091	0.00075	0.01008	0.00000	0.00000	0.00251	0.00251	0.00000	0.00059	0.00059	—	2.20474	2.20474	0.00005	0.00009	0.00294	2.23550
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00110	0.00046	0.03211	0.00755	0.00019	0.00053	0.00739	0.00792	0.00053	0.00202	0.00255	—	23.7055	23.7055	0.00039	0.00378	0.02121	24.8618

3.2. Linear, Grading & Excavation (2028)

3.2.1. Onsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.24699	2.72837	22.0190	28.8419	0.05998	0.89644	—	0.89644	0.82473	—	0.82473	—	6,494.47	6,494.47	0.26344	0.05269	—	6,516.76
Dust From Material Movement	—	—	—	—	—	—	1.24893	1.24893	—	0.13521	0.13521	—	—	—	—	—	—	—
Onsite truck	0.01477	0.00860	0.30159	0.12787	0.00132	0.00331	73.6019	73.6052	0.00331	7.34763	7.35093	—	175.506	175.506	0.00419	0.02800	0.33891	184.293
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48927	0.41112	3.31793	4.34604	0.00904	0.13508	—	0.13508	0.12427	—	0.12427	—	978.619	978.619	0.03970	0.00794	—	981.977
Dust From Material Movement	—	—	—	—	—	—	0.18819	0.18819	—	0.02037	0.02037	—	—	—	—	—	—	—
Onsite truck	0.00216	0.00123	0.04721	0.01947	0.00020	0.00050	10.8902	10.8907	0.00050	1.08717	1.08767	—	26.4728	26.4728	0.00063	0.00422	0.02202	27.7679
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.08929	0.07503	0.60552	0.79315	0.00165	0.02465	—	0.02465	0.02268	—	0.02268	—	162.021	162.021	0.00657	0.00131	—	162.577
Dust From Material Movement	—	—	—	—	—	—	0.03435	0.03435	—	0.00372	0.00372	—	—	—	—	—	—	—
Onsite truck	0.00039	0.00022	0.00862	0.00355	0.00004	0.00009	1.98746	1.98755	0.00009	0.19841	0.19850	—	4.38288	4.38288	0.00010	0.00070	0.00365	4.59729

3.2.2. Offsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14443	0.14178	0.08672	1.66692	0.00000	0.00000	0.33603	0.33603	0.00000	0.07876	0.07876	—	349.618	349.618	0.00617	0.01313	1.00009	354.685
Vendor	0.00124	0.00086	0.03099	0.01038	0.00020	0.00040	0.00763	0.00803	0.00040	0.00211	0.00251	—	26.5615	26.5615	0.00053	0.00397	0.05221	27.8089
Hauling	0.09290	0.03950	2.54793	0.62180	0.01536	0.04389	0.61519	0.65908	0.04389	0.16843	0.21232	—	2,167.08	2,167.08	0.03585	0.34528	4.49820	2,275.37
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02030	0.01819	0.01505	0.20242	0.00000	0.00000	0.05042	0.05042	0.00000	0.01181	0.01181	—	48.8281	48.8281	0.00106	0.00198	0.06507	49.5094
Vendor	0.00018	0.00012	0.00486	0.00159	0.00003	0.00006	0.00115	0.00121	0.00006	0.00032	0.00038	—	4.00399	4.00399	0.00008	0.00060	0.00339	4.18749
Hauling	0.01378	0.00573	0.40135	0.09436	0.00231	0.00661	0.09240	0.09901	0.00661	0.02530	0.03192	—	326.635	326.635	0.00540	0.05203	0.29225	342.567
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00371	0.00332	0.00275	0.03694	0.00000	0.00000	0.00920	0.00920	0.00000	0.00216	0.00216	—	8.08405	8.08405	0.00018	0.00033	0.01077	8.19684
Vendor	0.00003	0.00002	0.00089	0.00029	0.00001	0.00001	0.00021	0.00022	0.00001	0.00006	0.00007	—	0.66291	0.66291	0.00001	0.00010	0.00056	0.69329
Hauling	0.00251	0.00105	0.07325	0.01722	0.00042	0.00121	0.01686	0.01807	0.00121	0.00462	0.00583	—	54.0782	54.0782	0.00089	0.00861	0.04838	56.7159

3.3. Linear, Drainage, Utilities, & Sub-Grade (2028)

3.3.1. Onsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.67803	2.24435	18.6379	23.0575	0.05434	0.70496	—	0.70496	0.64856	—	0.64856	—	5,691.06	5,691.06	0.23085	0.04617	—	5,710.59
Dust From Material Movement	—	—	—	—	—	—	1.03399	1.03399	—	0.11165	0.11165	—	—	—	—	—	—	—
Onsite truck	0.01477	0.00860	0.30159	0.12787	0.00132	0.00331	73.6019	73.6052	0.00331	7.34763	7.35093	—	175.506	175.506	0.00419	0.02800	0.33891	184.293
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.67803	2.24435	18.6379	23.0575	0.05434	0.70496	—	0.70496	0.64856	—	0.64856	—	5,691.06	5,691.06	0.23085	0.04617	—	5,710.59
Dust From Material Movement	—	—	—	—	—	—	1.03399	1.03399	—	0.11165	0.11165	—	—	—	—	—	—	—
Onsite truck	0.01367	0.00772	0.32210	0.13140	0.00132	0.00331	73.6019	73.6052	0.00331	7.34763	7.35093	—	175.928	175.928	0.00419	0.02800	0.00878	184.385
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.88045	0.73787	6.12753	7.58056	0.01787	0.23177	—	0.23177	0.21323	—	0.21323	—	1,871.03	1,871.03	0.07590	0.01518	—	1,877.45
Dust From Material Movement	—	—	—	—	—	—	0.33994	0.33994	—	0.03671	0.03671	—	—	—	—	—	—	—
Onsite truck	0.00471	0.00268	0.10300	0.04247	0.00043	0.00109	23.7604	23.7615	0.00109	2.37200	2.37309	—	57.7589	57.7589	0.00138	0.00921	0.04804	60.5845
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16068	0.13466	1.11827	1.38345	0.00326	0.04230	—	0.04230	0.03891	—	0.03891	—	309.771	309.771	0.01257	0.00251	—	310.834
Dust From Material Movement	—	—	—	—	—	—	0.06204	0.06204	—	0.00670	0.00670	—	—	—	—	—	—	—
Onsite truck	0.00086	0.00049	0.01880	0.00775	0.00008	0.00020	4.33627	4.33647	0.00020	0.43289	0.43309	—	9.56264	9.56264	0.00023	0.00152	0.00795	10.0304

3.3.2. Offsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12638	0.12406	0.07588	1.45856	0.00000	0.00000	0.29403	0.29403	0.00000	0.06892	0.06892	—	305.915	305.915	0.00540	0.01149	0.87508	310.349
Vendor	0.02482	0.01728	0.61972	0.20759	0.00401	0.00802	0.15266	0.16069	0.00802	0.04218	0.05020	—	531.229	531.229	0.01067	0.07932	1.04427	556.178
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11712	0.10486	0.08969	1.15304	0.00000	0.00000	0.29403	0.29403	0.00000	0.06892	0.06892	—	276.655	276.655	0.00694	0.01226	0.02270	280.505

Vendor	0.02438	0.01640	0.65927	0.21508	0.00401	0.00802	0.15266	0.16069	0.00802	0.04218	0.05020	—	531.730	531.730	0.01067	0.07976	0.02702	555.793
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03876	0.03473	0.02872	0.38644	0.00000	0.00000	0.09626	0.09626	0.00000	0.02256	0.02256	—	93.2173	93.2173	0.00203	0.00378	0.12422	94.5179
Vendor	0.00787	0.00539	0.21193	0.06941	0.00132	0.00264	0.05001	0.05265	0.00264	0.01382	0.01646	—	174.720	174.720	0.00351	0.02608	0.14789	182.727
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00707	0.00634	0.00524	0.07053	0.00000	0.00000	0.01757	0.01757	0.00000	0.00412	0.00412	—	15.4332	15.4332	0.00034	0.00063	0.02057	15.6485
Vendor	0.00144	0.00098	0.03868	0.01267	0.00024	0.00048	0.00913	0.00961	0.00048	0.00252	0.00300	—	28.9269	28.9269	0.00058	0.00432	0.02449	30.2525
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4. Linear, Drainage, Utilities, & Sub-Grade (2029)

3.4.1. Onsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.59371	2.17362	17.4942	22.8348	0.05434	0.64957	—	0.64957	0.59760	—	0.59760	—	5,689.87	5,689.87	0.23081	0.04616	—	5,709.39
Dust From Material Movement	—	—	—	—	—	—	1.03399	1.03399	—	0.11165	0.11165	—	—	—	—	—	—	—
Onsite truck	0.01367	0.00860	0.29542	0.12787	0.00132	0.00331	73.6019	73.6052	0.00331	7.34763	7.35093	—	170.990	170.990	0.00419	0.02690	0.30896	179.418
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	2.59371	2.17362	17.4942	22.8348	0.05434	0.64957	—	0.64957	0.59760	—	0.59760	—	5,689.87	5,689.87	0.23081	0.04616	—	5,709.39
Dust From Material Movement	—	—	—	—	—	—	1.03399	1.03399	—	0.11165	0.11165	—	—	—	—	—	—	—
Onsite truck	0.01257	0.00772	0.31460	0.13140	0.00132	0.00331	73.6019	73.6052	0.00331	7.34763	7.35093	—	171.410	171.410	0.00419	0.02690	0.00802	179.538
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.09129	0.91454	7.36058	9.60758	0.02286	0.27330	—	0.27330	0.25144	—	0.25144	—	2,393.98	2,393.98	0.09711	0.01942	—	2,402.19
Dust From Material Movement	—	—	—	—	—	—	0.43504	0.43504	—	0.04697	0.04697	—	—	—	—	—	—	—
Onsite truck	0.00557	0.00343	0.12875	0.05436	0.00056	0.00139	30.4077	30.4091	0.00139	3.03560	3.03699	—	72.0171	72.0171	0.00176	0.01132	0.05617	75.4897
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19916	0.16690	1.34331	1.75338	0.00417	0.04988	—	0.04988	0.04589	—	0.04589	—	396.350	396.350	0.01608	0.00322	—	397.710
Dust From Material Movement	—	—	—	—	—	—	0.07940	0.07940	—	0.00857	0.00857	—	—	—	—	—	—	—
Onsite truck	0.00102	0.00063	0.02350	0.00992	0.00010	0.00025	5.54940	5.54965	0.00025	0.55400	0.55425	—	11.9233	11.9233	0.00029	0.00187	0.00930	12.4982

3.4.2. Offsite - 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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11943	0.10794	0.06593	1.36133	0.00000	0.00000	0.29403	0.29403	0.00000	0.06892	0.06892	—	300.270	300.270	0.00463	0.00231	0.77930	301.855
Vendor	0.02438	0.01283	0.59256	0.20269	0.00401	0.00802	0.15266	0.16069	0.00802	0.04218	0.05020	—	517.031	517.031	0.01067	0.07932	0.90656	541.843
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11249	0.10023	0.08814	1.07485	0.00000	0.00000	0.29403	0.29403	0.00000	0.06892	0.06892	—	271.600	271.600	0.00617	0.01226	0.02020	275.429
Vendor	0.02306	0.01195	0.63167	0.20975	0.00401	0.00802	0.15266	0.16069	0.00802	0.04218	0.05020	—	517.538	517.538	0.01067	0.07932	0.02358	541.466
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04668	0.04184	0.03225	0.46360	0.00000	0.00000	0.12319	0.12319	0.00000	0.02887	0.02887	—	117.114	117.114	0.00227	0.00483	0.14131	118.753
Vendor	0.01007	0.00521	0.25961	0.08658	0.00169	0.00338	0.06400	0.06738	0.00338	0.01769	0.02107	—	217.627	217.627	0.00449	0.03337	0.16513	227.850
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00852	0.00764	0.00589	0.08461	0.00000	0.00000	0.02248	0.02248	0.00000	0.00527	0.00527	—	19.3896	19.3896	0.00038	0.00080	0.02340	19.6609
Vendor	0.00184	0.00095	0.04738	0.01580	0.00031	0.00062	0.01168	0.01230	0.00062	0.00323	0.00384	—	36.0307	36.0307	0.00074	0.00553	0.02734	37.7232
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5. Linear, Paving (2029)

3.5.1. Onsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.90378	0.75943	6.78025	10.7735	0.01495	0.22769	—	0.22769	0.20947	—	0.20947	—	1,618.86	1,618.86	0.06567	0.01313	—	1,624.42
Onsite truck	0.01367	0.00860	0.29542	0.12787	0.00132	0.00331	73.6019	73.6052	0.00331	7.34763	7.35093	—	170.990	170.990	0.00419	0.02690	0.30896	179.418
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.90378	0.75943	6.78025	10.7735	0.01495	0.22769	—	0.22769	0.20947	—	0.20947	—	1,618.86	1,618.86	0.06567	0.01313	—	1,624.42
Onsite truck	0.01257	0.00772	0.31460	0.13140	0.00132	0.00331	73.6019	73.6052	0.00331	7.34763	7.35093	—	171.410	171.410	0.00419	0.02690	0.00802	179.538
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26176	0.21995	1.96375	3.12031	0.00433	0.06594	—	0.06594	0.06067	—	0.06067	—	468.868	468.868	0.01902	0.00380	—	470.477
Onsite truck	0.00383	0.00236	0.08863	0.03742	0.00038	0.00096	20.9318	20.9327	0.00096	2.08962	2.09058	—	49.5746	49.5746	0.00121	0.00779	0.03867	51.9650
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04777	0.04014	0.35838	0.56946	0.00079	0.01203	—	0.01203	0.01107	—	0.01107	—	77.6264	77.6264	0.00315	0.00063	—	77.8928
Onsite truck	0.00070	0.00043	0.01617	0.00683	0.00007	0.00017	3.82005	3.82023	0.00017	0.38136	0.38153	—	8.20763	8.20763	0.00020	0.00129	0.00640	8.60339

3.5.2. Offsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.09384	0.08481	0.05181	1.06961	0.00000	0.00000	0.23102	0.23102	0.00000	0.05415	0.05415	—	235.926	235.926	0.00364	0.00182	0.61231	237.171
Vendor	0.01097	0.00577	0.26665	0.09121	0.00181	0.00361	0.06870	0.07231	0.00361	0.01898	0.02259	—	232.664	232.664	0.00480	0.03570	0.40795	243.829
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08838	0.07875	0.06925	0.84452	0.00000	0.00000	0.23102	0.23102	0.00000	0.05415	0.05415	—	213.400	213.400	0.00485	0.00963	0.01587	216.408
Vendor	0.01038	0.00538	0.28425	0.09439	0.00181	0.00361	0.06870	0.07231	0.00361	0.01898	0.02259	—	232.892	232.892	0.00480	0.03570	0.01061	243.660
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02525	0.02263	0.01744	0.25075	0.00000	0.00000	0.06663	0.06663	0.00000	0.01561	0.01561	—	63.3428	63.3428	0.00123	0.00261	0.07643	64.2291
Vendor	0.00312	0.00161	0.08042	0.02682	0.00052	0.00105	0.01983	0.02087	0.00105	0.00548	0.00653	—	67.4138	67.4138	0.00139	0.01034	0.05115	70.5805
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00461	0.00413	0.00318	0.04576	0.00000	0.00000	0.01216	0.01216	0.00000	0.00285	0.00285	—	10.4871	10.4871	0.00020	0.00043	0.01265	10.6339
Vendor	0.00057	0.00029	0.01468	0.00489	0.00010	0.00019	0.00362	0.00381	0.00019	0.00100	0.00119	—	11.1611	11.1611	0.00023	0.00171	0.00847	11.6854
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6. Linear, Paving (2030)

3.6.1. Onsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.86843	0.72972	6.64689	10.7456	0.01495	0.21137	—	0.21137	0.19446	—	0.19446	—	1,618.86	1,618.86	0.06567	0.01313	—	1,624.42
Onsite truck	0.01257	0.00772	0.30887	0.13029	0.00132	0.00331	73.6019	73.6052	0.00331	7.34763	7.35093	—	166.956	166.956	0.00419	0.02690	0.00730	175.083
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09007	0.07569	0.68940	1.11452	0.00155	0.02192	—	0.02192	0.02017	—	0.02017	—	167.905	167.905	0.00681	0.00136	—	168.482
Onsite truck	0.00135	0.00085	0.03112	0.01331	0.00014	0.00034	7.49584	7.49619	0.00034	0.74831	0.74865	—	17.2911	17.2911	0.00043	0.00279	0.01259	18.1459
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01644	0.01381	0.12582	0.20340	0.00028	0.00400	—	0.00400	0.00368	—	0.00368	—	27.7987	27.7987	0.00113	0.00023	—	27.8941
Onsite truck	0.00025	0.00015	0.00568	0.00243	0.00003	0.00006	1.36799	1.36805	0.00006	0.13657	0.13663	—	2.86274	2.86274	0.00007	0.00046	0.00208	3.00426

3.6.2. Offsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08293	0.07390	0.06144	0.79211	0.00000	0.00000	0.23102	0.23102	0.00000	0.05415	0.05415	—	209.903	209.903	0.00485	0.00903	0.01402	212.729
Vendor	0.01038	0.00538	0.27383	0.09218	0.00181	0.00361	0.06870	0.07231	0.00361	0.01898	0.02259	—	226.117	226.117	0.00300	0.03389	0.00930	236.300
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00866	0.00766	0.00544	0.08386	0.00000	0.00000	0.02386	0.02386	0.00000	0.00559	0.00559	—	22.3103	22.3103	0.00044	0.00094	0.02427	22.6246
Vendor	0.00112	0.00058	0.02772	0.00940	0.00019	0.00037	0.00710	0.00747	0.00037	0.00196	0.00234	—	23.4386	23.4386	0.00031	0.00351	0.01607	24.5099
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00158	0.00140	0.00099	0.01530	0.00000	0.00000	0.00435	0.00435	0.00000	0.00102	0.00102	—	3.69372	3.69372	0.00007	0.00016	0.00402	3.74576
Vendor	0.00020	0.00011	0.00506	0.00171	0.00003	0.00007	0.00130	0.00136	0.00007	0.00036	0.00043	—	3.88053	3.88053	0.00005	0.00058	0.00266	4.05790
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

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	3/6/2028	4/28/2028	5.00000	40.0000	Earth work
Linear, Grading & Excavation	Linear, Grading & Excavation	5/1/2028	7/14/2028	5.00000	55.0000	Earth work
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	7/17/2028	8/3/2029	5.00000	275.000	Structure
Linear, Paving	Linear, Paving	8/6/2029	2/22/2030	5.00000	145.000	Paving

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	Crawler Tractors	Diesel	Average	1.000000	8.00000	87.0000	0.43000
Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	1.000000	8.00000	36.0000	0.38000
Linear, Grubbing & Land Clearing	Signal Boards	Electric	Average	4.00000	8.00000	6.00000	0.82000

Linear, Grading & Excavation	Crawler Tractors	Diesel	Average	1.000000	8.00000	87.0000	0.43000
Linear, Grading & Excavation	Excavators	Diesel	Average	3.00000	8.00000	36.0000	0.38000
Linear, Grading & Excavation	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Linear, Grading & Excavation	Rollers	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Average	1.000000	8.00000	150.000	0.36000
Linear, Grading & Excavation	Scrapers	Diesel	Average	2.00000	8.00000	423.000	0.48000
Linear, Grading & Excavation	Signal Boards	Electric	Average	4.00000	8.00000	6.00000	0.82000
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	2.00000	8.00000	84.0000	0.37000
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	1.000000	8.00000	37.0000	0.48000
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.000000	8.00000	8.00000	0.43000
Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	1.000000	8.00000	11.0000	0.74000
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	1.000000	8.00000	96.0000	0.40000
Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	2.00000	8.00000	423.000	0.48000
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	4.00000	8.00000	6.00000	0.82000
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	2.00000	8.00000	84.0000	0.37000
Linear, Paving	Pavers	Diesel	Average	1.000000	8.00000	81.0000	0.42000

Linear, Paving	Paving Equipment	Diesel	Average	1.000000	8.00000	89.0000	0.36000
Linear, Paving	Rollers	Diesel	Average	3.00000	8.00000	36.0000	0.38000
Linear, Paving	Signal Boards	Electric	Average	4.00000	8.00000	6.00000	0.82000
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	2.00000	8.00000	84.0000	0.37000

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	Worker	15.0000	11.8900	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	0.00000	9.10000	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	20.0000	20.0000	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	10.00000	5.00000	HHDT
Linear, Grading & Excavation	Worker	40.0000	11.8900	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	1.000000	9.10000	HHDT,MHDT
Linear, Grading & Excavation	Hauling	33.1818	20.0000	HHDT
Linear, Grading & Excavation	Onsite truck	10.00000	5.00000	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Worker	35.0000	11.8900	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	20.0000	9.10000	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00000	20.0000	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	10.00000	5.00000	HHDT
Linear, Paving	Worker	27.5000	11.8900	LDA,LDT1,LDT2
Linear, Paving	Vendor	9.00000	9.10000	HHDT,MHDT
Linear, Paving	Hauling	0.00000	20.0000	HHDT
Linear, Paving	Onsite truck	10.00000	5.00000	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

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	0.00000	0.00000	22.8700	0.00000	0.00000
Linear, Grading & Excavation	0.00000	14,600.0	22.8700	0.00000	0.00000
Linear, Drainage, Utilities, & Sub-Grade	0.00000	0.00000	22.8700	0.00000	0.00000

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

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2028	352.209	203.983	0.03300	0.00400
2029	234.806	203.983	0.03300	0.00400
2030	117.403	203.983	0.03300	0.00400

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Construction: Construction Phases	Construction schedule is based on applicant's input: Earth work March 2028 - July 2028 Structure . July 2028 - Aug 2029 Remaining work (paving) Sep 2029 - Feb 2030
Construction: Trips and VMT	Please see "Construction Trips" calculator for details

8.4. Construction

8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	End Date	5/1/2028	4/28/2028
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	Description	—	Earth work
Linear, Grading & Excavation	Linear, Grading & Excavation	Start Date	5/2/2028	5/1/2028
Linear, Grading & Excavation	Linear, Grading & Excavation	End Date	12/12/2028	7/14/2028
Linear, Grading & Excavation	Linear, Grading & Excavation	Work Days per Phase	160.000	55.0000
Linear, Grading & Excavation	Linear, Grading & Excavation	Description	—	Earth work
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	Start Date	12/13/2028	7/17/2028
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	End Date	6/27/2029	8/3/2029
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	Work Days per Phase	140.000	275.000
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	Description	—	Structure
Linear, Paving	Linear, Paving	Start Date	6/28/2029	8/6/2029

Linear, Paving	Linear, Paving	End Date	9/20/2029	2/22/2030
Linear, Paving	Linear, Paving	Work Days per Phase	60.0000	145.000
Linear, Paving	Linear, Paving	Description	—	Paving

8.4.6. Trips and VMT

Phase Name	Trip Type	Model Parameter	Default Value	New Value
Linear, Grubbing & Land Clearing	Hauling	One-Way Trips per Day	0.00000	20.0000
Linear, Drainage, Utilities, & Sub-Grade	Vendor	One-Way Trips per Day	0.00000	20.0000
Linear, Paving	Vendor	One-Way Trips per Day	0.00000	9.00000