



● **Board of Directors**
Engineering, Operations, and Technology Committee

1/10/2023 Board Meeting

7-3

Subject

Review and consider Addendum No. 3 to the certified 2005 Environmental Impact Report; award a \$59,489,720 contract to James W. Fowler Company for construction of the Interstate 215 freeway tunnel crossing for the Perris Valley Pipeline; and authorize agreements with Parsons Environment & Infrastructure Group, Inc. for \$1 million to provide technical support during construction, Mott McDonald Group for \$3.5 million to provide construction management support, and Rincon Consultants, Inc. for \$250,000 to provide specialized environmental support

Executive Summary

Eastern Municipal Water District (Eastern) and Western Municipal Water District (Western) of Riverside County have both requested additional deliveries from the Henry J. Mills Water Treatment Plant to meet current and future demands. The Perris Valley Pipeline project allows Metropolitan to meet projected treated water demands in Riverside County; maximize use of the Mills plant; strengthen water delivery system reliability; and increase operational flexibility in this portion of Metropolitan's service area. Although mostly completed in 2011, the southern portion of the pipeline has remained out of service until a tunnel crossing of the Interstate 215 freeway can be completed. This action awards a contract to construct the last remaining portion of the pipeline. This contract will be conducted under the terms of Metropolitan's project labor agreement (PLA). This action also authorizes agreements with Parsons Environment & Infrastructure Group, Inc. for technical support during construction, Mott McDonald Group for construction management support during construction, and Rincon Consultants for specialized environmental services.

Details

Background

The 96-inch-diameter Perris Valley Pipeline is approximately 6.5 miles long and has four service connections with a combined capacity of 375 cubic feet per second. The pipeline starts at the Mills plant and runs easterly along Alessandro Boulevard for approximately 2 miles, then continues south for approximately 4.5 miles. The route runs adjacent to Interstate 215 and a railroad line, with a tunnel crossing necessary for each. The terminus of the pipeline is at Harley Knox Boulevard.

The pipeline is being constructed in four stages. The initial portion of the Perris Valley Pipeline, consisting of the tie-in to the Mills plant and an initial service connection, was completed in 2006. Construction of the 2.5-miles long North Reach was completed in 2008, while the 3.5 miles South Reach was largely completed in 2011.

As construction of the South Reach was nearing completion, a dramatic downturn in the economy resulted in much lower water demands and demand projections. At that same time, the South Reach contractor encountered greater than anticipated groundwater flow at the Interstate 215 freeway tunnel crossing that would have required a change of conditions with considerable extra cost. Rather than negotiate a non-competitive cost for completion of the tunnel crossing, the crossing was deleted from the contract, and completion was deferred due to the reduced demands. In recent years, potential water supply demands in this portion of Riverside County have accelerated. As a result, both Eastern and Western have formally requested that construction of the remaining Interstate 215 tunnel crossing portion of the Perris Valley Pipeline be completed. Completion of this portion of the pipeline will allow water deliveries through the southernmost service connections of the pipeline to begin by fiscal year 2024/25.

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager will authorize staff to proceed with construction of the Perris Valley Pipeline Interstate 215 Tunnel Crossing, pending board award of the contract described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for the work to be performed pursuant to this action during the current biennium are available within the CIP Appropriation for Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15525). Funds required for work to be performed pursuant to the subject contract after fiscal year 2023/24 will be budgeted within the CIP Appropriation for fiscal years 2024/25 and 2025/26. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the System Flexibility/Supply Reliability Program.

Perris Valley Pipeline Interstate 215 Tunnel Crossing – Construction

The scope of the contract includes construction of four tunnel access shafts, construction of approximately 3,000 feet of tunnel in three sections between the shafts, and installation of temporary support in the form of a steel casing; installation of a 97-inch inside diameter steel pipe inside the tunnel casing; field welding the pipe joints; grouting the annular space between the steel pipe and the tunnel casing; mortar lining the inside of the steel pipe; settlement monitoring; and groundwater dewatering and treatment. Due to high groundwater levels and potential groundwater contamination with per-and polyfluoroalkyl substances (PFAS), the contractor is required to comply with the requirements of the permit issued to Metropolitan by the Santa Ana Regional Water Quality Control Board. If encountered in the groundwater during construction, the contractor will be required to treat perfluoro octane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) to non-detect levels. Metropolitan force activities will include shutdown of the pipeline and establishment of clearances, final disinfection, water quality testing, and return of the pipeline to service.

A total of \$75 million is required for this work, including the cost of the construction contract. Allocated funds for professional agreements include \$1 million for construction support by Parsons Environment & Infrastructure Group, Inc., \$3.5 million for specialized tunnelling construction management support by Mott McDonald Group, \$250,000 for environmental services by Rincon Consultants, Inc., and \$240,000 for PLA administration under an existing board-authorized agreement. The new agreements are further detailed below. In addition, \$500,000 is necessary for right of way acquisition of temporary access and storage areas. Allocated funds for Metropolitan staff activities include \$600,000 for shutdown-related activities; \$3,100,000 for construction management and inspection; \$769,000 for submittals review and preparation of record drawings; \$2,080,000 for contract administration, environmental monitoring support, project controls, PLA administration, and project management; and \$3,471,280 for remaining budget. **Attachment 1** provides the allocation of the required funds.

Award of Construction Contract (James W. Fowler Co.)

Specifications No. 1928 for construction of the Interstate 215 freeway tunnel crossing for the Perris Valley Pipeline was advertised for bids on August 17, 2022. As shown in **Attachment 2**, two bids were received and opened on December 1, 2022. The low bid from James W. Fowler Company in the amount of \$59,489,720 complies with the requirements of the specifications. The higher bid was \$67,880,500, while the engineer's estimate for this project was \$74,000,000. Staff investigated why the low bid was significantly lower than the engineer's estimate and attributes the difference to the conservative estimating approach by Metropolitan related to projected inflationary labor components of the project, as well as potential risks that were priced into the estimate associated with material procurement and supply chain issues. For this contract, Metropolitan established a Small Business Enterprise (SBE) participation level of at least ten percent of the bid amount. James W. Fowler has committed to meet this level of participation. The subcontractors for this contract are listed in **Attachment 3**. This contract will be conducted under the terms of Metropolitan's PLA.

This action awards a \$59,489,720 contract to James W. Fowler Company for the construction of the Interstate 215 freeway tunnel crossing for the Perris Valley Pipeline. The total cost of construction for this project is \$60,089,720, which includes the amount of the contract (\$59,489,720) and Metropolitan force activities (\$600,000). Engineering Services' performance metric target range for inspection of projects with construction greater than \$3 million is 9 to 12 percent. For this project, the performance metric goal for inspection is 11.0 percent of the total construction cost.

Technical Engineering Support During Construction (Parsons Environment & Infrastructure Group, Inc.) – New Agreement

Parsons Environment & Infrastructure Group, Inc. (Parsons) prepared the final design of the Perris Valley Pipeline Interstate 215 freeway tunnel crossing through an on-call agreement that has since expired. As the engineer of record, Parsons is recommended to provide technical support during construction. This support includes review of submittals received from the contractor, responding to requests for information, advising the inspectors on technical issues as they may arise, and preparing record drawings. The estimated cost for Parsons to provide these services is \$1 million. For this agreement, Metropolitan has established an SBE participation level of 25 percent. Parsons has agreed to meet this level of participation. The planned subconsultants for this agreement are Brierley Associates and DRP Engineering.

This action authorizes an agreement with Parsons for a not-to-exceed amount of \$1 million to provide technical support for construction of the Interstate 215 freeway tunnel crossing of the Perris Valley Pipeline.

Construction Management Support (Mott McDonald Group) – New Agreement

Given the complexity of the tunnelling operation for the Perris Valley Pipeline Interstate 215 freeway tunnel crossing, staff recommends the use of a hybrid team of in-house staff and an outside consultant experienced in this type of specialized work to perform construction management of this contract. Mott McDonald Group is recommended to provide specialized construction management support services for the Perris Valley Pipeline Interstate 215 freeway tunnel crossing. Mott McDonald Group was prequalified under Request for Qualifications No. 1298. Mott McDonald Group was selected for this project based on their qualifications, experience with similar projects, and technical approach and methodology.

The planned activities for Mott McDonald Group to support the in-house staff include providing technical support during construction, conducting field inspection during the tunnelling activities, review of tunnel submittals, and additional as-needed support to Metropolitan's general construction management activities. Anticipated consultant staff on the project will include: a construction manager experienced in tunnel construction, an assistant resident engineer, a chief inspector, tunnel inspectors, and field engineers and geologists with tunnel construction experience. For this agreement, Metropolitan has established an SBE participation level of 25 percent. See **Attachment 4** for the planned subconsultants.

This action authorizes an agreement with Mott McDonald Group for a not-to-exceed amount of \$3.5 million to provide construction management support for the Perris Valley Pipeline Interstate 215 crossing project.

Specialized Environmental Services (Rincon Consulting, Inc.) – New Agreement

Rincon Consulting, Inc. (Rincon) is recommended to prepare environmental monitoring services for construction of the Perris Valley Pipeline Interstate 215 tunnel. Rincon was prequalified through Request for Qualification No. 1265. Rincon was selected for this project based on the firm's extensive experience with CEQA compliance and environmental clearances, and its specific experience with facility environmental investigations and documentation.

The planned scope of work includes a preconstruction survey of the work site, environmental awareness training, construction monitoring, including nesting bird surveys, and general support.

This action authorizes a new agreement with Rincon for a not-to-exceed amount of \$250,000 for environmental monitoring for the Perris Valley Pipeline Interstate 215 tunnel. There are no planned subconsultants for this work.

Alternatives Considered

Alternatives considered for completing construction management of the Perris Valley Pipeline Interstate 215 crossing included assessing the availability and capability of in-house Metropolitan staff to conduct this construction support work. Metropolitan's staffing strategy for utilizing consultants and in-house Metropolitan staff has been: (1) to assess current work assignments for in-house staff to determine the potential availability of staff to conduct this work; and (2) for long-term rehabilitation projects, when resource needs exceed available in-house staffing or require specialized technical expertise.

In the case of this project, Metropolitan staff maintains the core competencies and technical capabilities to perform the general construction management of the project as well as performing inspection for the civil design work. The consultant will be relied upon to support construction management of the specialized tunnelling activities, review of tunnel submittals, and additional as-needed support to Metropolitan's general construction management activities. In this manner, in-house staff will continue to address a baseload of work on capital projects, while the professional services agreement will be relied upon to perform work that falls outside of the core competencies of in-house staff. This approach will allow for the efficient, competent, and timely completion of this project.

In addition, during the planning and design stage of this project, staff considered several different pipeline alignments, some of which consisted of a combination of tunnels and pipelines. After an assessment of construction risks, including groundwater infiltration into tunnel shafts and pipeline trenches, PFAS treatment requirements, and potential disruption to aboveground facilities owned by others, the current all-tunnel alignment was selected to mitigate risks and cost-effectively meet water-demand objectives.

Summary

This action awards a construction contract for the Interstate 215 freeway tunnel crossing for the Perris Valley Pipeline and authorizes agreements with: (1) Parsons Environment & Infrastructure, Inc. to provide technical support during construction, (2) Mott McDonald Group for construction management support services, and (3) Rincon Consulting, Inc. for environmental monitoring. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the Subcontractor of Low Bid, **Attachment 4** for the Planned Subconsultants for Mott McDonald Group, **Attachment 5** for the Location Map, and **Attachment 6** for Addendum No. 3 to the certified 2005 Environmental Impact Report.

Project Milestone

December 2024 – Completion of construction

Policy

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 11100: Environmental Matters

By Minute Item 52778, dated April 12, 2020, the Board appropriated a total of \$600 million for projects identified in the Capital Investment Plan for Fiscal Years 2022/23 and 2023/24.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

Pursuant to the provisions of CEQA and the State CEQA Guidelines, Western Municipal Water District, acting as Lead Agency, prepared and processed a Final Environmental Impact Report (Final EIR) for the proposed project. The Final EIR was certified, and the project was approved by the Lead Agency on December 7, 2005. The Lead Agency also approved the Findings of Fact (Findings), the Statement of Overriding Considerations (SOC), and the Mitigation Monitoring and Reporting Program (MMRP). Metropolitan, as a Responsible Agency under CEQA, certified that it had reviewed and considered the information in the certified Final EIR and adopted the Lead Agency's Findings, SOC, and MMRP on December 21, 2005, and has assumed responsibilities for the final design and construction of the proposed project.

On April 9, 2021, Addendum No. 3 to the Final EIR was prepared to document the proposed minor modifications to the approved project as described in this letter. CEQA and State CEQA Guidelines require the preparation of an addendum to a previously certified EIR if changes or additions are necessary, but none of the conditions calling for the preparation of a subsequent EIR have occurred (Section 15164 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Review and consider Addendum No. 3 to the certified 2005 Environmental Impact Report and:

- a. Award a \$59,489,720 contract to James W. Fowler Company for construction of the Interstate 215 freeway tunnel crossing for the Perris Valley Pipeline.
- b. Authorize an agreement with Parsons Environment & Infrastructure Group, Inc., for \$1 million to provide technical support during construction.
- c. Authorize an agreement with Mott McDonald Group, for \$3.5 million to provide construction management support.
- d. Authorize an agreement with Rincon Consultants, Inc., for \$250,000 to provide specialized environmental support.

Fiscal Impact: Expenditure of \$75 million in capital funds. Approximately \$60 million will be incurred in the current biennium and has been previously authorized. The remaining funds from this action will be accounted for and appropriated under the next biennial budget.

Business Analysis: This option would improve Metropolitan's ability to meet water demands in the Riverside County region.

Option #2

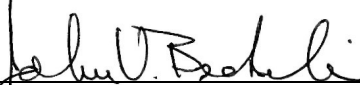

Do not proceed with this project at this time.

Fiscal Impact: None

Business Analysis: This option would reduce system reliability and operational flexibility within this portion of Metropolitan's distribution system.

Staff Recommendation

Option #1

 _____ John V. Bednarski Manager/Chief Engineer Engineering Services	12/19/2022 Date
 _____ Adel Hagekhalil General Manager	12/21/2022 Date

Attachment 1 – Allocation of Funds**Attachment 2 – Abstract of Bids****Attachment 3 – Subcontractors for the Low Bidder****Attachment 4 – Planned Subconsultants****Attachment 5 – Location Map****Attachment 6 – Addendum No. 3 to the Final EIR**

Allocation of Funds for Perris Valley Pipeline Interstate 215 Freeway Tunnel Crossing

	Current Board Action (Jan. 2023)
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., permitting, contract admin, & environmental monitoring)	2,080,000
Submittals Review & Record Drwgs.	769,000
Construction Inspection & Support	3,100,000
Metropolitan Force Construction	600,000
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Parsons Environmental & Infrastructure Group, Inc.	1,000,000
Mott McDonald Group	3,500,000
Rincon Consulting, Inc.	250,000
PLA Administration	240,000
Right-of-Way	500,000
Equipment Use	-
Contracts	-
James W. Fowler, Co.	59,489,720
Remaining Budget	3,471,280
Total	\$ 75,000,000

The total amount expended to date for the Perris Valley Pipeline Interstate 215 crossing project is approximately \$7.6 million. The total estimated cost to complete this pipeline project, including the amount appropriated to date and funds allocated for the work described in this action, is \$82.6 million.

The Metropolitan Water District of Southern California

Abstract of Bids Received on December 1, 2022, at 2:00 P.M.

Specifications No. 1928

Perris Valley Pipeline Interstate 215 Freeway Tunnel Crossing

This work includes constructing approximately 3,000 linear feet of 97-inch diameter welded steel pipe installed in steel casing by micro-tunneling and cut and cover, and four tunnel access shafts; installing cathodic protection test stations and geotechnical instrumentation; and performing groundwater management and treatment, offsite disposal of excavated materials, removal of existing bulkheads, hydrotesting, pipeline disinfection, traffic control, and site restoration.

Engineer's estimate: \$74,000,000

Bidder and Location	Total	SBE \$	SBE %	Met SBE¹
James W. Fowler Company Dallas, OR	\$59,489,720	\$6,371,246	11%	Yes
Steve P. Rados, Inc. Santa Ana, CA	\$67,880,500	-	-	-

¹ Small Business Enterprise (SBE) participation level established at 10% for this contract.

The Metropolitan Water District of Southern California
Subcontractors for Low Bidder
Specifications No. 1928
Perris Valley Pipeline Interstate 215 Freeway Tunnel Crossing

Low bidder: James W. Fowler Company

Subcontractor and Location
National Welding Corporation Midvale, UT
Clear Creek Systems, Inc. Bakersfield, CA
Mahaffey Drilling Co. Compton, CA
Sixense, Inc. Torrance, CA
Rain For Rent Bakersfield, CA

The Metropolitan Water District of Southern California
Subconsultants for Agreement with Mott McDonald Group

Subconsultant and Location
American Safety Group San Diego, California
Black & Veatch Overland Park, Kansas
Coast Surveying Tustin, California
CPM Partners Encinitas, California
FPL & Associates Irvine, California
Group Delta Consultants Irvine, California
Leland Saylor Associates Oakland, California
McMillen Jacobs San Francisco, California
MTGL Anaheim, California

Distribution System



Addendum No. 3 To The Perris Valley Pipeline Project Environmental Impact Report

April 2021

Prepared For:

The Metropolitan Water District of Southern California
Environmental Planning Section
700 North Alameda Street
Los Angeles, California 90012

Prepared By:

Rincon Consultants, Inc.
1980 Orange Tree Lane, Suite 105
Redlands, California 92374

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**THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA**

**ADDENDUM NO. 3 TO THE
PERRIS VALLEY PIPELINE PROJECT
ENVIRONMENTAL IMPACT REPORT**

(State Clearinghouse No. 2005061028)

**The Metropolitan Water District of Southern California
Environmental Planning Section
700 North Alameda Street
Los Angeles, CA 90012**

**Contact Information:
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April 9, 2021

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Metropolitan Water District of Southern California Perris Valley Pipeline Project

Addendum No. 3 to the Environmental Impact Report

1 Introduction

1.1 Purpose of Addendum

The purpose of this Addendum is to evaluate potential environmental effects associated with proposed minor modifications to the previously approved Perris Valley Pipeline Project (“Project”). An Environmental Impact Report (EIR) for the Project was prepared and certified by the Western Municipal Water District (WMWD) in 2005, and was reviewed and considered by the Metropolitan Water District of Southern California (Metropolitan) Board as part of its approval of the Project on December 21, 2005. Addendum No. 1 to the Final EIR was approved on May 20, 2008, and Addendum No. 2 was approved on July 15, 2009.

Addendum No. 3 proposes an alternate pipeline realignment across the Interstate 215 (I-215) freeway to minimize tunneling length. Construction and installation of approximately 3,000 feet of underground pipeline would be required using the tunneling method. When completed, the pipeline would provide continuous potable water delivery from Metropolitan’s Henry J. Mills Water Treatment Plant (Mills WTP) to regional member agencies identified in the Final EIR. Together, these minor design changes are referred to in Addendum No. 3 as the “proposed modifications.”

The proposed modifications are described in detail in Section 2.0 of this Addendum and are summarized as follows:

- Pipeline realignment to minimize the length of tunneling under I-215. The original Project crossed I-215 on a diagonal using tunneling and jack and bore methods, and the current project would cross I-215 at a perpendicular using tunneling method only.
- Tunneling activities to minimize above-ground impacts. Construct three separate tunnels and four boring pits/shafts for tunnel access and ventilation.
- Stagnant water is present in the already-constructed northern and southern segments of the Project. Temporary treatment facilities would treat stagnant water before dewatering at discharge point locations.
- Three temporary treatment facilities installed to treat encountered groundwater from tunnel activities, high total dissolved solids (TDS) and pH levels (high alkalinity), and stagnant water. Temporary dewatering pipelines installed to transport treated water from the temporary treatment facilities to discharge water locations.
- Approximately forty existing dewatering and monitoring wells may be removed and backfilled.

Additionally, Metropolitan actions will include obtaining real property rights from various public agencies (e.g., California Department of Transportation [Caltrans], March Joint Powers Authority [MJPA], Riverside County Transportation Commission/Burlington Northern Santa Fe [RCTC/BNSF], Southern California Regional Rail Authority [SCRRA], U.S. Department of Veterans Affairs, Riverside County Flood Control and Water Conservation District, Federal Aviation Administration, WMWD, Eastern Municipal Water District [EMWD]), and other private owners to complete the proposed Project.

These rights may include easements, licenses, leases, permits, or other rights which will be acquired through agreements with the underlying property owners, or through condemnation actions, as necessary and appropriate. This document, along with the previous CEQA documents, may be reviewed and considered by other agencies responsible for additional discretionary approvals related to the Project.

To comply with the California Environmental Quality Act (CEQA) (Public Resources Code Sections 21000 et seq.) and *Guidelines for Implementation of the CEQA* (California Code of Regulations Sections 15000 et seq., hereinafter referred to as *State CEQA Guidelines*), this Addendum No. 3 has been prepared to evaluate the potential environmental impacts associated with the proposed modifications as described in detail in Section 2.0.

1.2 Regulatory Background

According to Section 15164(a) of the *State CEQA Guidelines*, the Lead Agency or Responsible Agency shall prepare an addendum to a previously certified EIR or adopted negative declaration if some changes or additions are necessary, but none of the changes call for preparation of a subsequent EIR or negative declaration (see CEQA Guidelines Section 15162). Section 15162 of the *State CEQA Guidelines* lists the conditions that would require the preparation of a subsequent EIR or negative declaration rather than an addendum. These include the following:

- (1) Substantial changes are proposed in the Project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- (2) Substantial changes occur with respect to the circumstances under which the Project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time of the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
 - (A) The Project will have one or more significant effects not discussed in the previous EIR or negative declaration;
 - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the Project, but the Project proponents decline to adopt the mitigation measure or alternative; or
 - (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the Project proponents decline to adopt the mitigation measure or alternative.

Metropolitan has evaluated the potential environmental impacts of the proposed modifications as outlined in Section 3.0 of this Addendum. As noted in Section 6.0, *Conclusion*, of this Addendum, Metropolitan, acting as the Lead Agency, has determined that none of the conditions described in Section 15162 of the *State CEQA Guidelines* apply, and an addendum is the appropriate environmental documentation for the proposed modifications and fully complies with CEQA and the *State CEQA Guidelines*.

1.3 Summary of Environmental Effects

Section 3.0 of this Addendum presents an analysis of potential environmental impacts related to aesthetics, air quality, biological resources, cultural resources, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, transportation, tribal cultural resources, and wildfire associated with the proposed modifications. For all other resource categories identified in the CEQA Appendix G Checklist (e.g., agriculture, geology and soils, land use and planning, mineral resources, population and housing, public services, recreation, utilities and service systems), the certified 2005 EIR found that the Project would either have no impact, a less than significant impact, or a less than significant impact with mitigation incorporated. For these categories, the proposed modifications would not generate new significant environmental effects that were not previously addressed, nor would they substantially increase the severity of previously identified significant effects identified in the Project's original environmental documentation. Therefore, no further written analysis in this Addendum is required.

The certified 2005 EIR and Mitigation Monitoring and Reporting Program (MMRP) included mitigation measures for six resource areas - air quality, cultural resources, hazards and hazardous materials, hydrology and water quality, noise, and traffic - to reduce significant environmental impacts associated with the approved Project to the maximum extent practicable. The currently proposed modifications would be subject to the same adopted mitigation measures, as applicable. Mitigation measures adopted in the certified 2005 EIR remain unchanged.

This Addendum concludes that the proposed modifications would not change the significance determinations of the certified 2005 EIR regarding construction and operational impacts on the identified impact categories: aesthetics, air quality, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, noise, and transportation. Also, because analyses of greenhouse gas emissions, tribal cultural resources, and wildfire were not required when the original Project EIR was certified, brief discussions of impacts on these resource categories are included. The proposed modifications to the previously approved Project do not meet any of the conditions that would require the preparation of a subsequent EIR or negative declaration set forth in Section 15162 of the *State CEQA Guidelines* or any of the conditions requiring the preparation of a supplement to an EIR as set forth in Section 15163 of the *State CEQA Guidelines*.

1.4 Incorporation by Reference

The following documents were used in the preparation of this Addendum and are incorporated herein by reference, consistent with Section 15150 of the *State CEQA Guidelines*.

- *Perris Valley Pipeline Project Draft Environmental Impact Report*. Western Municipal Water District. (SCH No. 2005061028), October 2005.
- *Perris Valley Pipeline Project Final Environmental Impact Report*. Western Municipal Water District. (SCH No. 2005061028), December 2005.
- Addendum No. 1 to the Final Perris Valley Pipeline Project Environmental Impact Report. The Metropolitan Water District of Southern California. May 2008.
- Addendum No. 2 to the Perris Valley Pipeline Project Environmental Impact Report. The Metropolitan Water District of Southern California. July 2009.

2 Description of the Proposed Modifications

2.1 Background

As mentioned previously, the Project was analyzed in an EIR prepared and certified by WMWD on December 21, 2005. Metropolitan took over the design and construction of the Project in 2007, and Metropolitan's Board of Directors adopted the EIR and its MMRP and mitigation obligations in 2007. Subsequently, Metropolitan prepared Addendum No. 1 and No. 2, approved on May 20, 2008 and July 15, 2009, respectively. The objectives of the Project are to (1) meet existing and projected treated water demands in Riverside County, (2) maximize existing water treatment facilities, (3) strengthen water delivery system reliability and increase operational flexibility, and (4) provide a secure source of water to regional member agencies, as described in the certified 2005 EIR.

The Project, which was previously approved, permitted and is almost complete, consists of the construction, operation and maintenance of approximately six miles of the Perris Valley Pipeline and appurtenances, four service connections, and four pump stations. The Project alignment traverses the cities of Perris and Riverside as well as unincorporated Riverside County and is located almost entirely within the WMWD service area, with a small portion near the southern terminus extending into the EMWD service area. Both WMWD and EMWD provide wholesale and retail water to their respective service areas and purchase supplemental, imported water from Metropolitan.

2.2 Project Location and Project Description

The Project area is generally located off the Van Buren Boulevard and I-215 freeway interchange, on land owned by Caltrans, MJPA, RCTC/BNSF, and other private owners. The project would impact surrounding areas that parallel I-215, located within approximately 300 feet east and west of the freeway, from Van Buren Boulevard to Harley Knox Boulevard in unincorporated Riverside County. The regional location of the proposed modifications is depicted in Figure 1.

Metropolitan proposes to modify the Perris Valley Pipeline alignment, where it crosses I-215, from the alignment reviewed and certified in the 2005 EIR. The modifications would include the relocation of the tunnel undercrossing located near the RCTC/BNSF railroad tracks and I-215 from a point south of Van Buren Boulevard to a point just north of Van Buren Boulevard (Tunnel 1). The tunnel would veer in a southwesterly direction along the eastern side of I-215 and Van Buren Boulevard (Tunnel 2), and under the northwestern portion of the March Air Field Museum, and into the Van Buren Boulevard right-of-way (ROW) to connect with the already-constructed southern segment of the Project (Tunnel 3). The modifications would shorten the length of the alignment that would traverse beneath I-215, at approximately 3,000 linear feet, which is effectively the same as the length of the originally approved alignment in this area. Each tunnel activity would require approximately sixteen weeks.

The proposed modifications would include installation of temporary dewatering facilities such as temporary groundwater conveyance lines, a temporary conveyance line delivering treated water from the Mills WTP, and three temporary treatment plants. All the temporary facilities (e.g., groundwater conveyance lines, Mills WTP water conveyance lines, treatment plants) would be installed at-grade and no trenching is proposed.

The Project would also include decommissioning and removal of approximately 40 existing dewatering and monitoring wells. The groundwater dewatering wells were previously constructed as part of the construction of the Perris Valley Pipeline Project and are no longer required. Well decommissioning activities would occur over approximately eight weeks.

Construction access would be provided via existing paved and unpaved roads following the RCTC/BNSF railroad tracks, dirt roads associated with the already-constructed segments of the Project, and dirt and gravel access roads for public utility access near Van Buren Boulevard and the MJPA property line. The existing appurtenant facilities (e.g., blow-off valves, air release/vacuum relief valve assemblies, and access manholes), service connections, and pump stations would not be affected by the proposed modifications. Existing manholes, along the existing Perris Valley Pipeline, would be used for ingress/egress for pipeline cleaning activities and ventilation. Figure 2 shows the general Project location and Figure 3, Figure 4, and Figure 5 show the detailed proposed modifications (tunnels, temporary facilities, wells).

The realignment proposed in this Addendum would not result in an increase in the number of workers at the Project area during the operational phase compared to activities previously analyzed in the certified 2005 EIR. Given that the operational regime of the pipeline would not change as a result of the proposed realignment, this Addendum focuses on the construction aspect of the proposed modifications to the Project.

Figure 1 Regional Location



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★ Project Location

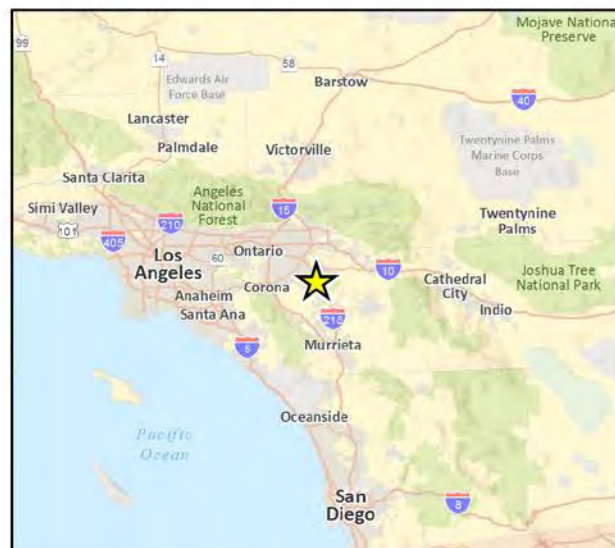


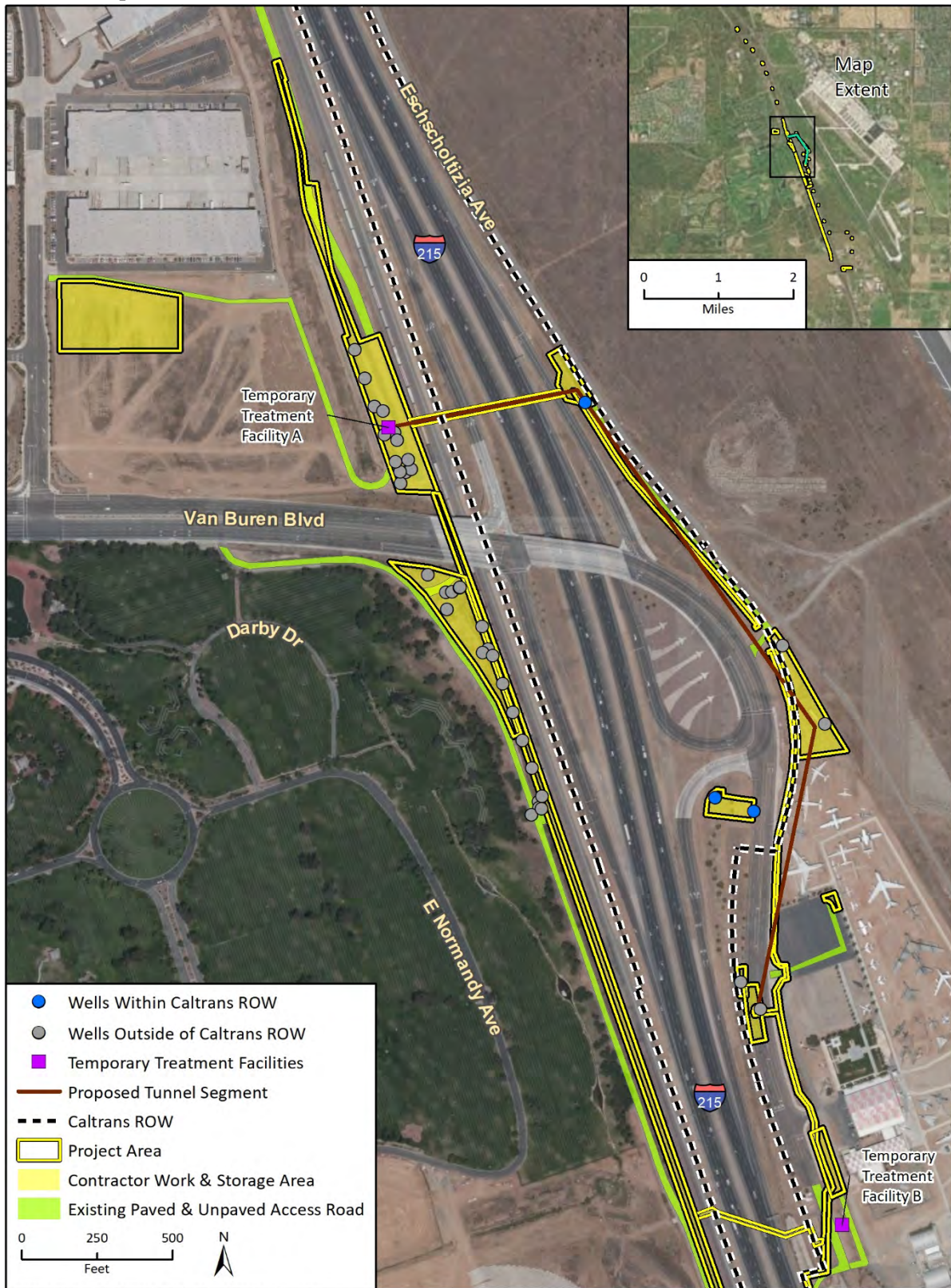
Figure 2 Project Location



Imagery provided by Microsoft Bing and its licensors © 2020.

EPS_Fig X ProjectOverview

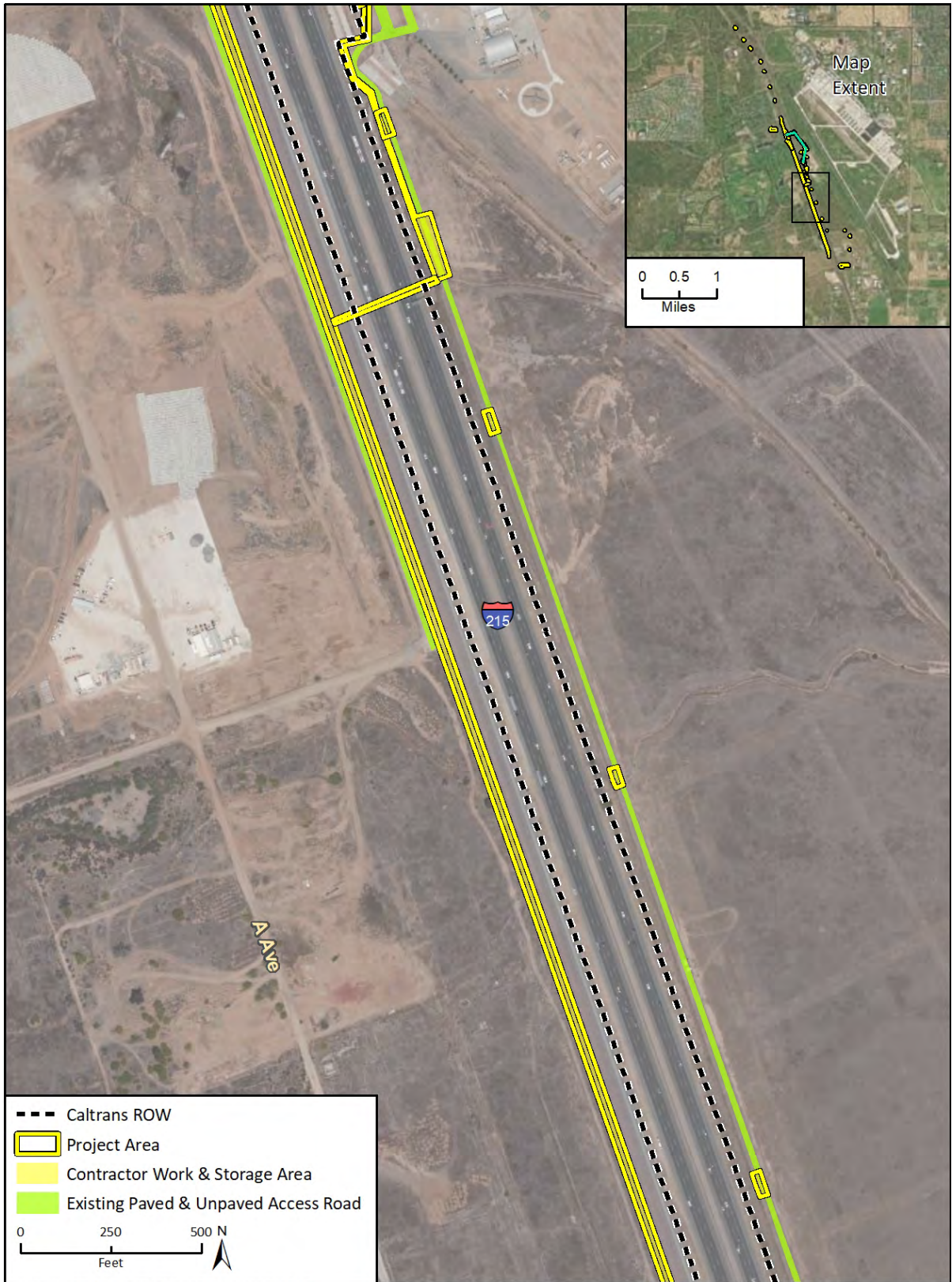
Figure 3 Proposed Modifications (1 of 3)



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Caltrans, Fig 4 Proposed Mods and Caltrans ROW Northern

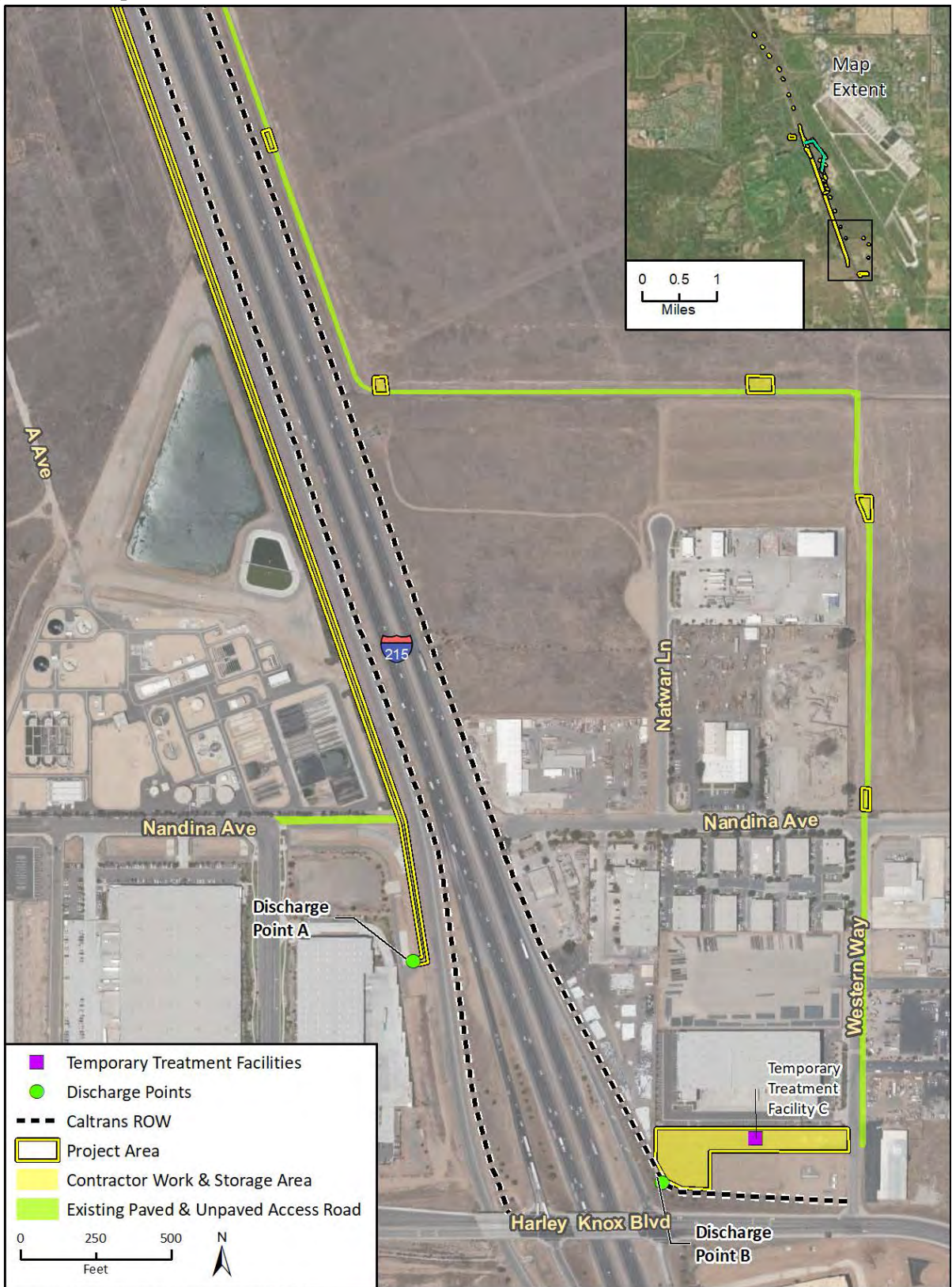
Figure 4 Proposed Modifications (2 of 3)



Imagery provided by Microsoft Bing and its licensors © 2020.
Additional data provided by Metropolitan Water District of Southern California 2018.

_Fig 5 Proposed Mods and Caltrans ROW Middle

Figure 5 Proposed Modifications (3 of 3)



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Additional data provided by Metropolitan Water District of Southern California 2018.

Caltrans_Fig 6 Proposed Mods and Caltrans ROW Southern

3 Environmental Setting and Analysis

This section presents an analysis of environmental impacts related to aesthetics, air quality, biological resources, cultural resources, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, transportation, tribal cultural resources and wildfire associated with the proposed modifications.

3.1 Aesthetics

The certified 2005 EIR prepared for the original Project concluded that potential environmental impacts to aesthetics would be less than significant. This section provides an analysis of the potential aesthetic impacts associated with the proposed modifications to the Project.

3.1.1 Setting

As described in the certified 2005 EIR, from virtually any place in the Project area, there is an overall view of distant mountains and nearby hills. Rock outcroppings accent the hillsides and provide a distinct texture to the landscape. Other dominant features in the landscape include the March Air Reserve Base, the I-215 freeway, the RCTC/BNSF railroad tracks, and commercial and industrial development.

According to the Riverside County General Plan (County of Riverside 2017), there are no designated State or County scenic highways within the Project area.

3.1.2 Significance Threshold Criteria

The following CEQA significance threshold criteria were used to evaluate impacts to aesthetics associated with the proposed modifications. Impacts would be potentially significant if the proposed modifications would introduce new significant impacts or substantially increase the severity of previously identified significant impacts associated with:

- a) A substantial adverse effect on a scenic vista
- b) Substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway
- c) In an urbanized area, a conflict with applicable zoning and other regulations governing scenic quality
- d) Creation of a new source of substantial light or glare which would adversely affect day or nighttime views in the area

3.1.3 Potential Impacts

Scenic Vista

The Riverside County General Plan addresses scenic resources in both the Land Use Element (County of Riverside 2019) and the Circulation Element (County of Riverside 2017). The Riverside County General Plan does not specifically designate scenic vistas, but it does identify policies to protect and maintain resources along scenic highways. There are no designated State or County scenic highways within the Project area.

The proposed modifications would not introduce new significant impacts to a scenic vista. Construction of the proposed modifications would be visible from surrounding land uses and would temporarily alter the existing visual character and quality of the Project area and vicinity. However, the modifications would not permanently affect any of the aboveground components of the Project. Construction activities would be temporary and localized. Upon completion of construction, the proposed modifications would be located entirely underground and would not be visible. The proposed modifications would not substantially change the aesthetic character of aboveground structures and would not result in permanent changes affecting scenic vistas. Therefore, no impacts to scenic vistas would occur.

Scenic Resources

According to the Riverside County General Plan (County of Riverside 2017), there are no designated State or County scenic highways within the Project area. Furthermore, as previously discussed, upon completion of construction, the proposed modifications would be located entirely underground and would not be visible. No trees, rock outcroppings, or historic buildings within a State scenic highway would be affected. Consequently, no impacts to scenic resources visible from a State scenic highway would occur.

Zoning and Other Regulations

The proposed modifications are located in unincorporated Riverside County and the city of Perris. Pursuant to California Government Code 53091(d) and (e), the Project, including the proposed modifications, would not be subject to the design review policies contained in the County's or City's zoning regulations. Local zoning and building ordinances do not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water.

As previously discussed, there are no designated State or County scenic highways within the Project area. Therefore, the proposed modifications would not conflict with Riverside County General Plan policies governing scenic quality. As such, the proposed modifications would not cause the Project to conflict with applicable zoning and other regulations governing scenic quality. No impacts would occur related to zoning ordinances or regulations governing scenic quality.

Light or Glare

During construction, tunnel boring and receiving pits would be dewatered. Construction dewatering would occur for the duration of excavation activities associated with tunneling. Dewatering would require continuous operation of approximately six pumps at the treatment facilities, and would require nighttime lighting.

Construction lighting may be visible from surrounding roadways and other land uses, but the lighting would not face toward adjacent uses and would be directed downwards towards pipeline installation activities. The land uses surrounding the Project area are primarily industrial and commercial. The nearest receptors sensitive to light trespass or glare are residences located over 5,000 feet west of the proposed tunneling activities near the I-215/Van Buren Boulevard interchange. Any construction lighting used would be shielded to minimize impacts to any nearby receptors. As such, light and glare from nighttime construction activities would not substantially disturb sensitive receptors. Following the completion of construction dewatering activities, temporary treatment facilities would be removed, and the general area would be returned to its existing conditions. Therefore, the proposed modifications would not result in any new significant impacts related to light and glare. This impact would be less than significant, consistent with the certified 2005 EIR.

3.1.4 Conclusion

The proposed modifications would not result in any new significant impacts to aesthetics or substantially increase the severity of impacts already identified in the certified 2005 EIR. Impacts would be similar to those determined in the certified 2005 EIR. Therefore, impacts to aesthetics would be considered less than significant and no further mitigation is required.

3.2 Air Quality

The certified 2005 EIR prepared for the original Project concluded that potential environmental impacts to air quality would be significant and unavoidable after the incorporation of mitigation. This section provides an analysis of the potential air quality impacts associated with the proposed modifications to the Project.

3.2.1 Setting

As described in the certified 2005 EIR, the Perris Valley Pipeline Project site, which includes the Project area, is located in the South Coast Air Basin (Basin), which is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). SCAQMD monitors ozone, carbon monoxide, nitrogen dioxide and suspended particulates in the Basin and compares the concentrations of those pollutants to State and federal standards.

The Basin is in non-attainment for the federal standards for ozone and particulate matter less than 2.5 microns in diameter (PM_{2.5}), as well as lead in Los Angeles County only. Also, the Basin is in non-attainment for the State standards for ozone, particulate matter less than 10 microns in diameter (PM₁₀), and PM_{2.5}, as well as lead in Los Angeles County only (SCAQMD 2016). The nonattainment status is a result of several factors, the primary ones being the naturally adverse meteorological conditions that limit the dispersion and diffusion of pollutants, the limited capacity of the local airshed to eliminate pollutants from the air, and the number, type, and density of emission sources within the Basin.

The SCAQMD considers air quality sensitive receptors to be residences, hospitals, convalescent facilities, and other places where it is possible for an individual to remain for 24 hours. Commercial and industrial facilities are not considered sensitive (SCAQMD 2008a). Therefore, the closest sensitive receptors to the Project area are residences located over 5,000 feet west of the project components near the I-215/Van Buren Boulevard interchange, approximately 2,800 feet northeast of the work area near the I-215/Cactus Avenue interchange, and a residence located approximately 1,900 feet southwest of the Project components near the I-215/Harley Knox Boulevard Interchange.

3.2.2 Significance Threshold Criteria

The following CEQA significance threshold criteria were used to evaluate impacts to air quality associated with the proposed modifications. Impacts would be potentially significant if the proposed modifications would introduce new significant impacts or substantially increase the severity of previously identified significant impacts associated with:

- a) A conflict with or obstruction of implementation of the applicable air quality plan
- b) 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
- c) Exposure of sensitive receptors to substantial pollutant concentrations

- d) Other emissions (such as those leading to odors) adversely affecting a substantial number of people

The SCAQMD provides significance thresholds (see Table 1) to determine the potential impacts of the proposed modifications for CEQA significance thresholds b) and c). These thresholds are the same as those applied in the certified 2005 EIR, with the exception of PM_{2.5} which was not previously evaluated.

Table 1
SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds		
Pollutant	Construction	Operation
NO_x	100 lbs/day	55 lbs/day
Volatile Organic Compounds (VOC)	75 lbs/day	55 lbs/day
PM₁₀	150 lbs/day	150 lbs/day
PM_{2.5}	55 lbs/day	55 lbs/day
Sulfur oxide (SO_x)	150 lbs/day	150 lbs/day
Carbon monoxide (CO)	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs) and Odor Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden >0.5 excess cancer cases (in areas ≥ 1 in 1 million) Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Greenhouse gases (GHG)	10,000 MT/yr CO ₂ eq for industrial facilities	
Ambient Air Quality for Criteria Pollutants		
Nitrogen dioxide (NO₂) 1-hour average annual arithmetic mean	SCAQMD is in attainment; the project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.03 ppm (state) and 0.0534 ppm (federal)	
PM₁₀ 24-hour average annual average	10.4 µg/m ³ (recommended for construction) & 2.5 µg/m ³ (operation) 1.0 µg/m ³	
PM_{2.5}	10.4 µg/m ³ (construction) & 2.5 µg/m ³ (operation)	
Sulfur dioxide (SO₂) 1-hr average 24-hr average	0.25 ppm (state) & 0.075 ppm (federal – 99 th percentile) 0.04 ppm (state)	
Sulfate 24-hour average	25 ug/m ³ (state)	
CO 1-hour average 8-hour average	SCAQMD is in attainment; the project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day average Rolling 3-month average Quarterly average	1.5 ug/m ³ (state) 0.15 ug/m ³ (federal) 1.5 ug/m ³ (federal)	

KEY: lbs/day = pounds per day ppm = parts per million ug/m³ = microgram per cubic meter ≥ greater than or equal to

Source: SCAQMD 2015.

The SCAQMD has also developed Localized Significance Thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4)¹ that was prepared to update the SCAQMD's CEQA Air Quality Handbook. LSTs are voluntary thresholds that represent the maximum emissions from a project that would not cause or contribute to an air quality exceedance of the most stringent applicable federal or State ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source-receptor area (SRA), project size, and distance to the sensitive receptor. LSTs only apply to emissions in a fixed stationary location and do not apply to mobile sources, such as cars on a roadway (SCAQMD 2008). As such, LSTs are typically applied only to construction emissions. LSTs have been developed for emissions within areas up to five acres in size, with air pollutant modeling recommended for activity within larger areas. The Project area is located in SRA 24, Perris Valley. Pipeline tunneling and minimal trenching for placement of temporary dewatering facilities are the primary components of the proposed modifications that would involve daily site disturbance. Decommissioning of dewatering and monitoring wells would occur at the rate of approximately one well per day, resulting in minor site disturbance area. To establish LSTs for the Project, the Project area was determined to be approximately 3.1 acres in size, based on the size of work areas around all tunnel pits, temporary water treatment facilities, and eight approximately 40-foot long segments of temporary dewatering and potable water conveyance lines that would be installed via trenching. Therefore, LSTs for a two-acre site were used to provide a conservative analysis. LSTs are provided by SCAQMD for sensitive receptors at a distance of up to 1,640 feet (500 meters) from the Project area. Because the nearest sensitive receptors are located approximately 1,900 feet from the Project area—which is in excess of the furthest distance established by SCAQMD of 1,640 feet—LSTs for receptors at 1,640 feet were used to provide a conservative analysis. See Table 2 for LSTs. LSTs are determined by both the size of the project footprint and the proximity to sensitive receptors, with projects closer to sensitive receptors having lower LSTs. Therefore, the LSTs presented in Table 2 are substantially higher than those applied in the certified 2005 EIR because the proposed modifications are located further from sensitive receptors than other previously constructed segments of the pipeline.

Table 2
SCAQMD LSTs for Construction

Pollutant	Allowable Emissions for a 2-acre Site in SRA 24 for a Receptor 1,640 Feet Away
Gradual conversion of NO_x to NO₂	684
CO	18,947
PM₁₀	186
PM_{2.5}	91

Source: SCAQMD 2009.

3.2.3 Potential Impacts

Air Quality Management Plan

Generally, to be consistent with an Air Quality Management Plan (AQMP), a project must not result in or contribute to an exceedance of the forecasts in the applicable plan(s). The certified 2005 EIR determined that the original Project was consistent with SCAQMD's 2003 AQMP because it served development approved in the general plans on which the AQMP is based. Similarly, the modified Project, including the

¹ The Governing Board's Environmental Justice Enhancement Initiative (1-4) refers to the first four original Environmental Justice Initiatives outlined here: <http://www.aqmd.gov/nav/about/initiatives/environmental-justice/environmental-justice-initiatives>

proposed modifications, would serve development approved in the current general plan upon which the 2016 AQMP is based. The proposed modifications would not directly or indirectly increase the population or result in a change in land use that would result in air contaminant emissions. As stated in Section 2.2, *Project Location and Project Description*, the proposed modifications would not require any additional workers during the operational phase of the Project. The certified 2005 EIR estimated there would be a maximum of 10 workers onsite during construction at any one time. Construction of the proposed modifications would generally involve similar construction techniques and, consequently, would require a similar number of workers at the Project area as activities previously analyzed in the certified 2005 EIR. Well-decommissioning activities would require a crew of up to four people and were not evaluated in the certified 2005 EIR. As such, the proposed modifications would be expected to require a maximum of 14 workers onsite during construction at any one time. Construction workers for the proposed modifications would be onsite temporarily, and it is not expected that they would permanently relocate to the area. The Project, including the proposed modifications, is therefore consistent with the 2016 AQMP. Construction of the proposed modifications would not increase the population of the area, and no impacts would occur.

Criteria Pollutants and Sensitive Receptors

The certified 2005 EIR concluded that construction emissions would exceed the SCAQMD regional thresholds for NO_x, and LSTs for NO_x, CO, and PM₁₀. Therefore, implementation of Mitigation Measure AIR-1 was required. However, the certified 2005 EIR determined that incorporation of Mitigation Measure AIR-1 would not reduce air quality impacts to a less than significant level.

AIR-1 The construction management entity(ies) shall include the following mitigation measures in its/their standard construction specifications:

- Maintain construction equipment engines by keeping them properly tuned
- Use clean and low-sulfur fuel for equipment
- Provide particulate traps and oxidation catalysts on construction equipment
- Spread soil binders on-site, where appropriate, unpaved roads and staging areas
- Water site and equipment in the morning and evening
- Suspend grading activities during first and second stage smog alters and during high winds by SCAQMD Rule 403 requirements
- If necessary, wash off trucks leaving the site
- Cover haul trucks

This mitigation measure was implemented during construction of portions of the original Project that have already been completed, and will be implemented during construction of the remaining portions of the Project, including the proposed modifications. The proposed modifications, similar to the Project activities analyzed under the certified 2005 EIR, will include construction activities that would generate temporary emissions. Exhaust emissions such as PM₁₀, CO, NO_x, and reactive organic gases (ROG)/VOC² associated with truck trips, haul trips, and diesel construction equipment would potentially

² Organic compound precursors of ozone are routinely described by a number of variations of three terms: hydrocarbons (HC), organic gases (OG), and organic compounds (OC). These terms are often modified by adjectives such as total, reactive, or volatile, and result in a rather confusing array of acronyms: HC, THC (total hydrocarbons), RHC (reactive hydrocarbons), TOG (total organic gases), ROG (reactive organic gases), TOC (total organic compounds), ROC (reactive organic compounds), and VOC (volatile organic compounds). While most of these differ in some significant way from a chemical perspective, from an air

degrade air quality. The air emissions modeling conducted for the original Project estimated the maximum daily air pollutant emissions associated with seven work areas of the Project carrying out construction activities concurrently. The number of construction activities occurring at any one time under the proposed modifications would be fewer than what was used to determine the maximum daily air pollutant emissions in the certified 2005 EIR. Construction methods, duration, and fleet requirements for the Project would not change substantially from what was previously analyzed in the certified 2005 EIR as a result of the proposed modifications because the original Project also called for tunneling/jack and bore construction methods for pipeline installation under the I-215 freeway. Finally, the emission factors associated with the use of heavy-duty construction equipment would be lower than those used to predict air pollutant emissions in the certified 2005 EIR because of improvements in technology and efficiency since 2005.

The original Project emissions were estimated based on the 2005 emissions factors from SCAQMD. Construction emissions associated with the proposed modifications were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2, a modeling tool that the California Air Pollution Control Officers Association developed for use throughout the State to estimate construction emissions from land use development. Metropolitan provided the construction schedule and equipment information that was used in CalEEMod to model emissions associated with the proposed modifications. Construction of the proposed modifications would adhere to all applicable regulatory standards. For construction emissions modeling, it was assumed that construction of the proposed modifications would comply with SCAQMD Rule 403, which identifies measures to reduce fugitive dust and is required to be implemented at all construction sites located within the Basin. Pursuant to Metropolitan's environmental specifications and consistent with the California Air Resources Board's (CARB) In-Use Off-Road Diesel-Fueled Fleets Regulation, the contractor would be required to use off-road construction equipment that meets or exceeds U.S. EPA Tier 4 emissions standards, or at a minimum Tier 3 or Tier 2 standards with the highest level of available emission control equipment where Tier 4 equipment is not available. However, for a more direct comparison with emissions quantified for the approved Project, emissions modeling for the proposed modifications does not account for engine tiering standards and, therefore, provides a conservative estimate of construction-related emissions.

Construction would involve the use of approximately five generators: two 1,200 kW generators (one at Tunnel Pit 1, one at Tunnel Pit 3), two 60 kW generators (one at Tunnel Pit 2, one at Tunnel Pit 3), and a 100kW generator to power construction trailers near the March Air Field Museum. Generators and pumps were assumed to operate for 24 hours per day for the duration of excavation, tunneling, and dewatering activities at each tunnel pit. While not expected to occur frequently during construction activities, it is possible that all generators may operate simultaneously. To account for the potential for all generators to operate at the same time, generator operating phases were made to overlap in CalEEMod to account for this worst-case scenario in the maximum daily emissions. Finally, it was assumed that installation of temporary construction dewatering facilities, including installation of treatment facilities and dewatering discharge lines, would occur prior to excavation of tunnel pits or pipeline installation. Therefore, site preparation and installation of temporary water treatment facilities and trenching to install temporary dewatering discharge lines were modeled separately in CalEEMod. Other activities, such as cleaning and disinfection of the existing pipeline and placement of temporary dewatering discharge and potable water conveyance lines are not anticipated to require the use of heavy equipment or substantial ground disturbance and, as such, were not modeled in CalEEMod. See Appendix A for air quality modeling assumptions and results.

quality perspective two groups are important: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (HC, RHC, ROG, ROC, and VOC).

As shown in Table 3, the estimated maximum daily construction emissions would not exceed SCAQMD regional or localized significance thresholds for ROG, CO, SO₂, PM₁₀, and PM_{2.5}. However, as with the original Project, maximum daily construction emissions associated with the construction of the proposed modifications would exceed the SCAQMD regional significance threshold for NO_x, and temporary air quality impacts would be potentially significant. Metropolitan would implement Mitigation Measure AIR-1 described in the certified 2005 EIR during the construction of the proposed modifications to reduce NO_x emissions; however, mitigation would not reduce impacts below the level of significance.

The certified 2005 EIR identified exceedances of SCAQMD's LSTs for CO, NO_x, and PM₁₀. The proposed modifications, however, would not result in any exceedances of SCAQMD LSTs. As mentioned, the nearest sensitive receptor to the location of the proposed modifications is a residence approximately 1,900 feet southwest of the proposed blended water discharge point near the I-215/Harley Knox Boulevard interchange. Given the distance of sensitive receptors from the Project area, temporary nature of construction emissions, and the fact maximum daily emissions would not exceed LSTs established by SCAQMD; no sensitive receptors would be exposed to substantial pollutant concentrations. Therefore, construction-related air quality impacts would remain significant and unavoidable, similar to what was described in the certified 2005 EIR, but the proposed modifications would not substantially increase the severity of this impact.

Table 3
Estimated Unmitigated Maximum Daily Construction Emissions

Construction Year	Emissions (pounds per day)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Installation of Temporary Dewatering Discharge and Treatment Facilities						
Maximum Daily Emissions	0.8	7.9	8.0	<0.1	0.9	0.6
<i>SCAQMD Regional Thresholds</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
Threshold Exceeded?	No	No	No	No	No	No
<i>SCAQMD LSTs</i>	<i>n/a</i>	<i>684</i>	<i>18,947</i>	<i>n/a</i>	<i>186</i>	<i>91</i>
Threshold Exceeded?	n/a	No	No	n/a	No	No
Pipeline Tunneling, Excavation Pit Dewatering, and Well Decommissioning Activities						
2021	45.5	628.0	269.2	1.0	22.8	18.5
2022	39.3	551.2	242.6	0.9	17.0	14.3
Maximum Daily Emissions	45.5	628.0	269.2	1.0	22.8	18.5
<i>SCAQMD Regional Thresholds</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
Threshold Exceeded?	No	Yes	No	No	No	No
<i>SCAQMD LSTs</i>	<i>n/a</i>	<i>684</i>	<i>18,947</i>	<i>n/a</i>	<i>186</i>	<i>91</i>
Threshold Exceeded?	n/a	No	No	n/a	No	No

LSTs = Localized Significance Thresholds

Source: See Appendix A for CalEEMod calculations and assumptions.

Notes: All numbers have been rounded to the nearest tenth. Emission data is pulled from "mitigated" results, which account for compliance with regulations. Emissions presented are the highest of the winter and summer modeled emissions.

No change in permanent, long-term operational air pollutant emissions would occur as a result of the proposed modifications because pipeline operations would be substantially the same as those analyzed under the certified 2005 EIR. Therefore, operational impacts to air quality associated with the proposed modifications would not result in a new or substantially more severe significant impact than previously identified in the certified 2005 EIR.

Objectionable Odors

As discussed in the certified 2005 EIR, the original Project includes the construction of a water supply pipeline, and operation would not create or cause objectionable odors; therefore, no impact would occur. Construction activities may result in temporary odors, such as those associated with use of gasoline and diesel fuel used to power construction equipment and generators. These odor sources would be temporary in nature and typical of other construction projects using similar equipment in the region. Furthermore, the proposed modifications are not located near any air quality sensitive receptors where construction-related odors would be expected to be disruptive. The proposed modifications would not include any additional odor-generating sources. The proposed modifications would not introduce new odor impacts and would not result in a new or substantially more severe significant impact than what was previously analyzed in the certified 2005 EIR.

3.2.4 Conclusion

The proposed modifications would not result in any new significant impacts to air quality or substantially increase the severity of impacts already identified in the certified 2005 EIR. Unlike the original Project, maximum daily emissions associated with construction of the proposed modifications would not exceed any LSTs established by SCAQMD and would not expose sensitive receptors to substantial pollutant concentrations. Therefore, impacts related to air quality for the proposed modifications would be less than previously identified in the certified 2005 EIR, but would remain significant and unavoidable. The proposed modifications would not substantially increase the severity of air quality impacts and no further mitigation is required.

3.3 Biological Resources

The certified 2005 EIR prepared for the original Project concluded that no potential environmental impacts to biological resources would occur. This section provides an analysis of the potential biological resource impacts associated with the proposed modifications.

3.3.1 Setting

A site-specific biological survey was conducted in 2005 to identify and evaluate impacts to biological resources associated with the Project. Survey results were recorded in the certified 2005 EIR. Additionally, a number of reconnaissance-level surveys were performed to assess the proposed modifications footprint. On June 8, 2018, Rincon biologist Lily Sam performed a reconnaissance-level biological resources field survey of the proposed modifications footprint that includes the approximately 3,000-foot segment of the pipeline, work areas, and access roads. On May 24, 2019, Rincon biologist Amy Leigh Trost conducted an additional reconnaissance-level biological field survey of the temporary dewatering facilities which includes the temporary dewatering lines and treatment facility locations. On March 30, 2020, Rincon biologist Jared Reed conducted an additional reconnaissance-level biological field survey of the revised work areas and temporary dewatering facility alignments. On April 23, 2020, Rincon biologist Christina Shushnar conducted an additional reconnaissance-level site visit which

consisted of walking and driving select portions of the Project alignment to assess existing conditions of biological resources present within the location of the proposed modifications and adjacent areas, with particular attention to the dewatering discharge locations. Results of the surveys are documented in a Biological Resources Assessment (BRA) for the proposed modifications (Rincon Consultants 2020a; Appendix B) and the *Biological Resources Memorandum for the Perris Valley Pipeline Modifications Project in the Caltrans Interstate 215 Right-of-Way* (Rincon Consultants 2020b).

The Project area is located within a developed/disturbed transportation corridor, primarily within the rights-of-way of existing dirt and paved roadways including I-215 freeway, Van Buren Boulevard, and the BNSF/RCTC railroad. The Project area and surrounding areas have been heavily developed and disturbed since at least 1994. Portions of the Project area that are not paved and devoid of vegetation consist of patchy, ruderal vegetation including non-native grasses and other weedy plant species, and bare ground. Adjacent land uses include developed and urban areas including the transportation corridors mentioned above, March Air Reserve Base to the east, industrial development to the west/northwest, and Riverside National Cemetery to the west/southwest.

No special status plant or wildlife species were observed during the four field reconnaissance surveys (Rincon Consultants 2020a). The Project is located within a heavily traveled urban transportation corridor with high levels of existing disturbance that is subject to high noise levels which would likely deter most wildlife from long-term use in the area.

3.3.2 Significance Threshold Criteria

The following CEQA significance threshold criteria were used to evaluate impacts to biological resources associated with the proposed modifications. Impacts would be potentially significant if the proposed modifications would introduce new significant impacts or substantially increase the severity of previously identified significant impacts associated with:

- a) An adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS)
- b) An adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS
- c) An adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
- d) Interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
- e) A conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- f) A conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plans

3.3.3 Potential Impacts

Special Status Species

As discussed in the certified 2005 EIR, no impacts to special status species were expected to occur as a result of the implementation of the original Project because none were present. As expected, no impacts to special status species have occurred to date during the construction of the Project.

As described in the BRA for the proposed modifications to the Project (Rincon Consultants 2020a; Appendix B), 14 sensitive plant species and 38 sensitive wildlife species are known to occur or have potential to occur within a five-mile radius of the site. Two sensitive plant communities, southern cottonwood riparian forest and southern sycamore alder riparian woodland, were identified within five miles of the Project area. Due to the lack of specific habitats or suitable substrates as well as the high levels of historical and existing disturbance, sensitive plant species are not expected to occur within the Project area.

Of the 38 sensitive wildlife species identified, 36 of these species are not expected to occur due to lack of suitable habitat (e.g., riparian, scrub, woodland). The remaining two species with the potential to occur within the Project area are burrowing owl (*Athene cunicularia*) and California horned lark (*Eremophila alpestris actia*). Construction activities associated with the proposed modifications are primarily located within existing dirt and paved roadways and will be installed underground with surfaces returned to pre-Project conditions following the completion of construction.

No special-status wildlife species were observed during the four reconnaissance surveys, and the potential for these species to occur is low due to the Project's location within a heavily traveled urban transportation corridor and high levels of existing disturbance which would likely deter individuals from long-term use of the Project area. However, construction activities associated with the proposed modifications will occur for approximately 52 weeks which would overlap with the nesting bird season. Metropolitan will implement standard best management practices (BMPs), including pre-construction nesting bird/burrowing owl surveys and avoidance/implementation of no-work buffers as appropriate, to ensure that no direct or indirect impacts to sensitive wildlife species or nesting birds would occur as a result of construction activities. Implementation of these standard BMPs would be required as part of Metropolitan's standard contractor specifications.

The proposed modifications to the Project would not result in new or substantially more severe significant impacts than what was previously analyzed in the certified 2005 EIR. No impact to special status species would occur.

Riparian Habitat, Wetlands, or Sensitive Natural Communities

As discussed in the certified 2005 EIR, no riparian habitat, protected wetlands, or sensitive natural communities were present in the Project area, and implementation of the original Project was expected to have no impact on these resources. The Project is almost complete, and no riparian habitat, protected wetlands, or sensitive natural communities were encountered to date during the prior construction phases of the Project. The adopted MND for the I-215/Van Buren Boulevard Interchange Project identified small areas of potentially jurisdictional wetlands, coastal sage scrub, and southern willow scrub within the Biological Study Area for that project (Caltrans 2009). However, none of those identified communities are located within the Project area.

As discussed in the BRA for the proposed modifications (Appendix B), several potentially State and/or federal jurisdictional features have been identified adjacent to the proposed realignment; however, a

formal jurisdictional delineation was not conducted. Therefore, the information below provides a general assessment of potentially jurisdictional features and does not provide a formal assessment of specific agency jurisdiction for each feature. Based on a review of existing data, including review of aerial imagery and the USFWS NWI (2020c), and on-site observations, several potentially jurisdictional features are present within or adjacent to the Project area, including the following:

- A constructed earthen storm channel is located east of I-215 off-ramp and north of Van Buren Boulevard but outside of the Project work limits. The channel conveys stormwater flows from north to south and supports low growing herbaceous vegetation as well as avian species. No standing water was observed in the storm channel during the April 2020 site visit.
- An existing detention basin is present west of the I-215 on-ramp and north of Van Buren Boulevard. The detention basin supports various grasses and shrubs and provides foraging and nesting habitat for avian species. A small pond of standing water was present within the detention basin during the April 2020 site visit.
- A small depression is present within the surrounding disturbed non-native grassland habitat located east of I-215 between the I-215 off-ramp and Van Buren Boulevard just across from the March Air Field Museum. It is adjacent to, but outside, the Project work limits. The depression contains areas with bare soil in contrast to the dense non-native grasses in the surrounding areas. The depression has cracked soils, indicating water may have collected for brief periods following storm events that has since percolated into the ground or evaporated. No wet areas were observed within the depression during the April 2020 site visit following a wet winter with relatively recent rains. The depression is surrounded by stakes and fencing, indicating that it may have been previously fenced or flagged from another project.

All three features (storm channel, detention basin, depression) described above are located outside of the proposed modifications work area, and the proposed modifications have been designed to avoid these potentially jurisdictional features. Additionally, Metropolitan would implement standard BMPs, including flagging work area boundaries and installation of straw wattles and/or silt fencing, to ensure that no direct or indirect impacts to adjacent potentially jurisdictional resources would occur as a result of construction activities. Implementation of these standard BMPs would be required as part of Metropolitan's standard contractor specifications. Therefore, the potentially jurisdictional features described above would not be impacted by the Project.

Tunneling and well decommissioning activities during construction might encounter groundwater. As mentioned in the BRA, project-related groundwater would be discharged at two separate discharge points near the potentially jurisdictional features described below:

- Discharge Point A consists of a partially earthen/partially concrete-lined v-ditch channel, owned and maintained by Riverside County Flood Control and Water Conservation District, which conveys flows from north to south into two large concrete culverts, and is located along the west side of I-215 near a warehouse complex. Review of aerial imagery indicates that the channel originates from underground approximately 400 feet north and 350 feet west of Discharge Point A. At Discharge Point A the channel is devoid of vegetation and does not provide habitat for sensitive biological resources. No riparian vegetation or wildlife were observed at this location. A small amount of water was present within the channel during the April 2020 site visit.
- Discharge Point B consists of a concrete-lined trapezoidal channel, owned by EMWD, which conveys flows from north to south along the east side of I-215. Review of aerial imagery indicates that Discharge Point B likely connects with Discharge Point A upstream approximately 1,000 feet northwest of Discharge Point B. At Discharge Point B, the channel is devoid of

vegetation and does not provide habitat for sensitive biological resources. No riparian vegetation or wildlife were observed at this location. The channel was dry at the time of the April 2020 site visit. The channel conveys flows underground to the south and into Lateral B.

- Lateral B is a 30-foot wide partially concrete-lined and partially earthen flood control channel maintained by Riverside County Flood Control and Water Conservation District. At Heacock Street, Lateral B transitions from a fully concrete-lined channel with rip-rap into a trapezoidal-shaped earthen channel. At this location the Lateral B channel exhibits signs of regular disturbance including erosion from flows transitioning from the concrete channel into an earthen channel, other water flows entering the channel, trash dumping, and mowing for weed abatement. A small amount of ponded water was present at the time of the April 2020 site visit which appeared to support several avian species including barn swallows and killdeer. At this location the channel was mostly devoid of vegetation with the exception of a few weedy herbaceous species. No riparian vegetation was observed. Ground squirrel burrows were present within the earthen banks of the channel. Approximately 1,000 feet downstream of Heacock Street, Lateral B was dry and similarly mostly devoid of vegetation. This section of the channel was comprised of very compact soils and showed signs of erosion including incised areas of flow concentration within the larger channel bottom and some areas of ponded water where deeper pockets had been formed. This portion of the channel also exhibited signs of regular mowing for weed abatement. As Lateral B proceeds downstream toward the Perris Valley Storm Drain, the channel is less disturbed and more densely vegetated. At the inlet of Lateral B to the Perris Valley Storm Drain, the channel supports dense riparian vegetation including large willow trees (*Salix* sp.) and tamarisk (*Tamarix* sp.). At this location, Lateral B contained several inches of standing water and supported various avian species including mallard ducks (*Anas platyrhynchos*) during the April 2020 site visit. Due to the presence of standing water and riparian vegetation, Lateral B is likely subject to the jurisdiction of CDFW and Regional Water Quality Control Board (RWQCB), and potentially subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE).
- Perris Valley Storm Drain is an approximately 300-foot wide partially concrete-lined and partially earthen bottom flood control channel maintained by Riverside County Flood Control and Water Conservation District. At the inlet of Lateral B, the Perris Valley Storm Drain was inundated with at least a foot of standing water and densely vegetated with riparian vegetation including willows, tamarisk and cattails (*Typha* sp.) during the April 2020 site visit. In this location, the Perris Valley Storm Drain supports riparian vegetation and provides foraging and nesting habitat for avian species. The Perris Valley Storm Drain is subject to the jurisdiction of all three regulatory agencies. The Perris Valley Storm Drain is located approximately 2.0 miles from Discharge Points A and B.

Project-related groundwater would be discharged at two separate points and may connect with downstream areas under the jurisdiction of CDFW, USACE, and RWQCB including Lateral B and the Perris Valley Storm Drain. Water would be discharged in accordance with the Project's National Pollutant Discharge Elimination System (NPDES) General Construction Permit and dewatering activities would comply with the conditions of the permit including preparation of a stormwater pollution prevention plan, implementation of BMPs, and monitoring to ensure impacts to water quality are minimized. Metropolitan conducted a hydraulic open channel flow analysis to estimate discharge flow and the potential for erosion/scour within Lateral B and the Perris Valley Storm Drain. The analysis indicated that the depth of discharge flow would be less than three inches with flow velocities around one foot per second. The analysis concluded that the flow velocity for the projected maximum discharge would not result in erosion/scour within Lateral B or the Perris Valley Storm Drain. Refer to the Appendix to the BRA for photographs of the potentially jurisdictional features described herein.

Additionally, based on a review of historical aerial imagery, Lateral B and the Perris Valley Storm Drain are routinely maintained as part of Riverside County Flood Control and Water Conservation District's maintenance program which includes grading and removal of all riparian vegetation within the channels. According to the MND for Riverside County Flood Control and Water Conservation District's Regional Permit for Maintenance of Existing Flood Control Facilities (March 2017), "It is important to note that conducting maintenance on existing flood control facilities is the existing conditions/CEQA baseline; on a daily basis the District currently maintains its facilities." The channels are also previously developed and subject to significant disturbance, including trash dumping and non-natural runoff from adjacent development. Based on this information, the volume of water discharged into the channels from Project dewatering would not adversely affect jurisdictional waters, riparian habitat, or wildlife beyond ambient conditions. Impacts would be less than significant and the proposed modifications would not substantially increase the severity of the impacts identified in the 2005 EIR. The Project is not expected to require regulatory permits from CDFW, RWQCB, or the USACE (e.g, a Lake and Streambed Alteration Agreement from CDFW pursuant to Section 1602 of the California Fish and Game Code, a 404 permit from the USACE pursuant to the Clean Water Act, or a 401 Permit from the RWQCB, pursuant to the Clean Water Act) because the Project would not be expected to result in discharge of dredge or fill into wetlands or waters of the United States; deposit or dispose of debris or waste or other material into any river, stream, or lake; or substantially divert or obstruct the natural flow of or change or use any material from the bed, channel, or bank of any river, stream, or lake

Wildlife Corridors or Nursery Sites

As discussed in the certified 2005 EIR, the original Project is mostly underground and would not interfere with any migratory activities or impact migratory corridors given their absence in the Project area. The adopted MND for the I-215/Van Buren Boulevard Interchange Project similarly found that there are limited wildlife connectivity and no linkages between MSHCP core areas in or near the I-215/Van Buren Boulevard Interchange Project area, which includes the proposed modifications Project area (Caltrans 2009).

As with the original Project, the Project area is not located within any known regional wildlife movement corridor and is not on or adjacent to any existing or proposed linkages between Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) core areas. Given that the Project area is disturbed and surrounded by existing development, there is limited connectivity between it and adjacent habitat areas. The Project area is also not a wildlife nursery site, meaning a site where wildlife are born and young are grown and cared for (Rincon Consultants 2020; Appendix B). Similar to the original Project, the proposed modifications would be installed underground with surfaces returned to pre-project conditions following completion of construction. No structures would be introduced that could physically impede wildlife movement.

Therefore, no impact to wildlife corridors or nursery sites would occur, and the proposed modifications to the Project would not result in new or substantially more severe significant impacts than what was previously analyzed in the certified 2005 EIR.

Stephens' Kangaroo Rat

The proposed modifications are located within the County of Riverside Stephens' Kangaroo Rat Plan and Fee Area. County of Riverside Ordinance No. 663 (Stephens' Kangaroo Rat Mitigation Fee Ordinance) requires that all proposed development projects located within the fee area are reviewed to determine the most appropriate course of action to ensure the survival of the species through one or more of the following: (1) on-site mitigation of impacts to the Stephens' Kangaroo Rat through the reservation or

addition of lands included within or immediately adjacent to a potential habitat reserve site, or (2) payment of the Mitigation Fee or (3) any combination of (1) and (2) consistent with the intent and purpose of the ordinance. The certified 2005 EIR identified no impact to special-status species, including Stephens' Kangaroo Rat, due to low potential for the species to occur on the Project site. Therefore, no potential conflicts with the County's ordinance would occur. As with the original Project, the proposed modifications site lacks suitable grassland, coastal scrub and sagebrush habitat to support Stephens' Kangaroo Rat and is located within a heavily traveled and disturbed transportation corridor primarily within the rights-of-ways of existing dirt and paved roadways. Also, the proposed modifications would be installed underground with surfaces returned to pre-project conditions following completion of construction. Therefore, the proposed modifications would not result in impacts to or loss of suitable habitat for Stephens' Kangaroo Rat. No other resources protected by local policies or ordinances are present within the Project area. Therefore, impacts would be less than significant, and the proposed modifications to the Project would not result in new or substantially more severe significant impacts than what was previously analyzed in the certified 2005 EIR.

Conservation Plans

As discussed in the certified 2005 EIR, the original Project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional or state habitat conservation plan. Similarly, the adopted MND for the I-215/Van Buren Boulevard Interchange Project found that implementation of the Interchange Project, which includes the proposed modifications area, would not have an adverse impact concerning the MSHCP (Caltrans 2009).

The proposed modifications are located in the Western Riverside County MSHCP area. Portions of the Project area are located within the survey area for burrowing owl, but not within a designated survey area identified for any other MSHCP covered species or narrow endemic plant species. The proposed modifications are not located within a criteria cell or Public/Quasi-Public conserved lands. Public/Quasi-Public conserved lands are located approximately 0.5 mile west of the Project area on the opposite side of adjacent industrial development and approximately 1.4 miles east of the Project area on the opposite side of March Air Reserve Base. Based on the proposed modifications' distance and separation from Public/Quasi-Public lands as well as the limited scope and duration of activities (i.e., activities to occur within existing dirt and paved roadways), the proposed modifications are not expected to impact Public/Quasi-Public lands. As discussed in the BRA (Rincon Consultants 2020a; Appendix B), no burrowing owls or their sign were observed during the reconnaissance-level biological resources field survey on June 8, 2018. The potential for burrowing owl to occur is low due to the Project's location within a heavily traveled urban transportation corridor and high levels of existing disturbance which would likely deter individuals from long-term use of the Project area. Also, the proposed modifications would be installed underground with surfaces returned to pre-project conditions following completion of construction. The proposed modifications are not expected to result in impacts to or loss of suitable habitat for burrowing owl and would not conflict with any requirement of the MSHCP. The Project area is not subject to the provisions of any other Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, impacts would be less than significant, and the proposed modifications would not result in new or substantially more severe significant impacts than what was previously analyzed in the certified 2005 EIR.

3.3.4 Conclusion

The proposed modifications would not result in any new significant biological resource impacts or substantially increase the severity of impacts already identified in the certified 2005 EIR. Impacts would

be similar to those identified in the certified 2005 EIR. Therefore, impacts to biological resources would be considered less than significant and no further mitigation is required.

3.4 Cultural Resources

The certified 2005 EIR prepared for the original Project concluded that potential environmental impacts to cultural resources would be less than significant with the incorporation of mitigation. This section provides an analysis of the potential impacts to cultural resources associated with the proposed modifications.

3.4.1 Setting

As discussed in the certified 2005 EIR, 14 cultural resource sites have been identified previously within or near the Project alignment. A field survey of the original Project's alignment conducted on June 8 and 9, 2005 found no evidence of the previously identified cultural resources present within the Project area, and no unidentified resources were discovered. The adopted MND for the I-215/Van Buren Boulevard Interchange Project, which has a project site and Area of Potential Effects (APE) similar to that of the proposed modifications, did not identify any cultural resources within a one-mile radius of the APE or the Project area (Caltrans 2009). No historic properties are located within the boundaries of the original Project.

Rincon Consultants completed pedestrian surveys of the Project area for all proposed modifications on June 26, 2018, August 24, 2018, May 24, 2019, and April 1, 2020. No cultural resources were identified during the surveys.

Rincon Consultants completed a cultural resources record search at the Eastern Information Center for the Project area on June 19, 2018. See Figure 6 for the geographic area covered by the records search. The updated records search did not indicate the presence of any known resources within the Project area.

Portions of the proposed modifications, specifically work areas associated with cleaning and disinfection activities along the already-constructed portions of the pipeline as well as temporary dewatering discharge lines and treatment facilities near the I-215/Harley Knox Boulevard interchange, were not included in the 2018 updated records search or within its 0.5-mile buffer. However, the Project components within this area would not involve ground disturbance, as Project activities consist of pipeline access through existing manholes and temporary dewatering facilities placement located at-grade. For additional discussion of the existing cultural resources setting in the Project area and potential impacts associated with the proposed modifications, refer to the *Cultural Resources Memorandum for the Perris Valley Pipeline Modifications Project Within the Caltrans Interstate 215 Right-of-Way* (Rincon Consultants 2020c).

The adopted MND for the I-215/Van Buren Boulevard Interchange Project identified the Project area as being located on very old alluvial fan deposits of the early Pleistocene age (geologic unit designation: Qvof). These deposits are well-indurated, reddish-brown sand deposits derived mainly from rocks of southern California batholith (United States Geological Survey 2001). According to the Cultural and Paleontological Resources Element of the County of Riverside's General Plan, this geologic unit has been classified as "High Sensitivity (High B)," which indicates that fossils are likely to be encountered at or below four feet (County of Riverside 2016, Figure 4.9.3). The adopted MND for the I-215/Van Buren Boulevard Interchange Project also found that most of the area contains a shallow layer of artificial fill from previous highway construction activities; the fill placement was not documented in available as-built

data but appears to have been derived from excavations of the alluvium during construction of the Van Buren Boulevard bridges over the railroad and I-215 (Caltrans 2009).

3.4.2 Significance Threshold Criteria

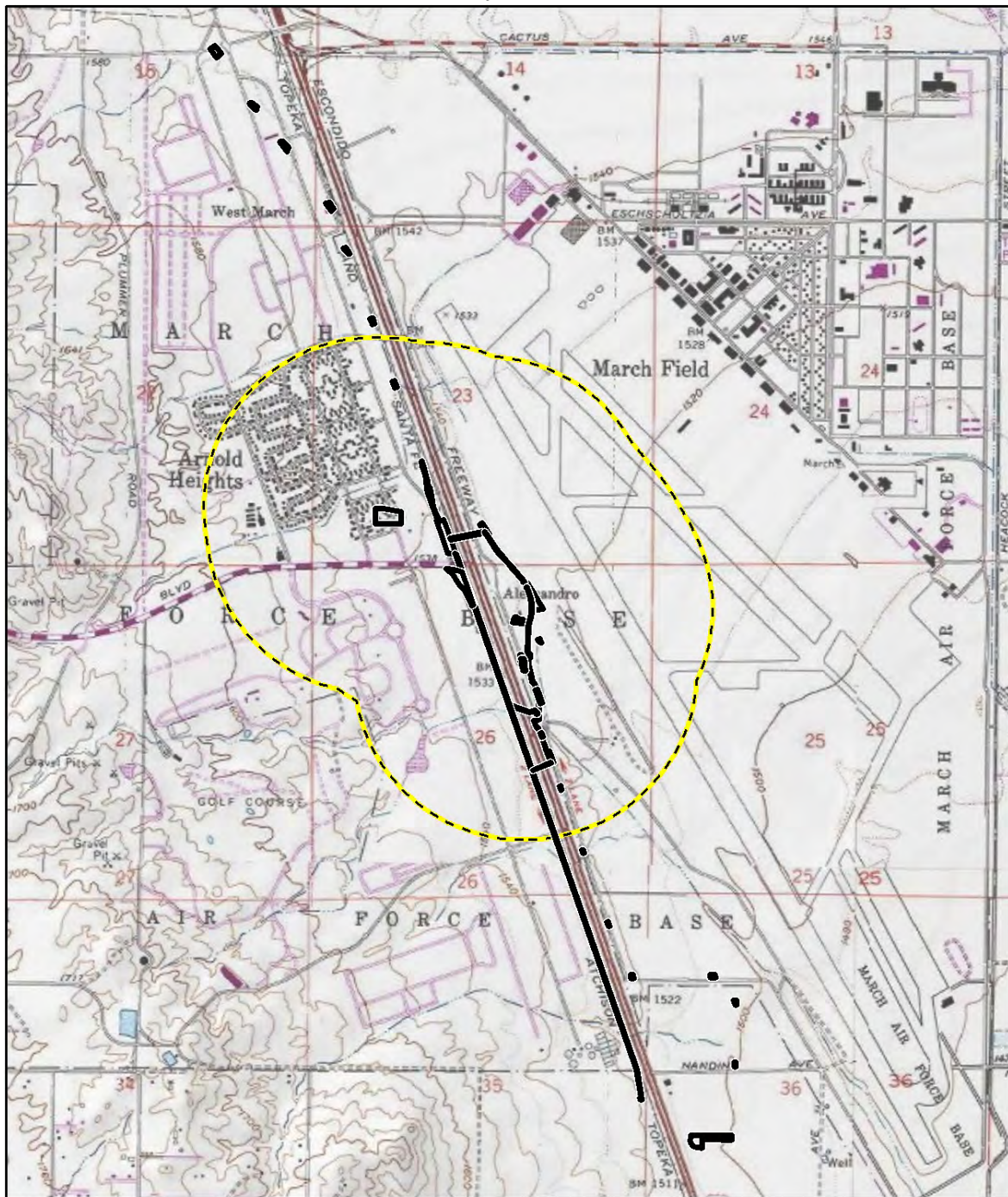
The following CEQA significance threshold criteria were used to evaluate impacts to cultural resources associated with the proposed modifications. Impacts would be potentially significant if the proposed modifications would introduce new significant impacts or substantially increase the severity of previously identified significant impacts associated with:

- a) A substantial adverse change in the significance of a historical resource pursuant to §15064.5
- b) A substantial adverse change in the significance of an archaeological resource pursuant to §15064.5
- c) Disturbance of any human remains, including those interred outside of formal cemeteries

In addition to the thresholds described above, updates to the CEQA Guidelines that took effect on December 28, 2018 categorized evaluation of impacts to paleontological resources under the Geology and Soils resource. Prior to December 28, 2018, discussion of paleontological resources had previously been evaluated under Cultural Resources, as it was in the certified 2005 EIR. Therefore, for consistency with the certified 2005 EIR, the following threshold is also evaluated in this section:



- d) Directly or indirectly destroying a unique paleontological resource or site or unique geologic feature

Figure 6 Cultural Resources Records Search Study Area, June 19, 2018



Imagery provided by National Geographic Society, Esri and its licensors © 2019. Riverside East Quadrangle. T03S R04W S22-27. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

Legend:

-  Location of Proposed Modifications (Area of Potential Effects)
-  Records Search Area

Scale: 0 1,000 2,000 Feet

North Arrow: N

3.4.3 Potential Impacts

Historical Resources

No historical resources were identified within the Project APE in the certified 2005 EIR. Also, the adopted MND for the I-215/Van Buren Boulevard Interchange Project, which has a project site and APE similar to that of the proposed modifications, did not identify any cultural resources within a one-mile radius of the APE or within the I-215/Van Buren Boulevard Interchange project area (Caltrans 2009). The records search performed by Rincon Consultants on June 19, 2018, determined that five built environment resources are located within 0.5-mile of the proposed modifications, which include four structures and the foundation remains of 60 to 70 buildings, all recorded under one primary number. These foundations are likely associated with Camp Haan, a United States Army training camp built in 1940 near March Air Reserve Base. Camp Haan opened in January 1941 as a training facility for Coast Artillery Antiaircraft gunners. The 8,058-acre camp spanned approximately four miles by three miles with tent housing before its closure in 1945. These resources are located outside the Project area and have been recommended as not eligible for the California Register of Historic Resources and are not identified as being associated with any historic districts and therefore would not be directly indirectly impacted by the proposed modifications. Additionally, no historical resources were identified during surveys of the Project area on June 26, 2018, August 24, 2018, May 24, 2019, and April 1, 2020. Therefore, no impact to historical resources would occur.

Archaeological Resources

No cultural resources were identified within a one-mile radius of the APE or the I-215/Van Buren Boulevard Interchange project area (Caltrans 2009). The records search performed by Rincon Consultants on June 19, 2018, determined that no archaeological resources are located within 0.5-mile of the proposed modifications. Surveys of the Project area were completed on June 26, 2018, August 24, 2018, May 24, 2019, and April 1, 2020 and no archaeological resources were observed as part of the surveys.

The proposed modifications would be constructed in an area recently disturbed during Caltrans' construction of the I-215/Van Buren Boulevard Interchange, completed in 2014. Tunneling activities associated with the construction of the proposed modifications would occur approximately 30 to 55 feet bgs, and the discovery of intact archaeological resources and presence of Holocene age sediments with potential to contain such resources is unlikely at these depths. Temporary dewatering discharge lines and potable water conveyance lines would be installed aboveground along existing access roads and parking lots. As a result, the potential for archaeological resources to be identified during ground disturbance in these areas is extremely low, and impacts to archaeological resources would be less than significant. However, because the potential for previously unknown archaeological resources to be discovered cannot be completely dismissed, Mitigation Measure CUL-1, included in the certified 2005 EIR, will be implemented for this phase of the Project in the unlikely event that archaeological resources are encountered. The certified 2005 EIR determined that implementation of mitigation measures would reduce impacts to a less than significant level and the proposed modification are not expected to produce any new or substantially more severe significant impacts to archaeological resources.

CUL-1 If cultural resources are encountered at any time during construction, construction personnel shall avoid altering these materials and their context until a qualified archeologist has evaluated the situation. Project personnel shall not collect or retain cultural resources. Prehistoric resources include but are not limited to: chert or obsidian flakes; projectile points; mortars and pestles; dark, friable soil containing shell and bone; dietary debris; heat-affected rock; or human burials. Historic resources include stone or adobe foundations or walls; structures and remains

with square nails; and refuse deposits (glass, metal, wood, ceramics), often found in old wells and privies.

Human Remains

The certified 2005 EIR determined that although grading activity associated with the Project would be limited, the discovery of human remains is always a possibility during ground-disturbing activities. Therefore, implementation of Mitigation Measure CUL-2 described in the certified EIR, which requires halting work and immediate notification of the County Coroner if human remains are discovered during grading activities, was included to reduce impacts to less than significant.

CUL-2 In the event of an accidental discovery or recognition of any human remains, the County Coroner shall be notified, and construction activities at the affected work site shall be halted. If the remains are found to be Native American, the Native American Heritage Commission shall be notified within 24 hours. Guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.

As described previously, construction activities associated with the proposed modifications would extend outside of the original Project boundary considered in the certified 2005 EIR. Mitigation Measure CUL-2 would apply to these activities if human remains are discovered and would reduce impacts to a less than significant level. Therefore, no new or substantially more severe significant impacts to cultural resources would occur as a result of the proposed modifications.

Paleontological Resources

The certified 2005 EIR determined that no impact to paleontological resources was expected to occur since no paleontological resources have been identified over the course of Project construction. The Project area is heavily disturbed due to construction of the existing freeway, railroad, and adjacent development. However, as described in Section 3.4.1, *Setting*, the geologic unit underlying the Project area has been identified as highly sensitive for paleontological resources. The proposed modifications would include excavation to depths of 30 to 55 feet. The certified 2005 EIR acknowledges that jack-and-bore tunneling methods would be required where cut-and-cover construction is not feasible, such as under the I-215 freeway. As such, excavation of tunnel pits and tunneling construction methods are consistent with the construction methods described and analyzed in the certified 2005 EIR.

Metropolitan's standard environmental requirements in its specifications for construction projects (Section 01065 specifications) include the following related to the discovery of paleontological resources:

- If paleontological resources are encountered at the Project area, the contractor shall not disturb the resources and shall immediately:
 - Cease all work within 50 feet of the discovery;
 - Notify the Engineer;
 - Protect the discovery area, as directed by the Engineer; and
 - The Engineer, with the qualified paleontologist, will make a decision of validity of the discovery and designate an area surrounding the discovery as a restricted area. The contractor shall not enter or work in the restricted area until the Engineer provides written authorization.

Given that the Project area is heavily disturbed, no paleontological resources identified during the previous construction of the original Project and Caltrans I-215/Van Buren Boulevard Interchange

Project, and implementation of standard BMPs and construction specifications would protect any paleontological discoveries made during construction of the proposed modifications; no new or substantially more severe significant impacts to paleontological resources would occur.

3.4.4 Conclusion

The proposed modifications would not result in any new significant impacts to cultural resources or substantially increase the severity of impacts already identified in the certified 2005 EIR. Impacts would be similar to those identified in the certified 2005 EIR. Therefore, impacts related to cultural and paleontological resources would be considered less than significant with mitigation incorporated and no further mitigation is required.

3.5 Greenhouse Gas Emissions

This section provides an analysis of the potential greenhouse gases (GHG) emission impacts associated with the proposed modifications to the Project.

3.5.1 Setting

Climate Change and Greenhouse Gases

The accumulation of GHGs in the atmosphere regulates the Earth's temperature. Without the natural heat-trapping effect of GHGs, Earth's surface would be about 34°C cooler (California Environmental Protection Agency [CalEPA] 2006). However, emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere to record historic levels. Greenhouse gases emitted in the highest levels from human activities include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Emissions of CO₂ are largely by-products of fossil fuel combustion. Methane emissions result from fossil fuel combustion sources as well as off-gassing associated with agricultural practices and landfills. Nitrous oxide is produced by microbial processes in soil and water, including those reactions that occur in fertilizers that contain nitrogen, fossil fuel combustion, and other chemical processes.

Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. According to CalEPA's 2010 Climate Action Team Biennial Report, potential impacts of climate change in California may include loss in snowpack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, increase in lake and water temperatures, and more drought years (CalEPA 2010). While these potential impacts identify the possible effects of climate change at a global and potentially statewide level, in general, scientific modeling tools are currently unable to predict what impacts would occur locally with a similar degree of accuracy.

Regulatory Framework

In response to an increase in man-made GHG concentrations over the past 150 years, California passed Assembly Bill (AB) 32, the "California Global Warming Solutions Act of 2006." AB 32 codifies the Statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels) and requires the CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires the ARB to adopt regulations to require reporting and verification of statewide GHG emissions.

The Scoping Plan includes a range of GHG reduction actions that may include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms. In May 2014, the CARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan update defines the CARB's climate change priorities for the next five years and sets the groundwork to reach post-2020 goals outlined in Executive Order (EO) S-3-05 (CARB 2014).

On September 8, 2016, the governor signed SB 32 into law, amending AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for water infrastructure or the water sector. Instead, it recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with a statewide per capita goal of 6 metric tons (MT) of CO_{2e} by 2030 and 2 MT of CO_{2e} by 2050 (CARB 2017).

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in CEQA documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the Guidelines for the analysis of GHG impacts and feasible mitigation of GHG emissions. The adopted Guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

3.5.2 Significance Threshold Criteria

The following CEQA significance threshold criteria were used to evaluate impacts to GHG emissions associated with the proposed modifications. Impacts would be potentially significant if the proposed modifications would introduce new significant impacts or substantially increase the severity of previously identified significant impacts associated with:

- a) The generation of GHG emissions, either directly or indirectly, that may have a significant impact on the environment
- b) A conflict with any applicable plan, policy, or regulation adopted to reduce the emissions of greenhouse gases

Under the requirements of SB 97, the Resources Agency adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted CEQA Guidelines provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. With regard to environmental impacts, there are no established federal, State, or local quantitative thresholds applicable to the proposed program to determine the quantity of GHG emissions that may have a significant effect on the environment. The CARB, SCAQMD, and various cities and agencies have proposed, or adopted on an interim basis, thresholds of significance that require the implementation of GHG emission reduction measures. The SCAQMD threshold, which was established in December 2008 and is designed to achieve emission reductions in the Basin consistent with statewide GHG reductions codified under AB 32, considers emissions of over 10,000 MT of CO_{2e} per year to be significant for industrial projects when SCAQMD is the lead agency. Per the CEQA Guidelines, Lead Agencies have the discretion to formulate their significance thresholds. Therefore, Metropolitan has chosen to apply the 10,000 MT of CO_{2e} per year threshold to water infrastructure projects in the past and has elected to apply that threshold to GHG emissions associated with the proposed modifications as well. However, this threshold is intended to evaluate a project for consistency with GHG targets established in AB 32, particularly for emissions

occurring by 2020. Because construction of the proposed modifications would extend beyond 2020 through 2022, the 10,000 MT CO₂e per year threshold has been adjusted to demonstrate consistency with 2030 GHG targets established pursuant to SB 32. SB 32 requires the State to further reduce GHG emissions to 40 percent below 1990 levels. Therefore, for the purposes of this analysis, a commensurate 40 percent reduction has been applied to the 10,000 MT CO₂e per year bright-line threshold to reflect the most applicable GHG reduction target based on the anticipated date of Project completion. This reduction results in a bright-line threshold of 6,000 MT CO₂e per year. Based on SCAQMD guidance, construction emissions should be amortized over the life of the project, which is defined by SCAQMD as 30 years, and compared to the applicable interim GHG significance threshold (SCAQMD 2008b). The proposed modifications would realign an unbuilt piece of water supply infrastructure, the Perris Valley Pipeline, with an anticipated life of much more than the standard 30 years used for amortization. Therefore, using the 30-year amortization period provides a conservative analysis.

3.5.3 Potential Impacts

Greenhouse Gas Emissions

As mentioned previously, the GHG resource category was incorporated into the CEQA checklist via amendments to the *State CEQA Guidelines* that went into effect in March 2010, approximately five years after adoption of the certified 2005 EIR. Consequently, no GHG emissions modeling was performed for the certified 2005 EIR. Additional amendments to the *State CEQA Guidelines* effective at the end of 2018 further clarified requirements for analysis of GHG impacts in CEQA documents. Similar to the original Project analyzed in the certified 2005 EIR, the proposed modifications would require construction activities that would generate temporary GHG emissions associated with worker trips, vendor trips, and diesel construction equipment. CalEEMod version 2016.3.2 was used to estimate emissions associated with the construction period, based on parameters such as the duration of construction activity, area of disturbance, and anticipated equipment use during construction, which were provided by Metropolitan. However, construction methods, duration, and fleet required for the Project would not change substantially from what was previously analyzed in the certified 2005 EIR, as the original Project anticipated use of tunneling/jack and bore construction methods under the I-215 freeway. Therefore, construction emissions from the original Project and the proposed modifications would be similar. Complete results from CalEEMod and assumptions can be viewed in Appendix A. As shown in Table 4, construction of the proposed modifications would generate approximately 9,638 MT of CO₂e, or 321.3 MT of CO₂e annually when amortized over a 30-year period (the expected life of projects per SCAQMD guidance).

**Table 4
Estimated GHG Emissions during Construction**

Year	Emissions (MT of CO₂e)
2021	5,433.6
2022	4,204.4
Total	9,638
Amortized over 30 years	321.3
Threshold	6,000
Threshold Exceeded?	No

Source: CalEEMod outputs (Appendix A)

No change in permanent, long-term operational GHG emissions would occur as a result of the proposed modifications because operational conditions would be similar to pipeline operations analyzed under the certified 2005 EIR. The proposed modifications would not result in new operational emissions above those generated by the original Project. Total emissions would not exceed the adjusted threshold of 6,000 MT of CO₂e per year, and impacts related to GHG emissions would be less than significant. Therefore, the proposed modifications would not result in any new significant or more severe impacts related to GHG emissions.

Consistency with Applicable Plans, Policies, and Regulations

Applicable plans, policies, and regulations adopted to reduce GHG emissions include the CARB's 2017 Scoping Plan and SCAQMD's GHG guidance and thresholds. SCAQMD's GHG policies are intended to ensure that planned development progresses in a manner consistent with the GHG reduction goals identified by AB 32. The original Project and proposed modifications are consistent with the AB 32 Scoping Plan and the 2017 Scoping Plan because they would serve the development approved in the general plans on which these plans are based. The original Project would result in long-term operational GHG emissions from the operation of four pump stations. The proposed modifications would not change the anticipated operations of the four pump stations or the construction methods, duration, or fleet. Therefore, the proposed modifications would not increase GHG emissions compared to the previously original Project, and no impact would occur.

3.5.4 Conclusion

The proposed modifications would not result in any new or more severe significant impacts related to GHG emissions. Therefore, impacts related to greenhouse gases emissions would be considered less than significant and no further mitigation is required.

3.6 Hazards and Hazardous Materials

The certified 2005 EIR prepared for the approved Project concluded that potential environmental impacts to hazards and hazardous materials would be less than significant with mitigation incorporated. This section provides an analysis of the potential impacts to hazards and hazardous materials associated with the proposed modifications.

3.6.1 Setting

The certified 2005 EIR identified three leaking underground storage tank (LUST) sites along Alessandro Boulevard with an open status in 2005. Of these, the Riverside City Fire #9 site is now listed as “Completed – Case Closed”; the Arco #6345 is currently listed as “Open – Remediation as of 11/30/2007”; and the Mobil #18-A3E is listed as “Open – Eligible for Closure as of 5/26/2017” (State Water Resources Control Board 2011, 2017, and 2018). None of these listings are within 0.5 mile of the Project area.

In addition, the certified 2005 EIR identified 27 hazardous waste sites at the March Air Reserve Base, none of which were listed as officially closed in 2005. The certified 2005 EIR did not identify any potential impacts associated with these sites. As of 2009, the March Air Reserve Base determined that 19 of these sites required no further action. The remaining eight sites either contain active land use restrictions (e.g., prohibitions on construction of residential land use), have been capped in place to isolate and prevent the spread of contaminants, or are undergoing continuing remediation. These sites are located approximately 1.0 to 1.9 miles from all ground disturbing work associated with the proposed modifications (March Air Reserve Base 2009).

Seismicity on the Project area was identified in the certified 2005 EIR as a potential hazard; however, the entire southern California region is susceptible to strong ground shaking from severe earthquakes. The certified 2005 EIR did not identify any unique onsite conditions that would exacerbate this hazard. The certified 2005 EIR also determined that no other hazards, including liquefaction, slope instability and erosion, fire, or flooding would affect the Project area.

Groundwater and soils in the Project area contain low levels of per- and polyfluoroalkyl substances (PFAS) compounds, specifically perfluorooctanoate (PFOA) and perfluorooctane sulfonate (PFOS), associated with the release of aqueous film forming foam (AFFF) for firefighting activities at the adjacent March Air Reserve Base between 1970 and 2002. Most of the identified AFFF Release Sites associated with the March Air Reserve Base are located downgradient from the proposed realignment; however, two AFFF Release Sites were identified upgradient from the proposed realignment and present the potential for PFAS impacts to soil and groundwater in the Project area. These Release Sites are located east of I-215, range from approximately 0.17 – 0.5 mile away from the Project area, and may be impacted by dewatering activities associated with the proposed modifications.

In October 2020, Parsons completed a *Data Report on Combined Field Investigations for PFAS, Hydrazine, and Other COCs in Soil and Groundwater* for the proposed realignment (Parsons 2020). As described in the October 2020 Report, Parsons sampled groundwater from six wells within the Project area and soil from four exploratory borings located near the proposed tunneling shafts. Groundwater and soil PFOA and PFOS concentrations were compared to the San Francisco Bay RWQCB’s Health Environmental Screening Levels (ESLs) for direct human exposure³. For additional information regarding the screening levels used in this analysis, refer to the *Water Quality Memorandum for the Perris Valley Pipeline Modifications Project Within the Caltrans Interstate 215 Right-of-Way* dated March 2021 (Rincon Consultants 2021a).

As summarized in Table 5, concentrations of PFOA and PFOS in groundwater underlying the Project area exceed the San Francisco Bay RWQCB health risk levels, as well as the State Water Resources Control Board (SWRCB) Response Levels and Notification Levels. Soil concentrations of PFOA and PFOS in the Project area do not exceed either the San Francisco Bay RWQCB’s Health ESLs or the U.S. Environmental Protection Agency’s (U.S. EPA) Regional Screening Levels (RSLs) for human health,

³ To date, the San Francisco Bay Regional Water Quality Control Board is the only Regional Board to publish Environmental Screening Levels for PFOA/PFOS compounds.

most recently updated in May 2020. Sampling results for perfluorobutanesulfonate (PFBS) are also reported and compared to U.S. EPA RSLs for human health.

Table 5
PFAS Concentrations in Groundwater and Soil within the Project Area

	PFOA	PFOS	PFBS
Groundwater	(ng/L)	(ng/L)	(ng/L)
On-Site Wells	5.9 - 26	1.1 - 23	13 - 57
U.S. EPA Interim Regional Screening Level	40	40	–
Exceeds Screening Level?	No	No	N/A
California Notification Level	5.1	6.5	–
Exceeds California Notification Level?	Yes	Yes	N/A
California Response Level	10	40	–
Exceeds California Response Level?	Yes	No	N/A
San Francisco Bay RWQCB Priority ESL ¹	5.1	6.5	–
Exceeds San Francisco Bay RWQCB Priority ESL	Yes	Yes	N/A
U.S. EPA Human Health RSL	–	–	400,000
Exceeds U.S. EPA Human Health RSL?	N/A	N/A	No
Soil	(µg/kg)	(µg/kg)	(µg/kg)
On-Site Near Surface Soil Samples	0.15 - 0.46	ND - 0.76	0.035 - 0.067
On-Site Soil Borings	ND - 0.26	ND - 0.91	ND - 0.039
San Francisco Bay RWQCB Health ESL ¹	93	290	–
Exceeds San Francisco Bay RWQCB Health ESL	No	No	N/A
U.S. EPA Human Health RSL ²	16,000	16,000	16,000,000
Exceeds U.S. EPA Human Health RSL?	No	No	No

PFOA = Perfluorooctanoate; PFOS = Perfluorooctane Sulfonate; PFBS = perfluorobutanesulfonate; RWQCB = Regional Water Quality Control Board; ESL = Environmental Screening Level; RSL = Regional Screening Level; EPA = Environmental Protection Agency; ND = non-detect; ng/L = nanogram per liter (parts per trillion [ppt]); µg/kg = microgram per kilogram (1,000 ppt)

¹ To date, the San Francisco Bay Regional Water Quality Control Board is the only regional board to publish Environmental Screening Levels for PFOA and PFOS.

² U.S. EPA Human Health RSL for PFBS as reported in Parsons 2020. U.S. EPA Human Health RSL for PFOS and PFOA as estimated in U.S. Department of Defense Memorandum, *Investigating Per- and Polyfluoroalkyl Substances within the Department of Defense Cleanup Program* (October 2019). PFOS and PFOA RSLs estimated in this memorandum using EPA RSL Calculator for Industrial/Commercial Composite Worker Screening Level with Hazard Quotient of 1.0.

Note: Several other PFAS compounds were detected at concentrations exceeding their respective laboratory detection limits in at least one of the soil samples; however, regulatory screening levels have not been established for any of these compounds.

Source: Parsons 2020

Additionally, groundwater and soils in the Project area were tested for the presence of hydrazine, due to use of hydrazine as an emergency fuel source for F-16 fighter jets at March Air Reserve Base. Hydrazine was not detected above laboratory detection limits in any groundwater or soil samples collected and analyzed by Parsons. Sampling and testing of groundwater and soils in the Project area for other volatile organic compounds (VOCs) and metals indicates that concentrations of these constituents of concern do not exceed applicable screening levels, as summarized in Table 6.

**Table 6
Concentrations of Additional Constituents of Concern
in Groundwater and Soils Within the Project Area**

Constituents	On-site Wells/ Soil Borings	Screening Level	Exceeds Screening Level?
Groundwater VOCs	(µg/L)	(µg/L)	
Hydrazine	ND	0.0011	No ¹
Mono-methyl Hydrazine	ND	–	N/A
1,1-Dimethyl-hydrazine	ND	0.00042	No
Total Petroleum Hydrocarbons (TPH-d)	ND - 24	200	No
PCE	ND - 0.51	5	No
Chloroform	ND - 0.66	80	No
Groundwater Metals	(mg/L)	(mg/L)	
Calcium	100 - 190	– ²	N/A ²
Iron	ND - 0.19	1,400	No
Manganese	38 - 67	– ²	N/A ²
Soil VOCs	(ng/g)	(ng/g)	
Hydrazine	ND	140	No
Mono-methyl Hydrazine	ND	–	N/A
1,1-Dimethyl-hydrazine	ND	24	No

VOC = Volatile Organic Compound; ND = non-detect; TPH-d = Total Petroleum Hydrocarbons in the diesel range; PCE = tetrachloroethene; N/A = not applicable; µg/L = micrograms per liter; mg/L = milligrams per liter; ng/g = nanograms per gram

¹ The laboratory's method detection limit of 0.13 µg/L (130 ppt) for hydrazine in groundwater is higher than the Tapwater RSL of 0.0011 µg/L (1.1 ppt). However, the Tapwater RSL is only applicable when evaluating drinking water itself or a direct source thereof. For the assessment of groundwater, it is more appropriate to compare concentrations to the Maximum Contaminant Level (MCL). However, no MCL has been established for hydrazine. As such, neither soils nor groundwater beneath the Project area are considered impacted by hydrazine (Parsons 2020).

² No U.S. EPA Regional Screening Level for Tapwater was available for comparison to calcium and manganese concentrations.

Source: Parsons 2020

For additional discussion of existing hazards and hazardous materials conditions in the Project area, refer to the *Hazardous Materials Memorandum for the Perris Valley Pipeline Modifications Project Within the Caltrans Interstate 215 Right-of-Way* (Rincon Consultants 2021b).

3.6.2 Significance Threshold Criteria

The following CEQA significance threshold criteria were used to evaluate impacts to hazards and hazardous materials associated with the proposed modifications. Impacts would be potentially significant if the proposed modifications would introduce new impacts or substantially increase the severity of previously identified significant impacts associated with:

- a) The creation of a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials
- b) The creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment

- c) The emission of hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school
- d) The location of the project on a site that is included on a list of hazardous materials sites compiled under Government Code Section 65963.5 and, as a result, the creation of a significant hazard to the public or the environment
- e) For projects located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, the creation of a safety hazard or excessive noise for people residing or working in the Project area
- f) The impairment of the implementation of or the physical interference with an adopted emergency response plan or emergency evacuation plan
- g) The exposure of people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires

3.6.3 Potential Impacts

Hazardous Materials and Emissions

As discussed in the certified 2005 EIR, the original Project would involve the temporary use and transport of hazardous materials including fuels, lubricating fluids, and solvents during construction. Accidental spills of materials such as oils, grease, solvents, and other finishing products, may occur over the course of construction. Therefore, implementation of Mitigation Measures HAZ-1, HAZ-2, and HAZ-3 from the 2005 EIR are required to reduce impacts to less than significant. No schools are located within 0.25 mile of the Project area.

The proposed modifications to the Project would require similar construction activities. As described in Section 2.2, *Project Location and Project Description*, the proposed modifications include the use of temporary treatment facilities. Facilities may include the use and storage of treatment chemicals, such as sodium bisulfate and/or citric acid, to adjust the pH of stagnant water within the already-constructed northern and southern segments of the original Project prior to discharge into the storm drain network. Storage of these chemicals would be subject to on-site handling rules and regular inspection for leaks, pursuant to Mitigation Measure HAZ-1 as described in the certified 2005 EIR for the original Project. Such rules include secondary containment for paints, oils, and other construction contaminants. Furthermore, Metropolitan's standard construction specifications (Section 01065) require all hazardous materials to be stored in covered, leak-proof containers when not in use, away from storm drains and heavy traffic areas. Hazardous materials must be stored separately from non-hazardous materials on a surface that prevents spills from permeating the ground surface and in an area secure from unauthorized entry at all times.

As described earlier in Section 3.6.1, *Setting*, soils and groundwater underlying the Project area were sampled, and results indicate they contain low levels of PFAS compounds, specifically PFOA and PFOS. However, the proposed modifications would include treatment of dewatering effluent prior to discharge, testing, and appropriate disposal of all excavated soils. These procedures are described in greater detail under *Hazardous Waste Sites* below. As such, the proposed modifications would not result in new or substantially more severe significant impacts than what was previously analyzed in the certified 2005 EIR. Impacts would remain less than significant with mitigation incorporated.

HAZ-1 The contractor(s) shall enforce strict on-site handling rules to keep construction and maintenance materials out of receiving waters and storm drains. Also, the contractor(s) shall

store all reserve fuel supplies only within the confines of a designated construction staging area, refuel equipment only within the designated construction staging area, and regularly inspect all construction equipment for leaks.

HAZ-2 The contractor(s) shall prepare a *Health and Safety Plan*. The Plan shall include measures to be taken in the event of an accidental spill.

HAZ-3 The construction staging area shall be designed to contain contaminants such as oil, grease, and fuel products so that they do not drain towards receiving waters or storm drain inlets.

Hazardous Waste Sites

LUST Sites

As discussed in the certified 2005 EIR, the Project would potentially affect three active LUST sites along Alessandro Boulevard because petroleum contaminants released at these sites may have migrated off-site to areas that would be excavated for the construction of the Project. The 2005 EIR required the implementation of Mitigation Measure HAZ-4 to reduce impacts associated with excavation and disposal of potentially contaminated soils to a less than significant level.

HAZ-4⁴ An electronic “sniffer” or portable VOC detector capable of detecting actionable levels of hydrocarbons shall be employed during excavation activities in proximity to the previously referenced sites. Should actionable levels of contaminants be encountered, these materials shall be removed and disposed of in accordance with applicable guidelines.

The segment of the pipeline along Alessandro Boulevard with potential to encounter contaminated soils associated with these LUST sites has already been constructed. The identified LUST sites are approximately 1.8 miles north of the Project area. Nevertheless, Metropolitan proposes to use an electronic sniffer to detect actionable levels of hydrocarbons during excavation of tunnel boring pits as needed, and Mitigation Measure HAZ-4 would apply. Should actionable levels of hydrocarbons be encountered during construction of the proposed modifications, such materials would be removed and disposed of in accordance with applicable guidelines, pursuant to Mitigation Measure HAZ-4.

Potential Environmental Concern (PEC) Sites

The proposed modifications would move the Project’s I-215 undercrossing approximately 100 feet north of its original location, placing it near the I-215/VBB interchange. The Initial Site Assessment (ISA) performed for the adopted MND for the I-215/VBB Interchange Project identified four Installation Restoration Program (IRP)⁵ sites and three additional sites located in the I-215/VBB project vicinity as potential environmental concern (PEC) sites,⁶ listed below in Table 7.

⁴ Mitigation Measure HAZ-4 originally applied to specific workspaces for the original Project in the vicinity of leaking underground storage tank sites, as identified in the certified 2005 EIR. None of these workspaces are located near the proposed modifications. However, construction of the proposed modifications would use an electronic sniffer to detect actionable levels of hydrocarbons during excavation of tunnel boring pits, and Mitigation Measure HAZ-4 would apply.

⁵ The IRP is a program developed by the Department of Defense in 1980 to locate and clean up hazardous waste sites.

⁶ Sites described in Table 7 were identified in the I-215/VBB Interchange Project IS-MND as potential environmental concern sites for that project. These sites are presented because the analysis in the I-215/VBB Interchange Project IS-MND and EA analyzed an area substantially similar to the location of proposed modifications considered in this Addendum. However, as described in Table 7 and the following discussion, due to the distance from the proposed modifications and remediation status of all seven sites, the proposed modifications would not disturb any of these PEC sites.

Table 7
Previously Identified PEC Sites Located in the Vicinity of the I-215/VBB
Interchange Project

PEC Site	Distance from the Project	Description
IRP Site 19	Approximately 1.2 miles south	The site currently contains a water recycling facility. The site formerly contained sludge drying beds and is contaminated with polyaromatic hydrocarbons, polychlorinated biphenyls, hexavalent chromium, and thallium in the surface soil. The site has institutional controls in place in the form of deed restrictions that prohibit residential land use and soil disturbance activities. ¹
IRP Site 22	Approximately 0.2 mile east	The site was a potential landfill on March Air Reserve Base, but after further investigation, was found to have no evidence of a landfill. ^{1, 2}
IRP Site 24	Approximately 1.2 miles south	The site was a former landfill and was remediated via removal of on-site waste and contaminated soil in 1995. The site was subsequently backfilled with clean soil and revegetated. ^{1, 2}
IRP Site 43	Approximately 1.3 miles north	The site was a former automotive maintenance area and contained soil contamination from fuels as well as benzene, toluene, ethylbenzene, and xylenes. The site was remediated via removal of contaminated soil. A closure letter from the Santa Ana Regional Water Quality Control Board was issued under the underground storage tank (UST) program prior to the publication of the Second 5-Year Review Report for Former March Air Force Base and March Air Reserve Base California in 2009. ^{1, 2}
RFA Site C	Within 0.1 mile west	The site was identified as a dry cleaner possibly fueled by a UST. An investigation of the dry cleaner site determined that no data suggests that a UST remains on site or that significant quantities of dry cleaning solvents or other volatile organic compounds have been lost to site soils. ¹
RFA Site Y	Within 0.25 mile west	The site was identified as a possible landfill area. Further investigation determined that the site contained elevated metals concentrations and organic compounds in subsurface samples but that the contaminants had not migrated to downgradient groundwater monitoring wells. Therefore, such constituents would not be anticipated to have migrated to the groundwater underlying the proposed modifications. ³
EBS A-12.7	Within 0.1 mile east	The site is located on the March Air Reserve Base near Runway 14-32. Investigation of the site determined that lead in the soil at the site was not present at concentrations considered to be a hazardous waste under the criteria cited in California Code of Regulations, Title 22, Division 4.5. ³

IRP = Installation Restoration Program; RFA = Resource Conservation and Recovery Act Facility Assessment; EBS = Environmental Baseline Survey

¹ March Air Reserve Base. 2003. 5-Year Review Report for Former March Air Force Base and March Air Reserve Base, Riverside County, California. September 2003.

https://geotracker.waterboards.ca.gov/regulators/deliverable_documents/7654339015/MarchARB_AFB_5yrRev_Sept2003.pdf

² March Air Reserve Base. 2009. Second 5-Year Review Report for Former March Air Force Base and March Air Reserve Base California. September 2009.

https://geotracker.waterboards.ca.gov/regulators/deliverable_documents/5402422845/MarchAFB_ARB_2nd5yearReviewSept2009.pdf

³ California Department of Transportation (Caltrans). 2009. Interstate 215 and Van Buren Boulevard Interchange Project Initial Study [with Mitigated Negative Declaration]/Environmental Assessment with Finding of No Significant Impact. State of California Department of Transportation. State Clearinghouse No. 2008081120. March 2009.

Given the distance and remediation status of the seven sites previously identified in the ISA performed for the adopted MND for the I-215/VBB Interchange Project, discussed above in Table 7, construction of the proposed modifications in the Project area (e.g., EBS A-12.7) would not disturb a PEC site and would not encounter known contamination or hazardous waste. The proposed modifications in the Project area would have no impact to the previously identified PEC sites.⁷

Hazardous Waste Cleanup Sites and Facilities

The Project site is adjacent to March Air Reserve Base (formerly March Air Force Base), a designated Superfund site under the Comprehensive Environmental Response, Compensation and Liability Act. Soils and groundwater underlying the 7,123-acre base have been contaminated as a result of facility operations dating back to 1918, including aircraft maintenance, refueling, and training operations. Cleanup activities on the base are ongoing and include removal and consolidation of contaminated landfill material, installation of soil vapor extraction systems, and operation of a groundwater extraction and treatment system beginning in 1992 and enhanced in 2020 (U.S. EPA 2021). Through the Superfund monitoring and cleanup process, specific contaminated sites within March Air Reserve Base have been identified. As described in Section 3.6.1, *Setting*, the certified 2005 EIR identified 27 of these hazardous waste sites located on March Air Reserve Base; as of 2009, all but eight of these sites had been determined to require no further cleanup action. All of the remaining eight sites are located approximately 1.0 to 1.9 miles from ground disturbing activities associated with the proposed modifications. Construction activities are not anticipated to affect these contaminated sites given their distance from the proposed modifications. Sites within 0.5 mile of the proposed modifications that were not addressed in the certified 2005 EIR, as well as the results of site-specific soil and groundwater sampling conducted in support of the Project, are described in greater detail below.

Table 8 lists hazardous waste cleanup sites and facilities permitted for the use of hazardous materials located within 0.5 mile of the portion of the proposed modifications that were not considered in the certified 2005 EIR. As discussed below in Table 8, none of these six sites are located within the Project area, or anticipated to interfere with or adversely affect the proposed modifications. Four of the six sites were cleaned up and remediated, and their cases were closed as of 2002. The other two trucking/warehousing storage facilities are permitted for handling hazardous materials with no below-ground activities that would have any potential to disturb hazardous materials. Additionally, the two trucking/warehousing storage facilities are located too far to adversely interfere with the proposed modifications.

Table 8
Listed Sites and Facilities within 0.5 Mile of the Proposed Modifications in the Caltrans ROW Not Considered in the Certified Perris Valley Pipeline Project EIR

Site Name	Address	Distance from the Project	Type	Status	Potential to Affect the Proposed Modifications
Sysco – Riverside ¹	15750 Meridian Parkway, Riverside	Approx. 450 feet northwest	Permitted Facility	Local Trucking with Storage	Permitted for the handling of hazardous materials. Based on distance to the Project area, this site is not expected to interfere with or adversely affect the proposed modifications.

⁷ This review only includes sites with RCRA- or State-listed hazardous wastes or hazardous material. Sites undergoing review for constituents of emerging concern (CECs) are analyzed in the Water Quality Technical memorandum (Rincon Consultants 2021a) and are summarized below.

Site Name	Address	Distance from the Project	Type	Status	Potential to Affect the Proposed Modifications
Mobis Parts America ²	15001 Meridian Parkway, Unit B, Moreno Valley	Approx. 0.5 mile northwest	Permitted Facility	General Warehousing and Storage	Permitted for the handling of hazardous materials. Based on distance to the Project area, this site is not expected to interfere with or adversely affect the proposed modifications.
Riverside National Cemetery ³	22459 Van Buren Boulevard, Riverside	Approx. 0.3 mile southwest	Leaking Underground Storage Tank (LUST) Cleanup Site	Completed – Case Closed as of 4/4/1989	Release of diesel to soil. Based on the soil-only nature of the case and that cleanup was completed in 1989, this site is not expected to interfere with or adversely affect the proposed modifications.
Empire Tractor ⁴	1480 Nandina Ave, Perris	Approx. 0.2 mile north	LUST Cleanup Site	Completed – Case Closed as of 1/9/2002	Release of oil to soil. Based on the soil-only nature of the case, remediation performed (excavation of contaminated soil), and distance to the Project area, this site is not expected to interfere with or adversely affect the proposed modifications.
Nandina Liquor ⁵	1569 Nandina Ave, Perris	Approx. 0.13 mile northwest	LUST Cleanup Site	Completed – Case Closed as of 3/19/2018	Release of diesel to groundwater. Based on remediation performed (excavation of contaminated soil and groundwater extraction and treatment) and distance to the Project area, this site is not expected to interfere with or adversely affect the proposed modifications.
Bell Grain and Milling ⁶	17971 Highway 215, Perris	Approx. 0.2 mile southwest	LUST Cleanup Site	Completed – Case Closed as of 12/13/1990	Release of gasoline to soil. Based on the soil-only nature of the case and distance to the Project area, this site is not expected to interfere with or adversely affect the proposed modifications.

¹United States Environmental Protection Agency. 2015. "Sysco – Riverside" Multisystem Search. Last modified: July 1, 2015. https://oaspub.epa.gov/enviro/multisys2_v2.get_list?facility_uin=110070096850 (accessed June 2018).

²United States Environmental Protection Agency. 2016. "Mobis Parts America." Multisystem Search. Last modified: September 16, 2016. https://oaspub.epa.gov/enviro/multisys2_v2.get_list?facility_uin=110055376169 (accessed June 2018).

³State Water Resources Control Board. 2015. "Riverside National Cemetery." GeoTracker. Last modified: 2015. https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606500036 (accessed June 2018).

⁴State Water Resources Control Board. 2015. "Empire Trucking." GeoTracker. Last modified: 2015. https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606500575 (accessed March 2020).

⁵State Water Resources Control Board. 2015. "Nandina Liquor." GeoTracker. Last modified: 2015. https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606500307 (accessed March 2020).

⁶State Water Resources Control Board. 2015. "Bell Grain and Milling." GeoTracker. Last modified: 2015. https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606500208 (accessed March 2020).

As discussed under Section 3.6.1, *Setting*, groundwater and soils in the Project area contain low levels of PFAS compounds, specifically PFOA and PFOS, associated with the use of AFFF for firefighting activities at the adjacent March Air Reserve Base. Most of the identified AFFF Release Sites associated with the March Air Reserve Base are located down-gradient from the proposed realignment and, therefore, would not be anticipated to affect soils or groundwater at the Project area. However, two AFFF Release Sites were identified up-gradient from the proposed realignment and present the potential for

PFAS impacts to soil and groundwater in the Project area. These Release Sites are located east of I-215, range from approximately 0.17 – 0.5 mile away from the Project area, and may be impacted by dewatering activities associated with the proposed modifications. As summarized in Table 5 above, sampling and testing conducted by Parsons of groundwater wells and exploratory soil borings indicated concentrations of PFOA and PFOS in groundwater underlying the Project area exceeding the San Francisco Bay RWQCB ESLs, as well as the SWRCB Response Levels and Notification Levels. Soil concentrations within the Project area do not exceed either the San Francisco Bay RWQCB's Health ESLs for PFOA or PFOS or the U.S. EPA's RSLs for human health for PFOA, PFOS, or PFBS. As summarized in Table 6, other groundwater and soil constituents of concern underlying the Project area do not exceed applicable screening levels (Parsons 2020).

Similar to the original Project, dewatering during construction of the proposed modifications is anticipated. The proposed modifications include treatment of dewatering effluent through a granular activated carbon (GAC) filtration system at on-site temporary treatment facilities prior to blending with Mills WTP potable water. Metropolitan will treat PFAS in construction groundwater discharges to non-detect ("ND"). ND means to a level below the PFAS reporting limits used by the contracting laboratory that conducts the analyses.

Soils within the Project area contain small quantities of PFAS compounds; however, the PFOA, PFOS, and PFBS levels are below the U.S. EPA's RSLs for human health and the San Francisco RWQCB's Health ESLs for direct human exposure. Excavated soils stored on the Project area would include standard erosion control BMPs to reduce potential off-site migration via wind and water erosion in accordance with the NPDES Construction General Permit requirements and Metropolitan's standard construction specifications. Additionally, as a precautionary measure, Metropolitan would profile and test all excavated material and temporary stockpile areas for PFOA and PFOS presence, pursuant to Modified EPA Method 537.1. Soils testing positive for PFOA and PFOS would be disposed of at a facility accepting Class I hazardous waste, while those testing negative for such compounds would be disposed of at an approved facility or used as backfill on the Project area. Standard manifest protocols would be required for hauling and disposal of all excavated materials.

As discussed above, the proposed modifications would not cause the Project to be located on or near any new identified hazardous waste sites. The proposed modifications include dewatering treated effluent and groundwater, and disposing soils following protocols to avoid the creation of a significant hazard to the public or the environment associated with low levels of PFAS compounds present on the Project area. As such, the proposed modifications would not result in new or substantially more severe significant impacts than previously analyzed in the certified 2005 EIR. Impacts would remain less than significant with mitigation incorporated.

Airports

As discussed in the certified 2005 EIR, the Project would be located within the March Air Reserve Base Airport Influence Area. Properties within the designated safety zones are subject to regulations that govern such issues as the height of structures and noise. These restrictions could have an impact on the use of certain types of construction equipment (e.g., cranes) within these zones; therefore, the certified 2005 EIR determined that all construction activities within these zones would need to be coordinated with the March Air Reserve Base. The Air Installation Compatible Use Zone study prepared for the March Air Reserve Base indicates that the project area is not located within the Clear Zone or an Accident Potential Zone (Air Force Reserve Command 2018, Figure 5-2). In addition, the certified 2005 EIR determined that the Project would not be located within the vicinity of a private airstrip; the proposed modifications would also not be located near a private airstrip. Therefore, the proposed modifications would not create an airport-related safety hazard for people working in the Project area. The proposed modifications would

not result in new or substantially more severe significant impacts than what was previously analyzed in the certified 2005 EIR. No impact would occur.

Emergency Plans

As discussed in the certified 2005 EIR, the Project would not physically interfere with an adopted emergency response plan or emergency evacuation plan. The proposed modifications would shift the alignment of the underground pipeline three hundred feet and would not alter the location of aboveground structures; therefore, the proposed modifications would not change the conclusion of the certified 2005 EIR. No impact would occur.

Wildland Fires

As discussed in the certified 2005 EIR, the Project would be located within an urban area and therefore would not be at risk of wildland fires. In addition, the proposed modifications would be located within an area that is not designated as a very high fire hazard severity zone (County of Riverside 2016, Figure S-11). The conclusion of the certified 2005 EIR would not change, and no impact would occur.

3.6.4 Conclusion

The proposed modifications would not result in any new significant impacts to hazards and hazardous materials or substantially increase the severity of significant impacts already identified in the certified 2005 EIR. Impacts would be similar to those identified in the certified 2005 EIR. Impacts would remain less than significant with mitigation incorporated and no further mitigation is required.

3.7 Hydrology and Water Quality

The certified 2005 EIR prepared for the original Project concluded potential environmental impacts to hydrology and water quality would be less than significant with mitigation incorporated. This section provides an analysis of the potential impacts to hydrology and water quality associated with the proposed modifications.

3.7.1 Setting

The Project area is in the Perris Reservoir sub-watershed of the San Jacinto River watershed (Hydrologic Unit Code: 18070202). The certified 2005 EIR describes the topography of the Project area as typical of foothill regions in Southern California, with an expansive alluvial fan formation created from repeated runoff from the surrounding mountains discharging to the valley floor. The Santa Ana RWQCB governs surface water quality within the San Jacinto River watershed, setting water quality objectives and monitoring surface water quality through the implementation of the Santa Ana River Water Quality Control Plan (Basin Plan). The Project area is approximately 8.7 miles northwest of the San Jacinto River and approximately 1.4 miles west of the Perris Valley Storm Drain/Perris Valley Channel, the primary tributary to the San Jacinto River through the city of Perris. The nearest surface water features to the Project area are built roadside/canal ditches and storm drains located south of the Van Buren Boulevard/I-215 interchange on both the east and west side of I-215. An existing storm drain originates west of I-215, flows under the RCTC/BNSF railroad tracks and I-215, and continues southeast, ultimately meeting the Perris Valley Storm Drain/Perris Valley Channel. Additionally, as discussed in Section 3.3, *Biological Resources*, other potentially jurisdictional features in the Project area include a constructed earthen stormwater channel north of Van Buren Boulevard and east of I-215, an existing detention basin along the

west side of the I-215 and of the Van Buren Boulevard on-ramp, and a small depression east of I-215 across the street from the March Air Field Museum.⁸ All of these features are located outside of the work area for the proposed modifications and are discussed in greater detail in the BRA (Appendix B; Rincon Consultants 2020a) and the *Biological Resources Memorandum for the Perris Valley Pipeline Project Modifications in the Caltrans Interstate 215 Right-of-Way* (Rincon Consultants 2020b).

The proposed modifications overlie the western portion of the San Jacinto Groundwater Basin (Basin 8-005). Water quality in the basin is characterized by high concentrations of TDS and nitrate. Groundwater sampling of 12 wells in the Perris North management zone of the basin, which the Project area overlies, indicated TDS levels ranging from 330 to 1,900 milligrams per liter (mg /L) and nitrate (as nitrogen) concentrations ranging from <0.1 to 20.0 mg/L in 2017 (EMWD 2018). Additionally, sampling and testing by Parsons in the *Data Report on Combined Field Investigations for PFAS, Hydrazine, and Other COCs in Soil and Groundwater, dated October 2020*, indicates that groundwater underlying the Project area contains low levels of PFAS, including PFOS and PFOA (Parsons 2020). Groundwater and soil contamination in the Project area are described in greater detail in Section 3.6, *Hazards and Hazardous Materials*.

EMWD oversees groundwater management in the basin, having adopted the West San Jacinto Groundwater Basin Groundwater Management Plan in 1995. In 2017, EMWD formed the West San Jacinto Groundwater Sustainability Agency (GSA) to implement the planning requirements of the Sustainable Groundwater Management Act in the western portion of the basin. The Project area is generally located outside the West San Jacinto GSA's management area because it is in WMWD's service area, except the proposed modifications associated with the discharge of blended dewatering effluent near the I-215/Harley Knox Boulevard interchange. WMWD serves on the Advisory Committee for the GSA. The eastern portion of the San Jacinto Groundwater Basin is adjudicated under a 2013 Stipulated Judgement (Case Number RIC 1207274).

For additional discussion of existing surface water and groundwater conditions in the Project area, refer to the *Water Quality Memorandum for the Perris Valley Pipeline Modifications Project Within the Caltrans Interstate 215 Right-of-Way* (Rincon Consultants 2021a).

3.7.2 Significance Threshold Criteria

The following CEQA significance threshold criteria were used to evaluate impacts to hydrology and water quality associated with the proposed modifications. Impacts would be potentially significant if the proposed modifications would introduce new impacts or substantially increase the severity of previously identified significant impacts associated with:

- a) The violation of any water quality standards or waste discharge requirements or otherwise substantial degradation of surface or groundwater quality
- b) The substantial decrease of groundwater supplies or substantial interference with groundwater recharge such that the project may impede sustainable groundwater management of the basin
- c) The substantial alteration of the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - i. Result in substantial erosion or siltation on- or off-site

⁸ As noted in the BRA, potentially jurisdictional features were identified in the Project area; however, a formal jurisdictional delineation was not conducted. Information in this document is provided for a general assessment of potentially jurisdictional features and does not provide a formal assessment of specific agency jurisdiction for each feature.

- ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site
 - iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff or
 - iv. Impede or redirect flood flows
- d) In flood hazard, tsunami, or seiche zones, the risk of releasing pollutants due to project inundation
 - e) Conflicting with or obstructing implementation of a water quality control plan or sustainable groundwater management plan

3.7.3 Potential Impacts

Water Quality Standards and Degradation of Surface or Groundwater Quality

As discussed in the certified 2005 EIR, the Project would temporarily expose bare soil to wind and water erosion during site grading and excavation activities. If precautions are not taken to contain sediments, construction activities could produce sediment-laden storm runoff that would exceed limits specified in the Project's NPDES General Construction Permit. In addition to increased erosion potential, hazardous materials associated with construction equipment and LUST sites in the Project area could adversely affect water quality if spilled or stored improperly. Finally, the certified 2005 EIR notes the potential need for construction dewatering activities and subsequent discharge to surface water during construction in areas of high groundwater. Therefore, implementation of Mitigation Measure HYD-1 was required to reduce impacts to less than significant.

The proposed modifications to the Project would generally require similar construction activities, including jack and bore tunneling under the RCTC/BNSF railroad tracks and I-215. As documented in the certified 2005 EIR, such activities would expose soil, resulting in potential sediment-laden runoff. As with the Project, Mitigation Measure HYD-1 would be required to reduce impacts to a less than significant level by requiring construction BMPs to reduce erosion and sediment runoff.

Given the groundwater elevation in the Project area and proposed depth of boring and receiving pits, construction dewatering activities would be necessary. The proposed modifications include placement of temporary dewatering facilities, including groundwater conveyance lines, a conveyance line delivering potable water from the Mills WTP, and three temporary treatment facilities for water blending, treatment, and testing prior to discharge to the existing storm drain network. The placement of these facilities would occur on the ground, requiring minimal, if any, additional ground disturbance with potential to result in exposed soil and erosion. Upon completion of construction, the temporary dewatering facilities would be removed, and the area restored to its pre-Project condition.

Groundwater in the Project area contains high concentrations of TDS, which could impair water quality if discharged directly to surface water bodies near the modified alignment. To comply with Santa Ana RWQCB discharge permit requirements for the Project and reduce potential impacts to surface water quality associated with construction dewatering activities, dewatering effluent would be blended with potable water to reduce TDS concentrations to levels acceptable to the Santa Ana RWQCB. Furthermore, as discussed in Section 3.6, *Hazards and Hazardous Materials*, groundwater and soils underlying the Project area contain low levels of PFAS compounds, specifically PFOS and PFOA, exceeding the San Francisco Bay RWQCB's ESLs and SWRCB Notification Levels and Response Levels. Other constituents of concern, including hydrocarbons, chloroform, and metals, were detected in groundwater but did not exceed applicable screening levels. Metropolitan would treat groundwater encountered during

construction activities (e.g., shaft and tunneling activities) using a GAC filtration system at the on-site temporary treatment facilities prior to blending with Mills WTP potable water. Use of the GAC method has been shown to be one of the best available methods to reduce PFAS levels in water. Metropolitan will treat PFAS in construction groundwater discharges to non-detect (“ND”). ND means to a level below the PFAS reporting limits used by the contracting laboratory that conducts the analyses. Pursuant to Mitigation Measure HYD-1, Metropolitan and the construction agents would inspect the construction site to verify that all required dewatering measures are implemented. GAC will only be used to treat pumped groundwater; surface water encountered within the Project area (e.g., rain, stormwater runoff) would follow standard BMPs required in the Project’s stormwater pollution prevention plan in compliance with the NPDES Construction General Permit.

The proposed modifications may also include decommissioning of 40 monitoring wells. Wells would be over-drilled to remove casings, then backfilled and capped. Given the size of each well (approximately six inches in diameter), decommissioning activities would involve minor ground disturbance. Pursuant to Mitigation Measure HYD-1, all disturbed surfaces would require the implementation of erosion control practices during the rainy season, minimizing potential surface runoff. Decommissioned wells would be backfilled and capped with an inert material, such as bentonite or concrete, which would protect groundwater from pollutants in surface runoff by reducing the potential for surface runoff to enter decommissioned wells.

Because the proposed modifications would require similar construction activities, temporary dewatering facilities would not substantially increase ground disturbance, and dewatering effluent would be treated prior to discharge to the storm drain network, the proposed modifications would not result in new or substantially more severe significant impacts than what was previously analyzed in the certified 2005 EIR. By implementing GAC treatment, complying with the Santa Ana RWQCB discharge permit, and implementing appropriate BMPs and Mitigation Measure HYD-1, impacts associated with water quality would remain less than significant with mitigation incorporated.

HYD-1 The construction agent(s) shall require contractors to implement a program of BMPs and best available technologies to reduce potential impacts to water quality that may result from construction activities. To reduce or eliminate construction-related water quality impacts before the onset of construction activities, the construction agent(s) shall obtain coverage under the NPDES General Construction Permit. Construction activities shall comply with the conditions of this permit that include preparation of a stormwater pollution prevention plan, implementation of BMPs, and monitoring to ensure impacts to water quality are minimized. As part of this process, multiple BMPs shall be implemented to provide effective erosion and sediment control. These BMPs shall be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. BMPs to be implemented as part of this mitigation measure shall include, but are not limited to, the following:

- Temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other groundcover would be employed for disturbed areas.
- Storm drain inlets on the site and in downstream offsite areas shall be protected from sediment with the use of BMPs acceptable to the construction agent(s), local jurisdictions and the California Regional Water Quality Control Board, Santa Ana Region.
- Dirt and debris shall be swept from paved streets in the construction zone on a regular basis, particularly before predicted rainfall events.

- No disturbed surfaces shall be left without erosion control measures in place between October 15 and April 15. The construction agent(s) shall file a Notice of Intent with the Regional Board and require the preparation of a pollution prevention plan prior to commencement of construction. The construction agent(s) shall routinely inspect the construction site to verify that the BMPs specified in the pollution prevention plan are properly installed and maintained. The construction agent(s) shall immediately notify the contractor if there were a noncompliance issue and require immediate compliance.
- Controls on construction site dewatering shall be implemented. If possible, water generated as part of construction dewatering shall be discharged onsite such that there would be no discharge to surface waters. If discharge to surface waters were unavoidable, the construction agent(s) shall obtain coverage under the NPDES General Dewatering Permit prior to commencement of construction. The provisions of this permit are sufficiently protective of water quality to ensure that impacts to surface waters would remain below significance thresholds. During dewatering activities, all permit conditions shall be followed. The construction agent(s) shall routinely inspect the construction site to verify that the measures specified in the permit are properly implemented. The construction agent(s) shall immediately notify the contractor if there were a noncompliance issue and require immediate compliance.

Groundwater Supplies and Recharge

The certified 2005 EIR states the Project would not use groundwater in any way and, therefore, would result in no impact with respect to groundwater supplies or groundwater recharge. However, the certified 2005 EIR does acknowledge construction dewatering may be necessary, and places controls on dewatering activities in Mitigation Measure HYD-1, described above.

The proposed modifications would require temporary pumping, conveyance, and treatment of groundwater during construction-related dewatering activities. Treated dewatering effluent would be subsequently discharged to the storm drain network at several discharge points, approximately 1.5 miles southeast of the modified alignment. Temporary construction-related dewatering activities could potentially result in a minor localized decrease in groundwater elevations near the boring and receiving pits. However, treated dewatering effluent would be discharged to the existing storm drain network, where opportunities for recharge within the San Jacinto Groundwater Basin would exist in unlined portions of the Perris Valley Channel and the San Jacinto River.

As mentioned previously, the proposed modifications may involve removal of approximately 40 groundwater dewatering and monitoring wells. These wells were installed for sampling purposes, and their removal would not affect groundwater supplies or recharge potential. The proposed modifications do not involve long-term groundwater extraction or elements that would interfere with groundwater recharge, such as increased impervious surface area. As described in the *Water Resources Memorandum for the Perris Valley Pipeline Modifications Project within the Caltrans Interstate 215 Right-of-Way*, dewatering activities during construction would involve periodic pumping and discharge of up to 250 gpm of groundwater, which would be treated and blended with Mills WTP water (Rincon Consultants 2021a). Due to the necessity of this temporary dewatering during construction activities, the proposed modifications would result in an increased impact to groundwater supplies and recharge relative to the Project. However, because dewatering activities would be temporary in nature and opportunities for downstream recharge exist following the discharge of dewatering effluent, this impact would be less than significant.

Drainage Alteration

As discussed in the certified 2005 EIR, the Project would be located underground and would not affect existing surface drainage patterns or increase runoff. The certified 2005 EIR concludes the Project would result in no impact with respect to stormwater flows or flooding, stormwater drainage facilities, or changes in drainage patterns that could result in increased erosion or sedimentation.

As with the original Project, the proposed modifications would involve the operation of an underground pipeline and would involve no long-term change in impervious surfaces, runoff, or drainage patterns. Construction activities would require temporary dewatering activities, including pumping, treatment, and discharge of dewatering effluent. Facilities associated with conveyance, treatment, and discharge of dewatering effluent would generally be placed at-grade, involving minimal ground disturbance. Following construction activities, temporary dewatering facilities would be removed, and the area would be returned to its pre-construction condition. Dewatering effluent would be discharged to the existing storm drain network. The discharge of dewatering effluent would be temporary in nature and comply with discharge limits established in the Project's permit received by the Santa Ana RWQCB. Decommissioning of groundwater dewatering and monitoring wells would involve temporary ground disturbance to drill the existing well and remove casings. The wells would then be backfilled and capped with an inert material, such as bentonite or concrete. Given the size of each well (approximately six inches in diameter), over drilling and capping of the wells would not substantially alter drainage patterns or add substantial impervious surface area.

Due to the temporary dewatering activities required, the proposed modifications would result in temporary impacts with respect to drainage patterns and stormwater facilities. However, the 2005 EIR noted that construction in areas of high groundwater could require dewatering with a subsequent discharge to surface waters (WMWD 2005). Given the proposed modifications would involve no long-term change in impervious surface or drainage patterns, dewatering effluent would be temporarily discharged to the existing storm drain network, and such activities were considered in the 2005 EIR, the modifications would not change the conclusion of the certified 2005 EIR and impacts would be less than significant.

Flood, Tsunami, or Seiche Hazards

As discussed in the certified 2005 EIR, no portion of the Project is located within a 100-year floodplain. According to current Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps, the proposed modifications are located in either Zone X, indicating an area of minimal flood hazard, or Zone D, indicating an area of undetermined flood risk (FEMA 2008, Map 06065C1410G and 06065C0745G, effective August 28, 2008). None of the proposed modifications are located in Zone A (the 100-year flood hazard zone). The nearest inland water body to the Project area is the Perris Reservoir, approximately 3.5 miles east. Given the distance from this water body to the Project area, the proposed modifications would not be subject to inundation by seiche. The proposed modifications are approximately 38 miles east of the Pacific Ocean and, therefore, would not be subject to inundation by a tsunami. The proposed modifications would not change the conclusion of the certified 2005 EIR and no impacts would occur.

Water Quality Management Plan and Sustainable Groundwater Management Plan

The Santa Ana RWQCB updated the Basin Plan in 2019. The Basin Plan designates beneficial uses for surface waters in the Santa Ana region and associated water quality objectives to fulfill such uses. Water from the location of the proposed modifications drains via the storm drain network to the Perris Valley Channel, which ultimately flows to Reach 3 of the San Jacinto River southeast of the city of Perris. Reach 3 of the San Jacinto River has intermittent designated uses of Agricultural Supply, Groundwater

Recharge, Non-Contact Water Recreation, Contact Water Recreation, Warm Freshwater Habitat, and Wildlife Habitat, and an existing or potential designated beneficial use of Rare, Threatened, or Endangered Species (Santa Ana RWQCB 2019). The water body is not currently listed as impaired for any of these uses; Canyon Lake (Railroad Canyon Reservoir), downstream from Reach 3, is listed as impaired for nutrients (SWRCB 2019).

As described above, the proposed modifications would involve the operation of an underground pipeline and would involve no long-term change in impervious surfaces, runoff, or drainage patterns. Construction activities would implement water quality BMPs pursuant to the requirements of the NPDES Construction General Permit and Mitigation Measure HYD-1, reducing potential runoff and surface water pollution during the construction of the proposed modifications. Dewatering activities would involve pumping, treatment, and discharge of groundwater to the existing storm drain network, which might ultimately flow to Reach 3 of the San Jacinto River. Groundwater in the Project area is characterized by elevated concentrations of TDS. As described previously, dewatering effluent would be treated via a GAC filtration system and blended with potable water to achieve water quality objectives, such as TDS limits, specified in the dewatering permit obtained from the Santa Ana RWQCB. Furthermore, neither Reach 3 of the San Jacinto River nor downstream reaches are listed as impaired for TDS. With adherence to applicable permit requirements, neither construction nor operation of the proposed modifications would exacerbate existing impairments in nearby surface water bodies. Low levels of PFOA and PFOS are also present in the groundwater underlying the Project area based on sampling and testing conducted by Parsons (Parsons 2020). While water quality objectives do not currently exist under the Basin Plan for these compounds, GAC treatment and blending of dewatering effluent would reduce concentrations of PFOA and PFOS, TDS, and pH levels. The treated and blending dewatering effluent would be sampled and tested to confirm that PFOA and PFOS are at non-detect level (“ND”) for these compounds. Therefore, the proposed modifications would not impair beneficial uses of downstream water bodies and would not conflict with or obstruct implementation of the Basin Plan.

The proposed modifications are located in the western portion of the San Jacinto Groundwater Basin. The Basin is designated a high-priority basin and, therefore, required to adopt a Groundwater Sustainability Plan (GSP) by 2022. As discussed in Section 3.7.1, *Setting*, EMWD is the GSA for the western portion of the Basin. While work is underway to prepare a GSP for the Basin, no GSP has been adopted to date. The proposed modifications involve no new wells or additional groundwater extraction. Temporary construction-related dewatering activities could potentially result in a localized decrease in groundwater elevations near the boring and receiving pits. However, dewatering effluent would be treated via GAC filtration and blended with potable water prior to discharge to the existing storm drain network, where opportunities for recharge within the San Jacinto Groundwater Basin would exist in unlined portions of the Perris Valley Channel and the San Jacinto River. Because the proposed modifications would involve no long-term impact to groundwater and no GSP has been adopted for the Basin, the proposed modifications would not conflict with or obstruct implementation of a sustainable groundwater management plan.

Overall, with respect to water quality and sustainable groundwater management plans, the proposed modifications would result in less than significant impacts with the implementation of Mitigation Measure HYD-1.

3.7.4 Conclusion

The proposed modifications would not result in any new significant impacts to hydrology and water quality or substantially increase the severity of significant impacts already identified in the certified 2005

EIR. Impacts would be similar to those identified in the certified 2005 EIR. Impacts would remain less than significant with mitigation incorporated and no further mitigation is required.

3.8 Noise

The certified 2005 EIR prepared for the Project concluded that potential environmental impacts to noise would be less than significant with the incorporation of mitigation. This section provides an analysis of the potential impacts of noise associated with the proposed modifications.

3.8.1 Setting

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may, therefore, be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (Caltrans 2013).

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response. Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; dividing the energy in half would result in a 3 dB decrease (Crocker 2007).

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or terms of sound energy. Two sources do not “sound twice as loud” as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible (8 times the sound energy); and that an increase (or decrease) of 10 dBA sounds twice (half) as loud (10.5x the sound energy) (Crocker 2007).

Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of sources (e.g., point or line, the path the sound will travel, site conditions, and obstructions). Noise levels from a point source typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance (e.g., construction, industrial machinery, ventilation units). Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about three dBA per doubling of distance (Caltrans 2013a). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this “shielding” depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, and man-made features such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2017). Structures can substantially reduce exposure to noise as well. The FHWA’s guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important factors of project noise impact. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. One of the most frequently used noise metrics is the equivalent noise level (L_{eq}); it considers

both duration and sound power level. L_{eq} is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over time. Typically, L_{eq} is summed over a one-hour period. L_{max} is the highest root mean squared (RMS) sound pressure level within the sampling period, and L_{min} is the lowest RMS sound pressure level within the measuring period (Crocker 2007).

Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{DN}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.); it is also measured using Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013a). Noise levels described by L_{DN} and CNEL usually differ by about one dBA. The relationship between the peak-hour L_{eq} value and the L_{DN} /CNEL depends on the distribution of traffic during the day, evening, and night. Quiet suburban areas typically have CNEL noise levels in the range of 40 to 50 dBA, while areas near arterial streets are in the 50 to 60-plus CNEL range. Normal conversational levels are in the 60 to 65-dBA L_{eq} range; ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations (Federal Transit Administration [FTA] 2018).

Some land uses are more sensitive to ambient noise levels than other uses due to the amount of noise exposure and the types of activities involved. For example, residences, motels, hotels, schools, libraries, churches, nursing homes, auditoriums, museums, cultural facilities, parks, and outdoor recreation areas are more sensitive to noise than commercial and industrial land uses.

The County of Riverside Noise Ordinance is codified in Chapter 9.52 of the County Code. The ordinance prohibits any person from creating any sound, or allowing the creation of any sound, on any property that causes the sound level on any other occupied property to exceed daytime or nighttime noise standards. For office commercial, business park, and industrial uses in the Project area, daytime noise standards outlined in the County's noise ordinance are 65-75 dB (from 7 a.m. to 10 p.m.) and nighttime noise standards range from 55-75 dB (from 10 p.m. to 7 a.m.). County of Riverside Section 9.52.020 exempts capital improvement projects of a governmental agency from the provisions of the noise ordinance.

Chapter 7.34 of the City of Perris Municipal Code codifies the City's noise ordinance. The ordinance prohibits any loud excessive or offensive noises or sounds which unreasonably disturb the peace and quiet of any residential neighborhood. Furthermore, the ordinance restricts construction activities to between the hours of 7 a.m. and 8 p.m. on weekdays and states that construction activity shall not exceed 80 dB in residential zones.

No noise measurements were taken for the certified 2005 EIR prepared for the approved Project. Primary sources of noise in the area of the proposed modifications include roadway noise along I-215 and Van Buren Boulevard, railroad noise from the RCTC/BNSF rail line, and air traffic at the March Air Reserve Base. To determine existing noise levels in the Project area, two 15-minute noise measurements were recorded near the Project area between 1:16 p.m. and 2:32 p.m. on June 8, 2018, using an ANSI Type II integrating sound level meter. Noise Measurement (NM) 1 was taken on the western portion of the Project area; measured noise levels are representative of existing ambient noise levels along Van Buren Boulevard, west of I-215. NM 2 was taken adjacent to the March Field Air Museum on the southern portion of the Project area and is representative of existing ambient noise levels along Van Buren Boulevard, east of I-215. Table 9 summarizes noise measurement activities and results. Average noise levels are provided in L_{eq} for a 15-minute measurement period ($L_{eq[15]}$); L_{max} is also provided.

**Table 9
Project Area Noise Monitoring Results**

Measurement Number	Measurement Location	Sample Times	Approximate Distance to Primary Noise Source	L _{eq[15]} (dBA)	L _{max} (dBA)
1	Intersection of Van Buren Boulevard and Opportunity Way	1:16 – 1:31 p.m.	90 ft ¹	63.6	80.6
2	Entrance of March Air Field Museum	2:17 - 2:32 p.m.	85 ft ²	67.8	90.1

See Appendix C for noise monitoring data.

¹ Distance to centerline of Van Buren Boulevard.

² Distance to centerline of Van Buren Boulevard.

Source: Rincon Consultants, field measurements on June 8, 2018, using ANSI Type II integrating sound level meter.

The proposed modifications fall within the geographic boundaries of the County of Riverside, City of Perris, and the MJPA. Noise-sensitive receptors identified by these jurisdictions include the following:

- Residential areas
- Schools and public libraries
- Hospitals and rest homes
- Places of worship
- Cemeteries
- Offices
- Hotels/Motels
- Outdoor recreation areas

The County of Riverside also considers residential areas, hospitals, concert halls, libraries, sensitive research operations, schools, and offices to be sensitive to vibration.

The certified 2005 EIR identified the sensitive receptors closest to the original Project area to be residences located approximately 200 feet south along Alessandro Boulevard. Although not identified in the certified 2005 EIR, the Project is also adjacent to the Riverside National Cemetery, which is considered a sensitive receptor by the County of Riverside pursuant to Section 9.52.030 of the Riverside County Code, and is located south of Van Buren Boulevard and west of I-215. The only construction activities that would occur near the cemetery are placement and removal of temporary dewatering pipelines, which would not involve substantial ground-disturbance or heavy equipment, and well decommissioning, which would occur over approximately eight weeks, as described in Section 2.2, *Project Location and Description*. Additionally, the cemetery is approximately 50 feet from the nearest wells that may be decommissioned, and approximately 250 feet southwest of the construction trenching, grading, and tunneling activities. Construction noise modeling was conducted for these receptors based on these distances; anticipated construction noise levels at these sites are presented in Section 3.8.3, *Potential Impacts*. The nearest vibration-sensitive receptors are single-family residences approximately 1,900 feet from the proposed Temporary Discharge Point B near the I-215/Harley Knox Boulevard.

3.8.2 Significance Threshold Criteria

The following CEQA significance threshold criteria were used to evaluate impacts to noise associated with the proposed modifications. Impacts would be potentially significant if the proposed modifications would introduce new impacts or substantially increase the severity of previously identified significant impacts associated with:

- a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- b) Generation of excessive ground-borne vibration or ground-borne noise levels
- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, exposure of people residing or working in the project area to excessive noise levels

The certified 2005 EIR found that vibration from construction activity is typically below the threshold of perception when the activity is more than 50 feet from receivers. Therefore, this addendum assesses the potential for the proposed modifications to result in a new significant impact or to increase the severity of an impact related to vibration based on the distance between the proposed modifications and the nearest sensitive receptor (e.g. Riverside National Cemetery, residents along Alessandro Boulevard).

3.8.3 Potential Impacts

Substantial Temporary or Permanent Increase in Noise Levels in Excess of Standards

The certified 2005 EIR determined that construction and operation of the Project would comply with applicable local noise ordinances, and no impact would occur. Similarly, as discussed below, the proposed modifications would not substantially change the construction or operational activities analyzed in the certified 2005 EIR and would comply with applicable local noise ordinances; therefore, no impact would occur.

As discussed in the certified 2005 EIR, the pipeline would be underground and would not generate any noise itself. Noise generated by pipeline maintenance activities would be temporary and intermittent. Placement, use, and removal of dewatering facilities would be temporary in nature and limited to the duration of construction activities. Operation of the four pump stations would generate noise. Mitigation Measure NOISE-3 was recommended to reduce operational noise further. Therefore, the certified 2005 EIR determined that a substantial permanent increase in ambient noise levels (i.e., during operation) in the Project vicinity above levels existing without the Project would not occur. The proposed modifications would not alter the location or operation of the four pumping stations and would not change the conclusion of the certified 2005 EIR and no impact would occur.

NOISE-3 The buildings housing the pump stations shall be insulated and contain sound attenuation materials to meet local noise standards.

As discussed in the certified 2005 EIR, the Project would result in temporary noise-generating construction activities. The Project and proposed modifications would be required to comply with the applicable noise ordinances for construction activities depending on the jurisdiction in which construction activities occur.

Project construction would include site preparation, grading, building construction/pipeline installation, and paving. Table 10 shows the typical peak noise levels associated with common types of heavy construction equipment, based on the Federal Highway Administration (FHWA) *Highway Construction Noise Handbook* (2006). Peak noise levels associated with the use of individual pieces of heavy equipment can range from about 70 to 89 dBA at 50 feet from the construction source, depending on the types of equipment in operation at any given time and phase of construction (FHWA 2006).

Table 10
Typical Noise Levels Generated by Construction Equipment

Equipment	Type	Typical L_{max} (dBA) 50 Feet from the Source
Air Compressor	Stationary	81
Augur Drill Rig	Stationary	84
Backhoe	Mobile	78
Compactor (ground)	Mobile	83
Concrete Mixer	Stationary	85
Crane	Stationary	81
Dozer	Mobile	82
Dump Truck	Mobile	76
Excavator	Mobile	81
Front End Loader	Mobile	79
Generator	Stationary	81
Grader	Mobile	85
Jack Hammer	Mobile	89
Man Lift	Mobile	75
Paver	Mobile	77
Pickup Truck	Mobile	75
Pneumatic Tools	Stationary	85
Roller	Mobile	80
Saw	Stationary	76
Scraper	Mobile	84
Tractor	Mobile	84
Truck	Mobile	88
Warning Horn	Stationary	83
Welder/Torch	Stationary	74

Source: FHWA 2006, Tables 9.1 and 9.9.

The certified 2005 EIR estimated that construction noise levels would range from 60 to 79 dBA at the nearest sensitive receptor, which would be approximately 200 feet from the construction site. To supplement this determination, construction noise from equipment operating onsite was estimated using the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM). RCNM predicts construction noise levels for a variety of construction operations based on empirical data and the application of acoustical propagation formulas. Using RCNM, construction noise levels were estimated at the nearest noise-sensitive receptors.

The nearest sensitive receptor to the Project area is the Riverside National Cemetery located south of Van Buren Boulevard and west of I-215. Most construction activities associated with the proposed modifications would occur approximately 250 feet from the cemetery; however, well-decommissioning activities may occur as close as 50 feet from the cemetery and trenching associated with installation of temporary dewatering discharge lines may occur as close as approximately 200 feet from the cemetery. A single-family residence is located approximately 1,900 feet southwest of the proposed Temporary Discharge Point B near the I-215/Harley Knox Boulevard interchange. However, construction activities at this point would involve placement of temporary dewatering facilities, such as a pH treatment facility and at-grade discharge lines and would not require substantial ground disturbance or regular use of noise-generating heavy equipment. Several residences are located approximately 5,000 feet west of the Project area near the I-215/Van Buren Boulevard interchange, where pipeline tunneling and well-decommissioning activities would occur. For this analysis, it is assumed that construction activities would occur up to the Project area boundary. Table 11 shows the maximum expected construction noise levels at the Riverside National Cemetery and the nearest residences based on the construction equipment anticipated to be used concurrently during each phase of construction (see Table 13-2 of the certified 2005 EIR). Additional factors to consider are that the estimated construction noise levels do not consider that equipment would be dispersed in various areas of the Project area in both time and space. The confined limits of construction within the proposed pipeline alignment will limit the numbers and types of equipment that can operate near a given location at a particular time. Therefore, the noise levels presented in Table 11 represent a conservative estimate of construction noise.

Table 11
Construction Noise Levels by Phase

Construction Phase	Equipment¹	Estimated Noise at Riverside National Cemetery² (dBA L_{eq})	Estimated Noise at Nearest Residences³ (dBA L_{eq})
Clearing	Air Compressor, Concrete Saw, Pavement Breaker, Sweeper, Pickup Trucks	72.3	46.3
Trenching	Backhoe, Dump Trucks, Utility Trucks, Sweeper, Pickup Trucks, Pumps	72.0	46.0
Backfilling	Dump Trucks, Utility Trucks, Water Truck, Compactor, Sweeper, Pickup Trucks, Pumps	72.4	46.3
Pipelaying	Crane, Dozer, Welder, Generator, Sweeper, Pickup Trucks, Pumps	72.6	46.6
Restoration	Paver, Sweeper, Pickup Trucks	65.6	39.6
Trenching for Temporary Dewatering Lines ⁴	Concrete Saw, Dozer, Backhoe (2)	72.5	44.6
Well Decommissioning	Drill Rig Truck, Dump Truck, Backhoe, Pickup Truck	78.4	38.4

¹Based on Table 13-2 of the certified 2005 EIR. Pumps have been added for the trenching, backfilling, and pipelaying phases to account for temporary dewatering activities.

²Based on a distance of 250 feet for clearing, trenching, backfilling, pipelaying, and restoration activities, 200 feet for trenching for temporary dewatering line activities, and 50 feet for well-decommissioning activities.

³Based on a distance of 5,000 feet for all construction phases.

⁴Equipment list based on California Emissions Estimator Model (CalEEMod) output for trenching activities. Loudest phase of construction reported.

Note: See Appendix D for RCNM modeling results.

As shown in Table 11, construction noise levels for the proposed modifications would range from 65.6 to 78.4 dBA L_{eq} at the Riverside National Cemetery and from 38.4 to 46.6 dBA L_{eq} at the nearest residences. These modeled noise levels are slightly higher than noise levels from the existing highway, roadway, and air traffic, which were measured in June 2018 as ranging from 63.6 to 67.8 dBA L_{eq} . Construction activities required for the proposed modifications would generally not differ substantially from those of the original Project. Well decommissioning activities, which were not analyzed in the certified 2005 EIR, would result in the highest construction noise levels at the Riverside National Cemetery due to their proximity to the sensitive receptor. This noise increase would be temporary and subject to construction hours limitations. Decommissioning of all 40 wells would occur over approximately eight weeks, as described in Section 2.2, *Project Location and Description*, with activities at a single well site lasting approximately one day. Tunneling and dewatering activities may require nighttime construction work. However, this work would unlikely disturb residential receptors, as it would occur in close proximity to the I-215 freeway and is over 5,000 feet from the nearest residences where people would be expected to sleep. Furthermore, any nighttime noise would be limited to the duration of tunneling activities. Nevertheless, pursuant to Mitigation Measure NOISE-1, any holiday, nighttime, or weekend construction activities would be subject to local permitting requirements. The County of Riverside Code of Ordinances Section 9.52.020 exempts capital improvement projects of a governmental agency and construction projects more than one-quarter mile from an inhabited dwelling from the provisions of the County's noise ordinance. As a result, the proposed modifications would qualify for these exemptions. Impacts related to construction noise associated with the proposed modifications would not result in a new or substantially more severe significant impact than previously identified in the certified 2005 EIR.

The certified 2005 EIR recommended the following mitigation measures to reduce construction-related noise impacts, and these mitigation measures would be implemented for the proposed modifications as well.

- NOISE-1** Construction activities shall be limited to between the hours of 7:00 a.m. and 7:00 p.m. and as necessary to comply with local ordinances. Any holiday, nighttime or weekend construction activities shall be subject to local permitting requirements.
- NOISE-2** All equipment used during construction shall be muffled and maintained in good operating condition. All internal combustion engines shall be fitted with well-maintained mufflers in accordance with manufacturers' recommendations.

Groundborne Vibration or Noise Levels

Vibration from construction activity is typically below the threshold of perception when the activity is more than 50 feet from receivers. As discussed in the certified 2005 EIR, the Project was found to create minor ground vibration; however, no vibration-sensitive receptors are located within 50 feet of the Project construction area. Therefore, the Project was not found to expose people or structures to excessive levels of ground-borne vibration. Impacts from the Project were determined to be less than significant, and no mitigation measures were required.

For the proposed modifications, the distance to the nearest vibration-sensitive receptors is approximately 1,900 feet from the proposed Temporary Discharge Point B near the I-215/Harley Knox Boulevard interchange and over 5,000 feet from the proposed modifications near the I-215/Van Buren Boulevard interchange. Because groundborne vibration is perceived through structures (i.e., rattling of walls, windows), the nearby cemetery would not constitute a vibration-sensitive receptor. Construction activities that would occur as part of the proposed modifications would be similar to those that would occur as part of the original Project analyzed in the certified 2005 EIR. Construction activities that generate substantial groundborne vibration, such as pile driving, are not anticipated, and the proposed operation of standard

construction equipment and generators would not be perceptible at the nearest vibration-sensitive receptors given their distance from the location of the proposed modifications. Furthermore, construction activities at the proposed Treatment Facility C near Harley Knox Boulevard would involve placement of temporary dewatering facilities, such as a pH treatment facility and at-grade discharge lines, and would not involve use of equipment that would generate substantial ground-borne vibration. As such, construction activities would not expose people or structures to excessive levels of groundborne vibration, similar to the conclusion reached in the certified 2005 EIR. Impacts would remain less than significant, and no new or substantially more severe significant impacts would occur as a result of the proposed modifications.

Airports and Airstrips

The Project area is located within the March Air Reserve Base Influence Area, which extends several miles from the base. The base accommodates both military and civilian aircraft activities, with maximum civilian aircraft activity limited to 21,000 annual operations (Riverside County Airport Land Use Commission 2014). The Project would not involve construction of new residences or other sensitive receptors where inhabitants would be exposed to air base noise. Construction workers may be subject to aircraft noise associated with operation of the reserve base; however, construction workers would be wearing hearing protection that would attenuate noise to acceptable levels. As with the original Project, the location of the proposed modifications would be located within the 65, 70 and 75-dBA noise contours for the March Air Reserve Base (Air Force Reserve Command 2018, Figure 4-2). The proposed modifications would not change the conclusion of the certified 2005 EIR. The proposed modifications would not expose people working in the area to excessive air traffic noise levels and no impacts related to airport noise exposure would occur.

3.8.4 Conclusion

The proposed modifications would not result in any new significant noise impacts or substantially increase the severity of impacts already identified in the certified 2005 EIR. Impacts would be similar to those identified in the certified 2005 EIR. Therefore, impacts related to noise would be considered less than significant with mitigation incorporated and no further mitigation is required.

3.9 Transportation

The certified 2005 EIR prepared for the original Project concluded that potential environmental impacts to transportation would be less than significant with the incorporation of mitigation. This section provides an analysis of the potential impacts to transportation associated with the proposed modifications.

3.9.1 Setting

As discussed in the certified 2005 EIR, several segments of I-215 along the proposed haul routes to and from the Project area were projected to operate at unacceptable levels of service (LOS) during peak hours, including Eastbridge Avenue to Alessandro Boulevard, Alessandro Boulevard to Frontage Road, and Frontage Road to Van Buren Boulevard. According to the adopted MND for the I-215/Van Buren Boulevard Interchange Project, the I-215 northbound/Van Buren Boulevard intersection will operate at LOS C or better conditions through 2035 following the completion of the interchange improvement project (Caltrans 2009). In 2001, the existing traffic volume on Van Buren Boulevard west of I-215 was estimated at 26,274 average daily trips. See Tables 17-1 and 17-2 in the certified 2005 EIR for further details.

As discussed in the certified 2005 EIR, approximately ten workers would be required daily at the Project area during construction activities. It is anticipated that most of these workers would travel to the Project area in separate vehicles, resulting in up to ten worker vehicle trips to and ten worker trips from the Project area per day. As discussed in the certified 2005 EIR, construction of the Project requires haul trips to and from the Project area on the surrounding road network to remove any excavated material that is not backfilled onsite. Like the original Project, the proposed modifications would also require haul trips to transport project materials to and from the Project area during construction. The proposed modifications would require an estimated 20,759 cy of soil excavated from the tunnel pits to be disposed of offsite. Additionally, an estimated 5,398 cy of imported backfill is assumed to be hauled to the location of the proposed modifications. Assuming a 16-cy haul truck capacity, material import and export would require approximately 1,635 haul trips throughout construction of the proposed modifications.

3.9.2 Significance Threshold Criteria

The following CEQA significance threshold criteria were used to evaluate impacts to transportation/traffic associated with the proposed modifications. Impacts would be potentially significant if the proposed modifications would introduce new significant impacts or substantially increase the severity of previously identified significant impacts associated with:

- a) A conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities
- b) A conflict or inconsistency with CEQA Guidelines Section 15064.3(b)
- c) An increase in hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- d) Inadequate emergency access

Threshold b) was not previously analyzed in the certified 2005 EIR, as this threshold was added pursuant to updates to the CEQA Guidelines that took effect in December 2018. As such, this Addendum assesses whether the proposed modifications would result in a potentially significant impact with respect to conflict or inconsistency with CEQA Guidelines Section 15064.3(b).

3.9.3 Potential Impacts

Circulation System Plans, Ordinances, or Policies

As discussed in the certified 2005 EIR, construction activities for the Project generate less than 100 trips per day, and the operation and maintenance of the Project would generate one additional trip per day. Well decommissioning activities, which were not previously analyzed in the certified 2005 EIR, would require up to four additional workers, resulting in as many as eight additional construction trips per day. These trips represent a minor incremental increase in daily traffic as compared to a 2003 traffic volume of approximately 35,000 daily trips on Alessandro Boulevard and a 2001 traffic volume of approximately 26,000 daily trips on Van Buren Boulevard. The proposed modifications would involve similar construction, operation, and maintenance activities and would not substantially change the amount of traffic generated by the Project.

As noted in the certified 2005 EIR, several of the highway segments along the proposed haul routes currently operate at unacceptable LOS, although the I-215 northbound/Van Buren Boulevard intersection will operate at LOS C or better conditions through 2035 as a result of the interchange improvement

project by Caltrans. The limited amount of temporary construction traffic that is associated with the Project was found not to be sufficient to result in long-term changes to traffic volumes or degrade the existing LOS of highway segments in the area. However, the certified 2005 EIR determined that construction of the Project temporarily reduces the number or available width of the travel lanes on Alessandro Boulevard during the construction period, resulting in temporary disruptions of traffic flows and increases in traffic congestion as well as potentially limited access to local businesses. Mitigation measures TRAF-1, TRAF-2, and TRAF-3 were included to reduce impacts from construction-related traffic disruptions to a less than significant level.

The proposed modifications would not result in a substantial increase in the maximum, or worst-case, amount of traffic projected to travel to and from the Project area daily. The proposed modifications would not affect the pipeline configuration near Alessandro Boulevard; therefore, temporary traffic disruptions along this roadway would remain the same as analyzed in the certified 2005 EIR. However, the proposed modifications would require the closure of the southern travel lanes of Van Buren Boulevard for approximately 16 weeks during the tunneling activities between Tunnel Pit 3 and Tunnel Pit 4, which has the potential to disrupt traffic flow and increase traffic congestion. Implementation of Mitigation Measures TRAF-1, TRAF-2, TRAF-3, and TRAF-4 from the certified 2005 EIR would reduce impacts from construction-related traffic disruptions along Van Buren Boulevard to a less than significant level. Therefore, the proposed modifications would not result in a substantial change to the effectiveness of the roadway system in the Project area and would not change the conclusion of the certified 2005 EIR. Impacts would be less than significant with the incorporation of mitigation.

- TRAF-1** Traffic control plans shall be prepared by a qualified professional engineer before construction.
- TRAF-2** Traffic control plans shall consider the ability of alternative routes to carry additional traffic and identify the least disruptive hours of construction site truck access routes and the type and location of warning signs, lights, and other traffic control devices. Consideration shall be given to maintaining access to commercial parking lots, private driveways and sidewalks, bikeways and equestrian traffic to the greatest extent possible.
- TRAF-3** Traffic control plans shall comply with the Work Area Traffic Control Handbook and/or Manual of Traffic Controls as determined by each affected local agency to minimize any traffic and pedestrian hazards that exist during project construction.
- TRAF-4** Encroachment permits for all work within public rights-of-way shall be obtained from each involved agency prior to commencement of any construction. The construction agent(s) shall comply with all traffic control requirements of the affected local agencies.

CEQA Guidelines Section 15064.3(b)

CEQA Guidelines Section 15064.3(b) identifies criteria for evaluating transportation impacts. Specifically, the guidelines state vehicle miles traveled (VMT) exceeding an applicable threshold of significance may indicate a significant impact. According to Section 15064.3(b)(3) of the CEQA Guidelines, a lead agency may include a qualitative analysis of operational and construction traffic. The certified 2005 EIR did not address VMT, as such analysis was not included in the CEQA Guidelines at the time the EIR was certified. However, as discussed below, the proposed modifications would not substantially affect VMT in the Project area.

A VMT calculation is typically conducted on a daily or annual basis, for long-range planning purposes. As discussed above, traffic on local roadways may temporarily increase during Project construction, including construction associated with the proposed modifications, due to the presence of construction vehicles and equipment. Increases in VMT from construction would be short-term, minimal, and

temporary. The proposed modifications, like the original Project, are located in heavily-populated southern California. As such, it is expected that construction crews and materials would be locally or regionally sourced, reducing construction worker and vendor commute distances. The proposed modifications are located along a major freeway (I-215), minimizing the travel from major transportation corridors required to reach the proposed modifications. Furthermore, the proposed modifications would require approximately 10 to 14 construction workers; as a result, the construction of the proposed modifications would not involve large construction crews resulting in generation of substantial VMT associated with commuting. In addition, as described in the certified 2005 EIR, maintenance of the proposed Project would consist of approximately one light-duty truck trip per day. This single visit would not substantially contribute to VMT in the Project area. Because the proposed modifications would not substantially increase construction- or maintenance-related trips, impacts associated with VMT per CEQA Guidelines Section 15064.3 would be less than significant.

Hazards, Parking, and Alternative Transportation

As discussed in the certified 2005 EIR, the Project does not change the design of any highway or street, does not impact any parking facilities, and does not affect any bus turnouts or other alternative transportation infrastructure. The proposed modifications would not change the conclusions of the certified 2005 EIR, and no impact related to traffic hazards, parking, or public transit, bicycle, and pedestrian facilities would occur.⁹

Emergency Access

The certified 2005 EIR identified potential impacts to emergency access associated with the temporary reduction of the number or available width of travel lanes on Alessandro Boulevard during the construction period. Therefore, mitigation measure TRAF-3 (outlined above) was included to reduce impacts to a less than significant level. The proposed modifications would require the closure of the southbound travel lanes of Van Buren Boulevard for a period of approximately 16 weeks during tunneling between Tunnel Pit 3 and Tunnel Pit 4. One of the two northbound lanes would remain open for southbound traffic and emergency access to the March Field Air Museum. Implementation of mitigation measure TRAF-3 from the certified 2005 EIR would reduce this impact to a less than significant level. The proposed modifications would not change the conclusions of the certified 2005 EIR; therefore, impacts related to emergency access would remain less than significant with mitigation incorporated.

3.9.4 Conclusion

The proposed modifications would not result in any new significant impacts to transportation or substantially increase the severity of impacts already identified in the certified 2005 EIR. Impacts would be similar to those identified in the certified 2005 EIR. Therefore, impacts related to traffic would be considered less than significant with mitigation incorporated and no further mitigation is required.

3.10 Tribal Cultural Resources

Although not included in the certified 2005 EIR, a discussion of tribal cultural resources is included in this Addendum per the most recent version of the *State CEQA Guidelines*. Changes to the *State CEQA Guidelines* requiring analysis of tribal cultural resources took effect July 2015. Because the certified EIR

⁹ Note that assessment of impacts to parking is no longer required with the State CEQA Guidelines Appendix G Checklist but is included here for comparison purposes with the certified 2005 EIR.

was published prior to July 2015, analysis of impacts to tribal cultural resources is not required. The analysis below is included for informational purposes.

3.10.1 Setting

The proposed modifications are located in an area that has been heavily disturbed by highway construction and expansion, pipeline construction, local roadway construction, and railroad construction. As discussed in Section 3.4, *Cultural Resources*, a cultural resources records search and archaeological surveys were completed for the proposed modifications. No prehistoric archaeological resources have been recorded within or immediately adjacent to the Project area. A Native American contact program conducted as part of the adopted MND for the I-215/Van Buren Boulevard Interchange Project, which has a project site similar to that of the proposed modifications, did not identify any Traditional Cultural Properties or other Native American concerns.

For additional discussion of the existing cultural resources setting in the Project area and potential impacts associated with the proposed modifications, refer to the *Cultural Resources Memorandum for the Perris Valley Pipeline Modifications Project Within the Caltrans Interstate 215 Right-of-Way* (Rincon Consultants 2020c).

3.10.2 Significance Threshold Criteria

The following CEQA significance threshold criteria were used to evaluate impacts to tribal cultural resources associated with the proposed modifications. Impacts would be potentially significant if the proposed modifications would introduce new impacts or substantially increase the severity of a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)
- b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant under criteria outlined in subdivision (c) of Public Resources Code Section 2024.1. In applying the criteria outlined in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe

3.10.3 Potential Impacts

As noted above in Section 3.4, *Cultural Resources*, numerous cultural resources pedestrian surveys have occurred in and immediately adjacent to the area and no prehistoric archaeological resources have been recorded within or immediately adjacent to the Project area. Furthermore, Metropolitan is not aware of any tribal cultural resources within the Project area and no prehistoric archaeological resources have been recorded as a result of ground disturbing activities associated with construction of the completed segments of the Perris Valley Pipeline. Therefore, no impacts to tribal cultural resources would occur as a result of the proposed modifications.

3.10.4 Conclusion

Given that the proposed modifications would occur on previously disturbed land, and that the cultural resources records search, archaeological survey, and previous construction activities resulted in negative findings for archaeological resources, no impacts to tribal cultural resources would occur with the proposed modifications analyzed here. The proposed modifications would not result in any new significant impacts or substantially increase the severity of impacts already identified in the certified 2005 EIR, and no further mitigation is required.

3.11 Wildfire

Although not included in the certified 2005 EIR, a discussion of wildfire is included in this Addendum per the most recent version of the *State CEQA Guidelines*.

3.11.1 Setting

The entire coastal southern California region is prone to large wildfires due to its hot, dry climate and expansive coverage of ignitable vegetation. During the autumn and winter months, strong offshore Santa Ana wind events carry dry, desert air and can fan fast-moving fires that spread rapidly from heavily vegetated wilderness and mountainous areas into developed communities. The Project area is in an urbanized area of Riverside County, which limits the spread of large, uncontrolled wildfires. However, surrounding mountainous areas are prone to regular fires, which can pose a health and safety risk to nearby communities. Recent fires in the Project area vicinity include the 2006 Esperanza Fire (41,173 acres and five fatalities), 2013 Mountain Fire (27,531 acres) and Silver Fire (20,292 acres), and the 2018 Holy Fire (23,136 acres) and Cranston Fire (13,139 acres).

While a natural ecological process in coastal chaparral and forest systems, wildfire return intervals have decreased throughout southern California, resulting in more frequent ecological disturbance, loss of biodiversity, and colonization by non-native grass species (United States Forest Service 2018). Furthermore, post-fire conditions leave exposed mountain slopes and hillsides vulnerable to surface erosion and runoff. Debris flows during post-fire rainy seasons can pose a risk to life and property and occur with little warning. In southern California, as little as 0.3 inches of rain in 30 minutes can produce debris flows on post-fire landscapes (United States Geological Survey 2018).

The proposed modifications are not located in a designated Very High Fire Hazard Severity Zone (VHFHSZ) or a State Responsibility Area (SRA). The nearest VHFHSZ is a Local Responsibility Area (LRA) in the city of Perris, approximately 2 miles south of the proposed modifications. The nearest SRA is a VHFHSZ in the city of Perris approximately 2.2 miles south of the proposed modifications (CAL FIRE 2007 and 2010).

3.11.2 Significance Threshold Criteria

The following CEQA significance threshold criteria were used to evaluate wildfire impacts associated with the proposed modifications. Impacts would be potentially significant if the proposed modifications are located in or near an SRA or lands classified as VHFHSZ, would introduce new impacts or substantially increase the severity of impacts associated with:

- a) Substantial impairment of an adopted emergency response plan or emergency evacuation plan

- b) The slope, prevailing winds, and other factors exacerbating wildfire risks and thereby exposure of Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire
- c) Project-required installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment
- d) Exposure of people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes

3.11.3 Potential Impacts

As discussed in Section 3.11.1, *Setting*, the proposed modifications are not located in lands classified as an SRA or VHFHSZ. The nearest such zones are over two miles south of the location of the proposed dewatering effluent discharge point. The proposed modifications involve the construction of underground potable water pipeline segments, placement, operation, and removal of temporary dewatering facilities, and removal of approximately 40 wells.

As discussed in the certified 2005 EIR and reiterated in Section 3.6, *Hazards and Hazardous Materials*, the Project would not physically interfere with an adopted emergency response plan or emergency evacuation plan. The proposed modifications would change the planned alignment of the underground pipeline and would not alter the location of aboveground structures; therefore, the proposed modifications would not change the conclusion of the certified 2005 EIR.

The proposed modifications would not include fuel breaks, power lines, or other aboveground utilities that would exacerbate fire risk or result in temporary or ongoing impacts to the environment. Furthermore, given the proposed modifications do not involve the construction of any aboveground structures and are located on relatively flat land, the proposed modifications would not increase the exposure of people to wildfire or related risks, such as post-fire debris flows or instability. Therefore, no impact related to wildfire would occur.

3.11.4 Conclusion

Given that proposed modifications are not located on or near lands designated as an SRA or VHFHSZ and the proposed modifications involve a change to the alignment of an underground potable water pipeline, no impacts associated with wildfire would occur with the proposed modifications analyzed here. The proposed modifications would not result in any new significant impacts or substantially increase the severity of impacts already identified in the certified 2005 EIR, and no further mitigation is required.

4 List of Preparers

The Metropolitan Water District of Southern California

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5 References

- Air Force Reserve Command. 2018. Final Air Installations Compatible Use Zones Study, March Air Reserve Base, Riverside California. Available at:
http://www.march.afrc.af.mil/Portals/135/documents/MARCH_AICUZ_2018.pdf?ver=2018-02-21-161029-473.
- California Air Pollution Control Officers Association (CAPCOA). 2008. *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA)*. January 2008.
- _____. 2017. "CalEEMod – FAQs." Last modified: 2017. <http://www.aqmd.gov/caleemod/faqs#upload>
- California Air Resources Board (CARB). 2014. First Update to the Climate Change Scoping Plan. May 2014.
https://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf
- _____. 2017. California's 2017 Climate Change Scoping Plan. November 2017.
- _____. 2018. California Greenhouse Gas Emission Inventory - 2018 Edition.
<https://www.arb.ca.gov/cc/inventory/data/data.htm> (accessed April 2019).
- California Department of Tax and Fee Administration. 2018. "Net Taxable Gasoline Gallons."
http://www.cdtfa.ca.gov/taxes-and-fees/MVF_10_Year_Report.pdf (accessed April 2019).
- California Department of Transportation (Caltrans). 2009. *Interstate 215 and Van Buren Boulevard Interchange Project Initial Study [with Mitigated Negative Declaration]/Environmental Assessment with Finding of No Significant Impact*. State of California Department of Transportation. State Clearinghouse No. 2008081120. March 2009.
- _____. 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. (CT-HWANP-RT-13-069.25.2) September. http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf
- California Energy Commission (CEC). 2016. Diesel Fuel Data, Facts, and Statistics.
https://www.energy.ca.gov/almanac/transportation_data/diesel.html (accessed April 2019).
- _____. 2018. "Renewables Portfolio Standard." Sacramento, CA. <http://www.energy.ca.gov/portfolio/> (accessed April 2019).
- _____. 2019. Total System Electric Generation.
https://www.energy.ca.gov/almanac/electricity_data/total_system_power.html (accessed April 2019).
- California Environmental Protection Agency (CalEPA). 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature: Executive Summary*. March 2006.
http://www.climatechange.ca.gov/climate_action_team/reports/2006report/2006-04-03_FINAL_CAT_REPORT_EXECSUMMARY.PDF (accessed April 2018).
- _____. 2010. *Climate Action Team Biennial Report*. April 2010.
- County of Riverside. 2016. County of Riverside General Plan. December 6, 2016.
<http://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx>

- Crocker, Malcolm J., 2007. *Handbook of Noise and Vibration Control*, John Wiley & Sons.
- Eastern Municipal Water District (EMWD). 2018. *West San Jacinto Groundwater Basin Management Area, 2017 Annual Report*. June 2018. <https://www.emwd.org/sites/main/files/file-attachments/westsanjacinto2017annualre.pdf>
- Federal Emergency Management Agency (FEMA). 2008. *FEMA Flood Map Service Center. Maps 06065C1410G and 0606560745G*. Effective August 28, 2008. <https://msc.fema.gov/portal/search#searchresultsanchor>
- Federal Highway Administration (FHWA). 2006. FHWA Highway Construction Noise Handbook. (FHWAHEP-06-015; DOT-VNTSC-FHWA-06-02). August 2006. http://www.fhwa.dot.gov/environment/construction_noise/handbook
- _____. 2017. *Highway Traffic Noise Analysis and Abatement Policy and Guidance*. August 24.
- _____. 2019. "Motor Fuel Use – 2017 (1)". <https://www.fhwa.dot.gov/policyinformation/statistics/2016/mf21.cfm> (accessed April 2019).
- Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.
- March Air Reserve Base. 2003. 5-Year Review Report for Former March Air Force Base and March Air Reserve Base, Riverside County, California. September 2003. https://geotracker.waterboards.ca.gov/regulators/deliverable_documents/7654339015/MarchARB_AFB_5yrRev_Sept2003.pdf
- _____. 2009. Second 5-Year Review Report for Former March Air Force Base and March Air Reserve Base California. September 2009. https://geotracker.waterboards.ca.gov/regulators/deliverable_documents/5402422845/MarchAFB_ARB_2nd5yearReviewSept2009.pdf
- March Joint Powers Authority (MJPA). 2016. Development Code. July 13, 2016. http://marchjpa.com/documents/docs_forms/development_code_2016.pdf
- Metropolitan Water District of Southern California. Electronic Mail Correspondence Dated April 24, 2020 from R. Bell to B. Marines on the Subject Title "PVP Discharge."
- Parsons. 2020. Data Report on Combined Field Investigations for PFAS, Hydrazine, and Other COCs in Soil and Groundwater. October 7, 2020.
- Rincon Consultants, Inc. 2020a. Biological Resources Assessment for the Perris Valley Pipeline Project I-215/Van Buren Boulevard Segment. August 2020.
- _____. 2020b. *Biological Resources Memorandum for the Perris Valley Pipeline Modifications Project in the Caltrans Interstate 215 Right-of-Way*. October 13, 2020.
- _____. 2020c. *Cultural Resources Memorandum for the Perris Valley Pipeline Modifications Project Within the Caltrans Interstate 215 Right-of-Way*. August 28, 2020.
- _____. 2021a. *Water Quality Memorandum for the Perris Valley Pipeline Modifications Project Within the Caltrans Interstate 215 Right-of-Way*. March 2, 2021.

- _____. 2021b. *Hazardous Materials Memorandum for the Perris Valley Pipeline Modifications Project Within the Caltrans Interstate 215 Right-of-Way*. March 1, 2021.
- Riverside, County of. 2017. Riverside County General Plan Circulation Element. Revised December 12, 2017.
https://planning.rctlma.org/Portals/14/genplan/2019/elements/Ch04_Circulation_121217.pdf
- _____. 2019. Riverside County General Plan Land Use Element. Revised April 16, 2019.
https://planning.rctlma.org/Portals/14/genplan/2019/elements/Ch03_Land%20Use_041619.pdf
- Riverside County Airport Land Use Commission. 2014. *March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan*. Adopted November 13, 2014.
<http://www.rcaluc.org/Portals/13/17%20-%20Vol.%201%20March%20Air%20Reserve%20Base%20Final.pdf?ver=2016-08-15-145812-700>
- Santa Ana Regional Water Quality Control Board (RWQCB). 2016. *Santa Ana Region Basin Plan*. February 2016. https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/
- South Coast Air Quality Management District (SCAQMD). 2008a. Final Localized Significance Threshold Methodology. July 2008. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2>
- _____. 2008b. *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans*. December 5. [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2)
- _____. 2009. Table C-1. 2006 – 2008 Thresholds for Construction and Operation with Gradual Conversion of NO_x to NO₂. Last modified: October 21, 2009. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2>.
- _____. 2015. SCAQMD Air Quality Significance Thresholds. March 2015.
<http://www.aqmd.gov/ceqa/hdbk.html>, Accessed May 25, 2018.
- _____. 2016. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin. February 2016.
<http://www.aqmd.gov/home/air-quality/clean-air-plans>, Accessed May 25, 2018.
- State Water Resources Control Board. 2011. “RVSD City Fire #9.” Last modified: July 11, 2011.
https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606500584 (accessed June 2018).
- _____. 2015a. “Riverside National Cemetery.” Geotracker. Last modified: 2015.
https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606500036 (accessed June 2018).
- _____. 2015b. “Empire Tractor.” Geotracker. Last modified: 2015.
https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606500575 (accessed May 2019).

- _____. 2015c. “Bell Grain and Milling.” Last modified: 2015.
https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606500208 (accessed May 2019).
- _____. 2017. “Mobil #18-A3E.” Last modified: November 17, 2017.
https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606599291 (accessed June 2018).
- _____. 2018a. “Arco #6345.” Last modified: June 26, 2018.
https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606500497 (accessed June 2018).
- _____. 2018b. “Nandina Liquor.” Geotracker. Last modified: 2018.
https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606500307 (accessed May 2019).
- _____. 2019. 2014 and 2016 California Integrated Report (Clean Water Act Section 303(d) List/305(b) Report). Last updated: April 2, 2019.
https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml
- United States Department of Defense. 2019. *Investigating Per- and Polyfluoroalkyl substances within the Department of Defense Cleanup Program*. Memorandum from Robert H. McMahon for Assistant Secretary of the Army (Installations, Energy and Environment), Assistant Secretary of the Navy (Energy, Installations and Environment), Assistant Secretary of the Air Force (Installations, Environment and Energy), Director, National Guard Bureau (Joint Staff, J8), Director, Defense Logistics Agency (Installation Support). October 2019. Found:
<https://media.defense.gov/2020/Feb/04/2002243735/-1/-1/1/PFAS-SCREENING-LEVEL-MEMO.PDF> (accessed February 2021).
- United States Department of Transportation, Bureau of Transportation Statistics. 2018. National Transportation Statistics, 2018. <https://www.bts.gov/sites/bts.dot.gov/files/docs/browse-statistical-products-and-data/national-transportation-statistics/223001/ntsntire2018q4.pdf> (accessed May 2019).
- United States Environmental Protection Agency (U.S. EPA). 2015. “Sysco – Riverside” Multisystem Search. Last modified: July 1, 2015.
https://oaspub.epa.gov/enviro/multisys2_v2.get_list?facility_uin=110070096850 (accessed June 2018).
- _____. 2016. “Mobis Parts America.” Multisystem Search. Last modified: September 16, 2016.
https://oaspub.epa.gov/enviro/multisys2_v2.get_list?facility_uin=110055376169 (accessed June 2018).
- _____. 2021. *Superfund Site: March Air Force Base, Riverside CA. Cleanup Activities*. Last updated April 1, 2021.
<https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.cleanup&id=0902761> (accessed April 2021).
- United States Energy Information Administration. 2018. “California - Profile Overview.” Last modified: November 15, 2018. <https://www.eia.gov/state/?sid=CA> (accessed April 2019).

United States Forest Service. 2018. "Fire in chaparral ecosystems." Last modified November 30, 2018. https://www.fs.fed.us/psw/topics/fire_science/ecosystems/chaparral.shtml (accessed May 2019).

United States Geological Survey. 2001. *Geologic map of the Riverside East 7.5' quadrangle, Riverside County, California* [map]. Tabular digital data and vector digital data. 1:24,000. Douglas M. Morton and Brett F. Cox. <https://pubs.er.usgs.gov/publication/ofr01452> (accessed May 2018).

_____. 2018. *Post-Fire Flooding and Debris Flow*. Last modified: October 31, 2018. <https://ca.water.usgs.gov/wildfires/wildfires-debris-flow.html> (accessed May 2019).

Western Municipal Water District (WMWD). Perris Valley Pipeline Project Environmental Impact Report. State Clearinghouse No. 2005061028. October 2005.

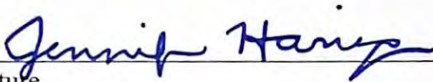
6 Conclusion

Section 15164(b) of the *State CEQA Guidelines* states the following:

"An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred."

The proposed modifications to the approved Project would not result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects. Furthermore, new information associated with the proposed modifications does not indicate that the Project will have one or more significant effects not discussed in the certified 2005 EIR; that significant effects previously examined will be substantially more severe than shown in the certified 2005 EIR; that mitigation measures previously found not to be feasible would in fact be feasible; or that mitigation measures which are considerably different from those analyzed in the certified 2005 EIR would substantially reduce one or more significant effects on the environment, but the Project proponent declines to adopt the mitigation measures or alternative. Accordingly, an Addendum was prepared as opposed to a subsequent environmental impact report or a negative declaration. As the Lead Agency for the proposed Project modifications, Metropolitan is issuing this Addendum in accordance with the State CEQA Guidelines (Section 15164).

The Metropolitan Water District of Southern California


Signature

4-9-2021
Date

Jennifer Harriger
Printed Name

Unit Manager, Environmental Planning
Title

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Appendix A

CalEEMod Results

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

PVP - Temporary Dewatering Facilities
South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	18.72	1000sqft	0.43	18,720.00	0
Other Asphalt Surfaces	0.24	1000sqft	0.01	240.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

Project Characteristics - Separate CalEEMod for installation of temporary dewatering facilities.

Land Use - Nonasphalt surface includes two 8,400 sf temp treatment facilities, one 1,200 sf temp treatment facility and approx. 720 sf of disturbance associated with trenching for temp. dewatering lines. Asphalt surf is trenching through pavement for temp dewatering lines

Construction Phase - Demo accounts for asphalt demo for pipe installation, site prep phase extended to account for prep/clearing of treatment facility areas. Building construction phase reduced from default for more realistic est. of temp. facility construction

Off-road Equipment - Equipment remains at default

Off-road Equipment - Equipment remains at default

Off-road Equipment -

Off-road Equipment - Cranes not anticipated for temporary facilities

Off-road Equipment - Equipment remains at default

Grading - Acres graded adjusted to match site area. Substantial material import/export not anticipated for temp. dewatering facilities.

Trips and VMT - Assumes 10 workers per day, consistent with 2005 EIR. 1 vendor trip added to defaults for all phases to account for water truck.

Energy Use -

Construction Off-road Equipment Mitigation - Water Exposed Area applied consistent with SCAQMD Rule 403.

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	40.00
tblConstructionPhase	NumDays	1.00	20.00
tblConstructionPhase	PhaseEndDate	6/9/2021	4/13/2021
tblConstructionPhase	PhaseEndDate	1/20/2021	2/16/2021
tblConstructionPhase	PhaseEndDate	6/16/2021	4/20/2021
tblConstructionPhase	PhaseEndDate	1/18/2021	2/12/2021
tblConstructionPhase	PhaseStartDate	1/21/2021	2/17/2021
tblConstructionPhase	PhaseStartDate	1/19/2021	2/15/2021
tblConstructionPhase	PhaseStartDate	6/10/2021	4/14/2021
tblGrading	AcresOfGrading	10.00	0.44
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	3.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	18.00	10.00

2.0 Emissions Summary

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.3400e-003	2.0000e-005	1.9400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005		4.4200e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	8.3400e-003	2.0000e-005	1.9400e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005	0.0000	4.4200e-003

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.3400e-003	2.0000e-005	1.9400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005		4.4200e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	8.3400e-003	2.0000e-005	1.9400e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005	0.0000	4.4200e-003

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/4/2021	1/15/2021	5	10	
2	Site Preparation	Site Preparation	1/16/2021	2/12/2021	5	20	
3	Grading	Grading	2/15/2021	2/16/2021	5	2	
4	Dewatering Pipe/Treatment Facility Install	Building Construction	2/17/2021	4/13/2021	5	40	
5	Paving	Paving	4/14/2021	4/20/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.44

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.44

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Dewatering Pipe/Treatment Facility Install	Cranes	0	4.00	231	0.29
Dewatering Pipe/Treatment Facility Install	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Dewatering Pipe/Treatment Facility Install	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	10.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dewatering Pipe/Treatment Facility	4	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	10.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.7800e-003	0.0954	0.0226	2.6000e-004	6.4000e-003	1.9000e-004	6.5900e-003	1.8400e-003	1.8000e-004	2.0300e-003		27.2439	27.2439	1.6500e-003		27.2851
Worker	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148
Total	0.0450	0.1228	0.3994	1.3700e-003	0.1182	1.0100e-003	0.1192	0.0315	9.4000e-004	0.0324		137.9842	137.9842	4.6300e-003		138.0998

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.7800e-003	0.0954	0.0226	2.6000e-004	6.4000e-003	1.9000e-004	6.5900e-003	1.8400e-003	1.8000e-004	2.0300e-003		27.2439	27.2439	1.6500e-003		27.2851
Worker	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148
Total	0.0450	0.1228	0.3994	1.3700e-003	0.1182	1.0100e-003	0.1192	0.0315	9.4000e-004	0.0324		137.9842	137.9842	4.6300e-003		138.0998

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0233	0.0000	0.0233	2.5200e-003	0.0000	2.5200e-003			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755		942.5842	942.5842	0.3049		950.2055
Total	0.6403	7.8204	4.0274	9.7300e-003	0.0233	0.2995	0.3228	2.5200e-003	0.2755	0.2780		942.5842	942.5842	0.3049		950.2055

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.7800e-003	0.0954	0.0226	2.6000e-004	6.4000e-003	1.9000e-004	6.5900e-003	1.8400e-003	1.8000e-004	2.0300e-003		27.2439	27.2439	1.6500e-003		27.2851
Worker	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148
Total	0.0450	0.1228	0.3994	1.3700e-003	0.1182	1.0100e-003	0.1192	0.0315	9.4000e-004	0.0324		137.9842	137.9842	4.6300e-003		138.0998

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

3.3 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0105	0.0000	0.0105	1.1300e-003	0.0000	1.1300e-003			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755	0.0000	942.5842	942.5842	0.3049		950.2055
Total	0.6403	7.8204	4.0274	9.7300e-003	0.0105	0.2995	0.3100	1.1300e-003	0.2755	0.2766	0.0000	942.5842	942.5842	0.3049		950.2055

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.7800e-003	0.0954	0.0226	2.6000e-004	6.4000e-003	1.9000e-004	6.5900e-003	1.8400e-003	1.8000e-004	2.0300e-003		27.2439	27.2439	1.6500e-003		27.2851
Worker	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148
Total	0.0450	0.1228	0.3994	1.3700e-003	0.1182	1.0100e-003	0.1192	0.0315	9.4000e-004	0.0324		137.9842	137.9842	4.6300e-003		138.0998

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120	0.7528	0.4073	1.1601	0.4138	0.3886	0.8024		1,147.4338	1,147.4338	0.2138		1,152.7797

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.7800e-003	0.0954	0.0226	2.6000e-004	6.4000e-003	1.9000e-004	6.5900e-003	1.8400e-003	1.8000e-004	2.0300e-003		27.2439	27.2439	1.6500e-003		27.2851
Worker	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148
Total	0.0450	0.1228	0.3994	1.3700e-003	0.1182	1.0100e-003	0.1192	0.0315	9.4000e-004	0.0324		137.9842	137.9842	4.6300e-003		138.0998

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

3.4 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120	0.3387	0.4073	0.7461	0.1862	0.3886	0.5748	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.7800e-003	0.0954	0.0226	2.6000e-004	6.4000e-003	1.9000e-004	6.5900e-003	1.8400e-003	1.8000e-004	2.0300e-003		27.2439	27.2439	1.6500e-003		27.2851
Worker	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148
Total	0.0450	0.1228	0.3994	1.3700e-003	0.1182	1.0100e-003	0.1192	0.0315	9.4000e-004	0.0324		137.9842	137.9842	4.6300e-003		138.0998

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

3.5 Dewatering Pipe/Treatment Facility Install - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5685	5.5603	6.2723	8.5100e-003		0.3491	0.3491		0.3212	0.3212		823.8464	823.8464	0.2665		830.5076
Total	0.5685	5.5603	6.2723	8.5100e-003		0.3491	0.3491		0.3212	0.3212		823.8464	823.8464	0.2665		830.5076

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0111	0.3815	0.0905	1.0200e-003	0.0256	7.7000e-004	0.0264	7.3700e-003	7.3000e-004	8.1000e-003		108.9754	108.9754	6.5900e-003		109.1402
Worker	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148
Total	0.0533	0.4089	0.4673	2.1300e-003	0.1374	1.5900e-003	0.1390	0.0370	1.4900e-003	0.0385		219.7157	219.7157	9.5700e-003		219.9550

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

3.5 Dewatering Pipe/Treatment Facility Install - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5685	5.5603	6.2723	8.5100e-003		0.3491	0.3491		0.3212	0.3212	0.0000	823.8464	823.8464	0.2665		830.5076
Total	0.5685	5.5603	6.2723	8.5100e-003		0.3491	0.3491		0.3212	0.3212	0.0000	823.8464	823.8464	0.2665		830.5076

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0111	0.3815	0.0905	1.0200e-003	0.0256	7.7000e-004	0.0264	7.3700e-003	7.3000e-004	8.1000e-003		108.9754	108.9754	6.5900e-003		109.1402
Worker	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148
Total	0.0533	0.4089	0.4673	2.1300e-003	0.1374	1.5900e-003	0.1390	0.0370	1.4900e-003	0.0385		219.7157	219.7157	9.5700e-003		219.9550

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286		1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7266	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286		1,035.3425	1,035.3425	0.3016		1,042.8818

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.7800e-003	0.0954	0.0226	2.6000e-004	6.4000e-003	1.9000e-004	6.5900e-003	1.8400e-003	1.8000e-004	2.0300e-003		27.2439	27.2439	1.6500e-003		27.2851
Worker	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148
Total	0.0450	0.1228	0.3994	1.3700e-003	0.1182	1.0100e-003	0.1192	0.0315	9.4000e-004	0.0324		137.9842	137.9842	4.6300e-003		138.0998

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

3.6 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286	0.0000	1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7266	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286	0.0000	1,035.3425	1,035.3425	0.3016		1,042.8818

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.7800e-003	0.0954	0.0226	2.6000e-004	6.4000e-003	1.9000e-004	6.5900e-003	1.8400e-003	1.8000e-004	2.0300e-003		27.2439	27.2439	1.6500e-003		27.2851
Worker	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148
Total	0.0450	0.1228	0.3994	1.3700e-003	0.1182	1.0100e-003	0.1192	0.0315	9.4000e-004	0.0324		137.9842	137.9842	4.6300e-003		138.0998

4.0 Operational Detail - Mobile

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896
Other Non-Asphalt Surfaces	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.3400e-003	2.0000e-005	1.9400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005		4.4200e-003
Unmitigated	8.3400e-003	2.0000e-005	1.9400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005		4.4200e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.4500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005		4.4200e-003
Total	8.3500e-003	2.0000e-005	1.9400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005		4.4200e-003

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.4500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005		4.4200e-003
Total	8.3500e-003	2.0000e-005	1.9400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005		4.4200e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Summer

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

PVP - Temporary Dewatering Facilities
South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	18.72	1000sqft	0.43	18,720.00	0
Other Asphalt Surfaces	0.24	1000sqft	0.01	240.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

Project Characteristics - Separate CalEEMod for installation of temporary dewatering facilities.

Land Use - Nonasphalt surface includes two 8,400 sf temp treatment facilities, one 1,200 sf temp treatment facility and approx. 720 sf of disturbance associated with trenching for temp. dewatering lines. Asphalt surf is trenching through pavement for temp dewatering lines

Construction Phase - Demo accounts for asphalt demo for pipe installation, site prep phase extended to account for prep/clearing of treatment facility areas. Building construction phase reduced from default for more realistic est. of temp. facility construction

Off-road Equipment - Equipment remains at default

Off-road Equipment - Equipment remains at default

Off-road Equipment -

Off-road Equipment - Cranes not anticipated for temporary facilities

Off-road Equipment - Equipment remains at default

Grading - Acres graded adjusted to match site area. Substantial material import/export not anticipated for temp. dewatering facilities.

Trips and VMT - Assumes 10 workers per day, consistent with 2005 EIR. 1 vendor trip added to defaults for all phases to account for water truck.

Energy Use -

Construction Off-road Equipment Mitigation - Water Exposed Area applied consistent with SCAQMD Rule 403.

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	40.00
tblConstructionPhase	NumDays	1.00	20.00
tblConstructionPhase	PhaseEndDate	6/9/2021	4/13/2021
tblConstructionPhase	PhaseEndDate	1/20/2021	2/16/2021
tblConstructionPhase	PhaseEndDate	6/16/2021	4/20/2021
tblConstructionPhase	PhaseEndDate	1/18/2021	2/12/2021
tblConstructionPhase	PhaseStartDate	1/21/2021	2/17/2021
tblConstructionPhase	PhaseStartDate	1/19/2021	2/15/2021
tblConstructionPhase	PhaseStartDate	6/10/2021	4/14/2021
tblGrading	AcresOfGrading	10.00	0.44
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	3.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	18.00	10.00

2.0 Emissions Summary

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.3400e-003	2.0000e-005	1.9400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005		4.4200e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	8.3400e-003	2.0000e-005	1.9400e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005	0.0000	4.4200e-003

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.3400e-003	2.0000e-005	1.9400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005		4.4200e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	8.3400e-003	2.0000e-005	1.9400e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005	0.0000	4.4200e-003

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/4/2021	1/15/2021	5	10	
2	Site Preparation	Site Preparation	1/16/2021	2/12/2021	5	20	
3	Grading	Grading	2/15/2021	2/16/2021	5	2	
4	Dewatering Pipe/Treatment Facility Install	Building Construction	2/17/2021	4/13/2021	5	40	
5	Paving	Paving	4/14/2021	4/20/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.44

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.44

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Dewatering Pipe/Treatment Facility Install	Cranes	0	4.00	231	0.29
Dewatering Pipe/Treatment Facility Install	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Dewatering Pipe/Treatment Facility Install	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	10.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dewatering Pipe/Treatment Facility	4	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	10.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.9300e-003	0.0951	0.0253	2.5000e-004	6.4000e-003	2.0000e-004	6.6000e-003	1.8400e-003	1.9000e-004	2.0300e-003		26.4550	26.4550	1.7700e-003		26.4993
Worker	0.0461	0.0300	0.3385	1.0400e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.5668	103.5668	2.7800e-003		103.6362
Total	0.0491	0.1250	0.3639	1.2900e-003	0.1182	1.0200e-003	0.1192	0.0315	9.5000e-004	0.0324		130.0218	130.0218	4.5500e-003		130.1355

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.9300e-003	0.0951	0.0253	2.5000e-004	6.4000e-003	2.0000e-004	6.6000e-003	1.8400e-003	1.9000e-004	2.0300e-003		26.4550	26.4550	1.7700e-003		26.4993
Worker	0.0461	0.0300	0.3385	1.0400e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.5668	103.5668	2.7800e-003		103.6362
Total	0.0491	0.1250	0.3639	1.2900e-003	0.1182	1.0200e-003	0.1192	0.0315	9.5000e-004	0.0324		130.0218	130.0218	4.5500e-003		130.1355

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0233	0.0000	0.0233	2.5200e-003	0.0000	2.5200e-003			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755		942.5842	942.5842	0.3049		950.2055
Total	0.6403	7.8204	4.0274	9.7300e-003	0.0233	0.2995	0.3228	2.5200e-003	0.2755	0.2780		942.5842	942.5842	0.3049		950.2055

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.9300e-003	0.0951	0.0253	2.5000e-004	6.4000e-003	2.0000e-004	6.6000e-003	1.8400e-003	1.9000e-004	2.0300e-003		26.4550	26.4550	1.7700e-003		26.4993
Worker	0.0461	0.0300	0.3385	1.0400e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.5668	103.5668	2.7800e-003		103.6362
Total	0.0491	0.1250	0.3639	1.2900e-003	0.1182	1.0200e-003	0.1192	0.0315	9.5000e-004	0.0324		130.0218	130.0218	4.5500e-003		130.1355

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

3.3 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0105	0.0000	0.0105	1.1300e-003	0.0000	1.1300e-003			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755	0.0000	942.5842	942.5842	0.3049		950.2055
Total	0.6403	7.8204	4.0274	9.7300e-003	0.0105	0.2995	0.3100	1.1300e-003	0.2755	0.2766	0.0000	942.5842	942.5842	0.3049		950.2055

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.9300e-003	0.0951	0.0253	2.5000e-004	6.4000e-003	2.0000e-004	6.6000e-003	1.8400e-003	1.9000e-004	2.0300e-003		26.4550	26.4550	1.7700e-003		26.4993
Worker	0.0461	0.0300	0.3385	1.0400e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.5668	103.5668	2.7800e-003		103.6362
Total	0.0491	0.1250	0.3639	1.2900e-003	0.1182	1.0200e-003	0.1192	0.0315	9.5000e-004	0.0324		130.0218	130.0218	4.5500e-003		130.1355

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120	0.7528	0.4073	1.1601	0.4138	0.3886	0.8024		1,147.4338	1,147.4338	0.2138		1,152.7797

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.9300e-003	0.0951	0.0253	2.5000e-004	6.4000e-003	2.0000e-004	6.6000e-003	1.8400e-003	1.9000e-004	2.0300e-003		26.4550	26.4550	1.7700e-003		26.4993
Worker	0.0461	0.0300	0.3385	1.0400e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.5668	103.5668	2.7800e-003		103.6362
Total	0.0491	0.1250	0.3639	1.2900e-003	0.1182	1.0200e-003	0.1192	0.0315	9.5000e-004	0.0324		130.0218	130.0218	4.5500e-003		130.1355

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

3.4 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120	0.3387	0.4073	0.7461	0.1862	0.3886	0.5748	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.9300e-003	0.0951	0.0253	2.5000e-004	6.4000e-003	2.0000e-004	6.6000e-003	1.8400e-003	1.9000e-004	2.0300e-003		26.4550	26.4550	1.7700e-003		26.4993
Worker	0.0461	0.0300	0.3385	1.0400e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.5668	103.5668	2.7800e-003		103.6362
Total	0.0491	0.1250	0.3639	1.2900e-003	0.1182	1.0200e-003	0.1192	0.0315	9.5000e-004	0.0324		130.0218	130.0218	4.5500e-003		130.1355

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

3.5 Dewatering Pipe/Treatment Facility Install - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5685	5.5603	6.2723	8.5100e-003		0.3491	0.3491		0.3212	0.3212		823.8464	823.8464	0.2665		830.5076
Total	0.5685	5.5603	6.2723	8.5100e-003		0.3491	0.3491		0.3212	0.3212		823.8464	823.8464	0.2665		830.5076

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0117	0.3803	0.1013	9.9000e-004	0.0256	7.9000e-004	0.0264	7.3700e-003	7.6000e-004	8.1300e-003		105.8201	105.8201	7.0800e-003		105.9971
Worker	0.0461	0.0300	0.3385	1.0400e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.5668	103.5668	2.7800e-003		103.6362
Total	0.0578	0.4103	0.4399	2.0300e-003	0.1374	1.6100e-003	0.1390	0.0370	1.5200e-003	0.0385		209.3869	209.3869	9.8600e-003		209.6333

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

3.5 Dewatering Pipe/Treatment Facility Install - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5685	5.5603	6.2723	8.5100e-003		0.3491	0.3491		0.3212	0.3212	0.0000	823.8464	823.8464	0.2665		830.5076
Total	0.5685	5.5603	6.2723	8.5100e-003		0.3491	0.3491		0.3212	0.3212	0.0000	823.8464	823.8464	0.2665		830.5076

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0117	0.3803	0.1013	9.9000e-004	0.0256	7.9000e-004	0.0264	7.3700e-003	7.6000e-004	8.1300e-003		105.8201	105.8201	7.0800e-003		105.9971
Worker	0.0461	0.0300	0.3385	1.0400e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.5668	103.5668	2.7800e-003		103.6362
Total	0.0578	0.4103	0.4399	2.0300e-003	0.1374	1.6100e-003	0.1390	0.0370	1.5200e-003	0.0385		209.3869	209.3869	9.8600e-003		209.6333

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286		1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7266	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286		1,035.3425	1,035.3425	0.3016		1,042.8818

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.9300e-003	0.0951	0.0253	2.5000e-004	6.4000e-003	2.0000e-004	6.6000e-003	1.8400e-003	1.9000e-004	2.0300e-003		26.4550	26.4550	1.7700e-003		26.4993
Worker	0.0461	0.0300	0.3385	1.0400e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.5668	103.5668	2.7800e-003		103.6362
Total	0.0491	0.1250	0.3639	1.2900e-003	0.1182	1.0200e-003	0.1192	0.0315	9.5000e-004	0.0324		130.0218	130.0218	4.5500e-003		130.1355

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

3.6 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286	0.0000	1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7266	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286	0.0000	1,035.3425	1,035.3425	0.3016		1,042.8818

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.9300e-003	0.0951	0.0253	2.5000e-004	6.4000e-003	2.0000e-004	6.6000e-003	1.8400e-003	1.9000e-004	2.0300e-003		26.4550	26.4550	1.7700e-003		26.4993
Worker	0.0461	0.0300	0.3385	1.0400e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.5668	103.5668	2.7800e-003		103.6362
Total	0.0491	0.1250	0.3639	1.2900e-003	0.1182	1.0200e-003	0.1192	0.0315	9.5000e-004	0.0324		130.0218	130.0218	4.5500e-003		130.1355

4.0 Operational Detail - Mobile

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896
Other Non-Asphalt Surfaces	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.3400e-003	2.0000e-005	1.9400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005		4.4200e-003
Unmitigated	8.3400e-003	2.0000e-005	1.9400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005		4.4200e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.4500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005		4.4200e-003
Total	8.3500e-003	2.0000e-005	1.9400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005		4.4200e-003

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.4500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005		4.4200e-003
Total	8.3500e-003	2.0000e-005	1.9400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.1500e-003	4.1500e-003	1.0000e-005		4.4200e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Winter

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Annual

VVP - Temporary Dewatering Facilities
South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	18.72	1000sqft	0.43	18,720.00	0
Other Asphalt Surfaces	0.24	1000sqft	0.01	240.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Annual

Project Characteristics - Separate CalEEMod for installation of temporary dewatering facilities.

Land Use - Nonasphalt surface includes two 8,400 sf temp treatment facilities, one 1,200 sf temp treatment facility and approx. 720 sf of disturbance associated with trenching for temp. dewatering lines. Asphalt surf is trenching through pavement for temp dewatering lines

Construction Phase - Demo accounts for asphalt demo for pipe installation, site prep phase extended to account for prep/clearing of treatment facility areas. Building construction phase reduced from default for more realistic est. of temp. facility construction

Off-road Equipment - Equipment remains at default

Off-road Equipment - Equipment remains at default

Off-road Equipment -

Off-road Equipment - Cranes not anticipated for temporary facilities

Off-road Equipment - Equipment remains at default

Grading - Acres graded adjusted to match site area. Substantial material import/export not anticipated for temp. dewatering facilities.

Trips and VMT - Assumes 10 workers per day, consistent with 2005 EIR. 1 vendor trip added to defaults for all phases to account for water truck.

Energy Use -

Construction Off-road Equipment Mitigation - Water Exposed Area applied consistent with SCAQMD Rule 403.

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	40.00
tblConstructionPhase	NumDays	1.00	20.00
tblConstructionPhase	PhaseEndDate	6/9/2021	4/13/2021
tblConstructionPhase	PhaseEndDate	1/20/2021	2/16/2021
tblConstructionPhase	PhaseEndDate	6/16/2021	4/20/2021
tblConstructionPhase	PhaseEndDate	1/18/2021	2/12/2021
tblConstructionPhase	PhaseStartDate	1/21/2021	2/17/2021
tblConstructionPhase	PhaseStartDate	1/19/2021	2/15/2021
tblConstructionPhase	PhaseStartDate	6/10/2021	4/14/2021
tblGrading	AcresOfGrading	10.00	0.44
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	3.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	18.00	10.00

2.0 Emissions Summary

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-4-2021	4-3-2021	0.2358	0.2358
2	4-4-2021	7-3-2021	0.0426	0.0426
		Highest	0.2358	0.2358

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.5100e-003	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.5100e-003	0.0000	2.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.5100e-003	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.5100e-003	0.0000	2.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/4/2021	1/15/2021	5	10	
2	Site Preparation	Site Preparation	1/16/2021	2/12/2021	5	20	
3	Grading	Grading	2/15/2021	2/16/2021	5	2	
4	Dewatering Pipe/Treatment Facility Install	Building Construction	2/17/2021	4/13/2021	5	40	
5	Paving	Paving	4/14/2021	4/20/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.44

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.44

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Dewatering Pipe/Treatment Facility Install	Cranes	0	4.00	231	0.29
Dewatering Pipe/Treatment Facility Install	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Dewatering Pipe/Treatment Facility Install	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	10.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dewatering Pipe/Treatment Facility	4	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	10.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Annual

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.9800e-003	0.0363	0.0379	6.0000e-005		2.0400e-003	2.0400e-003		1.9400e-003	1.9400e-003	0.0000	5.2047	5.2047	9.7000e-004	0.0000	5.2289
Total	3.9800e-003	0.0363	0.0379	6.0000e-005		2.0400e-003	2.0400e-003		1.9400e-003	1.9400e-003	0.0000	5.2047	5.2047	9.7000e-004	0.0000	5.2289

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	4.8000e-004	1.2000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1221	0.1221	1.0000e-005	0.0000	0.1223
Worker	2.1000e-004	1.5000e-004	1.7400e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4778	0.4778	1.0000e-005	0.0000	0.4782
Total	2.2000e-004	6.3000e-004	1.8600e-003	1.0000e-005	5.8000e-004	0.0000	5.8000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5999	0.5999	2.0000e-005	0.0000	0.6004

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Annual

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.9800e-003	0.0363	0.0379	6.0000e-005		2.0400e-003	2.0400e-003		1.9400e-003	1.9400e-003	0.0000	5.2047	5.2047	9.7000e-004	0.0000	5.2289
Total	3.9800e-003	0.0363	0.0379	6.0000e-005		2.0400e-003	2.0400e-003		1.9400e-003	1.9400e-003	0.0000	5.2047	5.2047	9.7000e-004	0.0000	5.2289

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	4.8000e-004	1.2000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1221	0.1221	1.0000e-005	0.0000	0.1223
Worker	2.1000e-004	1.5000e-004	1.7400e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4778	0.4778	1.0000e-005	0.0000	0.4782
Total	2.2000e-004	6.3000e-004	1.8600e-003	1.0000e-005	5.8000e-004	0.0000	5.8000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5999	0.5999	2.0000e-005	0.0000	0.6004

VVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Annual

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3000e-004	0.0000	2.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4000e-003	0.0782	0.0403	1.0000e-004		2.9900e-003	2.9900e-003		2.7600e-003	2.7600e-003	0.0000	8.5510	8.5510	2.7700e-003	0.0000	8.6201
Total	6.4000e-003	0.0782	0.0403	1.0000e-004	2.3000e-004	2.9900e-003	3.2200e-003	3.0000e-005	2.7600e-003	2.7900e-003	0.0000	8.5510	8.5510	2.7700e-003	0.0000	8.6201

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	9.7000e-004	2.4000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2442	0.2442	2.0000e-005	0.0000	0.2445
Worker	4.2000e-004	3.1000e-004	3.4800e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9557	0.9557	3.0000e-005	0.0000	0.9563
Total	4.5000e-004	1.2800e-003	3.7200e-003	1.0000e-005	1.1600e-003	1.0000e-005	1.1700e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.1998	1.1998	5.0000e-005	0.0000	1.2008

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3.3 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4000e-003	0.0782	0.0403	1.0000e-004		2.9900e-003	2.9900e-003		2.7600e-003	2.7600e-003	0.0000	8.5510	8.5510	2.7700e-003	0.0000	8.6201
Total	6.4000e-003	0.0782	0.0403	1.0000e-004	1.0000e-004	2.9900e-003	3.0900e-003	1.0000e-005	2.7600e-003	2.7700e-003	0.0000	8.5510	8.5510	2.7700e-003	0.0000	8.6201

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	9.7000e-004	2.4000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2442	0.2442	2.0000e-005	0.0000	0.2445
Worker	4.2000e-004	3.1000e-004	3.4800e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9557	0.9557	3.0000e-005	0.0000	0.9563
Total	4.5000e-004	1.2800e-003	3.7200e-003	1.0000e-005	1.1600e-003	1.0000e-005	1.1700e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.1998	1.1998	5.0000e-005	0.0000	1.2008

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3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.0000e-004	7.2500e-003	7.5700e-003	1.0000e-005		4.1000e-004	4.1000e-004		3.9000e-004	3.9000e-004	0.0000	1.0409	1.0409	1.9000e-004	0.0000	1.0458
Total	8.0000e-004	7.2500e-003	7.5700e-003	1.0000e-005	7.5000e-004	4.1000e-004	1.1600e-003	4.1000e-004	3.9000e-004	8.0000e-004	0.0000	1.0409	1.0409	1.9000e-004	0.0000	1.0458

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	1.0000e-004	2.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0244	0.0244	0.0000	0.0000	0.0245
Worker	4.0000e-005	3.0000e-005	3.5000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0956	0.0956	0.0000	0.0000	0.0956
Total	4.0000e-005	1.3000e-004	3.7000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1200	0.1200	0.0000	0.0000	0.1201

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3.4 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4000e-004	0.0000	3.4000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.0000e-004	7.2500e-003	7.5700e-003	1.0000e-005		4.1000e-004	4.1000e-004		3.9000e-004	3.9000e-004	0.0000	1.0409	1.0409	1.9000e-004	0.0000	1.0458
Total	8.0000e-004	7.2500e-003	7.5700e-003	1.0000e-005	3.4000e-004	4.1000e-004	7.5000e-004	1.9000e-004	3.9000e-004	5.8000e-004	0.0000	1.0409	1.0409	1.9000e-004	0.0000	1.0458

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	1.0000e-004	2.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0244	0.0244	0.0000	0.0000	0.0245
Worker	4.0000e-005	3.0000e-005	3.5000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0956	0.0956	0.0000	0.0000	0.0956
Total	4.0000e-005	1.3000e-004	3.7000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1200	0.1200	0.0000	0.0000	0.1201

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3.5 Dewatering Pipe/Treatment Facility Install - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0114	0.1112	0.1254	1.7000e-004		6.9800e-003	6.9800e-003		6.4200e-003	6.4200e-003	0.0000	14.9476	14.9476	4.8300e-003	0.0000	15.0685
Total	0.0114	0.1112	0.1254	1.7000e-004		6.9800e-003	6.9800e-003		6.4200e-003	6.4200e-003	0.0000	14.9476	14.9476	4.8300e-003	0.0000	15.0685

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3000e-004	7.7400e-003	1.9200e-003	2.0000e-005	5.0000e-004	2.0000e-005	5.2000e-004	1.5000e-004	1.0000e-005	1.6000e-004	0.0000	1.9532	1.9532	1.2000e-004	0.0000	1.9563
Worker	8.3000e-004	6.2000e-004	6.9700e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	1.9113	1.9113	5.0000e-005	0.0000	1.9126
Total	1.0600e-003	8.3600e-003	8.8900e-003	4.0000e-005	2.6900e-003	4.0000e-005	2.7300e-003	7.3000e-004	3.0000e-005	7.6000e-004	0.0000	3.8645	3.8645	1.7000e-004	0.0000	3.8689

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3.5 Dewatering Pipe/Treatment Facility Install - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0114	0.1112	0.1254	1.7000e-004		6.9800e-003	6.9800e-003		6.4200e-003	6.4200e-003	0.0000	14.9476	14.9476	4.8300e-003	0.0000	15.0685
Total	0.0114	0.1112	0.1254	1.7000e-004		6.9800e-003	6.9800e-003		6.4200e-003	6.4200e-003	0.0000	14.9476	14.9476	4.8300e-003	0.0000	15.0685

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3000e-004	7.7400e-003	1.9200e-003	2.0000e-005	5.0000e-004	2.0000e-005	5.2000e-004	1.5000e-004	1.0000e-005	1.6000e-004	0.0000	1.9532	1.9532	1.2000e-004	0.0000	1.9563
Worker	8.3000e-004	6.2000e-004	6.9700e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	1.9113	1.9113	5.0000e-005	0.0000	1.9126
Total	1.0600e-003	8.3600e-003	8.8900e-003	4.0000e-005	2.6900e-003	4.0000e-005	2.7300e-003	7.3000e-004	3.0000e-005	7.6000e-004	0.0000	3.8645	3.8645	1.7000e-004	0.0000	3.8689

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3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8000e-003	0.0168	0.0177	3.0000e-005		8.8000e-004	8.8000e-004		8.2000e-004	8.2000e-004	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652
Paving	1.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.8100e-003	0.0168	0.0177	3.0000e-005		8.8000e-004	8.8000e-004		8.2000e-004	8.2000e-004	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	2.4000e-004	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0610	0.0610	0.0000	0.0000	0.0611
Worker	1.0000e-004	8.0000e-005	8.7000e-004	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2389	0.2389	1.0000e-005	0.0000	0.2391
Total	1.1000e-004	3.2000e-004	9.3000e-004	0.0000	2.9000e-004	0.0000	3.0000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.3000	0.3000	1.0000e-005	0.0000	0.3002

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3.6 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8000e-003	0.0168	0.0177	3.0000e-005		8.8000e-004	8.8000e-004		8.2000e-004	8.2000e-004	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652
Paving	1.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.8100e-003	0.0168	0.0177	3.0000e-005		8.8000e-004	8.8000e-004		8.2000e-004	8.2000e-004	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	2.4000e-004	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0610	0.0610	0.0000	0.0000	0.0611
Worker	1.0000e-004	8.0000e-005	8.7000e-004	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2389	0.2389	1.0000e-005	0.0000	0.2391
Total	1.1000e-004	3.2000e-004	9.3000e-004	0.0000	2.9000e-004	0.0000	3.0000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.3000	0.3000	1.0000e-005	0.0000	0.3002

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.5100e-003	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004
Unmitigated	1.5100e-003	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004
Total	1.5100e-003	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004
Total	1.5100e-003	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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PVP - Temporary Dewatering Facilities - South Coast AQMD Air District, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

PVP All Tunnel 2020
South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	8.25	1000sqft	0.19	8,250.00	0
Other Asphalt Surfaces	0.01	1000sqft	0.00	14.00	0
Other Non-Asphalt Surfaces	64.00	1000sqft	1.47	64,000.00	0
Other Non-Asphalt Surfaces	11.50	1000sqft	0.26	11,500.00	0
Other Non-Asphalt Surfaces	32.10	1000sqft	0.74	32,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Modeling for all-tunnel construction of PVP alignment. Note: Installation of temp. dewatering facilities (i.e., pipelines, treatment facilities), modeled separately.

Land Use - Non-Asphalt surfaces are contractor work/storage areas around tunnel pits 1, 2, 3. Asphalt surfaces are contractor work storage pits around tunnel pit 4. 14 sf asphalt surface is well removal and capping (assuming 8 inch overdrilling).

Construction Phase - Schedule adjusted to match anticipated schedule (~16 weeks per tunnel segment).

Off-road Equipment - Equipment list per client. Pumps and generators added to separate phase.

Off-road Equipment - Equipment list per client. Pumps and generators added to separate phase.

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

- Off-road Equipment - Equipment list per client. Generators added to separate phase.
- Off-road Equipment - Equipment list per client.
- Off-road Equipment - Equipment list per client.
- Off-road Equipment - Equipment list per client.
- Off-road Equipment - Equipment list per client.
- Off-road Equipment - Assumes 3 pumps at Tunnel Pit 3 and two at Tunnel Pit 4. One 1200 kW generator at Tunnel Pit 3 and one 60 kW generator at Tunnel Pit 3.
- Off-road Equipment - Generators assume one 1200 kW generator at Tunnel Pit 1 based on Kohler KM1200U generator, and one 60 kW generator at Tunnel Pit 2 based on Generac SD060 diesel generator.
- Off-road Equipment - Based on one 1200 kW generator at tunnel pit 3 and one 60 kW generator at Tunnel Pits 2 and 3, each.
- Off-road Equipment - Generator sets included in dewatering phase.
- Off-road Equipment - Equipment usage per client. Generators added in separate phase.
- Off-road Equipment - Equipment usage and HP and LF from client. Generators added to separate phase.
- Off-road Equipment - Equipment updated per client equipment list.
- Off-road Equipment - Equipment updated per client equipment list.
- Off-road Equipment - Equipment list per client.
- Off-road Equipment - Equipment list per client.
- Off-road Equipment - Construction equipment list per client. Pumps added to dewatering phases
- Off-road Equipment - Equipment list per client. Pumps added to separate dewatering phase.
- Off-road Equipment - Equipment list per client. Pumps added to separate phase.
- Off-road Equipment - One 100 kW generator to power construction trailers. Based on Generac SD100 industrial generator set specs.
- Off-road Equipment - Equipment list per client. Generators and pumps added to generator and pumping phases.
- Off-road Equipment - Equipment list per client. Generators added to separate phase.
- Off-road Equipment - Equipment list per client. Generators added to separate phase.
- Off-road Equipment - Equipment usage and HP and LF from client. Generators added to separate phase.
- Off-road Equipment - Equipment usage, HP and LF from client. Generators added to separate phase.
- Off-road Equipment - Equipment hours and LF per client. Generators added to dewatering/generator phases
- Off-road Equipment - Demobilization remains at default.

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

Off-road Equipment - Paving remains at default.

Off-road Equipment - Adjusted per equipment list.

Off-road Equipment - Equipment updated per client equipment list.

Off-road Equipment - Equipment updated per client equipment list.

Off-road Equipment - Equipment updated per client equipment list.

Grading - Quantities obtained from PVP Update powerpoint dated 4/6/2020. Assumes all excavated quantities exported offsite and required backfill imported.

Trips and VMT - Assumes up to 10 workers per day, per 2005 EIR. Workers added to Generators - Trailers phase, as it spans entire construction period. Haul trips based on soil volumes and assumed 16 cy truck cap. Assumes disposal at Badlands Landfill (15.1 mi).

Energy Use -

Construction Off-road Equipment Mitigation - Water exposed area applied pursuant to SCAQMD Rule 403.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	220.00	4.00
tblConstructionPhase	NumDays	220.00	6.00
tblConstructionPhase	NumDays	220.00	5.00
tblConstructionPhase	NumDays	220.00	5.00
tblConstructionPhase	NumDays	220.00	4.00
tblConstructionPhase	NumDays	220.00	14.00
tblConstructionPhase	NumDays	220.00	12.00
tblConstructionPhase	NumDays	220.00	5.00
tblConstructionPhase	NumDays	220.00	4.00
tblConstructionPhase	NumDays	220.00	10.00
tblConstructionPhase	NumDays	220.00	8.00
tblConstructionPhase	NumDays	220.00	5.00
tblConstructionPhase	NumDays	6.00	16.00
tblConstructionPhase	NumDays	6.00	30.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	6.00	34.00

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

tblConstructionPhase	NumDays	6.00	23.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	6.00	24.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	6.00	30.00
tblConstructionPhase	NumDays	6.00	23.00
tblConstructionPhase	NumDays	3.00	15.00
tblConstructionPhase	NumDays	3.00	135.00
tblConstructionPhase	NumDays	3.00	493.00
tblConstructionPhase	NumDays	3.00	110.00
tblConstructionPhase	NumDays	3.00	2.00
tblConstructionPhase	NumDays	3.00	22.00
tblConstructionPhase	NumDays	3.00	8.00
tblConstructionPhase	NumDays	3.00	2.00
tblConstructionPhase	NumDays	3.00	141.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblGrading	AcresOfGrading	246.50	0.00
tblGrading	AcresOfGrading	3.00	1.00
tblGrading	AcresOfGrading	12.00	4.00
tblGrading	AcresOfGrading	3.00	1.00
tblGrading	MaterialExported	0.00	13,319.00
tblGrading	MaterialExported	0.00	673.00
tblGrading	MaterialExported	0.00	6,336.00

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

tblGrading	MaterialExported	0.00	431.00
tblGrading	MaterialImported	0.00	3,047.00
tblGrading	MaterialImported	0.00	362.00
tblGrading	MaterialImported	0.00	1,385.00
tblGrading	MaterialImported	0.00	604.00
tblLandUse	LandUseSquareFeet	10.00	14.00
tblOffRoadEquipment	HorsePower	231.00	300.00
tblOffRoadEquipment	HorsePower	231.00	300.00
tblOffRoadEquipment	HorsePower	231.00	300.00
tblOffRoadEquipment	HorsePower	231.00	300.00
tblOffRoadEquipment	HorsePower	231.00	300.00
tblOffRoadEquipment	HorsePower	231.00	300.00
tblOffRoadEquipment	HorsePower	231.00	300.00
tblOffRoadEquipment	HorsePower	231.00	300.00
tblOffRoadEquipment	HorsePower	231.00	300.00
tblOffRoadEquipment	HorsePower	231.00	300.00
tblOffRoadEquipment	HorsePower	97.00	150.00
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tblOffRoadEquipment	HorsePower	97.00	150.00
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tblOffRoadEquipment	HorsePower	46.00	40.00
tblOffRoadEquipment	HorsePower	46.00	40.00
tblOffRoadEquipment	HorsePower	46.00	40.00
tblOffRoadEquipment	HorsePower	78.00	300.00

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tblOffRoadEquipment	HorsePower	16.00	350.00
tblOffRoadEquipment	HorsePower	16.00	350.00
tblOffRoadEquipment	HorsePower	16.00	350.00
tblOffRoadEquipment	HorsePower	16.00	350.00
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tblOffRoadEquipment	HorsePower	158.00	150.00
tblOffRoadEquipment	HorsePower	158.00	150.00
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tblOffRoadEquipment	HorsePower	158.00	150.00
tblOffRoadEquipment	HorsePower	158.00	150.00
tblOffRoadEquipment	HorsePower	158.00	150.00
tblOffRoadEquipment	HorsePower	84.00	1,770.00
tblOffRoadEquipment	HorsePower	84.00	93.00
tblOffRoadEquipment	HorsePower	84.00	152.00
tblOffRoadEquipment	HorsePower	84.00	1,770.00
tblOffRoadEquipment	HorsePower	84.00	93.00
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tblOffRoadEquipment	HorsePower	172.00	300.00
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tblOffRoadEquipment	HorsePower	88.00	100.00
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tblOffRoadEquipment	LoadFactor	0.29	0.75
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tblOffRoadEquipment	LoadFactor	0.45	0.75
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tblOffRoadEquipment	LoadFactor	0.48	0.75

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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	UsageHours	8.00	2.80
tblOffRoadEquipment	UsageHours	8.00	2.80

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tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
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tblTripsAndVMT	HaulingTripLength	20.00	15.10
tblTripsAndVMT	HaulingTripLength	20.00	15.10
tblTripsAndVMT	HaulingTripLength	20.00	15.10

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tblTripsAndVMT	HaulingTripLength	20.00	15.10
tblTripsAndVMT	HaulingTripLength	20.00	15.10
tblTripsAndVMT	HaulingTripLength	20.00	15.10
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tblTripsAndVMT	HaulingTripNumber	1,665.00	832.00
tblTripsAndVMT	HaulingTripNumber	45.00	23.00
tblTripsAndVMT	HaulingTripNumber	84.00	42.00
tblTripsAndVMT	HaulingTripNumber	173.00	87.00
tblTripsAndVMT	HaulingTripNumber	76.00	38.00
tblTripsAndVMT	HaulingTripNumber	792.00	396.00
tblTripsAndVMT	HaulingTripNumber	54.00	27.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	49.00	0.00
tblTripsAndVMT	WorkerTripNumber	49.00	0.00
tblTripsAndVMT	WorkerTripNumber	49.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	30.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	49.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	49.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	49.00	0.00
tblTripsAndVMT	WorkerTripNumber	49.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00

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tblTripsAndVMT	WorkerTripNumber	25.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	49.00	0.00
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tblTripsAndVMT	WorkerTripNumber	15.00	0.00
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tblTripsAndVMT	WorkerTripNumber	28.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	49.00	0.00

2.0 Emissions Summary

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0510	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0270
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0510	1.1000e-004	0.0118	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005	0.0000	0.0270

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0510	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0270
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0510	1.1000e-004	0.0118	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005	0.0000	0.0270

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	SP Tunnel Pit 1	Site Preparation	4/21/2021	5/11/2021	5	15	
2	Generator - Trailers	Site Preparation	4/21/2021	8/26/2022	7	493	
3	SP Tunnel Pit 2	Site Preparation	5/12/2021	5/13/2021	5	2	
4	SP Tunnel Pit 3	Site Preparation	5/14/2021	5/25/2021	5	8	
5	SP Tunnel Pit 4	Site Preparation	5/26/2021	5/27/2021	5	2	
6	Dewatering - Tunnel Pits 1 and 2	Site Preparation	5/28/2021	10/15/2021	7	141	
7	Excavating Tunnel Pit 1	Grading	5/28/2021	7/8/2021	5	30	
8	Excavating Tunnel Pit 2	Grading	7/9/2021	8/10/2021	5	23	
9	Erect MTBM 215 Tunnel	Building Construction	7/22/2021	7/28/2021	5	5	
10	Excavation and Jacking 215 Tunnel	Grading	7/29/2021	8/19/2021	5	16	
11	Remove MTBM215 Tunnel	Building Construction	8/20/2021	8/25/2021	5	4	
12	Install Pipeline 215 Tunnel	Building Construction	8/23/2021	8/30/2021	5	6	
13	Annular Grout 215 Tunnel	Building Construction	8/30/2021	9/3/2021	5	5	
14	Backfill Tunnel Pit 1	Grading	9/6/2021	10/15/2021	5	30	
15	Dewatering - Tunnel Pits 2 and 3	Site Preparation	10/15/2021	2/26/2022	7	135	
16	Excavating Tunnel Pit 3	Grading	10/15/2021	11/11/2021	5	20	
17	Erect MTBM MARB Tunnel	Building Construction	10/28/2021	11/3/2021	5	5	
18	Excavation and Jacking MARB Tunnel	Grading	11/4/2021	12/21/2021	5	34	

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19	Remove MTBM MARB Tunnel	Building Construction	12/22/2021	12/27/2021	5	4
20	Install Pipeline MARB Tunnel	Building Construction	12/23/2021	1/11/2022	5	14
21	Annular Grout MARB Tunnel	Building Construction	1/11/2022	1/26/2022	5	12
22	Backfill Tunnel Pit 2	Grading	1/27/2022	2/28/2022	5	23
23	Dewatering - Tunnel Pit 3	Site Preparation	2/26/2022	6/15/2022	7	110
24	Excavating Tunnel Pit 4	Grading	3/1/2022	3/28/2022	5	20
25	Erect MTBM Van Buren Tunnel	Building Construction	3/12/2022	3/18/2022	5	5
26	Excavation and Jacking Van Buren Tunnel	Grading	3/21/2022	4/21/2022	5	24
27	Remove MTBM Van Buren Tunnel	Building Construction	4/23/2022	4/28/2022	5	4
28	Install Pipeline Van Buren Tunnel	Building Construction	4/26/2022	5/9/2022	5	10
29	Annular Grout Van Buren Tunnel	Building Construction	5/7/2022	5/18/2022	5	8
30	Backfill Tunnel Pit 3	Grading	5/19/2022	6/15/2022	5	20
31	Backfill Tunnel Pit 4	Grading	6/16/2022	7/13/2022	5	20
32	Site Restoration - Paving	Paving	7/14/2022	7/27/2022	5	10
33	Site Restoration - Other/Demobilization	Site Preparation	7/28/2022	8/26/2022	5	22

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 2.66

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
SP Tunnel Pit 1	Graders	1	8.00	187	0.41
SP Tunnel Pit 1	Other Construction Equipment	1	2.10	600	0.75
SP Tunnel Pit 1	Rubber Tired Dozers	1	7.00	247	0.40

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SP Tunnel Pit 1	Scrapers	0	8.00	367	0.48
SP Tunnel Pit 1	Tractors/Loaders/Backhoes	1	7.00	97	0.37
SP Tunnel Pit 2	Graders	1	8.00	187	0.41
SP Tunnel Pit 2	Other Construction Equipment	1	2.10	600	0.75
SP Tunnel Pit 2	Rubber Tired Dozers	1	7.00	247	0.40
SP Tunnel Pit 2	Tractors/Loaders/Backhoes	1	8.00	97	0.37
SP Tunnel Pit 3	Graders	1	8.00	187	0.41
SP Tunnel Pit 3	Other Construction Equipment	1	2.10	600	0.75
SP Tunnel Pit 3	Rubber Tired Dozers	1	8.00	247	0.40
SP Tunnel Pit 3	Tractors/Loaders/Backhoes	1	8.00	97	0.37
SP Tunnel Pit 4	Graders	1	8.00	187	0.41
SP Tunnel Pit 4	Other Construction Equipment	1	2.10	600	0.75
SP Tunnel Pit 4	Rubber Tired Dozers	1	8.00	247	0.40
SP Tunnel Pit 4	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Excavating Tunnel Pit 1	Cranes	1	2.10	300	0.75
Excavating Tunnel Pit 1	Dumpers/Tenders	1	2.10	350	0.75
Excavating Tunnel Pit 1	Excavators	1	4.30	150	0.75
Excavating Tunnel Pit 1	Graders	1	6.00	187	0.41
Excavating Tunnel Pit 1	Other Construction Equipment	1	4.30	300	0.75
Excavating Tunnel Pit 1	Rollers	1	2.10	75	0.75
Excavating Tunnel Pit 1	Rubber Tired Dozers	1	6.00	247	0.40
Excavating Tunnel Pit 1	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Excavating Tunnel Pit 1	Welders	1	6.40	40	0.75
Excavating Tunnel Pit 2	Cranes	1	2.10	300	0.75
Excavating Tunnel Pit 2	Dumpers/Tenders	1	2.10	350	0.75
Excavating Tunnel Pit 2	Excavators	1	4.30	150	0.75
Excavating Tunnel Pit 2	Graders	1	6.00	187	0.41

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Excavating Tunnel Pit 2	Other Construction Equipment	1	4.30	300	0.75
Excavating Tunnel Pit 2	Rollers	1	2.10	75	0.75
Excavating Tunnel Pit 2	Rubber Tired Dozers	1	6.00	247	0.40
Excavating Tunnel Pit 2	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Excavating Tunnel Pit 2	Welders	1	6.40	40	0.75
Erect MTBM 215 Tunnel	Cranes	1	2.80	300	0.75
Erect MTBM 215 Tunnel	Forklifts	1	6.00	89	0.20
Erect MTBM 215 Tunnel	Generator Sets	0	8.00	84	0.74
Erect MTBM 215 Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Erect MTBM 215 Tunnel	Welders	3	8.00	46	0.45
Excavation and Jacking 215 Tunnel	Air Compressors	1	2.80	300	0.75
Excavation and Jacking 215 Tunnel	Dumpers/Tenders	1	2.80	350	0.75
Excavation and Jacking 215 Tunnel	Graders	1	6.00	187	0.41
Excavation and Jacking 215 Tunnel	Other Construction Equipment	1	5.60	700	0.75
Excavation and Jacking 215 Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Excavation and Jacking 215 Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Excavation and Jacking 215 Tunnel	Other Material Handling Equipment	1	2.80	200	0.75
Excavation and Jacking 215 Tunnel	Rubber Tired Dozers	1	6.00	247	0.40
Excavation and Jacking 215 Tunnel	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Remove MTBM215 Tunnel	Cranes	1	2.80	300	0.75
Remove MTBM215 Tunnel	Forklifts	1	6.00	89	0.20
Remove MTBM215 Tunnel	Generator Sets	0	8.00	84	0.74
Remove MTBM215 Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Remove MTBM215 Tunnel	Welders	3	8.00	46	0.45
Install Pipeline 215 Tunnel	Air Compressors	1	2.80	300	0.75
Install Pipeline 215 Tunnel	Cranes	1	2.80	300	0.75
Install Pipeline 215 Tunnel	Dumpers/Tenders	1	2.80	350	0.75

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Install Pipeline 215 Tunnel	Forklifts	1	6.00	89	0.20
Install Pipeline 215 Tunnel	Generator Sets	0	8.00	84	0.74
Install Pipeline 215 Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Install Pipeline 215 Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Install Pipeline 215 Tunnel	Other Material Handling Equipment	1	2.80	200	0.75
Install Pipeline 215 Tunnel	Other Material Handling Equipment	2	1.40	400	0.75
Install Pipeline 215 Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Install Pipeline 215 Tunnel	Welders	2	4.20	40	0.75
Annular Grout 215 Tunnel	Air Compressors	1	2.80	300	0.75
Annular Grout 215 Tunnel	Cement and Mortar Mixers	3	0.50	750	0.75
Annular Grout 215 Tunnel	Cranes	1	6.00	231	0.29
Annular Grout 215 Tunnel	Forklifts	1	6.00	89	0.20
Annular Grout 215 Tunnel	Generator Sets	0	8.00	84	0.74
Annular Grout 215 Tunnel	Other General Industrial Equipment	1	2.80	100	0.75
Annular Grout 215 Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Annular Grout 215 Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Annular Grout 215 Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Annular Grout 215 Tunnel	Welders	3	8.00	46	0.45
Backfill Tunnel Pit 1	Cranes	1	2.10	300	0.75
Backfill Tunnel Pit 1	Dumpers/Tenders	1	2.10	350	0.75
Backfill Tunnel Pit 1	Excavators	1	4.30	150	0.75
Backfill Tunnel Pit 1	Graders	1	6.00	187	0.41
Backfill Tunnel Pit 1	Other Construction Equipment	1	4.30	300	0.75
Backfill Tunnel Pit 1	Rollers	1	2.10	75	0.75
Backfill Tunnel Pit 1	Rubber Tired Dozers	1	6.00	247	0.40
Backfill Tunnel Pit 1	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Backfill Tunnel Pit 1	Welders	1	6.40	40	0.75

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Excavating Tunnel Pit 3	Cranes	1	2.10	300	0.75
Excavating Tunnel Pit 3	Dumpers/Tenders	1	2.10	350	0.75
Excavating Tunnel Pit 3	Excavators	1	4.30	150	0.75
Excavating Tunnel Pit 3	Graders	1	6.00	187	0.41
Excavating Tunnel Pit 3	Other Construction Equipment	1	4.30	300	0.75
Excavating Tunnel Pit 3	Rollers	1	2.10	75	0.75
Excavating Tunnel Pit 3	Rubber Tired Dozers	1	6.00	247	0.40
Excavating Tunnel Pit 3	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Excavating Tunnel Pit 3	Welders	1	6.40	40	0.75
Erect MTBM MARB Tunnel	Cranes	1	2.80	300	0.75
Erect MTBM MARB Tunnel	Forklifts	1	6.00	89	0.20
Erect MTBM MARB Tunnel	Generator Sets	0	8.00	84	0.74
Erect MTBM MARB Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Erect MTBM MARB Tunnel	Welders	3	8.00	46	0.45
Excavation and Jacking MARB Tunnel	Air Compressors	1	2.80	300	0.75
Excavation and Jacking MARB Tunnel	Dumpers/Tenders	1	2.80	350	0.75
Excavation and Jacking MARB Tunnel	Graders	1	6.00	187	0.41
Excavation and Jacking MARB Tunnel	Other Construction Equipment	1	5.60	700	0.75
Excavation and Jacking MARB Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Excavation and Jacking MARB Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Excavation and Jacking MARB Tunnel	Other Material Handling Equipment	1	2.80	200	0.75
Excavation and Jacking MARB Tunnel	Rubber Tired Dozers	1	6.00	247	0.40
Excavation and Jacking MARB Tunnel	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Remove MTBM MARB Tunnel	Cranes	1	2.80	300	0.75
Remove MTBM MARB Tunnel	Forklifts	1	6.00	89	0.20
Remove MTBM MARB Tunnel	Generator Sets	0	8.00	84	0.74
Remove MTBM MARB Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37

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Remove MTBM MARB Tunnel	Welders	3	8.00	46	0.45
Install Pipeline MARB Tunnel	Air Compressors	1	2.80	300	0.75
Install Pipeline MARB Tunnel	Cranes	1	2.80	300	0.75
Install Pipeline MARB Tunnel	Dumpers/Tenders	1	2.80	350	0.75
Install Pipeline MARB Tunnel	Forklifts	1	6.00	89	0.20
Install Pipeline MARB Tunnel	Generator Sets	0	8.00	84	0.74
Install Pipeline MARB Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Install Pipeline MARB Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Install Pipeline MARB Tunnel	Other Material Handling Equipment	1	2.80	200	0.75
Install Pipeline MARB Tunnel	Other Material Handling Equipment	2	1.40	400	0.75
Install Pipeline MARB Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Install Pipeline MARB Tunnel	Welders	2	4.20	40	0.75
Annular Grout MARB Tunnel	Air Compressors	1	2.80	300	0.75
Annular Grout MARB Tunnel	Cement and Mortar Mixers	3	0.50	750	0.75
Annular Grout MARB Tunnel	Cranes	1	6.00	231	0.29
Annular Grout MARB Tunnel	Forklifts	1	6.00	89	0.20
Annular Grout MARB Tunnel	Generator Sets	0	8.00	84	0.74
Annular Grout MARB Tunnel	Other General Industrial Equipment	1	2.80	100	0.75
Annular Grout MARB Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Annular Grout MARB Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Annular Grout MARB Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Annular Grout MARB Tunnel	Welders	3	8.00	46	0.45
Backfill Tunnel Pit 2	Cranes	1	2.10	300	0.75
Backfill Tunnel Pit 2	Dumpers/Tenders	1	2.10	350	0.75
Backfill Tunnel Pit 2	Excavators	1	4.30	150	0.75
Backfill Tunnel Pit 2	Graders	1	6.00	187	0.41
Backfill Tunnel Pit 2	Other Construction Equipment	1	4.30	300	0.75

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Backfill Tunnel Pit 2	Rollers	1	2.10	75	0.75
Backfill Tunnel Pit 2	Rubber Tired Dozers	1	6.00	247	0.40
Backfill Tunnel Pit 2	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Backfill Tunnel Pit 2	Welders	1	6.40	40	0.75
Excavating Tunnel Pit 4	Cranes	1	2.10	300	0.75
Excavating Tunnel Pit 4	Dumpers/Tenders	1	2.10	350	0.75
Excavating Tunnel Pit 4	Excavators	1	4.30	150	0.75
Excavating Tunnel Pit 4	Graders	1	6.00	187	0.41
Excavating Tunnel Pit 4	Other Construction Equipment	1	4.30	300	0.75
Excavating Tunnel Pit 4	Rollers	1	2.10	75	0.75
Excavating Tunnel Pit 4	Rubber Tired Dozers	1	6.00	247	0.40
Excavating Tunnel Pit 4	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Excavating Tunnel Pit 4	Welders	1	6.40	40	0.75
Erect MTBM Van Buren Tunnel	Cranes	1	2.80	300	0.75
Erect MTBM Van Buren Tunnel	Forklifts	1	6.00	89	0.20
Erect MTBM Van Buren Tunnel	Generator Sets	0	8.00	84	0.74
Erect MTBM Van Buren Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Erect MTBM Van Buren Tunnel	Welders	3	8.00	46	0.45
Excavation and Jacking Van Buren Tunnel	Air Compressors	1	2.80	300	0.75
Excavation and Jacking Van Buren Tunnel	Dumpers/Tenders	1	2.80	350	0.75
Excavation and Jacking Van Buren Tunnel	Graders	1	6.00	187	0.41
Excavation and Jacking Van Buren Tunnel	Other Construction Equipment	1	5.60	700	0.75
Excavation and Jacking Van Buren Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Excavation and Jacking Van Buren Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Excavation and Jacking Van Buren Tunnel	Other Material Handling Equipment	1	2.30	200	0.75

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Excavation and Jacking Van Buren Tunnel	Rubber Tired Dozers	1	6.00	247	0.40
Excavation and Jacking Van Buren Tunnel	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Remove MTBM Van Buren Tunnel	Cranes	1	2.80	300	0.75
Remove MTBM Van Buren Tunnel	Forklifts	1	6.00	89	0.20
Remove MTBM Van Buren Tunnel	Generator Sets	0	8.00	84	0.74
Remove MTBM Van Buren Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Remove MTBM Van Buren Tunnel	Welders	3	8.00	46	0.45
Install Pipeline Van Buren Tunnel	Air Compressors	1	2.80	300	0.75
Install Pipeline Van Buren Tunnel	Cranes	1	2.80	300	0.75
Install Pipeline Van Buren Tunnel	Dumpers/Tenders	1	2.80	350	0.75
Install Pipeline Van Buren Tunnel	Forklifts	1	6.00	89	0.20
Install Pipeline Van Buren Tunnel	Generator Sets	0	8.00	84	0.74
Install Pipeline Van Buren Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Install Pipeline Van Buren Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Install Pipeline Van Buren Tunnel	Other Material Handling Equipment	1	2.80	200	0.75
Install Pipeline Van Buren Tunnel	Other Material Handling Equipment	2	1.40	400	0.75
Install Pipeline Van Buren Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Install Pipeline Van Buren Tunnel	Welders	2	4.20	40	0.75
Annular Grout Van Buren Tunnel	Air Compressors	1	2.80	300	0.75
Annular Grout Van Buren Tunnel	Cement and Mortar Mixers	3	0.50	750	0.75
Annular Grout Van Buren Tunnel	Cranes	1	6.00	231	0.29
Annular Grout Van Buren Tunnel	Forklifts	1	6.00	89	0.20
Annular Grout Van Buren Tunnel	Generator Sets	0	8.00	84	0.45
Annular Grout Van Buren Tunnel	Other General Industrial Equipment	1	2.80	100	0.75
Annular Grout Van Buren Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Annular Grout Van Buren Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Annular Grout Van Buren Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37

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Annular Grout Van Buren Tunnel	Welders	3	8.00	46	0.45
Backfill Tunnel Pit 3	Cranes	1	2.10	300	0.75
Backfill Tunnel Pit 3	Dumpers/Tenders	1	2.10	350	0.75
Backfill Tunnel Pit 3	Excavators	1	4.30	150	0.75
Backfill Tunnel Pit 3	Graders	1	6.00	187	0.41
Backfill Tunnel Pit 3	Other Construction Equipment	1	4.30	300	0.75
Backfill Tunnel Pit 3	Rollers	1	2.10	75	0.75
Backfill Tunnel Pit 3	Rubber Tired Dozers	1	6.00	247	0.40
Backfill Tunnel Pit 3	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Backfill Tunnel Pit 3	Welders	1	6.40	40	0.75
Backfill Tunnel Pit 4	Cranes	1	2.10	300	0.75
Backfill Tunnel Pit 4	Dumpers/Tenders	1	2.10	350	0.75
Backfill Tunnel Pit 4	Excavators	1	4.30	150	0.75
Backfill Tunnel Pit 4	Graders	1	6.00	187	0.41
Backfill Tunnel Pit 4	Other Construction Equipment	1	4.30	300	0.75
Backfill Tunnel Pit 4	Rollers	1	2.10	75	0.75
Backfill Tunnel Pit 4	Rubber Tired Dozers	1	6.00	247	0.40
Backfill Tunnel Pit 4	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Backfill Tunnel Pit 4	Welders	1	6.40	40	0.75
Site Restoration - Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Site Restoration - Paving	Pavers	1	8.00	130	0.42
Site Restoration - Paving	Paving Equipment	1	8.00	132	0.36
Site Restoration - Paving	Rollers	2	8.00	80	0.38
Site Restoration - Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Restoration - Other/Demobilization	Graders	1	8.00	187	0.41
Site Restoration - Other/Demobilization	Scrapers	1	8.00	367	0.48
Site Restoration - Other/Demobilization	Tractors/Loaders/Backhoes	1	7.00	97	0.37

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Dewatering - Tunnel Pits 1 and 2	Generator Sets	1	24.00	1770	0.75
Dewatering - Tunnel Pits 1 and 2	Generator Sets	1	24.00	93	0.75
Dewatering - Tunnel Pits 1 and 2	Pumps	6	24.00	5	0.75
Dewatering - Tunnel Pits 2 and 3	Generator Sets	1	24.00	1770	0.75
Dewatering - Tunnel Pits 2 and 3	Generator Sets	2	24.00	93	0.75
Dewatering - Tunnel Pits 2 and 3	Pumps	6	24.00	5	0.75
Dewatering - Tunnel Pit 3	Generator Sets	1	24.00	1770	0.75
Dewatering - Tunnel Pit 3	Generator Sets	1	24.00	93	0.75
Dewatering - Tunnel Pit 3	Pumps	5	24.00	5	0.75
Generator - Trailers	Generator Sets	1	24.00	152	0.75
Generator - Trailers	Scrapers	0	8.00	367	0.48
Generator - Trailers	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Dewatering - Tunnel Pits 2 and 3	Graders	1	8.00	187	0.41
Generator - Trailers	Graders	1	8.00	187	0.41
Dewatering - Tunnel Pit 3	Graders	1	8.00	187	0.41
Dewatering - Tunnel Pits 1 and 2	Graders	1	8.00	187	0.41
Dewatering - Tunnel Pits 2 and 3	Scrapers	1	8.00	367	0.48
Dewatering - Tunnel Pit 3	Scrapers	1	8.00	367	0.48
SP Tunnel Pit 2	Scrapers	1	8.00	367	0.48
SP Tunnel Pit 3	Scrapers	1	8.00	367	0.48
SP Tunnel Pit 4	Scrapers	1	8.00	367	0.48
Dewatering - Tunnel Pits 1 and 2	Scrapers	1	8.00	367	0.48
Dewatering - Tunnel Pits 2 and 3	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Dewatering - Tunnel Pit 3	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Dewatering - Tunnel Pits 1 and 2	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
SP Tunnel Pit 1	4	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
SP Tunnel Pit 2	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
SP Tunnel Pit 3	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
SP Tunnel Pit 4	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavating Tunnel Pit 1	9	0.00	0.00	396.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Excavating Tunnel Pit 2	9	0.00	0.00	27.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Erect MTBM 215 Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavation and Jacking 215 Tunnel	9	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Remove MTBM 215 Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Install Pipeline 215 Tunnel	12	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Annular Grout 215 Tunnel	13	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Backfill Tunnel Pit 1	9	0.00	0.00	190.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Excavating Tunnel Pit 3	9	0.00	0.00	832.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Erect MTBM MARB Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavation and Jacking MARB Tunnel	9	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Remove MTBM MARB Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Install Pipeline MARB Tunnel	12	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Annular Grout MARB Tunnel	13	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Backfill Tunnel Pit 2	9	0.00	0.00	23.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Excavating Tunnel Pit 4	9	0.00	0.00	42.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Erect MTBM Van Buren Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavation and Jacking Van Buren Tunnel	9	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Remove MTBM Van Buren Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Install Pipeline Van Buren Tunnel	12	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Annular Grout Van Buren Tunnel	13	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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Backfill Tunnel Pit 3	9	0.00	0.00	87.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Backfill Tunnel Pit 4	9	0.00	0.00	38.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Site Restoration - Paving	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Restoration - Other/Demobilization	3	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dewatering - Tunnel Pits 1 and 2	11	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dewatering - Tunnel Pits 2 and 3	12	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dewatering - Tunnel Pit 3	10	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Generator - Trailers	2	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 SP Tunnel Pit 1 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.5324	17.1833	7.2780	0.0168		0.7514	0.7514		0.6913	0.6913		1,628.9049	1,628.9049	0.5268		1,642.0754
Total	1.5324	17.1833	7.2780	0.0168	5.7996	0.7514	6.5510	2.9537	0.6913	3.6450		1,628.9049	1,628.9049	0.5268		1,642.0754

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3.2 SP Tunnel Pit 1 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	1.5324	17.1833	7.2780	0.0168		0.7514	0.7514		0.6913	0.6913	0.0000	1,628.9049	1,628.9049	0.5268		1,642.0754
Total	1.5324	17.1833	7.2780	0.0168	2.6098	0.7514	3.3612	1.3292	0.6913	2.0205	0.0000	1,628.9049	1,628.9049	0.5268		1,642.0754

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.2 SP Tunnel Pit 1 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.3 Generator - Trailers - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.9187	18.3984	19.4103	0.0428		0.7366	0.7366		0.7216	0.7216		4,069.577 0	4,069.577 0	0.3342		4,077.932 1
Total	1.9187	18.3984	19.4103	0.0428	0.0000	0.7366	0.7366	0.0000	0.7216	0.7216		4,069.577 0	4,069.577 0	0.3342		4,077.932 1

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.3 Generator - Trailers - 2021
Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148
Total	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.9187	18.3984	19.4103	0.0428		0.7366	0.7366		0.7216	0.7216	0.0000	4,069.5770	4,069.5770	0.3342		4,077.9321
Total	1.9187	18.3984	19.4103	0.0428	0.0000	0.7366	0.7366	0.0000	0.7216	0.7216	0.0000	4,069.5770	4,069.5770	0.3342		4,077.9321

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.3 Generator - Trailers - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148
Total	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148

3.3 Generator - Trailers - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.7782	16.2959	19.3709	0.0428		0.6558	0.6558		0.6424	0.6424		4,069.1718	4,069.1718	0.3280		4,077.3728
Total	1.7782	16.2959	19.3709	0.0428	0.0000	0.6558	0.6558	0.0000	0.6424	0.6424		4,069.1718	4,069.1718	0.3280		4,077.3728

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.3 Generator - Trailers - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0396	0.0247	0.3484	1.0700e-003	0.1118	8.0000e-004	0.1126	0.0296	7.4000e-004	0.0304		106.7724	106.7724	2.6900e-003		106.8397
Total	0.0396	0.0247	0.3484	1.0700e-003	0.1118	8.0000e-004	0.1126	0.0296	7.4000e-004	0.0304		106.7724	106.7724	2.6900e-003		106.8397

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.7782	16.2959	19.3709	0.0428		0.6558	0.6558		0.6424	0.6424	0.0000	4,069.1718	4,069.1718	0.3280		4,077.3728
Total	1.7782	16.2959	19.3709	0.0428	0.0000	0.6558	0.6558	0.0000	0.6424	0.6424	0.0000	4,069.1718	4,069.1718	0.3280		4,077.3728

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.3 Generator - Trailers - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0396	0.0247	0.3484	1.0700e-003	0.1118	8.0000e-004	0.1126	0.0296	7.4000e-004	0.0304		106.7724	106.7724	2.6900e-003		106.8397
Total	0.0396	0.0247	0.3484	1.0700e-003	0.1118	8.0000e-004	0.1126	0.0296	7.4000e-004	0.0304		106.7724	106.7724	2.6900e-003		106.8397

3.4 SP Tunnel Pit 2 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.4853	28.1230	14.5652	0.0324		1.1818	1.1818		1.0872	1.0872		3,134.4289	3,134.4289	1.0137		3,159.7723
Total	2.4853	28.1230	14.5652	0.0324	5.7996	1.1818	6.9813	2.9537	1.0872	4.0409		3,134.4289	3,134.4289	1.0137		3,159.7723

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.4 SP Tunnel Pit 2 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	2.4853	28.1230	14.5652	0.0324		1.1818	1.1818		1.0872	1.0872	0.0000	3,134.4289	3,134.4289	1.0137		3,159.7723
Total	2.4853	28.1230	14.5652	0.0324	2.6098	1.1818	3.7916	1.3292	1.0872	2.4164	0.0000	3,134.4289	3,134.4289	1.0137		3,159.7723

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.4 SP Tunnel Pit 2 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.5 SP Tunnel Pit 3 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.6161	29.4945	15.0699	0.0334		1.2483	1.2483		1.1484	1.1484		3,237.8479	3,237.8479	1.0472		3,264.0275
Total	2.6161	29.4945	15.0699	0.0334	6.5523	1.2483	7.8006	3.3675	1.1484	4.5159		3,237.8479	3,237.8479	1.0472		3,264.0275

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.5 SP Tunnel Pit 3 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	2.6161	29.4945	15.0699	0.0334		1.2483	1.2483		1.1484	1.1484	0.0000	3,237.8479	3,237.8479	1.0472		3,264.0275
Total	2.6161	29.4945	15.0699	0.0334	2.9486	1.2483	4.1969	1.5154	1.1484	2.6638	0.0000	3,237.8479	3,237.8479	1.0472		3,264.0275

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.5 SP Tunnel Pit 3 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.6 SP Tunnel Pit 4 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.6161	29.4945	15.0699	0.0334		1.2483	1.2483		1.1484	1.1484		3,237.8479	3,237.8479	1.0472		3,264.0275
Total	2.6161	29.4945	15.0699	0.0334	6.5523	1.2483	7.8006	3.3675	1.1484	4.5159		3,237.8479	3,237.8479	1.0472		3,264.0275

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.6 SP Tunnel Pit 4 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	2.6161	29.4945	15.0699	0.0334		1.2483	1.2483		1.1484	1.1484	0.0000	3,237.8479	3,237.8479	1.0472		3,264.0275
Total	2.6161	29.4945	15.0699	0.0334	2.9486	1.2483	4.1969	1.5154	1.1484	2.6638	0.0000	3,237.8479	3,237.8479	1.0472		3,264.0275

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.6 SP Tunnel Pit 4 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.7 Dewatering - Tunnel Pits 1 and 2 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	18.2021	265.7913	97.6071	0.3978		6.1833	6.1833		6.1271	6.1271		44,387.19 34	44,387.19 34	2.2090		44,442.41 86
Total	18.2021	265.7913	97.6071	0.3978	1.5908	6.1833	7.7740	0.1718	6.1271	6.2989		44,387.19 34	44,387.19 34	2.2090		44,442.41 86

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.7 Dewatering - Tunnel Pits 1 and 2 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7158	0.0000	0.7158	0.0773	0.0000	0.0773			0.0000			0.0000
Off-Road	18.2021	265.7913	97.6071	0.3978		6.1833	6.1833		6.1271	6.1271	0.0000	44,387.19 33	44,387.19 33	2.2090		44,442.41 86
Total	18.2021	265.7913	97.6071	0.3978	0.7158	6.1833	6.8991	0.0773	6.1271	6.2044	0.0000	44,387.19 33	44,387.19 33	2.2090		44,442.41 86

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.7 Dewatering - Tunnel Pits 1 and 2 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.8 Excavating Tunnel Pit 1 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9381	0.0000	4.9381	2.5292	0.0000	2.5292			0.0000			0.0000
Off-Road	2.8005	28.4894	19.8117	0.0415		1.2349	1.2349		1.1430	1.1430		3,973.8857	3,973.8857	1.2388		4,004.8546
Total	2.8005	28.4894	19.8117	0.0415	4.9381	1.2349	6.1731	2.5292	1.1430	3.6722		3,973.8857	3,973.8857	1.2388		4,004.8546

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.8 Excavating Tunnel Pit 1 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0775	2.8279	0.5680	8.0000e-003	0.1742	7.9300e-003	0.1821	0.0478	7.5800e-003	0.0553		865.3110	865.3110	0.0609		866.8334
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0775	2.8279	0.5680	8.0000e-003	0.1742	7.9300e-003	0.1821	0.0478	7.5800e-003	0.0553		865.3110	865.3110	0.0609		866.8334

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2222	0.0000	2.2222	1.1382	0.0000	1.1382			0.0000			0.0000
Off-Road	2.8005	28.4894	19.8117	0.0415		1.2349	1.2349		1.1430	1.1430	0.0000	3,973.8857	3,973.8857	1.2388		4,004.8546
Total	2.8005	28.4894	19.8117	0.0415	2.2222	1.2349	3.4571	1.1382	1.1430	2.2812	0.0000	3,973.8857	3,973.8857	1.2388		4,004.8546

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.8 Excavating Tunnel Pit 1 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0775	2.8279	0.5680	8.0000e-003	0.1742	7.9300e-003	0.1821	0.0478	7.5800e-003	0.0553		865.3110	865.3110	0.0609		866.8334
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0775	2.8279	0.5680	8.0000e-003	0.1742	7.9300e-003	0.1821	0.0478	7.5800e-003	0.0553		865.3110	865.3110	0.0609		866.8334

3.9 Excavating Tunnel Pit 2 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9166	0.0000	4.9166	2.5260	0.0000	2.5260			0.0000			0.0000
Off-Road	2.8005	28.4894	19.8117	0.0415		1.2349	1.2349		1.1430	1.1430		3,973.8857	3,973.8857	1.2388		4,004.8546
Total	2.8005	28.4894	19.8117	0.0415	4.9166	1.2349	6.1515	2.5260	1.1430	3.6690		3,973.8857	3,973.8857	1.2388		4,004.8546

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.9 Excavating Tunnel Pit 2 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.8900e-003	0.2515	0.0505	7.1000e-004	0.0155	7.1000e-004	0.0162	4.2500e-003	6.7000e-004	4.9200e-003		76.9545	76.9545	5.4200e-003		77.0899
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	6.8900e-003	0.2515	0.0505	7.1000e-004	0.0155	7.1000e-004	0.0162	4.2500e-003	6.7000e-004	4.9200e-003		76.9545	76.9545	5.4200e-003		77.0899

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2125	0.0000	2.2125	1.1367	0.0000	1.1367			0.0000			0.0000
Off-Road	2.8005	28.4894	19.8117	0.0415		1.2349	1.2349		1.1430	1.1430	0.0000	3,973.8857	3,973.8857	1.2388		4,004.8546
Total	2.8005	28.4894	19.8117	0.0415	2.2125	1.2349	3.4474	1.1367	1.1430	2.2797	0.0000	3,973.8857	3,973.8857	1.2388		4,004.8546

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.9 Excavating Tunnel Pit 2 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.8900e-003	0.2515	0.0505	7.1000e-004	0.0155	7.1000e-004	0.0162	4.2500e-003	6.7000e-004	4.9200e-003		76.9545	76.9545	5.4200e-003		77.0899
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	6.8900e-003	0.2515	0.0505	7.1000e-004	0.0155	7.1000e-004	0.0162	4.2500e-003	6.7000e-004	4.9200e-003		76.9545	76.9545	5.4200e-003		77.0899

3.10 Erect MTBM 215 Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342		1,615.3303	1,615.3303	0.4022		1,625.3846
Total	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342		1,615.3303	1,615.3303	0.4022		1,625.3846

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.10 Erect MTBM 215 Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342	0.0000	1,615.3303	1,615.3303	0.4022		1,625.3846
Total	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342	0.0000	1,615.3303	1,615.3303	0.4022		1,625.3846

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.10 Erect MTBM 215 Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159

3.11 Excavation and Jacking 215 Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	2.9973	28.7049	15.5959	0.0446		1.1907	1.1907		1.1019	1.1019		4,435.1283	4,435.1283	1.2111		4,465.4052
Total	2.9973	28.7049	15.5959	0.0446	4.9143	1.1907	6.1049	2.5256	1.1019	3.6275		4,435.1283	4,435.1283	1.2111		4,465.4052

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.11 Excavation and Jacking 215 Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2114	0.0000	2.2114	1.1365	0.0000	1.1365			0.0000			0.0000
Off-Road	2.9973	28.7049	15.5959	0.0446		1.1907	1.1907		1.1019	1.1019	0.0000	4,435.128 3	4,435.128 3	1.2111		4,465.405 2
Total	2.9973	28.7049	15.5959	0.0446	2.2114	1.1907	3.4021	1.1365	1.1019	2.2384	0.0000	4,435.128 3	4,435.128 3	1.2111		4,465.405 2

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.11 Excavation and Jacking 215 Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.12 Remove MTBM215 Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342		1,615.3303	1,615.3303	0.4022		1,625.3846
Total	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342		1,615.3303	1,615.3303	0.4022		1,625.3846

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.12 Remove MTBM215 Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342	0.0000	1,615.3303	1,615.3303	0.4022		1,625.3846
Total	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342	0.0000	1,615.3303	1,615.3303	0.4022		1,625.3846

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.12 Remove MTBM215 Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159

3.13 Install Pipeline 215 Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2878	28.5759	20.5218	0.0536		1.1918	1.1918		1.1119	1.1119		5,249.6231	5,249.6231	1.4135		5,284.9605
Total	3.2878	28.5759	20.5218	0.0536		1.1918	1.1918		1.1119	1.1119		5,249.6231	5,249.6231	1.4135		5,284.9605

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.13 Install Pipeline 215 Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2878	28.5759	20.5218	0.0536		1.1918	1.1918		1.1119	1.1119	0.0000	5,249.6231	5,249.6231	1.4135		5,284.9605
Total	3.2878	28.5759	20.5218	0.0536		1.1918	1.1918		1.1119	1.1119	0.0000	5,249.6231	5,249.6231	1.4135		5,284.9605

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.13 Install Pipeline 215 Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159

3.14 Annular Grout 215 Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1015	23.7116	18.9986	0.0437		1.0930	1.0930		1.0298	1.0298		4,229.2803	4,229.2803	1.0242		4,254.8863
Total	3.1015	23.7116	18.9986	0.0437		1.0930	1.0930		1.0298	1.0298		4,229.2803	4,229.2803	1.0242		4,254.8863

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.14 Annular Grout 215 Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1015	23.7116	18.9986	0.0437		1.0930	1.0930		1.0298	1.0298	0.0000	4,229.2803	4,229.2803	1.0242		4,254.8863
Total	3.1015	23.7116	18.9986	0.0437		1.0930	1.0930		1.0298	1.0298	0.0000	4,229.2803	4,229.2803	1.0242		4,254.8863

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.14 Annular Grout 215 Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159

3.15 Backfill Tunnel Pit 1 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9257	0.0000	4.9257	2.5274	0.0000	2.5274			0.0000			0.0000
Off-Road	2.8005	28.4894	19.8117	0.0415		1.2349	1.2349		1.1430	1.1430		3,973.8857	3,973.8857	1.2388		4,004.8546
Total	2.8005	28.4894	19.8117	0.0415	4.9257	1.2349	6.1607	2.5274	1.1430	3.6704		3,973.8857	3,973.8857	1.2388		4,004.8546

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.15 Backfill Tunnel Pit 1 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0372	1.3568	0.2725	3.8400e-003	0.0836	3.8000e-003	0.0874	0.0229	3.6400e-003	0.0266		415.1745	415.1745	0.0292		415.9049
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0372	1.3568	0.2725	3.8400e-003	0.0836	3.8000e-003	0.0874	0.0229	3.6400e-003	0.0266		415.1745	415.1745	0.0292		415.9049

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2166	0.0000	2.2166	1.1373	0.0000	1.1373			0.0000			0.0000
Off-Road	2.8005	28.4894	19.8117	0.0415		1.2349	1.2349		1.1430	1.1430	0.0000	3,973.8857	3,973.8857	1.2388		4,004.8546
Total	2.8005	28.4894	19.8117	0.0415	2.2166	1.2349	3.4515	1.1373	1.1430	2.2803	0.0000	3,973.8857	3,973.8857	1.2388		4,004.8546

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.15 Backfill Tunnel Pit 1 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0372	1.3568	0.2725	3.8400e-003	0.0836	3.8000e-003	0.0874	0.0229	3.6400e-003	0.0266		415.1745	415.1745	0.0292		415.9049
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0372	1.3568	0.2725	3.8400e-003	0.0836	3.8000e-003	0.0874	0.0229	3.6400e-003	0.0266		415.1745	415.1745	0.0292		415.9049

3.16 Dewatering - Tunnel Pits 2 and 3 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	19.4052	276.4496	110.0110	0.4200		6.7479	6.7479		6.6918	6.6918		46,484.5226	46,484.5226	2.3160		46,542.4235
Total	19.4052	276.4496	110.0110	0.4200	1.5908	6.7479	8.3387	0.1718	6.6918	6.8635		46,484.5226	46,484.5226	2.3160		46,542.4235

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.16 Dewatering - Tunnel Pits 2 and 3 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7158	0.0000	0.7158	0.0773	0.0000	0.0773			0.0000			0.0000
Off-Road	19.4052	276.4496	110.0110	0.4200		6.7479	6.7479		6.6918	6.6918	0.0000	46,484.52 25	46,484.52 25	2.3160		46,542.42 34
Total	19.4052	276.4496	110.0110	0.4200	0.7158	6.7479	7.4638	0.0773	6.6918	6.7691	0.0000	46,484.52 25	46,484.52 25	2.3160		46,542.42 34

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.16 Dewatering - Tunnel Pits 2 and 3 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.16 Dewatering - Tunnel Pits 2 and 3 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	18.0693	260.2883	108.2045	0.4200		6.0093	6.0093		5.9617	5.9617		46,486.72 61	46,486.72 61	2.2318		46,542.52 03
Total	18.0693	260.2883	108.2045	0.4200	1.5908	6.0093	7.6001	0.1718	5.9617	6.1335		46,486.72 61	46,486.72 61	2.2318		46,542.52 03

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.16 Dewatering - Tunnel Pits 2 and 3 - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7158	0.0000	0.7158	0.0773	0.0000	0.0773			0.0000			0.0000
Off-Road	18.0693	260.2883	108.2045	0.4200		6.0093	6.0093		5.9617	5.9617	0.0000	46,486.72 60	46,486.72 60	2.2318		46,542.52 03
Total	18.0693	260.2883	108.2045	0.4200	0.7158	6.0093	6.7252	0.0773	5.9617	6.0390	0.0000	46,486.72 60	46,486.72 60	2.2318		46,542.52 03

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.16 Dewatering - Tunnel Pits 2 and 3 - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.17 Excavating Tunnel Pit 3 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9896	0.0000	4.9896	2.5370	0.0000	2.5370			0.0000			0.0000
Off-Road	2.8005	28.4894	19.8117	0.0415		1.2349	1.2349		1.1430	1.1430		3,973.8857	3,973.8857	1.2388		4,004.8546
Total	2.8005	28.4894	19.8117	0.0415	4.9896	1.2349	6.2245	2.5370	1.1430	3.6800		3,973.8857	3,973.8857	1.2388		4,004.8546

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.17 Excavating Tunnel Pit 3 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2443	8.9120	1.7900	0.0252	0.5490	0.0250	0.5740	0.1505	0.0239	0.1744		2,727.0409	2,727.0409	0.1919		2,731.8385
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.2443	8.9120	1.7900	0.0252	0.5490	0.0250	0.5740	0.1505	0.0239	0.1744		2,727.0409	2,727.0409	0.1919		2,731.8385

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2453	0.0000	2.2453	1.1417	0.0000	1.1417			0.0000			0.0000
Off-Road	2.8005	28.4894	19.8117	0.0415		1.2349	1.2349		1.1430	1.1430	0.0000	3,973.8857	3,973.8857	1.2388		4,004.8546
Total	2.8005	28.4894	19.8117	0.0415	2.2453	1.2349	3.4802	1.1417	1.1430	2.2847	0.0000	3,973.8857	3,973.8857	1.2388		4,004.8546

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.17 Excavating Tunnel Pit 3 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2443	8.9120	1.7900	0.0252	0.5490	0.0250	0.5740	0.1505	0.0239	0.1744		2,727.0409	2,727.0409	0.1919		2,731.8385
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.2443	8.9120	1.7900	0.0252	0.5490	0.0250	0.5740	0.1505	0.0239	0.1744		2,727.0409	2,727.0409	0.1919		2,731.8385

3.18 Erect MTBM MARB Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342		1,615.3303	1,615.3303	0.4022		1,625.3846
Total	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342		1,615.3303	1,615.3303	0.4022		1,625.3846

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.18 Erect MTBM MARB Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342	0.0000	1,615.3303	1,615.3303	0.4022		1,625.3846
Total	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342	0.0000	1,615.3303	1,615.3303	0.4022		1,625.3846

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.18 Erect MTBM MARB Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159

3.19 Excavation and Jacking MARB Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	2.9973	28.7049	15.5959	0.0446		1.1907	1.1907		1.1019	1.1019		4,435.1283	4,435.1283	1.2111		4,465.4052
Total	2.9973	28.7049	15.5959	0.0446	4.9143	1.1907	6.1049	2.5256	1.1019	3.6275		4,435.1283	4,435.1283	1.2111		4,465.4052

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.19 Excavation and Jacking MARB Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2114	0.0000	2.2114	1.1365	0.0000	1.1365			0.0000			0.0000
Off-Road	2.9973	28.7049	15.5959	0.0446		1.1907	1.1907		1.1019	1.1019	0.0000	4,435.128 3	4,435.128 3	1.2111		4,465.405 2
Total	2.9973	28.7049	15.5959	0.0446	2.2114	1.1907	3.4021	1.1365	1.1019	2.2384	0.0000	4,435.128 3	4,435.128 3	1.2111		4,465.405 2

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.19 Excavation and Jacking MARB Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.20 Remove MTBM MARB Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342		1,615.3303	1,615.3303	0.4022		1,625.3846
Total	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342		1,615.3303	1,615.3303	0.4022		1,625.3846

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.20 Remove MTBM MARB Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342	0.0000	1,615.3303	1,615.3303	0.4022		1,625.3846
Total	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342	0.0000	1,615.3303	1,615.3303	0.4022		1,625.3846

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.20 Remove MTBM MARB Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159

3.21 Install Pipeline MARB Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2878	28.5759	20.5218	0.0536		1.1918	1.1918		1.1119	1.1119		5,249.6231	5,249.6231	1.4135		5,284.9605
Total	3.2878	28.5759	20.5218	0.0536		1.1918	1.1918		1.1119	1.1119		5,249.6231	5,249.6231	1.4135		5,284.9605

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.21 Install Pipeline MARB Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2878	28.5759	20.5218	0.0536		1.1918	1.1918		1.1119	1.1119	0.0000	5,249.6231	5,249.6231	1.4135		5,284.9605
Total	3.2878	28.5759	20.5218	0.0536		1.1918	1.1918		1.1119	1.1119	0.0000	5,249.6231	5,249.6231	1.4135		5,284.9605

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.21 Install Pipeline MARB Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0529	1.8121	0.4300	4.8500e-003	0.1216	3.6500e-003	0.1253	0.0350	3.4900e-003	0.0385		517.6331	517.6331	0.0313		518.4159

3.21 Install Pipeline MARB Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9445	24.3798	19.6498	0.0536		0.9909	0.9909		0.9251	0.9251		5,249.4958	5,249.4958	1.4087		5,284.7141
Total	2.9445	24.3798	19.6498	0.0536		0.9909	0.9909		0.9251	0.9251		5,249.4958	5,249.4958	1.4087		5,284.7141

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.21 Install Pipeline MARB Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9445	24.3798	19.6498	0.0536		0.9909	0.9909		0.9251	0.9251	0.0000	5,249.4958	5,249.4958	1.4087		5,284.7141
Total	2.9445	24.3798	19.6498	0.0536		0.9909	0.9909		0.9251	0.9251	0.0000	5,249.4958	5,249.4958	1.4087		5,284.7141

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.21 Install Pipeline MARB Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659

3.22 Annular Grout MARB Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7966	21.0775	18.5620	0.0437		0.9141	0.9141		0.8619	0.8619		4,229.6032	4,229.6032	1.0164		4,255.0128
Total	2.7966	21.0775	18.5620	0.0437		0.9141	0.9141		0.8619	0.8619		4,229.6032	4,229.6032	1.0164		4,255.0128

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.22 Annular Grout MARB Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7966	21.0775	18.5620	0.0437		0.9141	0.9141		0.8619	0.8619	0.0000	4,229.6032	4,229.6032	1.0164		4,255.0128
Total	2.7966	21.0775	18.5620	0.0437		0.9141	0.9141		0.8619	0.8619	0.0000	4,229.6032	4,229.6032	1.0164		4,255.0128

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.22 Annular Grout MARB Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659

3.23 Backfill Tunnel Pit 2 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9163	0.0000	4.9163	2.5259	0.0000	2.5259			0.0000			0.0000
Off-Road	2.4307	23.9596	18.7822	0.0415		1.0230	1.0230		0.9471	0.9471		3,974.8536	3,974.8536	1.2365		4,005.7669
Total	2.4307	23.9596	18.7822	0.0415	4.9163	1.0230	5.9392	2.5259	0.9471	3.4730		3,974.8536	3,974.8536	1.2365		4,005.7669

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.23 Backfill Tunnel Pit 2 - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5700e-003	0.1990	0.0425	6.0000e-004	0.0132	5.2000e-004	0.0137	3.6200e-003	4.9000e-004	4.1100e-003		64.7899	64.7899	4.5100e-003		64.9027
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	5.5700e-003	0.1990	0.0425	6.0000e-004	0.0132	5.2000e-004	0.0137	3.6200e-003	4.9000e-004	4.1100e-003		64.7899	64.7899	4.5100e-003		64.9027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2123	0.0000	2.2123	1.1367	0.0000	1.1367			0.0000			0.0000
Off-Road	2.4307	23.9596	18.7822	0.0415		1.0230	1.0230		0.9471	0.9471	0.0000	3,974.8536	3,974.8536	1.2365		4,005.7669
Total	2.4307	23.9596	18.7822	0.0415	2.2123	1.0230	3.2353	1.1367	0.9471	2.0837	0.0000	3,974.8536	3,974.8536	1.2365		4,005.7669

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.23 Backfill Tunnel Pit 2 - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5700e-003	0.1990	0.0425	6.0000e-004	0.0132	5.2000e-004	0.0137	3.6200e-003	4.9000e-004	4.1100e-003		64.7899	64.7899	4.5100e-003		64.9027
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	5.5700e-003	0.1990	0.0425	6.0000e-004	0.0132	5.2000e-004	0.0137	3.6200e-003	4.9000e-004	4.1100e-003		64.7899	64.7899	4.5100e-003		64.9027

3.24 Dewatering - Tunnel Pit 3 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	16.9585	250.4309	95.8302	0.3979		5.5148	5.5148		5.4672	5.4672		44,389.3969	44,389.3969	2.1321		44,442.7000
Total	16.9585	250.4309	95.8302	0.3979	1.5908	5.5148	7.1055	0.1718	5.4672	5.6389		44,389.3969	44,389.3969	2.1321		44,442.7000

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.24 Dewatering - Tunnel Pit 3 - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7158	0.0000	0.7158	0.0773	0.0000	0.0773			0.0000			0.0000
Off-Road	16.9585	250.4309	95.8302	0.3979		5.5148	5.5148		5.4672	5.4672	0.0000	44,389.3968	44,389.3968	2.1321		44,442.7000
Total	16.9585	250.4309	95.8302	0.3979	0.7158	5.5148	6.2306	0.0773	5.4672	5.5445	0.0000	44,389.3968	44,389.3968	2.1321		44,442.7000

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.24 Dewatering - Tunnel Pit 3 - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.25 Excavating Tunnel Pit 4 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9181	0.0000	4.9181	2.5262	0.0000	2.5262			0.0000			0.0000
Off-Road	2.4307	23.9596	18.7822	0.0415		1.0230	1.0230		0.9471	0.9471		3,974.8536	3,974.8536	1.2365		4,005.7669
Total	2.4307	23.9596	18.7822	0.0415	4.9181	1.0230	5.9410	2.5262	0.9471	3.4733		3,974.8536	3,974.8536	1.2365		4,005.7669

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.25 Excavating Tunnel Pit 4 - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0117	0.4178	0.0892	1.2600e-003	0.0277	1.0800e-003	0.0288	7.6000e-003	1.0400e-003	8.6300e-003		136.0588	136.0588	9.4800e-003		136.2958
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0117	0.4178	0.0892	1.2600e-003	0.0277	1.0800e-003	0.0288	7.6000e-003	1.0400e-003	8.6300e-003		136.0588	136.0588	9.4800e-003		136.2958

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2131	0.0000	2.2131	1.1368	0.0000	1.1368			0.0000			0.0000
Off-Road	2.4307	23.9596	18.7822	0.0415		1.0230	1.0230		0.9471	0.9471	0.0000	3,974.8536	3,974.8536	1.2365		4,005.7669
Total	2.4307	23.9596	18.7822	0.0415	2.2131	1.0230	3.2361	1.1368	0.9471	2.0838	0.0000	3,974.8536	3,974.8536	1.2365		4,005.7669

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.25 Excavating Tunnel Pit 4 - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0117	0.4178	0.0892	1.2600e-003	0.0277	1.0800e-003	0.0288	7.6000e-003	1.0400e-003	8.6300e-003		136.0588	136.0588	9.4800e-003		136.2958
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0117	0.4178	0.0892	1.2600e-003	0.0277	1.0800e-003	0.0288	7.6000e-003	1.0400e-003	8.6300e-003		136.0588	136.0588	9.4800e-003		136.2958

3.26 Erect MTBM Van Buren Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4013	10.4557	10.7035	0.0179		0.4746	0.4746		0.4520	0.4520		1,615.2030	1,615.2030	0.3956		1,625.0920
Total	1.4013	10.4557	10.7035	0.0179		0.4746	0.4746		0.4520	0.4520		1,615.2030	1,615.2030	0.3956		1,625.0920

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.26 Erect MTBM Van Buren Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4013	10.4557	10.7035	0.0179		0.4746	0.4746		0.4520	0.4520	0.0000	1,615.2030	1,615.2030	0.3956		1,625.0920
Total	1.4013	10.4557	10.7035	0.0179		0.4746	0.4746		0.4520	0.4520	0.0000	1,615.2030	1,615.2030	0.3956		1,625.0920

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.26 Erect MTBM Van Buren Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659

3.27 Excavation and Jacking Van Buren Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	2.5783	23.8707	14.6917	0.0438		0.9601	0.9601		0.8889	0.8889		4,356.9253	4,356.9253	1.1844		4,386.5351
Total	2.5783	23.8707	14.6917	0.0438	4.9143	0.9601	5.8743	2.5256	0.8889	3.4145		4,356.9253	4,356.9253	1.1844		4,386.5351

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.27 Excavation and Jacking Van Buren Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2114	0.0000	2.2114	1.1365	0.0000	1.1365			0.0000			0.0000
Off-Road	2.5783	23.8707	14.6917	0.0438		0.9601	0.9601		0.8889	0.8889	0.0000	4,356.925 3	4,356.925 3	1.1844		4,386.535 1
Total	2.5783	23.8707	14.6917	0.0438	2.2114	0.9601	3.1715	1.1365	0.8889	2.0255	0.0000	4,356.925 3	4,356.925 3	1.1844		4,386.535 1

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.27 Excavation and Jacking Van Buren Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.28 Remove MTBM Van Buren Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4013	10.4557	10.7035	0.0179		0.4746	0.4746		0.4520	0.4520		1,615.2030	1,615.2030	0.3956		1,625.0920
Total	1.4013	10.4557	10.7035	0.0179		0.4746	0.4746		0.4520	0.4520		1,615.2030	1,615.2030	0.3956		1,625.0920

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.28 Remove MTBM Van Buren Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4013	10.4557	10.7035	0.0179		0.4746	0.4746		0.4520	0.4520	0.0000	1,615.2030	1,615.2030	0.3956		1,625.0920
Total	1.4013	10.4557	10.7035	0.0179		0.4746	0.4746		0.4520	0.4520	0.0000	1,615.2030	1,615.2030	0.3956		1,625.0920

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.28 Remove MTBM Van Buren Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659

3.29 Install Pipeline Van Buren Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9445	24.3798	19.6498	0.0536		0.9909	0.9909		0.9251	0.9251		5,249.4958	5,249.4958	1.4087		5,284.7141
Total	2.9445	24.3798	19.6498	0.0536		0.9909	0.9909		0.9251	0.9251		5,249.4958	5,249.4958	1.4087		5,284.7141

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.29 Install Pipeline Van Buren Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9445	24.3798	19.6498	0.0536		0.9909	0.9909		0.9251	0.9251	0.0000	5,249.4958	5,249.4958	1.4087		5,284.7141
Total	2.9445	24.3798	19.6498	0.0536		0.9909	0.9909		0.9251	0.9251	0.0000	5,249.4958	5,249.4958	1.4087		5,284.7141

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.29 Install Pipeline Van Buren Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659

3.30 Annular Grout Van Buren Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7966	21.0775	18.5620	0.0437		0.9141	0.9141		0.8619	0.8619		4,229.6032	4,229.6032	1.0164		4,255.0128
Total	2.7966	21.0775	18.5620	0.0437		0.9141	0.9141		0.8619	0.8619		4,229.6032	4,229.6032	1.0164		4,255.0128

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.30 Annular Grout Van Buren Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7966	21.0775	18.5620	0.0437		0.9141	0.9141		0.8619	0.8619	0.0000	4,229.6032	4,229.6032	1.0164		4,255.0128
Total	2.7966	21.0775	18.5620	0.0437		0.9141	0.9141		0.8619	0.8619	0.0000	4,229.6032	4,229.6032	1.0164		4,255.0128

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.30 Annular Grout Van Buren Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0496	1.7201	0.4064	4.8000e-003	0.1216	3.1600e-003	0.1248	0.0350	3.0200e-003	0.0380		513.1123	513.1123	0.0301		513.8659

3.31 Backfill Tunnel Pit 3 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9221	0.0000	4.9221	2.5268	0.0000	2.5268			0.0000			0.0000
Off-Road	2.4307	23.9596	18.7822	0.0415		1.0230	1.0230		0.9471	0.9471		3,974.8536	3,974.8536	1.2365		4,005.7669
Total	2.4307	23.9596	18.7822	0.0415	4.9221	1.0230	5.9451	2.5268	0.9471	3.4739		3,974.8536	3,974.8536	1.2365		4,005.7669

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.31 Backfill Tunnel Pit 3 - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0242	0.8655	0.1848	2.6000e-003	0.0574	2.2400e-003	0.0597	0.0157	2.1500e-003	0.0179		281.8362	281.8362	0.0196		282.3269
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0242	0.8655	0.1848	2.6000e-003	0.0574	2.2400e-003	0.0597	0.0157	2.1500e-003	0.0179		281.8362	281.8362	0.0196		282.3269

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2149	0.0000	2.2149	1.1371	0.0000	1.1371			0.0000			0.0000
Off-Road	2.4307	23.9596	18.7822	0.0415		1.0230	1.0230		0.9471	0.9471	0.0000	3,974.8536	3,974.8536	1.2365		4,005.7669
Total	2.4307	23.9596	18.7822	0.0415	2.2149	1.0230	3.2379	1.1371	0.9471	2.0841	0.0000	3,974.8536	3,974.8536	1.2365		4,005.7669

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.31 Backfill Tunnel Pit 3 - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0242	0.8655	0.1848	2.6000e-003	0.0574	2.2400e-003	0.0597	0.0157	2.1500e-003	0.0179		281.8362	281.8362	0.0196		282.3269
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0242	0.8655	0.1848	2.6000e-003	0.0574	2.2400e-003	0.0597	0.0157	2.1500e-003	0.0179		281.8362	281.8362	0.0196		282.3269

3.32 Backfill Tunnel Pit 4 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9177	0.0000	4.9177	2.5261	0.0000	2.5261			0.0000			0.0000
Off-Road	2.4307	23.9596	18.7822	0.0415		1.0230	1.0230		0.9471	0.9471		3,974.8536	3,974.8536	1.2365		4,005.7669
Total	2.4307	23.9596	18.7822	0.0415	4.9177	1.0230	5.9406	2.5261	0.9471	3.4732		3,974.8536	3,974.8536	1.2365		4,005.7669

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.32 Backfill Tunnel Pit 4 - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0106	0.3780	0.0807	1.1400e-003	0.0251	9.8000e-004	0.0261	6.8700e-003	9.4000e-004	7.8100e-003		123.1009	123.1009	8.5700e-003		123.3152
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0106	0.3780	0.0807	1.1400e-003	0.0251	9.8000e-004	0.0261	6.8700e-003	9.4000e-004	7.8100e-003		123.1009	123.1009	8.5700e-003		123.3152

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2130	0.0000	2.2130	1.1368	0.0000	1.1368			0.0000			0.0000
Off-Road	2.4307	23.9596	18.7822	0.0415		1.0230	1.0230		0.9471	0.9471	0.0000	3,974.8536	3,974.8536	1.2365		4,005.7669
Total	2.4307	23.9596	18.7822	0.0415	2.2130	1.0230	3.2359	1.1368	0.9471	2.0838	0.0000	3,974.8536	3,974.8536	1.2365		4,005.7669

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.32 Backfill Tunnel Pit 4 - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0106	0.3780	0.0807	1.1400e-003	0.0251	9.8000e-004	0.0261	6.8700e-003	9.4000e-004	7.8100e-003		123.1009	123.1009	8.5700e-003		123.3152
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0106	0.3780	0.0807	1.1400e-003	0.0251	9.8000e-004	0.0261	6.8700e-003	9.4000e-004	7.8100e-003		123.1009	123.1009	8.5700e-003		123.3152

3.33 Site Restoration - Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9412	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500		1,709.6892	1,709.6892	0.5419		1,723.2356
Paving	0.0498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9909	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500		1,709.6892	1,709.6892	0.5419		1,723.2356

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.33 Site Restoration - Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9412	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500	0.0000	1,709.689 2	1,709.689 2	0.5419		1,723.235 6
Paving	0.0498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9909	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500	0.0000	1,709.689 2	1,709.689 2	0.5419		1,723.235 6

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.33 Site Restoration - Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.34 Site Restoration - Other/Demobilization - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	1.3784	15.6673	10.0558	0.0245	1.5908	0.5952	2.1859	0.1718	0.5476	0.7193		2,375.1569	2,375.1569	0.7682		2,394.3613

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.34 Site Restoration - Other/Demobilization - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7158	0.0000	0.7158	0.0773	0.0000	0.0773			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	1.3784	15.6673	10.0558	0.0245	0.7158	0.5952	1.3110	0.0773	0.5476	0.6249	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

3.34 Site Restoration - Other/Demobilization - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

PVP All Tunnel 2020 - South Coast AQMD Air District, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Other Non-Asphalt Surfaces	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0510	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0270
Unmitigated	0.0510	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0270

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	8.8300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0410					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-003	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0270
Total	0.0510	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0270

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	8.8300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0410					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-003	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0270
Total	0.0510	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0270

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

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South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	8.25	1000sqft	0.19	8,250.00	0
Other Asphalt Surfaces	0.01	1000sqft	0.00	14.00	0
Other Non-Asphalt Surfaces	64.00	1000sqft	1.47	64,000.00	0
Other Non-Asphalt Surfaces	11.50	1000sqft	0.26	11,500.00	0
Other Non-Asphalt Surfaces	32.10	1000sqft	0.74	32,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Modeling for all-tunnel construction of PVP alignment. Note: Installation of temp. dewatering facilities (i.e., pipelines, treatment facilities), modeled separately.

Land Use - Non-Asphalt surfaces are contractor work/storage areas around tunnel pits 1, 2, 3. Asphalt surfaces are contractor work storage pits around tunnel pit 4. 14 sf asphalt surface is well removal and capping (assuming 8 inch overdrilling).

Construction Phase - Schedule adjusted to match anticipated schedule (~16 weeks per tunnel segment).

Off-road Equipment - Equipment list per client. Pumps and generators added to separate phase.

Off-road Equipment - Equipment list per client. Pumps and generators added to separate phase.

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Off-road Equipment - Equipment list per client. Generators added to separate phase.

Off-road Equipment - Equipment list per client.

Off-road Equipment - Equipment list per client.

Off-road Equipment - Equipment list per client.

Off-road Equipment - Equipment list per client.

Off-road Equipment - Assumes 3 pumps at Tunnel Pit 3 and two at Tunnel Pit 4. One 1200 kW generator at Tunnel Pit 3 and one 60 kW generator at Tunnel Pit 3.

Off-road Equipment - Generators assume one 1200 kW generator at Tunnel Pit 1 based on Kohler KM1200U generator, and one 60 kW generator at Tunnel Pit 2 based on Generac SD060 diesel generator.

Off-road Equipment - Based on one 1200 kW generator at tunnel pit 3 and one 60 kW generator at Tunnel Pits 2 and 3, each.

Off-road Equipment - Generator sets included in dewatering phase.

Off-road Equipment - Equipment usage per client. Generators added in separate phase.

Off-road Equipment - Equipment usage and HP and LF from client. Generators added to separate phase.

Off-road Equipment - Equipment updated per client equipment list.

Off-road Equipment - Equipment updated per client equipment list.

Off-road Equipment - Equipment list per client.

Off-road Equipment - Equipment list per client.

Off-road Equipment - Construction equipment list per client. Pumps added to dewatering phases

Off-road Equipment - Equipment list per client. Pumps added to separate dewatering phase.

Off-road Equipment - Equipment list per client. Pumps added to separate phase.

Off-road Equipment - One 100 kW generator to power construction trailers. Based on Generac SD100 industrial generator set specs.

Off-road Equipment - Equipment list per client. Generators and pumps added to generator and pumping phases.

Off-road Equipment - Equipment list per client. Generators added to separate phase.

Off-road Equipment - Equipment list per client. Generators added to separate phase.

Off-road Equipment - Equipment usage and HP and LF from client. Generators added to separate phase.

Off-road Equipment - Equipment usage, HP and LF from client. Generators added to separate phase.

Off-road Equipment - Equipment hours and LF per client. Generators added to dewatering/generator phases

Off-road Equipment - Demobilization remains at default.

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Off-road Equipment - Paving remains at default.

Off-road Equipment - Adjusted per equipment list.

Off-road Equipment - Equipment updated per client equipment list.

Off-road Equipment - Equipment updated per client equipment list.

Off-road Equipment - Equipment updated per client equipment list.

Grading - Quantities obtained from PVP Update powerpoint dated 4/6/2020. Assumes all excavated quantities exported offsite and required backfill imported.

Trips and VMT - Assumes up to 10 workers per day, per 2005 EIR. Workers added to Generators - Trailers phase, as it spans entire construction period. Haul trips based on soil volumes and assumed 16 cy truck cap. Assumes disposal at Badlands Landfill (15.1 mi).

Energy Use -

Construction Off-road Equipment Mitigation - Water exposed area applied pursuant to SCAQMD Rule 403.

Table Name	Column Name	Default Value	New Value
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tblConstructionPhase	NumDays	220.00	5.00
tblConstructionPhase	NumDays	220.00	5.00
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tblConstructionPhase	NumDays	220.00	5.00
tblConstructionPhase	NumDays	6.00	16.00
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tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	6.00	34.00

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tblConstructionPhase	NumDays	6.00	23.00
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tblGrading	MaterialExported	0.00	13,319.00
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tblGrading	MaterialExported	0.00	6,336.00

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tblGrading	MaterialExported	0.00	431.00
tblGrading	MaterialImported	0.00	3,047.00
tblGrading	MaterialImported	0.00	362.00
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tblOffRoadEquipment	HorsePower	16.00	350.00
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tblOffRoadEquipment	HorsePower	172.00	300.00
tblOffRoadEquipment	HorsePower	172.00	700.00
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tblOffRoadEquipment	UsageHours	8.00	2.80
tblOffRoadEquipment	UsageHours	8.00	2.80
tblOffRoadEquipment	UsageHours	8.00	6.00
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tblOffRoadEquipment	UsageHours	8.00	2.80
tblOffRoadEquipment	UsageHours	8.00	2.80
tblOffRoadEquipment	UsageHours	8.00	6.00
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tblOffRoadEquipment	UsageHours	8.00	2.80
tblOffRoadEquipment	UsageHours	8.00	2.80

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tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
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tblOffRoadEquipment	UsageHours	7.00	4.30
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tblOffRoadEquipment	UsageHours	7.00	8.00
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tblOffRoadEquipment	UsageHours	8.00	4.20
tblOffRoadEquipment	UsageHours	8.00	4.20
tblTripsAndVMT	HaulingTripLength	20.00	15.10
tblTripsAndVMT	HaulingTripLength	20.00	15.10
tblTripsAndVMT	HaulingTripLength	20.00	15.10
tblTripsAndVMT	HaulingTripLength	20.00	15.10

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tblTripsAndVMT	HaulingTripLength	20.00	15.10
tblTripsAndVMT	HaulingTripLength	20.00	15.10
tblTripsAndVMT	HaulingTripLength	20.00	15.10
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tblTripsAndVMT	HaulingTripNumber	381.00	190.00
tblTripsAndVMT	HaulingTripNumber	1,665.00	832.00
tblTripsAndVMT	HaulingTripNumber	45.00	23.00
tblTripsAndVMT	HaulingTripNumber	84.00	42.00
tblTripsAndVMT	HaulingTripNumber	173.00	87.00
tblTripsAndVMT	HaulingTripNumber	76.00	38.00
tblTripsAndVMT	HaulingTripNumber	792.00	396.00
tblTripsAndVMT	HaulingTripNumber	54.00	27.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	49.00	0.00
tblTripsAndVMT	WorkerTripNumber	49.00	0.00
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tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	49.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	49.00	0.00
tblTripsAndVMT	WorkerTripNumber	49.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00

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tblTripsAndVMT	WorkerTripNumber	25.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	49.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
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tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	28.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	49.00	0.00

2.0 Emissions Summary

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0510	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0270
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0510	1.1000e-004	0.0118	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005	0.0000	0.0270

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0510	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0270
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0510	1.1000e-004	0.0118	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005	0.0000	0.0270

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	SP Tunnel Pit 1	Site Preparation	4/21/2021	5/11/2021	5	15	
2	Generator - Trailers	Site Preparation	4/21/2021	8/26/2022	7	493	
3	SP Tunnel Pit 2	Site Preparation	5/12/2021	5/13/2021	5	2	
4	SP Tunnel Pit 3	Site Preparation	5/14/2021	5/25/2021	5	8	
5	SP Tunnel Pit 4	Site Preparation	5/26/2021	5/27/2021	5	2	
6	Dewatering - Tunnel Pits 1 and 2	Site Preparation	5/28/2021	10/15/2021	7	141	
7	Excavating Tunnel Pit 1	Grading	5/28/2021	7/8/2021	5	30	
8	Excavating Tunnel Pit 2	Grading	7/9/2021	8/10/2021	5	23	
9	Erect MTBM 215 Tunnel	Building Construction	7/22/2021	7/28/2021	5	5	
10	Excavation and Jacking 215 Tunnel	Grading	7/29/2021	8/19/2021	5	16	
11	Remove MTBM215 Tunnel	Building Construction	8/20/2021	8/25/2021	5	4	
12	Install Pipeline 215 Tunnel	Building Construction	8/23/2021	8/30/2021	5	6	
13	Annular Grout 215 Tunnel	Building Construction	8/30/2021	9/3/2021	5	5	
14	Backfill Tunnel Pit 1	Grading	9/6/2021	10/15/2021	5	30	
15	Dewatering - Tunnel Pits 2 and 3	Site Preparation	10/15/2021	2/26/2022	7	135	
16	Excavating Tunnel Pit 3	Grading	10/15/2021	11/11/2021	5	20	
17	Erect MTBM MARB Tunnel	Building Construction	10/28/2021	11/3/2021	5	5	
18	Excavation and Jacking MARB Tunnel	Grading	11/4/2021	12/21/2021	5	34	

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19	Remove MTBM MARB Tunnel	Building Construction	12/22/2021	12/27/2021	5	4
20	Install Pipeline MARB Tunnel	Building Construction	12/23/2021	1/11/2022	5	14
21	Annular Grout MARB Tunnel	Building Construction	1/11/2022	1/26/2022	5	12
22	Backfill Tunnel Pit 2	Grading	1/27/2022	2/28/2022	5	23
23	Dewatering - Tunnel Pit 3	Site Preparation	2/26/2022	6/15/2022	7	110
24	Excavating Tunnel Pit 4	Grading	3/1/2022	3/28/2022	5	20
25	Erect MTBM Van Buren Tunnel	Building Construction	3/12/2022	3/18/2022	5	5
26	Excavation and Jacking Van Buren Tunnel	Grading	3/21/2022	4/21/2022	5	24
27	Remove MTBM Van Buren Tunnel	Building Construction	4/23/2022	4/28/2022	5	4
28	Install Pipeline Van Buren Tunnel	Building Construction	4/26/2022	5/9/2022	5	10
29	Annular Grout Van Buren Tunnel	Building Construction	5/7/2022	5/18/2022	5	8
30	Backfill Tunnel Pit 3	Grading	5/19/2022	6/15/2022	5	20
31	Backfill Tunnel Pit 4	Grading	6/16/2022	7/13/2022	5	20
32	Site Restoration - Paving	Paving	7/14/2022	7/27/2022	5	10
33	Site Restoration - Other/Demobilization	Site Preparation	7/28/2022	8/26/2022	5	22

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 2.66

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
SP Tunnel Pit 1	Graders	1	8.00	187	0.41
SP Tunnel Pit 1	Other Construction Equipment	1	2.10	600	0.75
SP Tunnel Pit 1	Rubber Tired Dozers	1	7.00	247	0.40

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SP Tunnel Pit 1	Scrapers	0	8.00	367	0.48
SP Tunnel Pit 1	Tractors/Loaders/Backhoes	1	7.00	97	0.37
SP Tunnel Pit 2	Graders	1	8.00	187	0.41
SP Tunnel Pit 2	Other Construction Equipment	1	2.10	600	0.75
SP Tunnel Pit 2	Rubber Tired Dozers	1	7.00	247	0.40
SP Tunnel Pit 2	Tractors/Loaders/Backhoes	1	8.00	97	0.37
SP Tunnel Pit 3	Graders	1	8.00	187	0.41
SP Tunnel Pit 3	Other Construction Equipment	1	2.10	600	0.75
SP Tunnel Pit 3	Rubber Tired Dozers	1	8.00	247	0.40
SP Tunnel Pit 3	Tractors/Loaders/Backhoes	1	8.00	97	0.37
SP Tunnel Pit 4	Graders	1	8.00	187	0.41
SP Tunnel Pit 4	Other Construction Equipment	1	2.10	600	0.75
SP Tunnel Pit 4	Rubber Tired Dozers	1	8.00	247	0.40
SP Tunnel Pit 4	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Excavating Tunnel Pit 1	Cranes	1	2.10	300	0.75
Excavating Tunnel Pit 1	Dumpers/Tenders	1	2.10	350	0.75
Excavating Tunnel Pit 1	Excavators	1	4.30	150	0.75
Excavating Tunnel Pit 1	Graders	1	6.00	187	0.41
Excavating Tunnel Pit 1	Other Construction Equipment	1	4.30	300	0.75
Excavating Tunnel Pit 1	Rollers	1	2.10	75	0.75
Excavating Tunnel Pit 1	Rubber Tired Dozers	1	6.00	247	0.40
Excavating Tunnel Pit 1	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Excavating Tunnel Pit 1	Welders	1	6.40	40	0.75
Excavating Tunnel Pit 2	Cranes	1	2.10	300	0.75
Excavating Tunnel Pit 2	Dumpers/Tenders	1	2.10	350	0.75
Excavating Tunnel Pit 2	Excavators	1	4.30	150	0.75
Excavating Tunnel Pit 2	Graders	1	6.00	187	0.41

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Excavating Tunnel Pit 2	Other Construction Equipment	1	4.30	300	0.75
Excavating Tunnel Pit 2	Rollers	1	2.10	75	0.75
Excavating Tunnel Pit 2	Rubber Tired Dozers	1	6.00	247	0.40
Excavating Tunnel Pit 2	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Excavating Tunnel Pit 2	Welders	1	6.40	40	0.75
Erect MTBM 215 Tunnel	Cranes	1	2.80	300	0.75
Erect MTBM 215 Tunnel	Forklifts	1	6.00	89	0.20
Erect MTBM 215 Tunnel	Generator Sets	0	8.00	84	0.74
Erect MTBM 215 Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Erect MTBM 215 Tunnel	Welders	3	8.00	46	0.45
Excavation and Jacking 215 Tunnel	Air Compressors	1	2.80	300	0.75
Excavation and Jacking 215 Tunnel	Dumpers/Tenders	1	2.80	350	0.75
Excavation and Jacking 215 Tunnel	Graders	1	6.00	187	0.41
Excavation and Jacking 215 Tunnel	Other Construction Equipment	1	5.60	700	0.75
Excavation and Jacking 215 Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Excavation and Jacking 215 Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Excavation and Jacking 215 Tunnel	Other Material Handling Equipment	1	2.80	200	0.75
Excavation and Jacking 215 Tunnel	Rubber Tired Dozers	1	6.00	247	0.40
Excavation and Jacking 215 Tunnel	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Remove MTBM215 Tunnel	Cranes	1	2.80	300	0.75
Remove MTBM215 Tunnel	Forklifts	1	6.00	89	0.20
Remove MTBM215 Tunnel	Generator Sets	0	8.00	84	0.74
Remove MTBM215 Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Remove MTBM215 Tunnel	Welders	3	8.00	46	0.45
Install Pipeline 215 Tunnel	Air Compressors	1	2.80	300	0.75
Install Pipeline 215 Tunnel	Cranes	1	2.80	300	0.75
Install Pipeline 215 Tunnel	Dumpers/Tenders	1	2.80	350	0.75

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Install Pipeline 215 Tunnel	Forklifts	1	6.00	89	0.20
Install Pipeline 215 Tunnel	Generator Sets	0	8.00	84	0.74
Install Pipeline 215 Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Install Pipeline 215 Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Install Pipeline 215 Tunnel	Other Material Handling Equipment	1	2.80	200	0.75
Install Pipeline 215 Tunnel	Other Material Handling Equipment	2	1.40	400	0.75
Install Pipeline 215 Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Install Pipeline 215 Tunnel	Welders	2	4.20	40	0.75
Annular Grout 215 Tunnel	Air Compressors	1	2.80	300	0.75
Annular Grout 215 Tunnel	Cement and Mortar Mixers	3	0.50	750	0.75
Annular Grout 215 Tunnel	Cranes	1	6.00	231	0.29
Annular Grout 215 Tunnel	Forklifts	1	6.00	89	0.20
Annular Grout 215 Tunnel	Generator Sets	0	8.00	84	0.74
Annular Grout 215 Tunnel	Other General Industrial Equipment	1	2.80	100	0.75
Annular Grout 215 Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Annular Grout 215 Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Annular Grout 215 Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Annular Grout 215 Tunnel	Welders	3	8.00	46	0.45
Backfill Tunnel Pit 1	Cranes	1	2.10	300	0.75
Backfill Tunnel Pit 1	Dumpers/Tenders	1	2.10	350	0.75
Backfill Tunnel Pit 1	Excavators	1	4.30	150	0.75
Backfill Tunnel Pit 1	Graders	1	6.00	187	0.41
Backfill Tunnel Pit 1	Other Construction Equipment	1	4.30	300	0.75
Backfill Tunnel Pit 1	Rollers	1	2.10	75	0.75
Backfill Tunnel Pit 1	Rubber Tired Dozers	1	6.00	247	0.40
Backfill Tunnel Pit 1	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Backfill Tunnel Pit 1	Welders	1	6.40	40	0.75

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Excavating Tunnel Pit 3	Cranes	1	2.10	300	0.75
Excavating Tunnel Pit 3	Dumpers/Tenders	1	2.10	350	0.75
Excavating Tunnel Pit 3	Excavators	1	4.30	150	0.75
Excavating Tunnel Pit 3	Graders	1	6.00	187	0.41
Excavating Tunnel Pit 3	Other Construction Equipment	1	4.30	300	0.75
Excavating Tunnel Pit 3	Rollers	1	2.10	75	0.75
Excavating Tunnel Pit 3	Rubber Tired Dozers	1	6.00	247	0.40
Excavating Tunnel Pit 3	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Excavating Tunnel Pit 3	Welders	1	6.40	40	0.75
Erect MTBM MARB Tunnel	Cranes	1	2.80	300	0.75
Erect MTBM MARB Tunnel	Forklifts	1	6.00	89	0.20
Erect MTBM MARB Tunnel	Generator Sets	0	8.00	84	0.74
Erect MTBM MARB Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Erect MTBM MARB Tunnel	Welders	3	8.00	46	0.45
Excavation and Jacking MARB Tunnel	Air Compressors	1	2.80	300	0.75
Excavation and Jacking MARB Tunnel	Dumpers/Tenders	1	2.80	350	0.75
Excavation and Jacking MARB Tunnel	Graders	1	6.00	187	0.41
Excavation and Jacking MARB Tunnel	Other Construction Equipment	1	5.60	700	0.75
Excavation and Jacking MARB Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Excavation and Jacking MARB Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Excavation and Jacking MARB Tunnel	Other Material Handling Equipment	1	2.80	200	0.75
Excavation and Jacking MARB Tunnel	Rubber Tired Dozers	1	6.00	247	0.40
Excavation and Jacking MARB Tunnel	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Remove MTBM MARB Tunnel	Cranes	1	2.80	300	0.75
Remove MTBM MARB Tunnel	Forklifts	1	6.00	89	0.20
Remove MTBM MARB Tunnel	Generator Sets	0	8.00	84	0.74
Remove MTBM MARB Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37

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Remove MTBM MARB Tunnel	Welders	3	8.00	46	0.45
Install Pipeline MARB Tunnel	Air Compressors	1	2.80	300	0.75
Install Pipeline MARB Tunnel	Cranes	1	2.80	300	0.75
Install Pipeline MARB Tunnel	Dumpers/Tenders	1	2.80	350	0.75
Install Pipeline MARB Tunnel	Forklifts	1	6.00	89	0.20
Install Pipeline MARB Tunnel	Generator Sets	0	8.00	84	0.74
Install Pipeline MARB Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Install Pipeline MARB Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Install Pipeline MARB Tunnel	Other Material Handling Equipment	1	2.80	200	0.75
Install Pipeline MARB Tunnel	Other Material Handling Equipment	2	1.40	400	0.75
Install Pipeline MARB Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Install Pipeline MARB Tunnel	Welders	2	4.20	40	0.75
Annular Grout MARB Tunnel	Air Compressors	1	2.80	300	0.75
Annular Grout MARB Tunnel	Cement and Mortar Mixers	3	0.50	750	0.75
Annular Grout MARB Tunnel	Cranes	1	6.00	231	0.29
Annular Grout MARB Tunnel	Forklifts	1	6.00	89	0.20
Annular Grout MARB Tunnel	Generator Sets	0	8.00	84	0.74
Annular Grout MARB Tunnel	Other General Industrial Equipment	1	2.80	100	0.75
Annular Grout MARB Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Annular Grout MARB Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Annular Grout MARB Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Annular Grout MARB Tunnel	Welders	3	8.00	46	0.45
Backfill Tunnel Pit 2	Cranes	1	2.10	300	0.75
Backfill Tunnel Pit 2	Dumpers/Tenders	1	2.10	350	0.75
Backfill Tunnel Pit 2	Excavators	1	4.30	150	0.75
Backfill Tunnel Pit 2	Graders	1	6.00	187	0.41
Backfill Tunnel Pit 2	Other Construction Equipment	1	4.30	300	0.75

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Backfill Tunnel Pit 2	Rollers	1	2.10	75	0.75
Backfill Tunnel Pit 2	Rubber Tired Dozers	1	6.00	247	0.40
Backfill Tunnel Pit 2	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Backfill Tunnel Pit 2	Welders	1	6.40	40	0.75
Excavating Tunnel Pit 4	Cranes	1	2.10	300	0.75
Excavating Tunnel Pit 4	Dumpers/Tenders	1	2.10	350	0.75
Excavating Tunnel Pit 4	Excavators	1	4.30	150	0.75
Excavating Tunnel Pit 4	Graders	1	6.00	187	0.41
Excavating Tunnel Pit 4	Other Construction Equipment	1	4.30	300	0.75
Excavating Tunnel Pit 4	Rollers	1	2.10	75	0.75
Excavating Tunnel Pit 4	Rubber Tired Dozers	1	6.00	247	0.40
Excavating Tunnel Pit 4	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Excavating Tunnel Pit 4	Welders	1	6.40	40	0.75
Erect MTBM Van Buren Tunnel	Cranes	1	2.80	300	0.75
Erect MTBM Van Buren Tunnel	Forklifts	1	6.00	89	0.20
Erect MTBM Van Buren Tunnel	Generator Sets	0	8.00	84	0.74
Erect MTBM Van Buren Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Erect MTBM Van Buren Tunnel	Welders	3	8.00	46	0.45
Excavation and Jacking Van Buren Tunnel	Air Compressors	1	2.80	300	0.75
Excavation and Jacking Van Buren Tunnel	Dumpers/Tenders	1	2.80	350	0.75
Excavation and Jacking Van Buren Tunnel	Graders	1	6.00	187	0.41
Excavation and Jacking Van Buren Tunnel	Other Construction Equipment	1	5.60	700	0.75
Excavation and Jacking Van Buren Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Excavation and Jacking Van Buren Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Excavation and Jacking Van Buren Tunnel	Other Material Handling Equipment	1	2.30	200	0.75

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Excavation and Jacking Van Buren Tunnel	Rubber Tired Dozers	1	6.00	247	0.40
Excavation and Jacking Van Buren Tunnel	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Remove MTBM Van Buren Tunnel	Cranes	1	2.80	300	0.75
Remove MTBM Van Buren Tunnel	Forklifts	1	6.00	89	0.20
Remove MTBM Van Buren Tunnel	Generator Sets	0	8.00	84	0.74
Remove MTBM Van Buren Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Remove MTBM Van Buren Tunnel	Welders	3	8.00	46	0.45
Install Pipeline Van Buren Tunnel	Air Compressors	1	2.80	300	0.75
Install Pipeline Van Buren Tunnel	Cranes	1	2.80	300	0.75
Install Pipeline Van Buren Tunnel	Dumpers/Tenders	1	2.80	350	0.75
Install Pipeline Van Buren Tunnel	Forklifts	1	6.00	89	0.20
Install Pipeline Van Buren Tunnel	Generator Sets	0	8.00	84	0.74
Install Pipeline Van Buren Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Install Pipeline Van Buren Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Install Pipeline Van Buren Tunnel	Other Material Handling Equipment	1	2.80	200	0.75
Install Pipeline Van Buren Tunnel	Other Material Handling Equipment	2	1.40	400	0.75
Install Pipeline Van Buren Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Install Pipeline Van Buren Tunnel	Welders	2	4.20	40	0.75
Annular Grout Van Buren Tunnel	Air Compressors	1	2.80	300	0.75
Annular Grout Van Buren Tunnel	Cement and Mortar Mixers	3	0.50	750	0.75
Annular Grout Van Buren Tunnel	Cranes	1	6.00	231	0.29
Annular Grout Van Buren Tunnel	Forklifts	1	6.00	89	0.20
Annular Grout Van Buren Tunnel	Generator Sets	0	8.00	84	0.45
Annular Grout Van Buren Tunnel	Other General Industrial Equipment	1	2.80	100	0.75
Annular Grout Van Buren Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Annular Grout Van Buren Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Annular Grout Van Buren Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37

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Annular Grout Van Buren Tunnel	Welders	3	8.00	46	0.45
Backfill Tunnel Pit 3	Cranes	1	2.10	300	0.75
Backfill Tunnel Pit 3	Dumpers/Tenders	1	2.10	350	0.75
Backfill Tunnel Pit 3	Excavators	1	4.30	150	0.75
Backfill Tunnel Pit 3	Graders	1	6.00	187	0.41
Backfill Tunnel Pit 3	Other Construction Equipment	1	4.30	300	0.75
Backfill Tunnel Pit 3	Rollers	1	2.10	75	0.75
Backfill Tunnel Pit 3	Rubber Tired Dozers	1	6.00	247	0.40
Backfill Tunnel Pit 3	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Backfill Tunnel Pit 3	Welders	1	6.40	40	0.75
Backfill Tunnel Pit 4	Cranes	1	2.10	300	0.75
Backfill Tunnel Pit 4	Dumpers/Tenders	1	2.10	350	0.75
Backfill Tunnel Pit 4	Excavators	1	4.30	150	0.75
Backfill Tunnel Pit 4	Graders	1	6.00	187	0.41
Backfill Tunnel Pit 4	Other Construction Equipment	1	4.30	300	0.75
Backfill Tunnel Pit 4	Rollers	1	2.10	75	0.75
Backfill Tunnel Pit 4	Rubber Tired Dozers	1	6.00	247	0.40
Backfill Tunnel Pit 4	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Backfill Tunnel Pit 4	Welders	1	6.40	40	0.75
Site Restoration - Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Site Restoration - Paving	Pavers	1	8.00	130	0.42
Site Restoration - Paving	Paving Equipment	1	8.00	132	0.36
Site Restoration - Paving	Rollers	2	8.00	80	0.38
Site Restoration - Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Restoration - Other/Demobilization	Graders	1	8.00	187	0.41
Site Restoration - Other/Demobilization	Scrapers	1	8.00	367	0.48
Site Restoration - Other/Demobilization	Tractors/Loaders/Backhoes	1	7.00	97	0.37

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Dewatering - Tunnel Pits 1 and 2	Generator Sets	1	24.00	1770	0.75
Dewatering - Tunnel Pits 1 and 2	Generator Sets	1	24.00	93	0.75
Dewatering - Tunnel Pits 1 and 2	Pumps	6	24.00	5	0.75
Dewatering - Tunnel Pits 2 and 3	Generator Sets	1	24.00	1770	0.75
Dewatering - Tunnel Pits 2 and 3	Generator Sets	2	24.00	93	0.75
Dewatering - Tunnel Pits 2 and 3	Pumps	6	24.00	5	0.75
Dewatering - Tunnel Pit 3	Generator Sets	1	24.00	1770	0.75
Dewatering - Tunnel Pit 3	Generator Sets	1	24.00	93	0.75
Dewatering - Tunnel Pit 3	Pumps	5	24.00	5	0.75
Generator - Trailers	Generator Sets	1	24.00	152	0.75
Generator - Trailers	Scrapers	0	8.00	367	0.48
Generator - Trailers	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Dewatering - Tunnel Pits 2 and 3	Graders	1	8.00	187	0.41
Generator - Trailers	Graders	1	8.00	187	0.41
Dewatering - Tunnel Pit 3	Graders	1	8.00	187	0.41
Dewatering - Tunnel Pits 1 and 2	Graders	1	8.00	187	0.41
Dewatering - Tunnel Pits 2 and 3	Scrapers	1	8.00	367	0.48
Dewatering - Tunnel Pit 3	Scrapers	1	8.00	367	0.48
SP Tunnel Pit 2	Scrapers	1	8.00	367	0.48
SP Tunnel Pit 3	Scrapers	1	8.00	367	0.48
SP Tunnel Pit 4	Scrapers	1	8.00	367	0.48
Dewatering - Tunnel Pits 1 and 2	Scrapers	1	8.00	367	0.48
Dewatering - Tunnel Pits 2 and 3	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Dewatering - Tunnel Pit 3	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Dewatering - Tunnel Pits 1 and 2	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
SP Tunnel Pit 1	4	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
SP Tunnel Pit 2	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
SP Tunnel Pit 3	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
SP Tunnel Pit 4	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavating Tunnel Pit 1	9	0.00	0.00	396.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Excavating Tunnel Pit 2	9	0.00	0.00	27.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Erect MTBM 215 Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavation and Jacking 215 Tunnel	9	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Remove MTBM 215 Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Install Pipeline 215 Tunnel	12	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Annular Grout 215 Tunnel	13	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Backfill Tunnel Pit 1	9	0.00	0.00	190.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Excavating Tunnel Pit 3	9	0.00	0.00	832.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Erect MTBM MARB Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavation and Jacking MARB Tunnel	9	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Remove MTBM MARB Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Install Pipeline MARB Tunnel	12	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Annular Grout MARB Tunnel	13	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Backfill Tunnel Pit 2	9	0.00	0.00	23.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Excavating Tunnel Pit 4	9	0.00	0.00	42.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Erect MTBM Van Buren Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavation and Jacking Van Buren Tunnel	9	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Remove MTBM Van Buren Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Install Pipeline Van Buren Tunnel	12	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Annular Grout Van Buren Tunnel	13	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

Backfill Tunnel Pit 3	9	0.00	0.00	87.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Backfill Tunnel Pit 4	9	0.00	0.00	38.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Site Restoration - Paving	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Restoration - Other/Demobilization	3	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dewatering - Tunnel Pits 1 and 2	11	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dewatering - Tunnel Pits 2 and 3	12	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dewatering - Tunnel Pit 3	10	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Generator - Trailers	2	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 SP Tunnel Pit 1 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.5324	17.1833	7.2780	0.0168		0.7514	0.7514		0.6913	0.6913		1,628.9049	1,628.9049	0.5268		1,642.0754
Total	1.5324	17.1833	7.2780	0.0168	5.7996	0.7514	6.5510	2.9537	0.6913	3.6450		1,628.9049	1,628.9049	0.5268		1,642.0754

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.2 SP Tunnel Pit 1 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	1.5324	17.1833	7.2780	0.0168		0.7514	0.7514		0.6913	0.6913	0.0000	1,628.9049	1,628.9049	0.5268		1,642.0754
Total	1.5324	17.1833	7.2780	0.0168	2.6098	0.7514	3.3612	1.3292	0.6913	2.0205	0.0000	1,628.9049	1,628.9049	0.5268		1,642.0754

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.2 SP Tunnel Pit 1 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.3 Generator - Trailers - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.9187	18.3984	19.4103	0.0428		0.7366	0.7366		0.7216	0.7216		4,069.577 0	4,069.577 0	0.3342		4,077.932 1
Total	1.9187	18.3984	19.4103	0.0428	0.0000	0.7366	0.7366	0.0000	0.7216	0.7216		4,069.577 0	4,069.577 0	0.3342		4,077.932 1

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.3 Generator - Trailers - 2021
Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0461	0.0300	0.3385	1.0400e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.5668	103.5668	2.7800e-003		103.6362
Total	0.0461	0.0300	0.3385	1.0400e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.5668	103.5668	2.7800e-003		103.6362

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.9187	18.3984	19.4103	0.0428		0.7366	0.7366		0.7216	0.7216	0.0000	4,069.5770	4,069.5770	0.3342		4,077.9321
Total	1.9187	18.3984	19.4103	0.0428	0.0000	0.7366	0.7366	0.0000	0.7216	0.7216	0.0000	4,069.5770	4,069.5770	0.3342		4,077.9321

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.3 Generator - Trailers - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0461	0.0300	0.3385	1.0400e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.5668	103.5668	2.7800e-003		103.6362
Total	0.0461	0.0300	0.3385	1.0400e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.5668	103.5668	2.7800e-003		103.6362

3.3 Generator - Trailers - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.7782	16.2959	19.3709	0.0428		0.6558	0.6558		0.6424	0.6424		4,069.1718	4,069.1718	0.3280		4,077.3728
Total	1.7782	16.2959	19.3709	0.0428	0.0000	0.6558	0.6558	0.0000	0.6424	0.6424		4,069.1718	4,069.1718	0.3280		4,077.3728

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.3 Generator - Trailers - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0434	0.0271	0.3125	1.0000e-003	0.1118	8.0000e-004	0.1126	0.0296	7.4000e-004	0.0304		99.8537	99.8537	2.5100e-003		99.9163
Total	0.0434	0.0271	0.3125	1.0000e-003	0.1118	8.0000e-004	0.1126	0.0296	7.4000e-004	0.0304		99.8537	99.8537	2.5100e-003		99.9163

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.7782	16.2959	19.3709	0.0428		0.6558	0.6558		0.6424	0.6424	0.0000	4,069.1718	4,069.1718	0.3280		4,077.3728
Total	1.7782	16.2959	19.3709	0.0428	0.0000	0.6558	0.6558	0.0000	0.6424	0.6424	0.0000	4,069.1718	4,069.1718	0.3280		4,077.3728

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.3 Generator - Trailers - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0434	0.0271	0.3125	1.0000e-003	0.1118	8.0000e-004	0.1126	0.0296	7.4000e-004	0.0304		99.8537	99.8537	2.5100e-003		99.9163
Total	0.0434	0.0271	0.3125	1.0000e-003	0.1118	8.0000e-004	0.1126	0.0296	7.4000e-004	0.0304		99.8537	99.8537	2.5100e-003		99.9163

3.4 SP Tunnel Pit 2 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.4853	28.1230	14.5652	0.0324		1.1818	1.1818		1.0872	1.0872		3,134.4289	3,134.4289	1.0137		3,159.7723
Total	2.4853	28.1230	14.5652	0.0324	5.7996	1.1818	6.9813	2.9537	1.0872	4.0409		3,134.4289	3,134.4289	1.0137		3,159.7723

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.4 SP Tunnel Pit 2 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	2.4853	28.1230	14.5652	0.0324		1.1818	1.1818		1.0872	1.0872	0.0000	3,134.4289	3,134.4289	1.0137		3,159.7723
Total	2.4853	28.1230	14.5652	0.0324	2.6098	1.1818	3.7916	1.3292	1.0872	2.4164	0.0000	3,134.4289	3,134.4289	1.0137		3,159.7723

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.4 SP Tunnel Pit 2 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.5 SP Tunnel Pit 3 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.6161	29.4945	15.0699	0.0334		1.2483	1.2483		1.1484	1.1484		3,237.8479	3,237.8479	1.0472		3,264.0275
Total	2.6161	29.4945	15.0699	0.0334	6.5523	1.2483	7.8006	3.3675	1.1484	4.5159		3,237.8479	3,237.8479	1.0472		3,264.0275

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.5 SP Tunnel Pit 3 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	2.6161	29.4945	15.0699	0.0334		1.2483	1.2483		1.1484	1.1484	0.0000	3,237.8479	3,237.8479	1.0472		3,264.0275
Total	2.6161	29.4945	15.0699	0.0334	2.9486	1.2483	4.1969	1.5154	1.1484	2.6638	0.0000	3,237.8479	3,237.8479	1.0472		3,264.0275

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.5 SP Tunnel Pit 3 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.6 SP Tunnel Pit 4 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.6161	29.4945	15.0699	0.0334		1.2483	1.2483		1.1484	1.1484		3,237.8479	3,237.8479	1.0472		3,264.0275
Total	2.6161	29.4945	15.0699	0.0334	6.5523	1.2483	7.8006	3.3675	1.1484	4.5159		3,237.8479	3,237.8479	1.0472		3,264.0275

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.6 SP Tunnel Pit 4 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	2.6161	29.4945	15.0699	0.0334		1.2483	1.2483		1.1484	1.1484	0.0000	3,237.8479	3,237.8479	1.0472		3,264.0275
Total	2.6161	29.4945	15.0699	0.0334	2.9486	1.2483	4.1969	1.5154	1.1484	2.6638	0.0000	3,237.8479	3,237.8479	1.0472		3,264.0275

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.6 SP Tunnel Pit 4 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000

3.7 Dewatering - Tunnel Pits 1 and 2 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	18.2021	265.7913	97.6071	0.3978		6.1833	6.1833		6.1271	6.1271		44,387.19 34	44,387.19 34	2.2090		44,442.41 86
Total	18.2021	265.7913	97.6071	0.3978	1.5908	6.1833	7.7740	0.1718	6.1271	6.2989		44,387.19 34	44,387.19 34	2.2090		44,442.41 86

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.7 Dewatering - Tunnel Pits 1 and 2 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7158	0.0000	0.7158	0.0773	0.0000	0.0773			0.0000			0.0000
Off-Road	18.2021	265.7913	97.6071	0.3978		6.1833	6.1833		6.1271	6.1271	0.0000	44,387.19 33	44,387.19 33	2.2090		44,442.41 86
Total	18.2021	265.7913	97.6071	0.3978	0.7158	6.1833	6.8991	0.0773	6.1271	6.2044	0.0000	44,387.19 33	44,387.19 33	2.2090		44,442.41 86

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.7 Dewatering - Tunnel Pits 1 and 2 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.8 Excavating Tunnel Pit 1 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9381	0.0000	4.9381	2.5292	0.0000	2.5292			0.0000			0.0000
Off-Road	2.8005	28.4894	19.8117	0.0415		1.2349	1.2349		1.1430	1.1430		3,973.8857	3,973.8857	1.2388		4,004.8546
Total	2.8005	28.4894	19.8117	0.0415	4.9381	1.2349	6.1731	2.5292	1.1430	3.6722		3,973.8857	3,973.8857	1.2388		4,004.8546

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.8 Excavating Tunnel Pit 1 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0802	2.8460	0.6208	7.8100e-003	0.1742	8.0900e-003	0.1823	0.0478	7.7400e-003	0.0555		845.0566	845.0566	0.0640		846.6562
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0802	2.8460	0.6208	7.8100e-003	0.1742	8.0900e-003	0.1823	0.0478	7.7400e-003	0.0555		845.0566	845.0566	0.0640		846.6562

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2222	0.0000	2.2222	1.1382	0.0000	1.1382			0.0000			0.0000
Off-Road	2.8005	28.4894	19.8117	0.0415		1.2349	1.2349		1.1430	1.1430	0.0000	3,973.8857	3,973.8857	1.2388		4,004.8546
Total	2.8005	28.4894	19.8117	0.0415	2.2222	1.2349	3.4571	1.1382	1.1430	2.2812	0.0000	3,973.8857	3,973.8857	1.2388		4,004.8546

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.8 Excavating Tunnel Pit 1 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0802	2.8460	0.6208	7.8100e-003	0.1742	8.0900e-003	0.1823	0.0478	7.7400e-003	0.0555		845.0566	845.0566	0.0640		846.6562
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0802	2.8460	0.6208	7.8100e-003	0.1742	8.0900e-003	0.1823	0.0478	7.7400e-003	0.0555		845.0566	845.0566	0.0640		846.6562

3.9 Excavating Tunnel Pit 2 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9166	0.0000	4.9166	2.5260	0.0000	2.5260			0.0000			0.0000
Off-Road	2.8005	28.4894	19.8117	0.0415		1.2349	1.2349		1.1430	1.1430		3,973.8857	3,973.8857	1.2388		4,004.8546
Total	2.8005	28.4894	19.8117	0.0415	4.9166	1.2349	6.1515	2.5260	1.1430	3.6690		3,973.8857	3,973.8857	1.2388		4,004.8546

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.9 Excavating Tunnel Pit 2 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.1400e-003	0.2531	0.0552	6.9000e-004	0.0155	7.2000e-004	0.0162	4.2500e-003	6.9000e-004	4.9300e-003		75.1533	75.1533	5.6900e-003		75.2955
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	7.1400e-003	0.2531	0.0552	6.9000e-004	0.0155	7.2000e-004	0.0162	4.2500e-003	6.9000e-004	4.9300e-003		75.1533	75.1533	5.6900e-003		75.2955

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2125	0.0000	2.2125	1.1367	0.0000	1.1367			0.0000			0.0000
Off-Road	2.8005	28.4894	19.8117	0.0415		1.2349	1.2349		1.1430	1.1430	0.0000	3,973.8857	3,973.8857	1.2388		4,004.8546
Total	2.8005	28.4894	19.8117	0.0415	2.2125	1.2349	3.4474	1.1367	1.1430	2.2797	0.0000	3,973.8857	3,973.8857	1.2388		4,004.8546

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.9 Excavating Tunnel Pit 2 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.1400e-003	0.2531	0.0552	6.9000e-004	0.0155	7.2000e-004	0.0162	4.2500e-003	6.9000e-004	4.9300e-003		75.1533	75.1533	5.6900e-003		75.2955
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	7.1400e-003	0.2531	0.0552	6.9000e-004	0.0155	7.2000e-004	0.0162	4.2500e-003	6.9000e-004	4.9300e-003		75.1533	75.1533	5.6900e-003		75.2955

3.10 Erect MTBM 215 Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342		1,615.3303	1,615.3303	0.4022		1,625.3846
Total	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342		1,615.3303	1,615.3303	0.4022		1,625.3846

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.10 Erect MTBM 215 Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342	0.0000	1,615.3303	1,615.3303	0.4022		1,625.3846
Total	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342	0.0000	1,615.3303	1,615.3303	0.4022		1,625.3846

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.10 Erect MTBM 215 Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861

3.11 Excavation and Jacking 215 Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	2.9973	28.7049	15.5959	0.0446		1.1907	1.1907		1.1019	1.1019		4,435.1283	4,435.1283	1.2111		4,465.4052
Total	2.9973	28.7049	15.5959	0.0446	4.9143	1.1907	6.1049	2.5256	1.1019	3.6275		4,435.1283	4,435.1283	1.2111		4,465.4052

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.11 Excavation and Jacking 215 Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2114	0.0000	2.2114	1.1365	0.0000	1.1365			0.0000			0.0000
Off-Road	2.9973	28.7049	15.5959	0.0446		1.1907	1.1907		1.1019	1.1019	0.0000	4,435.128 3	4,435.128 3	1.2111		4,465.405 2
Total	2.9973	28.7049	15.5959	0.0446	2.2114	1.1907	3.4021	1.1365	1.1019	2.2384	0.0000	4,435.128 3	4,435.128 3	1.2111		4,465.405 2

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.11 Excavation and Jacking 215 Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.12 Remove MTBM215 Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342		1,615.3303	1,615.3303	0.4022		1,625.3846
Total	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342		1,615.3303	1,615.3303	0.4022		1,625.3846

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.12 Remove MTBM215 Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342	0.0000	1,615.3303	1,615.3303	0.4022		1,625.3846
Total	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342	0.0000	1,615.3303	1,615.3303	0.4022		1,625.3846

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.12 Remove MTBM215 Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861

3.13 Install Pipeline 215 Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2878	28.5759	20.5218	0.0536		1.1918	1.1918		1.1119	1.1119		5,249.6231	5,249.6231	1.4135		5,284.9605
Total	3.2878	28.5759	20.5218	0.0536		1.1918	1.1918		1.1119	1.1119		5,249.6231	5,249.6231	1.4135		5,284.9605

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.13 Install Pipeline 215 Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2878	28.5759	20.5218	0.0536		1.1918	1.1918		1.1119	1.1119	0.0000	5,249.6231	5,249.6231	1.4135		5,284.9605
Total	3.2878	28.5759	20.5218	0.0536		1.1918	1.1918		1.1119	1.1119	0.0000	5,249.6231	5,249.6231	1.4135		5,284.9605

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.13 Install Pipeline 215 Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861

3.14 Annular Grout 215 Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1015	23.7116	18.9986	0.0437		1.0930	1.0930		1.0298	1.0298		4,229.2803	4,229.2803	1.0242		4,254.8863
Total	3.1015	23.7116	18.9986	0.0437		1.0930	1.0930		1.0298	1.0298		4,229.2803	4,229.2803	1.0242		4,254.8863

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.14 Annular Grout 215 Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1015	23.7116	18.9986	0.0437		1.0930	1.0930		1.0298	1.0298	0.0000	4,229.2803	4,229.2803	1.0242		4,254.8863
Total	3.1015	23.7116	18.9986	0.0437		1.0930	1.0930		1.0298	1.0298	0.0000	4,229.2803	4,229.2803	1.0242		4,254.8863

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.14 Annular Grout 215 Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861

3.15 Backfill Tunnel Pit 1 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9257	0.0000	4.9257	2.5274	0.0000	2.5274			0.0000			0.0000
Off-Road	2.8005	28.4894	19.8117	0.0415		1.2349	1.2349		1.1430	1.1430		3,973.8857	3,973.8857	1.2388		4,004.8546
Total	2.8005	28.4894	19.8117	0.0415	4.9257	1.2349	6.1607	2.5274	1.1430	3.6704		3,973.8857	3,973.8857	1.2388		4,004.8546

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.15 Backfill Tunnel Pit 1 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0385	1.3655	0.2979	3.7500e-003	0.0836	3.8800e-003	0.0875	0.0229	3.7100e-003	0.0266		405.4565	405.4565	0.0307		406.2240
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0385	1.3655	0.2979	3.7500e-003	0.0836	3.8800e-003	0.0875	0.0229	3.7100e-003	0.0266		405.4565	405.4565	0.0307		406.2240

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2166	0.0000	2.2166	1.1373	0.0000	1.1373			0.0000			0.0000
Off-Road	2.8005	28.4894	19.8117	0.0415		1.2349	1.2349		1.1430	1.1430	0.0000	3,973.8857	3,973.8857	1.2388		4,004.8546
Total	2.8005	28.4894	19.8117	0.0415	2.2166	1.2349	3.4515	1.1373	1.1430	2.2803	0.0000	3,973.8857	3,973.8857	1.2388		4,004.8546

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.15 Backfill Tunnel Pit 1 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0385	1.3655	0.2979	3.7500e-003	0.0836	3.8800e-003	0.0875	0.0229	3.7100e-003	0.0266		405.4565	405.4565	0.0307		406.2240
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0385	1.3655	0.2979	3.7500e-003	0.0836	3.8800e-003	0.0875	0.0229	3.7100e-003	0.0266		405.4565	405.4565	0.0307		406.2240

3.16 Dewatering - Tunnel Pits 2 and 3 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	19.4052	276.4496	110.0110	0.4200		6.7479	6.7479		6.6918	6.6918		46,484.5226	46,484.5226	2.3160		46,542.4235
Total	19.4052	276.4496	110.0110	0.4200	1.5908	6.7479	8.3387	0.1718	6.6918	6.8635		46,484.5226	46,484.5226	2.3160		46,542.4235

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.16 Dewatering - Tunnel Pits 2 and 3 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7158	0.0000	0.7158	0.0773	0.0000	0.0773			0.0000			0.0000
Off-Road	19.4052	276.4496	110.0110	0.4200		6.7479	6.7479		6.6918	6.6918	0.0000	46,484.52 25	46,484.52 25	2.3160		46,542.42 34
Total	19.4052	276.4496	110.0110	0.4200	0.7158	6.7479	7.4638	0.0773	6.6918	6.7691	0.0000	46,484.52 25	46,484.52 25	2.3160		46,542.42 34

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.16 Dewatering - Tunnel Pits 2 and 3 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.16 Dewatering - Tunnel Pits 2 and 3 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	18.0693	260.2883	108.2045	0.4200		6.0093	6.0093		5.9617	5.9617		46,486.72 61	46,486.72 61	2.2318		46,542.52 03
Total	18.0693	260.2883	108.2045	0.4200	1.5908	6.0093	7.6001	0.1718	5.9617	6.1335		46,486.72 61	46,486.72 61	2.2318		46,542.52 03

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.16 Dewatering - Tunnel Pits 2 and 3 - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7158	0.0000	0.7158	0.0773	0.0000	0.0773			0.0000			0.0000
Off-Road	18.0693	260.2883	108.2045	0.4200		6.0093	6.0093		5.9617	5.9617	0.0000	46,486.72 60	46,486.72 60	2.2318		46,542.52 03
Total	18.0693	260.2883	108.2045	0.4200	0.7158	6.0093	6.7252	0.0773	5.9617	6.0390	0.0000	46,486.72 60	46,486.72 60	2.2318		46,542.52 03

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.16 Dewatering - Tunnel Pits 2 and 3 - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.17 Excavating Tunnel Pit 3 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9896	0.0000	4.9896	2.5370	0.0000	2.5370			0.0000			0.0000
Off-Road	2.8005	28.4894	19.8117	0.0415		1.2349	1.2349		1.1430	1.1430		3,973.8857	3,973.8857	1.2388		4,004.8546
Total	2.8005	28.4894	19.8117	0.0415	4.9896	1.2349	6.2245	2.5370	1.1430	3.6800		3,973.8857	3,973.8857	1.2388		4,004.8546

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.17 Excavating Tunnel Pit 3 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2529	8.9692	1.9565	0.0246	0.5490	0.0255	0.5745	0.1505	0.0244	0.1749		2,663.2088	2,663.2088	0.2016		2,668.2499
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.2529	8.9692	1.9565	0.0246	0.5490	0.0255	0.5745	0.1505	0.0244	0.1749		2,663.2088	2,663.2088	0.2016		2,668.2499

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2453	0.0000	2.2453	1.1417	0.0000	1.1417			0.0000			0.0000
Off-Road	2.8005	28.4894	19.8117	0.0415		1.2349	1.2349		1.1430	1.1430	0.0000	3,973.8857	3,973.8857	1.2388		4,004.8546
Total	2.8005	28.4894	19.8117	0.0415	2.2453	1.2349	3.4802	1.1417	1.1430	2.2847	0.0000	3,973.8857	3,973.8857	1.2388		4,004.8546

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.17 Excavating Tunnel Pit 3 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2529	8.9692	1.9565	0.0246	0.5490	0.0255	0.5745	0.1505	0.0244	0.1749		2,663.2088	2,663.2088	0.2016		2,668.2499
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.2529	8.9692	1.9565	0.0246	0.5490	0.0255	0.5745	0.1505	0.0244	0.1749		2,663.2088	2,663.2088	0.2016		2,668.2499

3.18 Erect MTBM MARB Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342		1,615.3303	1,615.3303	0.4022		1,625.3846
Total	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342		1,615.3303	1,615.3303	0.4022		1,625.3846

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.18 Erect MTBM MARB Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342	0.0000	1,615.3303	1,615.3303	0.4022		1,625.3846
Total	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342	0.0000	1,615.3303	1,615.3303	0.4022		1,625.3846

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.18 Erect MTBM MARB Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861

3.19 Excavation and Jacking MARB Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	2.9973	28.7049	15.5959	0.0446		1.1907	1.1907		1.1019	1.1019		4,435.1283	4,435.1283	1.2111		4,465.4052
Total	2.9973	28.7049	15.5959	0.0446	4.9143	1.1907	6.1049	2.5256	1.1019	3.6275		4,435.1283	4,435.1283	1.2111		4,465.4052

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.19 Excavation and Jacking MARB Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2114	0.0000	2.2114	1.1365	0.0000	1.1365			0.0000			0.0000
Off-Road	2.9973	28.7049	15.5959	0.0446		1.1907	1.1907		1.1019	1.1019	0.0000	4,435.128 3	4,435.128 3	1.2111		4,465.405 2
Total	2.9973	28.7049	15.5959	0.0446	2.2114	1.1907	3.4021	1.1365	1.1019	2.2384	0.0000	4,435.128 3	4,435.128 3	1.2111		4,465.405 2

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.19 Excavation and Jacking MARB Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.20 Remove MTBM MARB Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342		1,615.3303	1,615.3303	0.4022		1,625.3846
Total	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342		1,615.3303	1,615.3303	0.4022		1,625.3846

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.20 Remove MTBM MARB Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342	0.0000	1,615.3303	1,615.3303	0.4022		1,625.3846
Total	1.5556	11.6143	11.1280	0.0179		0.5613	0.5613		0.5342	0.5342	0.0000	1,615.3303	1,615.3303	0.4022		1,625.3846

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.20 Remove MTBM MARB Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861

3.21 Install Pipeline MARB Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2878	28.5759	20.5218	0.0536		1.1918	1.1918		1.1119	1.1119		5,249.6231	5,249.6231	1.4135		5,284.9605
Total	3.2878	28.5759	20.5218	0.0536		1.1918	1.1918		1.1119	1.1119		5,249.6231	5,249.6231	1.4135		5,284.9605

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.21 Install Pipeline MARB Tunnel - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2878	28.5759	20.5218	0.0536		1.1918	1.1918		1.1119	1.1119	0.0000	5,249.6231	5,249.6231	1.4135		5,284.9605
Total	3.2878	28.5759	20.5218	0.0536		1.1918	1.1918		1.1119	1.1119	0.0000	5,249.6231	5,249.6231	1.4135		5,284.9605

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.21 Install Pipeline MARB Tunnel - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0557	1.8064	0.4812	4.7100e-003	0.1216	3.7700e-003	0.1254	0.0350	3.6000e-003	0.0386		502.6454	502.6454	0.0336		503.4861

3.21 Install Pipeline MARB Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9445	24.3798	19.6498	0.0536		0.9909	0.9909		0.9251	0.9251		5,249.4958	5,249.4958	1.4087		5,284.7141
Total	2.9445	24.3798	19.6498	0.0536		0.9909	0.9909		0.9251	0.9251		5,249.4958	5,249.4958	1.4087		5,284.7141

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.21 Install Pipeline MARB Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9445	24.3798	19.6498	0.0536		0.9909	0.9909		0.9251	0.9251	0.0000	5,249.4958	5,249.4958	1.4087		5,284.7141
Total	2.9445	24.3798	19.6498	0.0536		0.9909	0.9909		0.9251	0.9251	0.0000	5,249.4958	5,249.4958	1.4087		5,284.7141

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.21 Install Pipeline MARB Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779

3.22 Annular Grout MARB Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7966	21.0775	18.5620	0.0437		0.9141	0.9141		0.8619	0.8619		4,229.6032	4,229.6032	1.0164		4,255.0128
Total	2.7966	21.0775	18.5620	0.0437		0.9141	0.9141		0.8619	0.8619		4,229.6032	4,229.6032	1.0164		4,255.0128

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.22 Annular Grout MARB Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7966	21.0775	18.5620	0.0437		0.9141	0.9141		0.8619	0.8619	0.0000	4,229.6032	4,229.6032	1.0164		4,255.0128
Total	2.7966	21.0775	18.5620	0.0437		0.9141	0.9141		0.8619	0.8619	0.0000	4,229.6032	4,229.6032	1.0164		4,255.0128

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.22 Annular Grout MARB Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779

3.23 Backfill Tunnel Pit 2 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9163	0.0000	4.9163	2.5259	0.0000	2.5259			0.0000			0.0000
Off-Road	2.4307	23.9596	18.7822	0.0415		1.0230	1.0230		0.9471	0.9471		3,974.8536	3,974.8536	1.2365		4,005.7669
Total	2.4307	23.9596	18.7822	0.0415	4.9163	1.0230	5.9392	2.5259	0.9471	3.4730		3,974.8536	3,974.8536	1.2365		4,005.7669

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.23 Backfill Tunnel Pit 2 - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.7700e-003	0.2000	0.0463	5.8000e-004	0.0132	5.3000e-004	0.0137	3.6200e-003	5.0000e-004	4.1200e-003		63.2608	63.2608	4.7400e-003		63.3791
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	5.7700e-003	0.2000	0.0463	5.8000e-004	0.0132	5.3000e-004	0.0137	3.6200e-003	5.0000e-004	4.1200e-003		63.2608	63.2608	4.7400e-003		63.3791

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2123	0.0000	2.2123	1.1367	0.0000	1.1367			0.0000			0.0000
Off-Road	2.4307	23.9596	18.7822	0.0415		1.0230	1.0230		0.9471	0.9471	0.0000	3,974.8536	3,974.8536	1.2365		4,005.7669
Total	2.4307	23.9596	18.7822	0.0415	2.2123	1.0230	3.2353	1.1367	0.9471	2.0837	0.0000	3,974.8536	3,974.8536	1.2365		4,005.7669

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.23 Backfill Tunnel Pit 2 - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.7700e-003	0.2000	0.0463	5.8000e-004	0.0132	5.3000e-004	0.0137	3.6200e-003	5.0000e-004	4.1200e-003		63.2608	63.2608	4.7400e-003		63.3791
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	5.7700e-003	0.2000	0.0463	5.8000e-004	0.0132	5.3000e-004	0.0137	3.6200e-003	5.0000e-004	4.1200e-003		63.2608	63.2608	4.7400e-003		63.3791

3.24 Dewatering - Tunnel Pit 3 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	16.9585	250.4309	95.8302	0.3979		5.5148	5.5148		5.4672	5.4672		44,389.3969	44,389.3969	2.1321		44,442.7000
Total	16.9585	250.4309	95.8302	0.3979	1.5908	5.5148	7.1055	0.1718	5.4672	5.6389		44,389.3969	44,389.3969	2.1321		44,442.7000

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.24 Dewatering - Tunnel Pit 3 - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7158	0.0000	0.7158	0.0773	0.0000	0.0773			0.0000			0.0000
Off-Road	16.9585	250.4309	95.8302	0.3979		5.5148	5.5148		5.4672	5.4672	0.0000	44,389.3968	44,389.3968	2.1321		44,442.7000
Total	16.9585	250.4309	95.8302	0.3979	0.7158	5.5148	6.2306	0.0773	5.4672	5.5445	0.0000	44,389.3968	44,389.3968	2.1321		44,442.7000

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.24 Dewatering - Tunnel Pit 3 - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.25 Excavating Tunnel Pit 4 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9181	0.0000	4.9181	2.5262	0.0000	2.5262			0.0000			0.0000
Off-Road	2.4307	23.9596	18.7822	0.0415		1.0230	1.0230		0.9471	0.9471		3,974.8536	3,974.8536	1.2365		4,005.7669
Total	2.4307	23.9596	18.7822	0.0415	4.9181	1.0230	5.9410	2.5262	0.9471	3.4733		3,974.8536	3,974.8536	1.2365		4,005.7669

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.25 Excavating Tunnel Pit 4 - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0121	0.4200	0.0972	1.2300e-003	0.0277	1.1100e-003	0.0288	7.6000e-003	1.0600e-003	8.6500e-003		132.8476	132.8476	9.9400e-003		133.0962
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0121	0.4200	0.0972	1.2300e-003	0.0277	1.1100e-003	0.0288	7.6000e-003	1.0600e-003	8.6500e-003		132.8476	132.8476	9.9400e-003		133.0962

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2131	0.0000	2.2131	1.1368	0.0000	1.1368			0.0000			0.0000
Off-Road	2.4307	23.9596	18.7822	0.0415		1.0230	1.0230		0.9471	0.9471	0.0000	3,974.8536	3,974.8536	1.2365		4,005.7669
Total	2.4307	23.9596	18.7822	0.0415	2.2131	1.0230	3.2361	1.1368	0.9471	2.0838	0.0000	3,974.8536	3,974.8536	1.2365		4,005.7669

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.25 Excavating Tunnel Pit 4 - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0121	0.4200	0.0972	1.2300e-003	0.0277	1.1100e-003	0.0288	7.6000e-003	1.0600e-003	8.6500e-003		132.8476	132.8476	9.9400e-003		133.0962
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0121	0.4200	0.0972	1.2300e-003	0.0277	1.1100e-003	0.0288	7.6000e-003	1.0600e-003	8.6500e-003		132.8476	132.8476	9.9400e-003		133.0962

3.26 Erect MTBM Van Buren Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4013	10.4557	10.7035	0.0179		0.4746	0.4746		0.4520	0.4520		1,615.2030	1,615.2030	0.3956		1,625.0920
Total	1.4013	10.4557	10.7035	0.0179		0.4746	0.4746		0.4520	0.4520		1,615.2030	1,615.2030	0.3956		1,625.0920

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.26 Erect MTBM Van Buren Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4013	10.4557	10.7035	0.0179		0.4746	0.4746		0.4520	0.4520	0.0000	1,615.2030	1,615.2030	0.3956		1,625.0920
Total	1.4013	10.4557	10.7035	0.0179		0.4746	0.4746		0.4520	0.4520	0.0000	1,615.2030	1,615.2030	0.3956		1,625.0920

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.26 Erect MTBM Van Buren Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779

3.27 Excavation and Jacking Van Buren Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	2.5783	23.8707	14.6917	0.0438		0.9601	0.9601		0.8889	0.8889		4,356.9253	4,356.9253	1.1844		4,386.5351
Total	2.5783	23.8707	14.6917	0.0438	4.9143	0.9601	5.8743	2.5256	0.8889	3.4145		4,356.9253	4,356.9253	1.1844		4,386.5351

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.27 Excavation and Jacking Van Buren Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2114	0.0000	2.2114	1.1365	0.0000	1.1365			0.0000			0.0000
Off-Road	2.5783	23.8707	14.6917	0.0438		0.9601	0.9601		0.8889	0.8889	0.0000	4,356.925 3	4,356.925 3	1.1844		4,386.535 1
Total	2.5783	23.8707	14.6917	0.0438	2.2114	0.9601	3.1715	1.1365	0.8889	2.0255	0.0000	4,356.925 3	4,356.925 3	1.1844		4,386.535 1

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.27 Excavation and Jacking Van Buren Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.28 Remove MTBM Van Buren Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4013	10.4557	10.7035	0.0179		0.4746	0.4746		0.4520	0.4520		1,615.2030	1,615.2030	0.3956		1,625.0920
Total	1.4013	10.4557	10.7035	0.0179		0.4746	0.4746		0.4520	0.4520		1,615.2030	1,615.2030	0.3956		1,625.0920

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.28 Remove MTBM Van Buren Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4013	10.4557	10.7035	0.0179		0.4746	0.4746		0.4520	0.4520	0.0000	1,615.2030	1,615.2030	0.3956		1,625.0920
Total	1.4013	10.4557	10.7035	0.0179		0.4746	0.4746		0.4520	0.4520	0.0000	1,615.2030	1,615.2030	0.3956		1,625.0920

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.28 Remove MTBM Van Buren Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779

3.29 Install Pipeline Van Buren Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9445	24.3798	19.6498	0.0536		0.9909	0.9909		0.9251	0.9251		5,249.4958	5,249.4958	1.4087		5,284.7141
Total	2.9445	24.3798	19.6498	0.0536		0.9909	0.9909		0.9251	0.9251		5,249.4958	5,249.4958	1.4087		5,284.7141

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.29 Install Pipeline Van Buren Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9445	24.3798	19.6498	0.0536		0.9909	0.9909		0.9251	0.9251	0.0000	5,249.4958	5,249.4958	1.4087		5,284.7141
Total	2.9445	24.3798	19.6498	0.0536		0.9909	0.9909		0.9251	0.9251	0.0000	5,249.4958	5,249.4958	1.4087		5,284.7141

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.29 Install Pipeline Van Buren Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779

3.30 Annular Grout Van Buren Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7966	21.0775	18.5620	0.0437		0.9141	0.9141		0.8619	0.8619		4,229.6032	4,229.6032	1.0164		4,255.0128
Total	2.7966	21.0775	18.5620	0.0437		0.9141	0.9141		0.8619	0.8619		4,229.6032	4,229.6032	1.0164		4,255.0128

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.30 Annular Grout Van Buren Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7966	21.0775	18.5620	0.0437		0.9141	0.9141		0.8619	0.8619	0.0000	4,229.6032	4,229.6032	1.0164		4,255.0128
Total	2.7966	21.0775	18.5620	0.0437		0.9141	0.9141		0.8619	0.8619	0.0000	4,229.6032	4,229.6032	1.0164		4,255.0128

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.30 Annular Grout Van Buren Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0522	1.7133	0.4550	4.6600e-003	0.1216	3.2700e-003	0.1249	0.0350	3.1200e-003	0.0381		498.1690	498.1690	0.0324		498.9779

3.31 Backfill Tunnel Pit 3 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9221	0.0000	4.9221	2.5268	0.0000	2.5268			0.0000			0.0000
Off-Road	2.4307	23.9596	18.7822	0.0415		1.0230	1.0230		0.9471	0.9471		3,974.8536	3,974.8536	1.2365		4,005.7669
Total	2.4307	23.9596	18.7822	0.0415	4.9221	1.0230	5.9451	2.5268	0.9471	3.4739		3,974.8536	3,974.8536	1.2365		4,005.7669

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.31 Backfill Tunnel Pit 3 - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0251	0.8700	0.2014	2.5400e-003	0.0574	2.2900e-003	0.0597	0.0157	2.1900e-003	0.0179		275.1843	275.1843	0.0206		275.6993
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0251	0.8700	0.2014	2.5400e-003	0.0574	2.2900e-003	0.0597	0.0157	2.1900e-003	0.0179		275.1843	275.1843	0.0206		275.6993

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2149	0.0000	2.2149	1.1371	0.0000	1.1371			0.0000			0.0000
Off-Road	2.4307	23.9596	18.7822	0.0415		1.0230	1.0230		0.9471	0.9471	0.0000	3,974.8536	3,974.8536	1.2365		4,005.7669
Total	2.4307	23.9596	18.7822	0.0415	2.2149	1.0230	3.2379	1.1371	0.9471	2.0841	0.0000	3,974.8536	3,974.8536	1.2365		4,005.7669

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.31 Backfill Tunnel Pit 3 - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0251	0.8700	0.2014	2.5400e-003	0.0574	2.2900e-003	0.0597	0.0157	2.1900e-003	0.0179		275.1843	275.1843	0.0206		275.6993
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0251	0.8700	0.2014	2.5400e-003	0.0574	2.2900e-003	0.0597	0.0157	2.1900e-003	0.0179		275.1843	275.1843	0.0206		275.6993

3.32 Backfill Tunnel Pit 4 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9177	0.0000	4.9177	2.5261	0.0000	2.5261			0.0000			0.0000
Off-Road	2.4307	23.9596	18.7822	0.0415		1.0230	1.0230		0.9471	0.9471		3,974.8536	3,974.8536	1.2365		4,005.7669
Total	2.4307	23.9596	18.7822	0.0415	4.9177	1.0230	5.9406	2.5261	0.9471	3.4732		3,974.8536	3,974.8536	1.2365		4,005.7669

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.32 Backfill Tunnel Pit 4 - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0110	0.3800	0.0880	1.1100e-003	0.0251	1.0000e-003	0.0261	6.8700e-003	9.6000e-004	7.8300e-003		120.1954	120.1954	9.0000e-003		120.4204
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0110	0.3800	0.0880	1.1100e-003	0.0251	1.0000e-003	0.0261	6.8700e-003	9.6000e-004	7.8300e-003		120.1954	120.1954	9.0000e-003		120.4204

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2130	0.0000	2.2130	1.1368	0.0000	1.1368			0.0000			0.0000
Off-Road	2.4307	23.9596	18.7822	0.0415		1.0230	1.0230		0.9471	0.9471	0.0000	3,974.8536	3,974.8536	1.2365		4,005.7669
Total	2.4307	23.9596	18.7822	0.0415	2.2130	1.0230	3.2359	1.1368	0.9471	2.0838	0.0000	3,974.8536	3,974.8536	1.2365		4,005.7669

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.32 Backfill Tunnel Pit 4 - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0110	0.3800	0.0880	1.1100e-003	0.0251	1.0000e-003	0.0261	6.8700e-003	9.6000e-004	7.8300e-003		120.1954	120.1954	9.0000e-003		120.4204
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0110	0.3800	0.0880	1.1100e-003	0.0251	1.0000e-003	0.0261	6.8700e-003	9.6000e-004	7.8300e-003		120.1954	120.1954	9.0000e-003		120.4204

3.33 Site Restoration - Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9412	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500		1,709.6892	1,709.6892	0.5419		1,723.2356
Paving	0.0498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9909	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500		1,709.6892	1,709.6892	0.5419		1,723.2356

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.33 Site Restoration - Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9412	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500	0.0000	1,709.689 2	1,709.689 2	0.5419		1,723.235 6
Paving	0.0498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9909	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500	0.0000	1,709.689 2	1,709.689 2	0.5419		1,723.235 6

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.33 Site Restoration - Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.34 Site Restoration - Other/Demobilization - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	1.3784	15.6673	10.0558	0.0245	1.5908	0.5952	2.1859	0.1718	0.5476	0.7193		2,375.1569	2,375.1569	0.7682		2,394.3613

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.34 Site Restoration - Other/Demobilization - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7158	0.0000	0.7158	0.0773	0.0000	0.0773			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	1.3784	15.6673	10.0558	0.0245	0.7158	0.5952	1.3110	0.0773	0.5476	0.6249	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

3.34 Site Restoration - Other/Demobilization - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Other Non-Asphalt Surfaces	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

PVP All Tunnel 2020 - South Coast AQMD Air District, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0510	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0270
Unmitigated	0.0510	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0270

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	8.8300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0410					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-003	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0270
Total	0.0510	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0270

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	8.8300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0410					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-003	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0270
Total	0.0510	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0270

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	8.25	1000sqft	0.19	8,250.00	0
Other Asphalt Surfaces	0.01	1000sqft	0.00	14.00	0
Other Non-Asphalt Surfaces	64.00	1000sqft	1.47	64,000.00	0
Other Non-Asphalt Surfaces	11.50	1000sqft	0.26	11,500.00	0
Other Non-Asphalt Surfaces	32.10	1000sqft	0.74	32,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Modeling for all-tunnel construction of PVP alignment. Note: Installation of temp. dewatering facilities (i.e., pipelines, treatment facilities), modeled separately.

Land Use - Non-Asphalt surfaces are contractor work/storage areas around tunnel pits 1, 2, 3. Asphalt surfaces are contractor work storage pits around tunnel pit 4. 14 sf asphalt surface is well removal and capping (assuming 8 inch overdrilling).

Construction Phase - Schedule adjusted to match anticipated schedule (~16 weeks per tunnel segment).

Off-road Equipment - Equipment list per client. Pumps and generators added to separate phase.

Off-road Equipment - Equipment list per client. Pumps and generators added to separate phase.

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Off-road Equipment - Equipment list per client. Generators added to separate phase.

Off-road Equipment - Equipment list per client.

Off-road Equipment - Equipment list per client.

Off-road Equipment - Equipment list per client.

Off-road Equipment - Equipment list per client.

Off-road Equipment - Assumes 3 pumps at Tunnel Pit 3 and two at Tunnel Pit 4. One 1200 kW generator at Tunnel Pit 3 and one 60 kW generator at Tunnel Pit 3.

Off-road Equipment - Generators assume one 1200 kW generator at Tunnel Pit 1 based on Kohler KM1200U generator, and one 60 kW generator at Tunnel Pit 2 based on Generac SD060 diesel generator.

Off-road Equipment - Based on one 1200 kW generator at tunnel pit 3 and one 60 kW generator at Tunnel Pits 2 and 3, each.

Off-road Equipment - Generator sets included in dewatering phase.

Off-road Equipment - Equipment usage per client. Generators added in separate phase.

Off-road Equipment - Equipment usage and HP and LF from client. Generators added to separate phase.

Off-road Equipment - Equipment updated per client equipment list.

Off-road Equipment - Equipment updated per client equipment list.

Off-road Equipment - Equipment list per client.

Off-road Equipment - Equipment list per client.

Off-road Equipment - Construction equipment list per client. Pumps added to dewatering phases

Off-road Equipment - Equipment list per client. Pumps added to separate dewatering phase.

Off-road Equipment - Equipment list per client. Pumps added to separate phase.

Off-road Equipment - One 100 kW generator to power construction trailers. Based on Generac SD100 industrial generator set specs.

Off-road Equipment - Equipment list per client. Generators and pumps added to generator and pumping phases.

Off-road Equipment - Equipment list per client. Generators added to separate phase.

Off-road Equipment - Equipment list per client. Generators added to separate phase.

Off-road Equipment - Equipment usage and HP and LF from client. Generators added to separate phase.

Off-road Equipment - Equipment usage, HP and LF from client. Generators added to separate phase.

Off-road Equipment - Equipment hours and LF per client. Generators added to dewatering/generator phases

Off-road Equipment - Demobilization remains at default.

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Off-road Equipment - Paving remains at default.

Off-road Equipment - Adjusted per equipment list.

Off-road Equipment - Equipment updated per client equipment list.

Off-road Equipment - Equipment updated per client equipment list.

Off-road Equipment - Equipment updated per client equipment list.

Grading - Quantities obtained from PVP Update powerpoint dated 4/6/2020. Assumes all excavated quantities exported offsite and required backfill imported.

Trips and VMT - Assumes up to 10 workers per day, per 2005 EIR. Workers added to Generators - Trailers phase, as it spans entire construction period. Haul trips based on soil volumes and assumed 16 cy truck cap. Assumes disposal at Badlands Landfill (15.1 mi).

Energy Use -

Construction Off-road Equipment Mitigation - Water exposed area applied pursuant to SCAQMD Rule 403.

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tblConstructionPhase	NumDays	220.00	5.00
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tblConstructionPhase	NumDays	220.00	10.00
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tblConstructionPhase	NumDays	220.00	5.00
tblConstructionPhase	NumDays	6.00	16.00
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tblConstructionPhase	NumDays	6.00	20.00
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tblConstructionPhase	NumDays	6.00	23.00
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2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-21-2021	7-20-2021	9.5663	9.5663
2	7-21-2021	10-20-2021	15.4360	15.4360
3	10-21-2021	1-20-2022	15.5958	15.5958
4	1-21-2022	4-20-2022	14.1491	14.1491
5	4-21-2022	7-20-2022	9.1726	9.1726
6	7-21-2022	9-30-2022	0.5440	0.5440
		Highest	15.5958	15.5958

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.2400e-003	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.2400e-003	1.0000e-005	1.4800e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0600e-003

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2.2 Overall Operational
Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.2400e-003	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.2400e-003	1.0000e-005	1.4800e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0600e-003

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	SP Tunnel Pit 1	Site Preparation	4/21/2021	5/11/2021	5	15	
2	Generator - Trailers	Site Preparation	4/21/2021	8/26/2022	7	493	
3	SP Tunnel Pit 2	Site Preparation	5/12/2021	5/13/2021	5	2	

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4	SP Tunnel Pit 3	Site Preparation	5/14/2021	5/25/2021	5	8
5	SP Tunnel Pit 4	Site Preparation	5/26/2021	5/27/2021	5	2
6	Dewatering - Tunnel Pits 1 and 2	Site Preparation	5/28/2021	10/15/2021	7	141
7	Excavating Tunnel Pit 1	Grading	5/28/2021	7/8/2021	5	30
8	Excavating Tunnel Pit 2	Grading	7/9/2021	8/10/2021	5	23
9	Erect MTBM 215 Tunnel	Building Construction	7/22/2021	7/28/2021	5	5
10	Excavation and Jacking 215 Tunnel	Grading	7/29/2021	8/19/2021	5	16
11	Remove MTBM215 Tunnel	Building Construction	8/20/2021	8/25/2021	5	4
12	Install Pipeline 215 Tunnel	Building Construction	8/23/2021	8/30/2021	5	6
13	Annular Grout 215 Tunnel	Building Construction	8/30/2021	9/3/2021	5	5
14	Backfill Tunnel Pit 1	Grading	9/6/2021	10/15/2021	5	30
15	Dewatering - Tunnel Pits 2 and 3	Site Preparation	10/15/2021	2/26/2022	7	135
16	Excavating Tunnel Pit 3	Grading	10/15/2021	11/11/2021	5	20
17	Erect MTBM MARB Tunnel	Building Construction	10/28/2021	11/3/2021	5	5
18	Excavation and Jacking MARB Tunnel	Grading	11/4/2021	12/21/2021	5	34
19	Remove MTBM MARB Tunnel	Building Construction	12/22/2021	12/27/2021	5	4
20	Install Pipeline MARB Tunnel	Building Construction	12/23/2021	1/11/2022	5	14
21	Annular Grout MARB Tunnel	Building Construction	1/11/2022	1/26/2022	5	12
22	Backfill Tunnel Pit 2	Grading	1/27/2022	2/28/2022	5	23
23	Dewatering - Tunnel Pit 3	Site Preparation	2/26/2022	6/15/2022	7	110
24	Excavating Tunnel Pit 4	Grading	3/1/2022	3/28/2022	5	20
25	Erect MTBM Van Buren Tunnel	Building Construction	3/12/2022	3/18/2022	5	5
26	Excavation and Jacking Van Buren Tunnel	Grading	3/21/2022	4/21/2022	5	24
27	Remove MTBM Van Buren Tunnel	Building Construction	4/23/2022	4/28/2022	5	4
28	Install Pipeline Van Buren Tunnel	Building Construction	4/26/2022	5/9/2022	5	10
29	Annular Grout Van Buren Tunnel	Building Construction	5/7/2022	5/18/2022	5	8

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30	Backfill Tunnel Pit 3	Grading	5/19/2022	6/15/2022	5	20
31	Backfill Tunnel Pit 4	Grading	6/16/2022	7/13/2022	5	20
32	Site Restoration - Paving	Paving	7/14/2022	7/27/2022	5	10
33	Site Restoration - Other/Demobilization	Site Preparation	7/28/2022	8/26/2022	5	22

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 2.66

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
SP Tunnel Pit 1	Graders	1	8.00	187	0.41
SP Tunnel Pit 1	Other Construction Equipment	1	2.10	600	0.75
SP Tunnel Pit 1	Rubber Tired Dozers	1	7.00	247	0.40
SP Tunnel Pit 1	Scrapers	0	8.00	367	0.48
SP Tunnel Pit 1	Tractors/Loaders/Backhoes	1	7.00	97	0.37
SP Tunnel Pit 2	Graders	1	8.00	187	0.41
SP Tunnel Pit 2	Other Construction Equipment	1	2.10	600	0.75
SP Tunnel Pit 2	Rubber Tired Dozers	1	7.00	247	0.40
SP Tunnel Pit 2	Tractors/Loaders/Backhoes	1	8.00	97	0.37
SP Tunnel Pit 3	Graders	1	8.00	187	0.41
SP Tunnel Pit 3	Other Construction Equipment	1	2.10	600	0.75
SP Tunnel Pit 3	Rubber Tired Dozers	1	8.00	247	0.40
SP Tunnel Pit 3	Tractors/Loaders/Backhoes	1	8.00	97	0.37
SP Tunnel Pit 4	Graders	1	8.00	187	0.41

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SP Tunnel Pit 4	Other Construction Equipment	1	2.10	600	0.75
SP Tunnel Pit 4	Rubber Tired Dozers	1	8.00	247	0.40
SP Tunnel Pit 4	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Excavating Tunnel Pit 1	Cranes	1	2.10	300	0.75
Excavating Tunnel Pit 1	Dumpers/Tenders	1	2.10	350	0.75
Excavating Tunnel Pit 1	Excavators	1	4.30	150	0.75
Excavating Tunnel Pit 1	Graders	1	6.00	187	0.41
Excavating Tunnel Pit 1	Other Construction Equipment	1	4.30	300	0.75
Excavating Tunnel Pit 1	Rollers	1	2.10	75	0.75
Excavating Tunnel Pit 1	Rubber Tired Dozers	1	6.00	247	0.40
Excavating Tunnel Pit 1	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Excavating Tunnel Pit 1	Welders	1	6.40	40	0.75
Excavating Tunnel Pit 2	Cranes	1	2.10	300	0.75
Excavating Tunnel Pit 2	Dumpers/Tenders	1	2.10	350	0.75
Excavating Tunnel Pit 2	Excavators	1	4.30	150	0.75
Excavating Tunnel Pit 2	Graders	1	6.00	187	0.41
Excavating Tunnel Pit 2	Other Construction Equipment	1	4.30	300	0.75
Excavating Tunnel Pit 2	Rollers	1	2.10	75	0.75
Excavating Tunnel Pit 2	Rubber Tired Dozers	1	6.00	247	0.40
Excavating Tunnel Pit 2	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Excavating Tunnel Pit 2	Welders	1	6.40	40	0.75
Erect MTBM 215 Tunnel	Cranes	1	2.80	300	0.75
Erect MTBM 215 Tunnel	Forklifts	1	6.00	89	0.20
Erect MTBM 215 Tunnel	Generator Sets	0	8.00	84	0.74
Erect MTBM 215 Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Erect MTBM 215 Tunnel	Welders	3	8.00	46	0.45
Excavation and Jacking 215 Tunnel	Air Compressors	1	2.80	300	0.75

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Excavation and Jacking 215 Tunnel	Dumpers/Tenders	1	2.80	350	0.75
Excavation and Jacking 215 Tunnel	Graders	1	6.00	187	0.41
Excavation and Jacking 215 Tunnel	Other Construction Equipment	1	5.60	700	0.75
Excavation and Jacking 215 Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Excavation and Jacking 215 Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Excavation and Jacking 215 Tunnel	Other Material Handling Equipment	1	2.80	200	0.75
Excavation and Jacking 215 Tunnel	Rubber Tired Dozers	1	6.00	247	0.40
Excavation and Jacking 215 Tunnel	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Remove MTBM215 Tunnel	Cranes	1	2.80	300	0.75
Remove MTBM215 Tunnel	Forklifts	1	6.00	89	0.20
Remove MTBM215 Tunnel	Generator Sets	0	8.00	84	0.74
Remove MTBM215 Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Remove MTBM215 Tunnel	Welders	3	8.00	46	0.45
Install Pipeline 215 Tunnel	Air Compressors	1	2.80	300	0.75
Install Pipeline 215 Tunnel	Cranes	1	2.80	300	0.75
Install Pipeline 215 Tunnel	Dumpers/Tenders	1	2.80	350	0.75
Install Pipeline 215 Tunnel	Forklifts	1	6.00	89	0.20
Install Pipeline 215 Tunnel	Generator Sets	0	8.00	84	0.74
Install Pipeline 215 Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Install Pipeline 215 Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Install Pipeline 215 Tunnel	Other Material Handling Equipment	1	2.80	200	0.75
Install Pipeline 215 Tunnel	Other Material Handling Equipment	2	1.40	400	0.75
Install Pipeline 215 Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Install Pipeline 215 Tunnel	Welders	2	4.20	40	0.75
Annular Grout 215 Tunnel	Air Compressors	1	2.80	300	0.75
Annular Grout 215 Tunnel	Cement and Mortar Mixers	3	0.50	750	0.75
Annular Grout 215 Tunnel	Cranes	1	6.00	231	0.29

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Annular Grout 215 Tunnel	Forklifts	1	6.00	89	0.20
Annular Grout 215 Tunnel	Generator Sets	0	8.00	84	0.74
Annular Grout 215 Tunnel	Other General Industrial Equipment	1	2.80	100	0.75
Annular Grout 215 Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Annular Grout 215 Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Annular Grout 215 Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Annular Grout 215 Tunnel	Welders	3	8.00	46	0.45
Backfill Tunnel Pit 1	Cranes	1	2.10	300	0.75
Backfill Tunnel Pit 1	Dumpers/Tenders	1	2.10	350	0.75
Backfill Tunnel Pit 1	Excavators	1	4.30	150	0.75
Backfill Tunnel Pit 1	Graders	1	6.00	187	0.41
Backfill Tunnel Pit 1	Other Construction Equipment	1	4.30	300	0.75
Backfill Tunnel Pit 1	Rollers	1	2.10	75	0.75
Backfill Tunnel Pit 1	Rubber Tired Dozers	1	6.00	247	0.40
Backfill Tunnel Pit 1	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Backfill Tunnel Pit 1	Welders	1	6.40	40	0.75
Excavating Tunnel Pit 3	Cranes	1	2.10	300	0.75
Excavating Tunnel Pit 3	Dumpers/Tenders	1	2.10	350	0.75
Excavating Tunnel Pit 3	Excavators	1	4.30	150	0.75
Excavating Tunnel Pit 3	Graders	1	6.00	187	0.41
Excavating Tunnel Pit 3	Other Construction Equipment	1	4.30	300	0.75
Excavating Tunnel Pit 3	Rollers	1	2.10	75	0.75
Excavating Tunnel Pit 3	Rubber Tired Dozers	1	6.00	247	0.40
Excavating Tunnel Pit 3	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Excavating Tunnel Pit 3	Welders	1	6.40	40	0.75
Erect MTBM MARB Tunnel	Cranes	1	2.80	300	0.75
Erect MTBM MARB Tunnel	Forklifts	1	6.00	89	0.20

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Erect MTBM MARB Tunnel	Generator Sets	0	8.00	84	0.74
Erect MTBM MARB Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Erect MTBM MARB Tunnel	Welders	3	8.00	46	0.45
Excavation and Jacking MARB Tunnel	Air Compressors	1	2.80	300	0.75
Excavation and Jacking MARB Tunnel	Dumpers/Tenders	1	2.80	350	0.75
Excavation and Jacking MARB Tunnel	Graders	1	6.00	187	0.41
Excavation and Jacking MARB Tunnel	Other Construction Equipment	1	5.60	700	0.75
Excavation and Jacking MARB Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Excavation and Jacking MARB Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Excavation and Jacking MARB Tunnel	Other Material Handling Equipment	1	2.80	200	0.75
Excavation and Jacking MARB Tunnel	Rubber Tired Dozers	1	6.00	247	0.40
Excavation and Jacking MARB Tunnel	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Remove MTBM MARB Tunnel	Cranes	1	2.80	300	0.75
Remove MTBM MARB Tunnel	Forklifts	1	6.00	89	0.20
Remove MTBM MARB Tunnel	Generator Sets	0	8.00	84	0.74
Remove MTBM MARB Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Remove MTBM MARB Tunnel	Welders	3	8.00	46	0.45
Install Pipeline MARB Tunnel	Air Compressors	1	2.80	300	0.75
Install Pipeline MARB Tunnel	Cranes	1	2.80	300	0.75
Install Pipeline MARB Tunnel	Dumpers/Tenders	1	2.80	350	0.75
Install Pipeline MARB Tunnel	Forklifts	1	6.00	89	0.20
Install Pipeline MARB Tunnel	Generator Sets	0	8.00	84	0.74
Install Pipeline MARB Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Install Pipeline MARB Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Install Pipeline MARB Tunnel	Other Material Handling Equipment	1	2.80	200	0.75
Install Pipeline MARB Tunnel	Other Material Handling Equipment	2	1.40	400	0.75
Install Pipeline MARB Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37

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Install Pipeline MARB Tunnel	Welders	2	4.20	40	0.75
Annular Grout MARB Tunnel	Air Compressors	1	2.80	300	0.75
Annular Grout MARB Tunnel	Cement and Mortar Mixers	3	0.50	750	0.75
Annular Grout MARB Tunnel	Cranes	1	6.00	231	0.29
Annular Grout MARB Tunnel	Forklifts	1	6.00	89	0.20
Annular Grout MARB Tunnel	Generator Sets	0	8.00	84	0.74
Annular Grout MARB Tunnel	Other General Industrial Equipment	1	2.80	100	0.75
Annular Grout MARB Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Annular Grout MARB Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Annular Grout MARB Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Annular Grout MARB Tunnel	Welders	3	8.00	46	0.45
Backfill Tunnel Pit 2	Cranes	1	2.10	300	0.75
Backfill Tunnel Pit 2	Dumpers/Tenders	1	2.10	350	0.75
Backfill Tunnel Pit 2	Excavators	1	4.30	150	0.75
Backfill Tunnel Pit 2	Graders	1	6.00	187	0.41
Backfill Tunnel Pit 2	Other Construction Equipment	1	4.30	300	0.75
Backfill Tunnel Pit 2	Rollers	1	2.10	75	0.75
Backfill Tunnel Pit 2	Rubber Tired Dozers	1	6.00	247	0.40
Backfill Tunnel Pit 2	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Backfill Tunnel Pit 2	Welders	1	6.40	40	0.75
Excavating Tunnel Pit 4	Cranes	1	2.10	300	0.75
Excavating Tunnel Pit 4	Dumpers/Tenders	1	2.10	350	0.75
Excavating Tunnel Pit 4	Excavators	1	4.30	150	0.75
Excavating Tunnel Pit 4	Graders	1	6.00	187	0.41
Excavating Tunnel Pit 4	Other Construction Equipment	1	4.30	300	0.75
Excavating Tunnel Pit 4	Rollers	1	2.10	75	0.75
Excavating Tunnel Pit 4	Rubber Tired Dozers	1	6.00	247	0.40

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Excavating Tunnel Pit 4	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Excavating Tunnel Pit 4	Welders	1	6.40	40	0.75
Erect MTBM Van Buren Tunnel	Cranes	1	2.80	300	0.75
Erect MTBM Van Buren Tunnel	Forklifts	1	6.00	89	0.20
Erect MTBM Van Buren Tunnel	Generator Sets	0	8.00	84	0.74
Erect MTBM Van Buren Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Erect MTBM Van Buren Tunnel	Welders	3	8.00	46	0.45
Excavation and Jacking Van Buren Tunnel	Air Compressors	1	2.80	300	0.75
Excavation and Jacking Van Buren Tunnel	Dumpers/Tenders	1	2.80	350	0.75
Excavation and Jacking Van Buren Tunnel	Graders	1	6.00	187	0.41
Excavation and Jacking Van Buren Tunnel	Other Construction Equipment	1	5.60	700	0.75
Excavation and Jacking Van Buren Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Excavation and Jacking Van Buren Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Excavation and Jacking Van Buren Tunnel	Other Material Handling Equipment	1	2.30	200	0.75
Excavation and Jacking Van Buren Tunnel	Rubber Tired Dozers	1	6.00	247	0.40
Excavation and Jacking Van Buren Tunnel	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Remove MTBM Van Buren Tunnel	Cranes	1	2.80	300	0.75
Remove MTBM Van Buren Tunnel	Forklifts	1	6.00	89	0.20
Remove MTBM Van Buren Tunnel	Generator Sets	0	8.00	84	0.74
Remove MTBM Van Buren Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Remove MTBM Van Buren Tunnel	Welders	3	8.00	46	0.45
Install Pipeline Van Buren Tunnel	Air Compressors	1	2.80	300	0.75
Install Pipeline Van Buren Tunnel	Cranes	1	2.80	300	0.75
Install Pipeline Van Buren Tunnel	Dumpers/Tenders	1	2.80	350	0.75
Install Pipeline Van Buren Tunnel	Forklifts	1	6.00	89	0.20

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Install Pipeline Van Buren Tunnel	Generator Sets	0	8.00	84	0.74
Install Pipeline Van Buren Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Install Pipeline Van Buren Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Install Pipeline Van Buren Tunnel	Other Material Handling Equipment	1	2.80	200	0.75
Install Pipeline Van Buren Tunnel	Other Material Handling Equipment	2	1.40	400	0.75
Install Pipeline Van Buren Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Install Pipeline Van Buren Tunnel	Welders	2	4.20	40	0.75
Annular Grout Van Buren Tunnel	Air Compressors	1	2.80	300	0.75
Annular Grout Van Buren Tunnel	Cement and Mortar Mixers	3	0.50	750	0.75
Annular Grout Van Buren Tunnel	Cranes	1	6.00	231	0.29
Annular Grout Van Buren Tunnel	Forklifts	1	6.00	89	0.20
Annular Grout Van Buren Tunnel	Generator Sets	0	8.00	84	0.45
Annular Grout Van Buren Tunnel	Other General Industrial Equipment	1	2.80	100	0.75
Annular Grout Van Buren Tunnel	Other General Industrial Equipment	1	10.10	200	0.75
Annular Grout Van Buren Tunnel	Other General Industrial Equipment	1	10.10	30	0.75
Annular Grout Van Buren Tunnel	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Annular Grout Van Buren Tunnel	Welders	3	8.00	46	0.45
Backfill Tunnel Pit 3	Cranes	1	2.10	300	0.75
Backfill Tunnel Pit 3	Dumpers/Tenders	1	2.10	350	0.75
Backfill Tunnel Pit 3	Excavators	1	4.30	150	0.75
Backfill Tunnel Pit 3	Graders	1	6.00	187	0.41
Backfill Tunnel Pit 3	Other Construction Equipment	1	4.30	300	0.75
Backfill Tunnel Pit 3	Rollers	1	2.10	75	0.75
Backfill Tunnel Pit 3	Rubber Tired Dozers	1	6.00	247	0.40
Backfill Tunnel Pit 3	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Backfill Tunnel Pit 3	Welders	1	6.40	40	0.75
Backfill Tunnel Pit 4	Cranes	1	2.10	300	0.75

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Backfill Tunnel Pit 4	Dumpers/Tenders	1	2.10	350	0.75
Backfill Tunnel Pit 4	Excavators	1	4.30	150	0.75
Backfill Tunnel Pit 4	Graders	1	6.00	187	0.41
Backfill Tunnel Pit 4	Other Construction Equipment	1	4.30	300	0.75
Backfill Tunnel Pit 4	Rollers	1	2.10	75	0.75
Backfill Tunnel Pit 4	Rubber Tired Dozers	1	6.00	247	0.40
Backfill Tunnel Pit 4	Tractors/Loaders/Backhoes	1	4.30	150	0.75
Backfill Tunnel Pit 4	Welders	1	6.40	40	0.75
Site Restoration - Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Site Restoration - Paving	Pavers	1	8.00	130	0.42
Site Restoration - Paving	Paving Equipment	1	8.00	132	0.36
Site Restoration - Paving	Rollers	2	8.00	80	0.38
Site Restoration - Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Restoration - Other/Demobilization	Graders	1	8.00	187	0.41
Site Restoration - Other/Demobilization	Scrapers	1	8.00	367	0.48
Site Restoration - Other/Demobilization	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Dewatering - Tunnel Pits 1 and 2	Generator Sets	1	24.00	1770	0.75
Dewatering - Tunnel Pits 1 and 2	Generator Sets	1	24.00	93	0.75
Dewatering - Tunnel Pits 1 and 2	Pumps	6	24.00	5	0.75
Dewatering - Tunnel Pits 2 and 3	Generator Sets	1	24.00	1770	0.75
Dewatering - Tunnel Pits 2 and 3	Generator Sets	2	24.00	93	0.75
Dewatering - Tunnel Pits 2 and 3	Pumps	6	24.00	5	0.75
Dewatering - Tunnel Pit 3	Generator Sets	1	24.00	1770	0.75
Dewatering - Tunnel Pit 3	Generator Sets	1	24.00	93	0.75
Dewatering - Tunnel Pit 3	Pumps	5	24.00	5	0.75
Generator - Trailers	Generator Sets	1	24.00	152	0.75
Generator - Trailers	Scrapers	0	8.00	367	0.48

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Generator - Trailers	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Dewatering - Tunnel Pits 2 and 3	Graders	1	8.00	187	0.41
Generator - Trailers	Graders	1	8.00	187	0.41
Dewatering - Tunnel Pit 3	Graders	1	8.00	187	0.41
Dewatering - Tunnel Pits 1 and 2	Graders	1	8.00	187	0.41
Dewatering - Tunnel Pits 2 and 3	Scrapers	1	8.00	367	0.48
Dewatering - Tunnel Pit 3	Scrapers	1	8.00	367	0.48
SP Tunnel Pit 2	Scrapers	1	8.00	367	0.48
SP Tunnel Pit 3	Scrapers	1	8.00	367	0.48
SP Tunnel Pit 4	Scrapers	1	8.00	367	0.48
Dewatering - Tunnel Pits 1 and 2	Scrapers	1	8.00	367	0.48
Dewatering - Tunnel Pits 2 and 3	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Dewatering - Tunnel Pit 3	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Dewatering - Tunnel Pits 1 and 2	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
SP Tunnel Pit 1	4	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
SP Tunnel Pit 2	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
SP Tunnel Pit 3	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
SP Tunnel Pit 4	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavating Tunnel Pit 1	9	0.00	0.00	396.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Excavating Tunnel Pit 2	9	0.00	0.00	27.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Erect MTBM 215 Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavation and Jacking 215 Tunnel	9	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Remove MTBM215 Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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Install Pipeline 215 Tunnel	12	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Annular Grout 215 Tunnel	13	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Backfill Tunnel Pit 1	9	0.00	0.00	190.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Excavating Tunnel Pit 2	9	0.00	0.00	832.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Erect MTBM MARB Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavation and Backfilling MARB Tunnel	9	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Remove MTBM MARB Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Install Pipeline MARB Tunnel	12	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Annular Grout MARB Tunnel	13	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Backfill Tunnel Pit 2	9	0.00	0.00	23.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Excavating Tunnel Pit 4	9	0.00	0.00	42.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Erect MTBM Van Buren Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavation and Backfilling Van Buren Tunnel	9	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Remove MTBM Van Buren Tunnel	6	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Install Pipeline Van Buren Tunnel	12	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Annular Grout Van Buren Tunnel	13	0.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Backfill Tunnel Pit 3	9	0.00	0.00	87.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Backfill Tunnel Pit 4	9	0.00	0.00	38.00	14.70	6.90	15.10	LD_Mix	HDT_Mix	HHDT
Site Restoration - Paving	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Restoration - Other/Demobilization	3	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dewatering - Tunnel Pits 1 and 2	11	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dewatering - Tunnel Pits 2 and 3	12	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dewatering - Tunnel Pit 3	10	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Generator - Trailers	2	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

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3.3 Generator - Trailers - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2446	2.3458	2.4748	5.4600e-003		0.0939	0.0939		0.0920	0.0920	0.0000	470.7119	470.7119	0.0387	0.0000	471.6783
Total	0.2446	2.3458	2.4748	5.4600e-003	0.0000	0.0939	0.0939	0.0000	0.0920	0.0920	0.0000	470.7119	470.7119	0.0387	0.0000	471.6783

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3100e-003	3.9300e-003	0.0444	1.3000e-004	0.0140	1.0000e-004	0.0141	3.7100e-003	1.0000e-004	3.8100e-003	0.0000	12.1847	12.1847	3.3000e-004	0.0000	12.1928
Total	5.3100e-003	3.9300e-003	0.0444	1.3000e-004	0.0140	1.0000e-004	0.0141	3.7100e-003	1.0000e-004	3.8100e-003	0.0000	12.1847	12.1847	3.3000e-004	0.0000	12.1928

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3.3 Generator - Trailers - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2446	2.3458	2.4748	5.4600e-003		0.0939	0.0939		0.0920	0.0920	0.0000	470.7114	470.7114	0.0387	0.0000	471.6778
Total	0.2446	2.3458	2.4748	5.4600e-003	0.0000	0.0939	0.0939	0.0000	0.0920	0.0920	0.0000	470.7114	470.7114	0.0387	0.0000	471.6778

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3100e-003	3.9300e-003	0.0444	1.3000e-004	0.0140	1.0000e-004	0.0141	3.7100e-003	1.0000e-004	3.8100e-003	0.0000	12.1847	12.1847	3.3000e-004	0.0000	12.1928
Total	5.3100e-003	3.9300e-003	0.0444	1.3000e-004	0.0140	1.0000e-004	0.0141	3.7100e-003	1.0000e-004	3.8100e-003	0.0000	12.1847	12.1847	3.3000e-004	0.0000	12.1928

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3.3 Generator - Trailers - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2116	1.9392	2.3051	5.0900e-003		0.0780	0.0780		0.0765	0.0765	0.0000	439.2874	439.2874	0.0354	0.0000	440.1727
Total	0.2116	1.9392	2.3051	5.0900e-003	0.0000	0.0780	0.0780	0.0000	0.0765	0.0765	0.0000	439.2874	439.2874	0.0354	0.0000	440.1727

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6600e-003	3.3100e-003	0.0383	1.2000e-004	0.0131	1.0000e-004	0.0132	3.4700e-003	9.0000e-005	3.5500e-003	0.0000	10.9646	10.9646	2.8000e-004	0.0000	10.9715
Total	4.6600e-003	3.3100e-003	0.0383	1.2000e-004	0.0131	1.0000e-004	0.0132	3.4700e-003	9.0000e-005	3.5500e-003	0.0000	10.9646	10.9646	2.8000e-004	0.0000	10.9715

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3.3 Generator - Trailers - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2116	1.9392	2.3051	5.0900e-003		0.0780	0.0780		0.0765	0.0765	0.0000	439.2869	439.2869	0.0354	0.0000	440.1722
Total	0.2116	1.9392	2.3051	5.0900e-003	0.0000	0.0780	0.0780	0.0000	0.0765	0.0765	0.0000	439.2869	439.2869	0.0354	0.0000	440.1722

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6600e-003	3.3100e-003	0.0383	1.2000e-004	0.0131	1.0000e-004	0.0132	3.4700e-003	9.0000e-005	3.5500e-003	0.0000	10.9646	10.9646	2.8000e-004	0.0000	10.9715
Total	4.6600e-003	3.3100e-003	0.0383	1.2000e-004	0.0131	1.0000e-004	0.0132	3.4700e-003	9.0000e-005	3.5500e-003	0.0000	10.9646	10.9646	2.8000e-004	0.0000	10.9715

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3.8 Excavating Tunnel Pit 1 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0741	0.0000	0.0741	0.0379	0.0000	0.0379	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0420	0.4273	0.2972	6.2000e-004		0.0185	0.0185		0.0172	0.0172	0.0000	54.0757	54.0757	0.0169	0.0000	54.4972
Total	0.0420	0.4273	0.2972	6.2000e-004	0.0741	0.0185	0.0926	0.0379	0.0172	0.0551	0.0000	54.0757	54.0757	0.0169	0.0000	54.4972

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1800e-003	0.0435	8.8700e-003	1.2000e-004	2.5700e-003	1.2000e-004	2.6900e-003	7.1000e-004	1.1000e-004	8.2000e-004	0.0000	11.6592	11.6592	8.5000e-004	0.0000	11.6804
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.1800e-003	0.0435	8.8700e-003	1.2000e-004	2.5700e-003	1.2000e-004	2.6900e-003	7.1000e-004	1.1000e-004	8.2000e-004	0.0000	11.6592	11.6592	8.5000e-004	0.0000	11.6804

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3.8 Excavating Tunnel Pit 1 - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0333	0.0000	0.0333	0.0171	0.0000	0.0171	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0420	0.4273	0.2972	6.2000e-004		0.0185	0.0185		0.0172	0.0172	0.0000	54.0757	54.0757	0.0169	0.0000	54.4971
Total	0.0420	0.4273	0.2972	6.2000e-004	0.0333	0.0185	0.0519	0.0171	0.0172	0.0342	0.0000	54.0757	54.0757	0.0169	0.0000	54.4971

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1800e-003	0.0435	8.8700e-003	1.2000e-004	2.5700e-003	1.2000e-004	2.6900e-003	7.1000e-004	1.1000e-004	8.2000e-004	0.0000	11.6592	11.6592	8.5000e-004	0.0000	11.6804
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.1800e-003	0.0435	8.8700e-003	1.2000e-004	2.5700e-003	1.2000e-004	2.6900e-003	7.1000e-004	1.1000e-004	8.2000e-004	0.0000	11.6592	11.6592	8.5000e-004	0.0000	11.6804

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3.9 Excavating Tunnel Pit 2 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0565	0.0000	0.0565	0.0291	0.0000	0.0291	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0322	0.3276	0.2278	4.8000e-004		0.0142	0.0142		0.0131	0.0131	0.0000	41.4581	41.4581	0.0129	0.0000	41.7811
Total	0.0322	0.3276	0.2278	4.8000e-004	0.0565	0.0142	0.0707	0.0291	0.0131	0.0422	0.0000	41.4581	41.4581	0.0129	0.0000	41.7811

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	2.9600e-003	6.0000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7950	0.7950	6.0000e-005	0.0000	0.7964
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.0000e-005	2.9600e-003	6.0000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7950	0.7950	6.0000e-005	0.0000	0.7964

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3.9 Excavating Tunnel Pit 2 - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0254	0.0000	0.0254	0.0131	0.0000	0.0131	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0322	0.3276	0.2278	4.8000e-004		0.0142	0.0142		0.0131	0.0131	0.0000	41.4580	41.4580	0.0129	0.0000	41.7811
Total	0.0322	0.3276	0.2278	4.8000e-004	0.0254	0.0142	0.0396	0.0131	0.0131	0.0262	0.0000	41.4580	41.4580	0.0129	0.0000	41.7811

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	2.9600e-003	6.0000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7950	0.7950	6.0000e-005	0.0000	0.7964
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.0000e-005	2.9600e-003	6.0000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7950	0.7950	6.0000e-005	0.0000	0.7964

PVP All Tunnel 2020 - South Coast AQMD Air District, Annual

3.10 Erect MTBM 215 Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.8900e-003	0.0290	0.0278	4.0000e-005		1.4000e-003	1.4000e-003		1.3400e-003	1.3400e-003	0.0000	3.6635	3.6635	9.1000e-004	0.0000	3.6863
Total	3.8900e-003	0.0290	0.0278	4.0000e-005		1.4000e-003	1.4000e-003		1.3400e-003	1.3400e-003	0.0000	3.6635	3.6635	9.1000e-004	0.0000	3.6863

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-004	4.6000e-003	1.1400e-003	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.1597	1.1597	7.0000e-005	0.0000	1.1615
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.4000e-004	4.6000e-003	1.1400e-003	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.1597	1.1597	7.0000e-005	0.0000	1.1615

PVP All Tunnel 2020 - South Coast AQMD Air District, Annual

3.10 Erect MTBM 215 Tunnel - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.8900e-003	0.0290	0.0278	4.0000e-005		1.4000e-003	1.4000e-003		1.3400e-003	1.3400e-003	0.0000	3.6635	3.6635	9.1000e-004	0.0000	3.6863
Total	3.8900e-003	0.0290	0.0278	4.0000e-005		1.4000e-003	1.4000e-003		1.3400e-003	1.3400e-003	0.0000	3.6635	3.6635	9.1000e-004	0.0000	3.6863

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-004	4.6000e-003	1.1400e-003	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.1597	1.1597	7.0000e-005	0.0000	1.1615
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.4000e-004	4.6000e-003	1.1400e-003	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.1597	1.1597	7.0000e-005	0.0000	1.1615

PVP All Tunnel 2020 - South Coast AQMD Air District, Annual

3.12 Remove MTBM215 Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1100e-003	0.0232	0.0223	4.0000e-005		1.1200e-003	1.1200e-003		1.0700e-003	1.0700e-003	0.0000	2.9308	2.9308	7.3000e-004	0.0000	2.9491
Total	3.1100e-003	0.0232	0.0223	4.0000e-005		1.1200e-003	1.1200e-003		1.0700e-003	1.0700e-003	0.0000	2.9308	2.9308	7.3000e-004	0.0000	2.9491

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	3.6800e-003	9.1000e-004	1.0000e-005	2.4000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9278	0.9278	6.0000e-005	0.0000	0.9292
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.1000e-004	3.6800e-003	9.1000e-004	1.0000e-005	2.4000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9278	0.9278	6.0000e-005	0.0000	0.9292

PVP All Tunnel 2020 - South Coast AQMD Air District, Annual

3.12 Remove MTBM215 Tunnel - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1100e-003	0.0232	0.0223	4.0000e-005		1.1200e-003	1.1200e-003		1.0700e-003	1.0700e-003	0.0000	2.9308	2.9308	7.3000e-004	0.0000	2.9490
Total	3.1100e-003	0.0232	0.0223	4.0000e-005		1.1200e-003	1.1200e-003		1.0700e-003	1.0700e-003	0.0000	2.9308	2.9308	7.3000e-004	0.0000	2.9490

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	3.6800e-003	9.1000e-004	1.0000e-005	2.4000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9278	0.9278	6.0000e-005	0.0000	0.9292
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.1000e-004	3.6800e-003	9.1000e-004	1.0000e-005	2.4000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9278	0.9278	6.0000e-005	0.0000	0.9292

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3.13 Install Pipeline 215 Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8600e-003	0.0857	0.0616	1.6000e-004		3.5800e-003	3.5800e-003		3.3400e-003	3.3400e-003	0.0000	14.2871	14.2871	3.8500e-003	0.0000	14.3833
Total	9.8600e-003	0.0857	0.0616	1.6000e-004		3.5800e-003	3.5800e-003		3.3400e-003	3.3400e-003	0.0000	14.2871	14.2871	3.8500e-003	0.0000	14.3833

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6000e-004	5.5200e-003	1.3700e-003	1.0000e-005	3.6000e-004	1.0000e-005	3.7000e-004	1.0000e-004	1.0000e-005	1.1000e-004	0.0000	1.3916	1.3916	9.0000e-005	0.0000	1.3938
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.6000e-004	5.5200e-003	1.3700e-003	1.0000e-005	3.6000e-004	1.0000e-005	3.7000e-004	1.0000e-004	1.0000e-005	1.1000e-004	0.0000	1.3916	1.3916	9.0000e-005	0.0000	1.3938

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3.13 Install Pipeline 215 Tunnel - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8600e-003	0.0857	0.0616	1.6000e-004		3.5800e-003	3.5800e-003		3.3400e-003	3.3400e-003	0.0000	14.2871	14.2871	3.8500e-003	0.0000	14.3833
Total	9.8600e-003	0.0857	0.0616	1.6000e-004		3.5800e-003	3.5800e-003		3.3400e-003	3.3400e-003	0.0000	14.2871	14.2871	3.8500e-003	0.0000	14.3833

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6000e-004	5.5200e-003	1.3700e-003	1.0000e-005	3.6000e-004	1.0000e-005	3.7000e-004	1.0000e-004	1.0000e-005	1.1000e-004	0.0000	1.3916	1.3916	9.0000e-005	0.0000	1.3938
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.6000e-004	5.5200e-003	1.3700e-003	1.0000e-005	3.6000e-004	1.0000e-005	3.7000e-004	1.0000e-004	1.0000e-005	1.1000e-004	0.0000	1.3916	1.3916	9.0000e-005	0.0000	1.3938

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3.14 Annular Grout 215 Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.7500e-003	0.0593	0.0475	1.1000e-004		2.7300e-003	2.7300e-003		2.5700e-003	2.5700e-003	0.0000	9.5919	9.5919	2.3200e-003	0.0000	9.6499
Total	7.7500e-003	0.0593	0.0475	1.1000e-004		2.7300e-003	2.7300e-003		2.5700e-003	2.5700e-003	0.0000	9.5919	9.5919	2.3200e-003	0.0000	9.6499

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-004	4.6000e-003	1.1400e-003	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.1597	1.1597	7.0000e-005	0.0000	1.1615
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.4000e-004	4.6000e-003	1.1400e-003	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.1597	1.1597	7.0000e-005	0.0000	1.1615

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3.14 Annular Grout 215 Tunnel - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.7500e-003	0.0593	0.0475	1.1000e-004		2.7300e-003	2.7300e-003		2.5700e-003	2.5700e-003	0.0000	9.5918	9.5918	2.3200e-003	0.0000	9.6499
Total	7.7500e-003	0.0593	0.0475	1.1000e-004		2.7300e-003	2.7300e-003		2.5700e-003	2.5700e-003	0.0000	9.5918	9.5918	2.3200e-003	0.0000	9.6499

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-004	4.6000e-003	1.1400e-003	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.1597	1.1597	7.0000e-005	0.0000	1.1615
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.4000e-004	4.6000e-003	1.1400e-003	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.1597	1.1597	7.0000e-005	0.0000	1.1615

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3.15 Backfill Tunnel Pit 1 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0739	0.0000	0.0739	0.0379	0.0000	0.0379	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0420	0.4273	0.2972	6.2000e-004		0.0185	0.0185		0.0172	0.0172	0.0000	54.0757	54.0757	0.0169	0.0000	54.4972
Total	0.0420	0.4273	0.2972	6.2000e-004	0.0739	0.0185	0.0924	0.0379	0.0172	0.0551	0.0000	54.0757	54.0757	0.0169	0.0000	54.4972

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.7000e-004	0.0209	4.2600e-003	6.0000e-005	1.2300e-003	6.0000e-005	1.2900e-003	3.4000e-004	6.0000e-005	3.9000e-004	0.0000	5.5941	5.5941	4.1000e-004	0.0000	5.6042
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.7000e-004	0.0209	4.2600e-003	6.0000e-005	1.2300e-003	6.0000e-005	1.2900e-003	3.4000e-004	6.0000e-005	3.9000e-004	0.0000	5.5941	5.5941	4.1000e-004	0.0000	5.6042

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3.15 Backfill Tunnel Pit 1 - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0333	0.0000	0.0333	0.0171	0.0000	0.0171	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0420	0.4273	0.2972	6.2000e-004		0.0185	0.0185		0.0172	0.0172	0.0000	54.0757	54.0757	0.0169	0.0000	54.4971
Total	0.0420	0.4273	0.2972	6.2000e-004	0.0333	0.0185	0.0518	0.0171	0.0172	0.0342	0.0000	54.0757	54.0757	0.0169	0.0000	54.4971

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.7000e-004	0.0209	4.2600e-003	6.0000e-005	1.2300e-003	6.0000e-005	1.2900e-003	3.4000e-004	6.0000e-005	3.9000e-004	0.0000	5.5941	5.5941	4.1000e-004	0.0000	5.6042
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.7000e-004	0.0209	4.2600e-003	6.0000e-005	1.2300e-003	6.0000e-005	1.2900e-003	3.4000e-004	6.0000e-005	3.9000e-004	0.0000	5.5941	5.5941	4.1000e-004	0.0000	5.6042

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3.17 Excavating Tunnel Pit 3 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0499	0.0000	0.0499	0.0254	0.0000	0.0254	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0280	0.2849	0.1981	4.2000e-004		0.0124	0.0124		0.0114	0.0114	0.0000	36.0505	36.0505	0.0112	0.0000	36.3314
Total	0.0280	0.2849	0.1981	4.2000e-004	0.0499	0.0124	0.0623	0.0254	0.0114	0.0368	0.0000	36.0505	36.0505	0.0112	0.0000	36.3314

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4800e-003	0.0914	0.0186	2.5000e-004	5.4000e-003	2.5000e-004	5.6500e-003	1.4800e-003	2.4000e-004	1.7200e-003	0.0000	24.4961	24.4961	1.7800e-003	0.0000	24.5406
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.4800e-003	0.0914	0.0186	2.5000e-004	5.4000e-003	2.5000e-004	5.6500e-003	1.4800e-003	2.4000e-004	1.7200e-003	0.0000	24.4961	24.4961	1.7800e-003	0.0000	24.5406

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3.17 Excavating Tunnel Pit 3 - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0225	0.0000	0.0225	0.0114	0.0000	0.0114	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0280	0.2849	0.1981	4.2000e-004		0.0124	0.0124		0.0114	0.0114	0.0000	36.0504	36.0504	0.0112	0.0000	36.3314
Total	0.0280	0.2849	0.1981	4.2000e-004	0.0225	0.0124	0.0348	0.0114	0.0114	0.0229	0.0000	36.0504	36.0504	0.0112	0.0000	36.3314

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4800e-003	0.0914	0.0186	2.5000e-004	5.4000e-003	2.5000e-004	5.6500e-003	1.4800e-003	2.4000e-004	1.7200e-003	0.0000	24.4961	24.4961	1.7800e-003	0.0000	24.5406
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.4800e-003	0.0914	0.0186	2.5000e-004	5.4000e-003	2.5000e-004	5.6500e-003	1.4800e-003	2.4000e-004	1.7200e-003	0.0000	24.4961	24.4961	1.7800e-003	0.0000	24.5406

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3.18 Erect MTBM MARB Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.8900e-003	0.0290	0.0278	4.0000e-005		1.4000e-003	1.4000e-003		1.3400e-003	1.3400e-003	0.0000	3.6635	3.6635	9.1000e-004	0.0000	3.6863
Total	3.8900e-003	0.0290	0.0278	4.0000e-005		1.4000e-003	1.4000e-003		1.3400e-003	1.3400e-003	0.0000	3.6635	3.6635	9.1000e-004	0.0000	3.6863

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-004	4.6000e-003	1.1400e-003	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.1597	1.1597	7.0000e-005	0.0000	1.1615
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.4000e-004	4.6000e-003	1.1400e-003	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.1597	1.1597	7.0000e-005	0.0000	1.1615

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3.18 Erect MTBM MARB Tunnel - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.8900e-003	0.0290	0.0278	4.0000e-005		1.4000e-003	1.4000e-003		1.3400e-003	1.3400e-003	0.0000	3.6635	3.6635	9.1000e-004	0.0000	3.6863
Total	3.8900e-003	0.0290	0.0278	4.0000e-005		1.4000e-003	1.4000e-003		1.3400e-003	1.3400e-003	0.0000	3.6635	3.6635	9.1000e-004	0.0000	3.6863

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-004	4.6000e-003	1.1400e-003	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.1597	1.1597	7.0000e-005	0.0000	1.1615
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.4000e-004	4.6000e-003	1.1400e-003	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.1597	1.1597	7.0000e-005	0.0000	1.1615

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3.20 Remove MTBM MARB Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1100e-003	0.0232	0.0223	4.0000e-005		1.1200e-003	1.1200e-003		1.0700e-003	1.0700e-003	0.0000	2.9308	2.9308	7.3000e-004	0.0000	2.9491
Total	3.1100e-003	0.0232	0.0223	4.0000e-005		1.1200e-003	1.1200e-003		1.0700e-003	1.0700e-003	0.0000	2.9308	2.9308	7.3000e-004	0.0000	2.9491

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	3.6800e-003	9.1000e-004	1.0000e-005	2.4000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9278	0.9278	6.0000e-005	0.0000	0.9292
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.1000e-004	3.6800e-003	9.1000e-004	1.0000e-005	2.4000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9278	0.9278	6.0000e-005	0.0000	0.9292

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3.20 Remove MTBM MARB Tunnel - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1100e-003	0.0232	0.0223	4.0000e-005		1.1200e-003	1.1200e-003		1.0700e-003	1.0700e-003	0.0000	2.9308	2.9308	7.3000e-004	0.0000	2.9490
Total	3.1100e-003	0.0232	0.0223	4.0000e-005		1.1200e-003	1.1200e-003		1.0700e-003	1.0700e-003	0.0000	2.9308	2.9308	7.3000e-004	0.0000	2.9490

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	3.6800e-003	9.1000e-004	1.0000e-005	2.4000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9278	0.9278	6.0000e-005	0.0000	0.9292
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.1000e-004	3.6800e-003	9.1000e-004	1.0000e-005	2.4000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9278	0.9278	6.0000e-005	0.0000	0.9292

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3.21 Install Pipeline MARB Tunnel - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0115	0.1000	0.0718	1.9000e-004		4.1700e-003	4.1700e-003		3.8900e-003	3.8900e-003	0.0000	16.6683	16.6683	4.4900e-003	0.0000	16.7805
Total	0.0115	0.1000	0.0718	1.9000e-004		4.1700e-003	4.1700e-003		3.8900e-003	3.8900e-003	0.0000	16.6683	16.6683	4.4900e-003	0.0000	16.7805

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	6.4300e-003	1.6000e-003	2.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.2000e-004	1.0000e-005	1.3000e-004	0.0000	1.6236	1.6236	1.0000e-004	0.0000	1.6261
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.9000e-004	6.4300e-003	1.6000e-003	2.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.2000e-004	1.0000e-005	1.3000e-004	0.0000	1.6236	1.6236	1.0000e-004	0.0000	1.6261

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3.21 Install Pipeline MARB Tunnel - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0115	0.1000	0.0718	1.9000e-004		4.1700e-003	4.1700e-003		3.8900e-003	3.8900e-003	0.0000	16.6683	16.6683	4.4900e-003	0.0000	16.7805
Total	0.0115	0.1000	0.0718	1.9000e-004		4.1700e-003	4.1700e-003		3.8900e-003	3.8900e-003	0.0000	16.6683	16.6683	4.4900e-003	0.0000	16.7805

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	6.4300e-003	1.6000e-003	2.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.2000e-004	1.0000e-005	1.3000e-004	0.0000	1.6236	1.6236	1.0000e-004	0.0000	1.6261
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.9000e-004	6.4300e-003	1.6000e-003	2.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.2000e-004	1.0000e-005	1.3000e-004	0.0000	1.6236	1.6236	1.0000e-004	0.0000	1.6261

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3.21 Install Pipeline MARB Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.0853	0.0688	1.9000e-004		3.4700e-003	3.4700e-003		3.2400e-003	3.2400e-003	0.0000	16.6679	16.6679	4.4700e-003	0.0000	16.7797
Total	0.0103	0.0853	0.0688	1.9000e-004		3.4700e-003	3.4700e-003		3.2400e-003	3.2400e-003	0.0000	16.6679	16.6679	4.4700e-003	0.0000	16.7797

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8000e-004	6.1000e-003	1.5100e-003	2.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.2000e-004	1.0000e-005	1.3000e-004	0.0000	1.6093	1.6093	1.0000e-004	0.0000	1.6118
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.8000e-004	6.1000e-003	1.5100e-003	2.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.2000e-004	1.0000e-005	1.3000e-004	0.0000	1.6093	1.6093	1.0000e-004	0.0000	1.6118

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3.21 Install Pipeline MARB Tunnel - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.0853	0.0688	1.9000e-004		3.4700e-003	3.4700e-003		3.2400e-003	3.2400e-003	0.0000	16.6679	16.6679	4.4700e-003	0.0000	16.7797
Total	0.0103	0.0853	0.0688	1.9000e-004		3.4700e-003	3.4700e-003		3.2400e-003	3.2400e-003	0.0000	16.6679	16.6679	4.4700e-003	0.0000	16.7797

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8000e-004	6.1000e-003	1.5100e-003	2.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.2000e-004	1.0000e-005	1.3000e-004	0.0000	1.6093	1.6093	1.0000e-004	0.0000	1.6118
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.8000e-004	6.1000e-003	1.5100e-003	2.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.2000e-004	1.0000e-005	1.3000e-004	0.0000	1.6093	1.6093	1.0000e-004	0.0000	1.6118

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3.22 Annular Grout MARB Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0168	0.1265	0.1114	2.6000e-004		5.4800e-003	5.4800e-003		5.1700e-003	5.1700e-003	0.0000	23.0222	23.0222	5.5300e-003	0.0000	23.1605
Total	0.0168	0.1265	0.1114	2.6000e-004		5.4800e-003	5.4800e-003		5.1700e-003	5.1700e-003	0.0000	23.0222	23.0222	5.5300e-003	0.0000	23.1605

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-004	0.0105	2.5800e-003	3.0000e-005	7.2000e-004	2.0000e-005	7.4000e-004	2.1000e-004	2.0000e-005	2.3000e-004	0.0000	2.7588	2.7588	1.7000e-004	0.0000	2.7630
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.0000e-004	0.0105	2.5800e-003	3.0000e-005	7.2000e-004	2.0000e-005	7.4000e-004	2.1000e-004	2.0000e-005	2.3000e-004	0.0000	2.7588	2.7588	1.7000e-004	0.0000	2.7630

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3.22 Annular Grout MARB Tunnel - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0168	0.1265	0.1114	2.6000e-004		5.4800e-003	5.4800e-003		5.1700e-003	5.1700e-003	0.0000	23.0222	23.0222	5.5300e-003	0.0000	23.1605
Total	0.0168	0.1265	0.1114	2.6000e-004		5.4800e-003	5.4800e-003		5.1700e-003	5.1700e-003	0.0000	23.0222	23.0222	5.5300e-003	0.0000	23.1605

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-004	0.0105	2.5800e-003	3.0000e-005	7.2000e-004	2.0000e-005	7.4000e-004	2.1000e-004	2.0000e-005	2.3000e-004	0.0000	2.7588	2.7588	1.7000e-004	0.0000	2.7630
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.0000e-004	0.0105	2.5800e-003	3.0000e-005	7.2000e-004	2.0000e-005	7.4000e-004	2.1000e-004	2.0000e-005	2.3000e-004	0.0000	2.7588	2.7588	1.7000e-004	0.0000	2.7630

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3.23 Backfill Tunnel Pit 2 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0565	0.0000	0.0565	0.0291	0.0000	0.0291	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0280	0.2755	0.2160	4.8000e-004		0.0118	0.0118		0.0109	0.0109	0.0000	41.4682	41.4682	0.0129	0.0000	41.7907
Total	0.0280	0.2755	0.2160	4.8000e-004	0.0565	0.0118	0.0683	0.0291	0.0109	0.0399	0.0000	41.4682	41.4682	0.0129	0.0000	41.7907

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.0000e-005	2.3400e-003	5.1000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.6692	0.6692	5.0000e-005	0.0000	0.6704
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	7.0000e-005	2.3400e-003	5.1000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.6692	0.6692	5.0000e-005	0.0000	0.6704

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3.23 Backfill Tunnel Pit 2 - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0254	0.0000	0.0254	0.0131	0.0000	0.0131	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0280	0.2755	0.2160	4.8000e-004		0.0118	0.0118		0.0109	0.0109	0.0000	41.4681	41.4681	0.0129	0.0000	41.7906
Total	0.0280	0.2755	0.2160	4.8000e-004	0.0254	0.0118	0.0372	0.0131	0.0109	0.0240	0.0000	41.4681	41.4681	0.0129	0.0000	41.7906

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.0000e-005	2.3400e-003	5.1000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.6692	0.6692	5.0000e-005	0.0000	0.6704
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	7.0000e-005	2.3400e-003	5.1000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.6692	0.6692	5.0000e-005	0.0000	0.6704

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3.25 Excavating Tunnel Pit 4 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0492	0.0000	0.0492	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0243	0.2396	0.1878	4.2000e-004		0.0102	0.0102		9.4700e-003	9.4700e-003	0.0000	36.0593	36.0593	0.0112	0.0000	36.3397
Total	0.0243	0.2396	0.1878	4.2000e-004	0.0492	0.0102	0.0594	0.0253	9.4700e-003	0.0347	0.0000	36.0593	36.0593	0.0112	0.0000	36.3397

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2000e-004	4.2800e-003	9.3000e-004	1.0000e-005	2.7000e-004	1.0000e-005	2.8000e-004	7.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.2221	1.2221	9.0000e-005	0.0000	1.2243
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.2000e-004	4.2800e-003	9.3000e-004	1.0000e-005	2.7000e-004	1.0000e-005	2.8000e-004	7.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.2221	1.2221	9.0000e-005	0.0000	1.2243

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3.25 Excavating Tunnel Pit 4 - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0221	0.0000	0.0221	0.0114	0.0000	0.0114	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0243	0.2396	0.1878	4.2000e-004		0.0102	0.0102		9.4700e-003	9.4700e-003	0.0000	36.0592	36.0592	0.0112	0.0000	36.3397
Total	0.0243	0.2396	0.1878	4.2000e-004	0.0221	0.0102	0.0324	0.0114	9.4700e-003	0.0208	0.0000	36.0592	36.0592	0.0112	0.0000	36.3397

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2000e-004	4.2800e-003	9.3000e-004	1.0000e-005	2.7000e-004	1.0000e-005	2.8000e-004	7.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.2221	1.2221	9.0000e-005	0.0000	1.2243
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.2000e-004	4.2800e-003	9.3000e-004	1.0000e-005	2.7000e-004	1.0000e-005	2.8000e-004	7.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.2221	1.2221	9.0000e-005	0.0000	1.2243

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3.26 Erect MTBM Van Buren Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.5000e-003	0.0261	0.0268	4.0000e-005		1.1900e-003	1.1900e-003		1.1300e-003	1.1300e-003	0.0000	3.6632	3.6632	9.0000e-004	0.0000	3.6857
Total	3.5000e-003	0.0261	0.0268	4.0000e-005		1.1900e-003	1.1900e-003		1.1300e-003	1.1300e-003	0.0000	3.6632	3.6632	9.0000e-004	0.0000	3.6857

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-004	4.3600e-003	1.0800e-003	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.1495	1.1495	7.0000e-005	0.0000	1.1513
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.3000e-004	4.3600e-003	1.0800e-003	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.1495	1.1495	7.0000e-005	0.0000	1.1513

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3.26 Erect MTBM Van Buren Tunnel - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.5000e-003	0.0261	0.0268	4.0000e-005		1.1900e-003	1.1900e-003		1.1300e-003	1.1300e-003	0.0000	3.6632	3.6632	9.0000e-004	0.0000	3.6856
Total	3.5000e-003	0.0261	0.0268	4.0000e-005		1.1900e-003	1.1900e-003		1.1300e-003	1.1300e-003	0.0000	3.6632	3.6632	9.0000e-004	0.0000	3.6856

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-004	4.3600e-003	1.0800e-003	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.1495	1.1495	7.0000e-005	0.0000	1.1513
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.3000e-004	4.3600e-003	1.0800e-003	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.1495	1.1495	7.0000e-005	0.0000	1.1513

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3.28 Remove MTBM Van Buren Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8000e-003	0.0209	0.0214	4.0000e-005		9.5000e-004	9.5000e-004		9.0000e-004	9.0000e-004	0.0000	2.9306	2.9306	7.2000e-004	0.0000	2.9485
Total	2.8000e-003	0.0209	0.0214	4.0000e-005		9.5000e-004	9.5000e-004		9.0000e-004	9.0000e-004	0.0000	2.9306	2.9306	7.2000e-004	0.0000	2.9485

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-004	3.4900e-003	8.6000e-004	1.0000e-005	2.4000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9196	0.9196	6.0000e-005	0.0000	0.9210
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-004	3.4900e-003	8.6000e-004	1.0000e-005	2.4000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9196	0.9196	6.0000e-005	0.0000	0.9210

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3.28 Remove MTBM Van Buren Tunnel - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8000e-003	0.0209	0.0214	4.0000e-005		9.5000e-004	9.5000e-004		9.0000e-004	9.0000e-004	0.0000	2.9306	2.9306	7.2000e-004	0.0000	2.9485
Total	2.8000e-003	0.0209	0.0214	4.0000e-005		9.5000e-004	9.5000e-004		9.0000e-004	9.0000e-004	0.0000	2.9306	2.9306	7.2000e-004	0.0000	2.9485

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-004	3.4900e-003	8.6000e-004	1.0000e-005	2.4000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9196	0.9196	6.0000e-005	0.0000	0.9210
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-004	3.4900e-003	8.6000e-004	1.0000e-005	2.4000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9196	0.9196	6.0000e-005	0.0000	0.9210

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3.29 Install Pipeline Van Buren Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0147	0.1219	0.0983	2.7000e-004		4.9500e-003	4.9500e-003		4.6300e-003	4.6300e-003	0.0000	23.8113	23.8113	6.3900e-003	0.0000	23.9711
Total	0.0147	0.1219	0.0983	2.7000e-004		4.9500e-003	4.9500e-003		4.6300e-003	4.6300e-003	0.0000	23.8113	23.8113	6.3900e-003	0.0000	23.9711

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-004	8.7200e-003	2.1500e-003	2.0000e-005	6.0000e-004	2.0000e-005	6.1000e-004	1.7000e-004	2.0000e-005	1.9000e-004	0.0000	2.2990	2.2990	1.4000e-004	0.0000	2.3025
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.5000e-004	8.7200e-003	2.1500e-003	2.0000e-005	6.0000e-004	2.0000e-005	6.1000e-004	1.7000e-004	2.0000e-005	1.9000e-004	0.0000	2.2990	2.2990	1.4000e-004	0.0000	2.3025

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3.29 Install Pipeline Van Buren Tunnel - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0147	0.1219	0.0983	2.7000e-004		4.9500e-003	4.9500e-003		4.6300e-003	4.6300e-003	0.0000	23.8113	23.8113	6.3900e-003	0.0000	23.9710
Total	0.0147	0.1219	0.0983	2.7000e-004		4.9500e-003	4.9500e-003		4.6300e-003	4.6300e-003	0.0000	23.8113	23.8113	6.3900e-003	0.0000	23.9710

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-004	8.7200e-003	2.1500e-003	2.0000e-005	6.0000e-004	2.0000e-005	6.1000e-004	1.7000e-004	2.0000e-005	1.9000e-004	0.0000	2.2990	2.2990	1.4000e-004	0.0000	2.3025
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.5000e-004	8.7200e-003	2.1500e-003	2.0000e-005	6.0000e-004	2.0000e-005	6.1000e-004	1.7000e-004	2.0000e-005	1.9000e-004	0.0000	2.2990	2.2990	1.4000e-004	0.0000	2.3025

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3.30 Annular Grout Van Buren Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0112	0.0843	0.0743	1.7000e-004		3.6600e-003	3.6600e-003		3.4500e-003	3.4500e-003	0.0000	15.3481	15.3481	3.6900e-003	0.0000	15.4403
Total	0.0112	0.0843	0.0743	1.7000e-004		3.6600e-003	3.6600e-003		3.4500e-003	3.4500e-003	0.0000	15.3481	15.3481	3.6900e-003	0.0000	15.4403

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-004	6.9700e-003	1.7200e-003	2.0000e-005	4.8000e-004	1.0000e-005	4.9000e-004	1.4000e-004	1.0000e-005	1.5000e-004	0.0000	1.8392	1.8392	1.1000e-004	0.0000	1.8420
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0000e-004	6.9700e-003	1.7200e-003	2.0000e-005	4.8000e-004	1.0000e-005	4.9000e-004	1.4000e-004	1.0000e-005	1.5000e-004	0.0000	1.8392	1.8392	1.1000e-004	0.0000	1.8420

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3.30 Annular Grout Van Buren Tunnel - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0112	0.0843	0.0743	1.7000e-004		3.6600e-003	3.6600e-003		3.4500e-003	3.4500e-003	0.0000	15.3481	15.3481	3.6900e-003	0.0000	15.4403
Total	0.0112	0.0843	0.0743	1.7000e-004		3.6600e-003	3.6600e-003		3.4500e-003	3.4500e-003	0.0000	15.3481	15.3481	3.6900e-003	0.0000	15.4403

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-004	6.9700e-003	1.7200e-003	2.0000e-005	4.8000e-004	1.0000e-005	4.9000e-004	1.4000e-004	1.0000e-005	1.5000e-004	0.0000	1.8392	1.8392	1.1000e-004	0.0000	1.8420
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0000e-004	6.9700e-003	1.7200e-003	2.0000e-005	4.8000e-004	1.0000e-005	4.9000e-004	1.4000e-004	1.0000e-005	1.5000e-004	0.0000	1.8392	1.8392	1.1000e-004	0.0000	1.8420

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3.31 Backfill Tunnel Pit 3 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0492	0.0000	0.0492	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0243	0.2396	0.1878	4.2000e-004		0.0102	0.0102		9.4700e-003	9.4700e-003	0.0000	36.0593	36.0593	0.0112	0.0000	36.3397
Total	0.0243	0.2396	0.1878	4.2000e-004	0.0492	0.0102	0.0595	0.0253	9.4700e-003	0.0347	0.0000	36.0593	36.0593	0.0112	0.0000	36.3397

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5000e-004	8.8600e-003	1.9200e-003	3.0000e-005	5.6000e-004	2.0000e-005	5.9000e-004	1.6000e-004	2.0000e-005	1.8000e-004	0.0000	2.5314	2.5314	1.8000e-004	0.0000	2.5360
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.5000e-004	8.8600e-003	1.9200e-003	3.0000e-005	5.6000e-004	2.0000e-005	5.9000e-004	1.6000e-004	2.0000e-005	1.8000e-004	0.0000	2.5314	2.5314	1.8000e-004	0.0000	2.5360

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3.31 Backfill Tunnel Pit 3 - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0222	0.0000	0.0222	0.0114	0.0000	0.0114	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0243	0.2396	0.1878	4.2000e-004		0.0102	0.0102		9.4700e-003	9.4700e-003	0.0000	36.0592	36.0592	0.0112	0.0000	36.3397
Total	0.0243	0.2396	0.1878	4.2000e-004	0.0222	0.0102	0.0324	0.0114	9.4700e-003	0.0208	0.0000	36.0592	36.0592	0.0112	0.0000	36.3397

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5000e-004	8.8600e-003	1.9200e-003	3.0000e-005	5.6000e-004	2.0000e-005	5.9000e-004	1.6000e-004	2.0000e-005	1.8000e-004	0.0000	2.5314	2.5314	1.8000e-004	0.0000	2.5360
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.5000e-004	8.8600e-003	1.9200e-003	3.0000e-005	5.6000e-004	2.0000e-005	5.9000e-004	1.6000e-004	2.0000e-005	1.8000e-004	0.0000	2.5314	2.5314	1.8000e-004	0.0000	2.5360

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3.32 Backfill Tunnel Pit 4 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0492	0.0000	0.0492	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0243	0.2396	0.1878	4.2000e-004		0.0102	0.0102		9.4700e-003	9.4700e-003	0.0000	36.0593	36.0593	0.0112	0.0000	36.3397
Total	0.0243	0.2396	0.1878	4.2000e-004	0.0492	0.0102	0.0594	0.0253	9.4700e-003	0.0347	0.0000	36.0593	36.0593	0.0112	0.0000	36.3397

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	3.8700e-003	8.4000e-004	1.0000e-005	2.5000e-004	1.0000e-005	2.6000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	1.1057	1.1057	8.0000e-005	0.0000	1.1077
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.1000e-004	3.8700e-003	8.4000e-004	1.0000e-005	2.5000e-004	1.0000e-005	2.6000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	1.1057	1.1057	8.0000e-005	0.0000	1.1077

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3.32 Backfill Tunnel Pit 4 - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0221	0.0000	0.0221	0.0114	0.0000	0.0114	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0243	0.2396	0.1878	4.2000e-004		0.0102	0.0102		9.4700e-003	9.4700e-003	0.0000	36.0592	36.0592	0.0112	0.0000	36.3397
Total	0.0243	0.2396	0.1878	4.2000e-004	0.0221	0.0102	0.0324	0.0114	9.4700e-003	0.0208	0.0000	36.0592	36.0592	0.0112	0.0000	36.3397

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	3.8700e-003	8.4000e-004	1.0000e-005	2.5000e-004	1.0000e-005	2.6000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	1.1057	1.1057	8.0000e-005	0.0000	1.1077
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.1000e-004	3.8700e-003	8.4000e-004	1.0000e-005	2.5000e-004	1.0000e-005	2.6000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	1.1057	1.1057	8.0000e-005	0.0000	1.1077

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3.34 Site Restoration - Other/Demobilization - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.8700e-003	0.0000	7.8700e-003	8.5000e-004	0.0000	8.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0152	0.1723	0.1106	2.7000e-004		6.5500e-003	6.5500e-003		6.0200e-003	6.0200e-003	0.0000	23.7017	23.7017	7.6700e-003	0.0000	23.8934
Total	0.0152	0.1723	0.1106	2.7000e-004	7.8700e-003	6.5500e-003	0.0144	8.5000e-004	6.0200e-003	6.8700e-003	0.0000	23.7017	23.7017	7.6700e-003	0.0000	23.8934

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

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Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Other Non-Asphalt Surfaces	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	9.2400e-003	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0600e-003
Unmitigated	9.2400e-003	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0600e-003

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.6100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.4900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4000e-004	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0600e-003
Total	9.2400e-003	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0600e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.6100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.4900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4000e-004	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0600e-003
Total	9.2400e-003	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0600e-003

7.0 Water Detail

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7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Appendix B

Biological Resources Assessment

October 13, 2020
Project No: 18-05919

Ms. Brenda Marines
Environmental Specialist
The Metropolitan Water District of Southern California
Environmental Planning Section
700 North Alameda Street
Los Angeles, California 90012
Via Email: bmarines@mwdh2o.com

Subject: Biological Resources Assessment for the Perris Valley Pipeline Project I-215/Van Buren Boulevard Segment

Dear Ms. Marines:

This report documents the findings of a Biological Resources Assessment conducted by Rincon Consultants, Inc. (Rincon), for the proposed modifications to the Perris Valley Pipeline Project ("Project"). The assessment was completed to document existing site conditions via desktop analysis and field survey, to determine potential impacts to special-status biological resources based upon current plans of the proposed modifications to the Project, and to compare impacts to those previously analyzed within Western Municipal Water District's (WMWD) Environmental Impact Report (EIR) (SCH No. 205061028) (WMWD 2005). The Metropolitan Water District of Southern California (Metropolitan) adopted the EIR and its Mitigation Monitoring and Reporting Program (MMRP) and mitigation obligations in 2005. Metropolitan took over construction of the Project in 2007.

Project Location and Description

The Project is generally located off the Van Buren Boulevard and I-215 freeway interchange, on land owned by the California Department of Transportation (Caltrans), March Joint Powers Authority (MJPA), Riverside County Transportation Commission/Burlington Northern Santa Fe (RCTC/BNSF), and other private owners. The Project would impact surrounding areas that parallel I-215, located approximately and up to 300-feet east and west of the freeway, from Van Buren Boulevard to Harley-Knox Boulevard, in unincorporated Riverside County.

Metropolitan proposes to modify the Perris Valley Pipeline alignment, where it crosses I-215, from the alignment reviewed and certified in the 2005 EIR. The modifications would include the relocation of the tunnel undercrossing located near the RCTC/BNSF railroad tracks and I-215 from a point south of Van Buren Boulevard to a point just north of Van Buren Boulevard. The tunnel would veer in a southwesterly direction long the eastern side of I-215 and Van Buren Boulevard, and under the northwestern portion of the March Air Field Museum, and into the Van Buren Boulevard ROW to connect with the already-constructed southern segment of the Project. The modifications would shorten the length of the alignment that would traverse beneath I-215, at approximately 3,000 linear feet, which is effectively the same as the length of the originally approved alignment in this area.

In addition, the proposed modifications would include installation of temporary dewatering facilities, temporary groundwater conveyance lines, a temporary conveyance line delivering treated water from the Mills WTP, and three temporary treatment facilities. The Project would include decommissioning and removal of approximately 40 existing dewatering and monitoring wells. See Figure 1 for the regional location. Figure 2 shows the general Project, and Figures 3, 4, and 5 show the detailed proposed modifications (tunnels, temporary facilities, wells) located within the Caltrans ROW.

This assessment documents the existing site conditions and potential impacts to special-status biological resources associated with construction of the 3,000-foot segment that was not analyzed in the 2005 EIR.

Methodology

Regulatory Overview

Regulated or sensitive resources studied and analyzed herein include special status plant and wildlife species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement, and locally protected resources, such as protected trees.

Environmental Statutes. For the purpose of this report, potential impacts to biological resources were analyzed based on the following statutes:

- National Environmental Policy Act (NEPA)
- California Environmental Quality Act (CEQA)
- Federal Endangered Species Act (ESA)
- California Endangered Species Act (CESA)
- Federal Clean Water Act (CWA)
- California Fish and Game Code (CFGC)
- Migratory Bird Treaty Act (MBTA)
- The Bald and Golden Eagle Protection Act
- Porter-Cologne Water Quality Control Act
- Riverside County Code of Ordinances
- Western Riverside County Multiple Species Habitat Conservation Plan (WRMSHCP)(2003)

Guidelines for Determining CEQA Significance. The following threshold criteria, as defined by the CEQA Guidelines Appendix G Initial Study Checklist, were used to evaluate potential environmental effects. Based on these criteria, the proposed Project would have a significant effect on biological resources if it would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal areas, etc.) through direct removal, filling, hydrological interruption, or other means.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional or state habitat conservation plan.

Literature Review

A literature review was conducted to establish the environmental and regulatory setting of the proposed modifications to the Project. Specific literature reviewed for the subject analysis is provided in the references section of this document. The reviewed literature also included the United States Department of Agriculture (USDA) Soil Survey for the Riverside East 7.5-minute topographic quadrangle (USDA, 2018), and literature detailing the habitat requirements of subject species. Aerial photographs, topographic maps, and soil survey maps were also examined.

Queries of the United States Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS): Information, Planning and Conservation System (IPaC) (USFWS, 2020b), USFWS Critical Habitat Portal (USFWS, 2020a), USFWS National Wetland Inventory (NWI) (USFWS, 2020c), California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) (CDFW, 2020a), CDFW Biogeographic Information and Observation System (BIOS) (CDFW, 2020b), California Native Plant Society (CNPS) *Online Inventory of Rare, Threatened and Endangered Plants of California* (CNPS, 2020), and the National Marine Fisheries Service (NMFS) California Species List Tool (NMFS, 2020) were conducted. The queries were conducted to obtain comprehensive information regarding state and federally listed species, sensitive communities and federally designated Critical Habitat known to or considered to have potential to occur within the vicinity of the Project site. Refer to Appendix B for the complete literature review.

Field Reconnaissance Surveys

The field reconnaissance surveys were limited to providing an overview of site biological constraints and the potential presence of sensitive biological resources, including sensitive plant and wildlife species, sensitive plant communities, jurisdictional waters and wetlands, protected trees, wildlife movement, and habitat for nesting birds. Potentially jurisdictional features were identified; however, a formal jurisdictional delineation was not conducted. The survey area consisted of the footprint of the approximately 3,000-foot segment of pipeline as well as work areas and access roads. The survey area for the April 2020 survey also included the storm drain and channel downstream of the dewatering discharge points. Reconnaissance surveys were conducted by Rincon biologists in 2018, 2019 and 2020 as detailed in Table 1 below.

Table 1. Reconnaissance Surveys

Date	Time	Temperature	Cloud Cover	Wind
June 8, 2018	0930 - 1530	89 degrees Fahrenheit	0%	2 - 5 miles per hour
May 24, 2019	1015 - 1315	74 degrees Fahrenheit	5%	0 - 3 miles per hour
March 30, 2020	0815 - 0230	52 degrees Fahrenheit	0%	4 - 8 miles per hour
April 23, 2020	0900 - 1200	81 degrees Fahrenheit	0%	0 - 3 miles per hour

The surveys were performed by walking and driving along the proposed modifications work area to characterize the existing biological resources present (e.g., vegetative communities, potential presence of sensitive species and/or habitats, and presence of potentially jurisdictional waters). Where portions of the survey area were inaccessible on foot (e.g., portions of the railroad and I-215 freeway), the biologist visually inspected these areas with binoculars (10 x 40).

Existing Conditions

Physical Characteristics

The proposed modifications site (site) is located within a developed/disturbed transportation corridor, primarily within the rights-of-way of existing dirt and paved roadways including the I-215 freeway, Van Buren Boulevard, and the BNSF/RCTC railroad. Based on a review of historic aerial photographs, the site and surrounding areas have been heavily developed and disturbed since at least 1994.

Soils along the proposed realignment consist of the following soil types (Figure 6):

- Monserate sandy loam, 0 to 5 percent slopes
- Monserate sandy loam, 5 to 8 percent slopes (USDA 2018)

Land use adjacent to the site consists of developed and urban areas including the I-215 freeway and BNSF/RCTC railroad which bisect the Project area, March Air Reserve Base to east, industrial development to the west/northwest, and Riverside National Cemetery to west/southwest.

Vegetation

Based on a review of available aerial imagery and the field reconnaissance survey, the site is primarily characterized by urban and developed land including dirt and paved roadway rights-of-ways and adjacent disturbed areas. Portions of the site that are not paved and devoid of vegetation consist of patchy, ruderal vegetation and bare ground. These areas are dominated by non-native grasses and Russian thistle (*Salsola tragus*), and included lower abundances of the following non-native, weedy plant species: short podded mustard (*Hirschfeldia incana*) and Mediterranean grass species (*Schismus ssp.*). Sparse occurrences of native plants include Palmer's goldenbush (*Ericameria palmeri*), common sandaster (*Corethrogyne filaginifolia*), and California buckwheat (*Eriogonum fasciculatum*). Vegetation within a potentially jurisdictional drainage located immediately adjacent to the site of proposed temporary dewatering facilities included sparse umbrella plant (*Cyperus involucreatus*), mulefat (*Baccharis salicifolia*), and dock species (*Rumex sp.*).

General Wildlife

As would be expected from the location adjacent to existing roadways, wildlife activity was low on the Project site, and only common avian and small mammal species typically found in disturbed areas of Riverside County were observed during the surveys: common raven (*Corvus corax*), horned lark

(*Eremophila alpestris*), house finch (*Haemorhous mexicanus*), European starling (*Sturnus vulgaris*), red-tailed hawk (*Buteo jamaicensis*), black phoebe (*Sayornis nigricans*), hooded oriole (*Icterus cucullatus*), killdeer (*Charadrius vociferus*), Eurasian collared-dove (*Streptopelia decaocto*), and California ground squirrel (*Otospermophilus beecheyi*). Due to the site's location within a heavily travelled urban transportation corridor with high levels of existing disturbance as evidenced from vehicle tracks and low vegetative cover, the site is subject to high levels of noise which would likely deter most wildlife from long-term use of the Project site.

Sensitive Biological Resources

Based on review of aerial photographs and the field reconnaissance survey, Rincon evaluated the potential presence of sensitive biological resources on and adjacent to the site.

Special Status Species

Local, state, and federal agencies regulate special status species and generally require an assessment of their presence or potential presence to be conducted prior to the approval of a proposed project. Assessments for the potential occurrence of special status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDDB, species occurrence records from other sites in the vicinity of the survey area, and previous reports for the Project site. The potential for each special status species to occur in the survey area was evaluated according to the following criteria:

- *No Potential.* Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- *Low Potential.* Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- *Moderate Potential.* Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- *High Potential.* All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- *Present.* Species is observed on the site or has been recorded (e.g., CNDDDB, other reports) on the site recently (within the last 5 years).

The literature review identified 14 sensitive plant species and 38 sensitive wildlife species within five miles of the proposed realignment (Table 2 and Figure 7). Two sensitive plant communities, southern cottonwood riparian forest and southern sycamore alder riparian woodland, were identified within five miles of the site. Sensitive plant and wildlife species typically have very specific habitat requirements, which are not found on the site.

Table 2. Special Status Species Potential for Occurrence Table

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Plants				
<i>Allium munzii</i> Munz's onion	Endangered/ Candidate Threatened G1/S1 1B.1	Chaparral, Cismontane woodland, Coastal scrub, Pinyon and juniper woodland, Valley and foothill grassland. mesic, clay. 297 - 1070 m. perennial bulbiferous herb. Blooms Mar-May	Not Expected	No suitable chaparral, scrub, woodland, or grassland habitat present on site. Project area is highly developed/ disturbed.
<i>Arenaria paludicola</i> marsh sandwort	Endangered/ Candidate Endangered G1/S1 1B.1	Marshes and swamps (freshwater or brackish). sandy, openings. 3 - 170 m. perennial stoloniferous herb. Blooms May-Aug	Not Expected	No suitable marsh habitat present on site. Project area is highly developed/ disturbed.
<i>Ambrosia pumila</i> San Diego ambrosia	Endangered/ None G1/S1 1B.1	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools. sandy loam or clay, often in disturbed areas, sometimes alkaline. 20 - 415 m. perennial rhizomatous herb. Blooms Apr-Oct	Not Expected	No suitable chaparral, scrub, grassland or vernal pool habitat present on site. Project area is highly developed/ disturbed.
<i>Berberis nevini</i> Nevin's barberry	Endangered/ Endangered G1 / S1 1B.1	Chaparral, cismontane woodland, coastal scrub, riparian scrub. On steep, N-facing slopes or in low grade sandy washes. 290-1575 m. perennial evergreen shrub. Blooms (Feb)Mar-Jun	Not Expected	No suitable scrub or woodland habitat present on site. Project area is highly developed/disturbed.
<i>Brodiaea fillifolia</i> thread-leaved brodiaea	Threatened/ Candidate Endangered G2/S2 1B.1	Chaparral (openings), Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools. often clay. 25 - 1120 m. perennial bulbiferous herb. Blooms Mar-Jun	Not Expected	No suitable chaparral, scrub grassland, woodland or vernal pool habitat present on site. Project area is highly developed/disturbed.
<i>Centromadia pungens</i> ssp. <i>laevis</i> smooth tarplant	None/None G3G4T2 / S2 1B.1	Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland. Alkali meadow, alkali scrub; also in disturbed places. 5-1170 m. annual herb. Blooms Apr-Sep	Not Expected	No suitable grassland, scrub, or riparian habitat present on site. Alkali soils and vegetation absent. Project area is highly developed/ disturbed.

<i>Chloropyron maritimum</i> ssp. <i>maritimum</i> salt marsh bird's-beak	Endangered/ Candidate Endangered G4?T1/S1 1B.2	Coastal dunes, Marshes and swamps (coastal salt). 0 - 30 m. annual herb (hemiparasitic). Blooms May-Oct(Nov)	Not Expected	No suitable coastal dune or marsh habitat present on site. Alkali soils and vegetation absent. Project area is highly developed/ disturbed.
<i>Chorizanthe parryi</i> var. <i>parryi</i> Parry's spineflower	None/None G3T2 / S2 1B.1	Coastal scrub, chaparral, cismontane woodland, valley and foothill grassland. Dry slopes and flats; sometimes at interface of 2 vegetation types, such as chaparral and oak woodland. Dry, sandy soils. 90-1220 m. annual herb. Blooms Apr-Jun	Not Expected	No suitable scrub, woodland, or grassland habitat present on site. Project area is highly developed/disturbed.
<i>Chorizanthe polygonoides</i> var. <i>longispina</i> long-spined spineflower	None/None G5T3 / S3 1B.2	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Gabbroic clay. 30-1540 m. annual herb. Blooms Apr-Jul	Not Expected	No suitable scrub or grassland habitats present on site. No vernal pools present. Project area is highly developed/disturbed.
<i>Dodecahema leptoceras</i> slender-horned spineflower	Endangered/ Candidate Endangered G1/S1 1B.1	Chaparral, Cismontane woodland, Coastal scrub (alluvial fan). sandy. 200 - 760 m. annual herb. Blooms Apr-Jun	Not Expected	No suitable chaparral, woodland or scrub habitats present on site. Project area is highly developed/disturbed.
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i> Santa Ana River woolly-star	Endangered/ Candidate Endangered G4T1/S1 1B.1	Chaparral, Coastal scrub (alluvial fan). sandy or gravelly. 91 - 610 m. perennial herb. Blooms Apr-Sep	Not Expected	No suitable chaparral or scrub habitats present on site. Project area is highly developed/disturbed.
<i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson's pepper-grass	None/None G5T3/S3 4.3	Chaparral, Coastal scrub. 1 - 885 m. annual herb. Blooms Jan-Jul	Not Expected	No suitable chaparral or scrub habitats present on site. Project area is highly developed/disturbed.
<i>Nasturtium gambelii</i> Gambel's water cress	Endangered/ Candidate Threatened G1/S1 1B.1	Marshes and swamps (freshwater or brackish). 5 - 330 m. perennial rhizomatous herb. Blooms Apr-Oct	Not Expected	No suitable marsh habitats present on site. Project area is highly developed/disturbed.

<i>Navarretia fossalis</i> spreading navarretia	Threatened/ None G2/S2 1B.1	Chenopod scrub, Marshes and swamps (assorted shallow freshwater), Playas, Vernal pools. 30 - 655 m. annual herb. Blooms Apr-Jun	Not Expected	No suitable scrub, marsh, or vernal pool habitats present on site. Project area is highly developed/disturbed.
Insects				
<i>Bombus crotchii</i> Crotch bumble bee	None/None G3G4 / S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	Not Expected	No suitable coastal habitat or plants for foraging within the Project area. Project area is highly developed/disturbed.
<i>Euphydryas editha quino</i> Quino checkerspot butterfly	Endangered/ None G5T1T2/ S1S2	Sunny openings within chaparral & coastal sage shrublands in parts of Riverside & San Diego counties. Hills and mesas near the coast. Need high densities of food plants <i>Plantago erecta</i> , <i>P. insularis</i> , and <i>Orthocarpus purpureus</i> .	Not Expected	No suitable chaparral or sage scrub habitat within the Project area. Project area is highly developed/disturbed.
<i>Neolarra alba</i> white cuckoo bee	None/None GH/SH	Known only from 6 historical localities in Southern California; has not been collected since 1946. Cleptoparasitic in the nests of perdita bees.	Not Expected	Project area is highly developed/disturbed.
Crustaceans				
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	Threatened/ None G3/S3	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Not Expected	No vernal pool habitat present. Project area is highly developed/disturbed.
<i>Streptocephalus woottoni</i> Riverside fairy shrimp	Endangered/ None G1G2 / S1S2	Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season.	Not Expected	No suitable swales, grassland, scrub, or vernal pool habitat present on site. Project area is highly developed/disturbed.
Fish				
<i>Catostomus santaanae</i> Santa Ana sucker	Threatened/ None G1/S1	Endemic to Los Angeles Basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae.	Not Expected	Outside known range of species. No aquatic habitat present in Project area.

Amphibians				
<i>Spea hammondi</i> western spadefoot	None/None G3 / S3 SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Not Expected	No suitable grassland, woodland or vernal pool habitat present on site. Project area is highly developed/disturbed.
Reptiles				
<i>Anniella stebbinsi</i> southern California legless lizard	None/None G3/S3	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	Not Expected	No moist loose soil present on site. Project area is highly developed/disturbed.
<i>Arizona elegans occidentalis</i> California glossy snake	None/None G5T2 / S2 SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	Not Expected	No suitable scrub or grassland habitat present on site. Project area is highly developed/disturbed.
<i>Aspidoscelis hyperythra</i> orange-throated whiptail	None/None G5 / S2S3 WL	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food: termites.	Not Expected	No suitable scrub or hardwood habitat present on site. Project area is highly developed/disturbed.
<i>Aspidoscelis tigris stejnegeri</i> coastal whiptail	None/None G5T5 / S3 SSC	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland & riparian areas. Ground may be firm soil, sandy, or rocky.	Not Expected	No desert, woodland or riparian habitat present on site. Project area is highly developed/disturbed.
<i>Crotalus ruber</i> red-diamond rattlesnake	None/None G4 / S3 SSC	Chaparral, woodland, grassland, & desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	Not Expected	No rocky areas or dense vegetation present on site. Project area is highly developed/disturbed.

<i>Diadophis punctatus modestus</i> San Bernardino ringneck snake	None/None G5T2T3Q / S2?	Most common in open, relatively rocky areas. Often in somewhat moist microhabitats near intermittent streams. Avoids moving through open or barren areas by restricting movements to areas of surface litter or herbaceous veg.	Not Expected	No rocky or moist areas or present on site. No surface litter present. Project area is highly developed/disturbed.
<i>Emys marmorata</i> western pond turtle	None/None G3G4/S3	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Not Expected	No aquatic habitat present. Project area is highly developed/disturbed.
<i>Phrynosoma blainvillii</i> coast horned lizard	None/None G3G4 / S3S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Not Expected	No sandy washes or bushes present on site. Project area is highly developed/disturbed.
Birds				
<i>Accipiter cooperii</i> Cooper's hawk	None/None G5 / S4 WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Not Expected	No suitable woodland or riparian habitat present on site. Project area is highly developed/disturbed.
<i>Agelaius tricolor</i> tricolored blackbird	None/ Threatened G2G3 / S1S2 SSC	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	Not Expected	No suitable riparian habitat present on site. Project area is highly developed/disturbed.
<i>Aimophila ruficeps canescens</i> southern California rufous-crowned sparrow	None/None G5T3 / S3 WL	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	Not Expected	No suitable scrub habitat present on site. Project area is highly developed/disturbed.

<i>Artemisospiza belli belli</i> Bell's sage sparrow	None/None G5T2T4 / S3 WL	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.	Not Expected	No suitable chaparral or scrub habitat present on site. Project area is highly developed/disturbed.
<i>Athene cucularia</i> burrowing owl	None/None G4 / S3 SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Low	The Project site contains disturbed ruderal habitat bare ground which may provide marginal habitat for this species. California ground squirrel burrows are present nearby. Habitat quality and potential for occurrence are low due to high levels of existing development/disturbance.
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	Threatened/ Endangered G5T2T3 / S1	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Not Expected	No suitable riparian habitat present on site. Project area is highly developed/disturbed.
<i>Empidonax traillii extimus</i> southwestern willow flycatcher	Endangered/ Endangered G5T2/S1	Riparian woodlands in Southern California.	Not Expected	No riparian woodland habitat present on site. Project area is highly developed/disturbed.
<i>Eremophila alpestris actia</i> California horned lark	None/None G5T4Q / S4 WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Low	The Project site contains disturbed ruderal habitat and bare ground which may provide marginal habitat for this species. Habitat quality and potential for occurrence is considered low due to high levels of existing development/disturbance.

<i>Icteria virens</i> yellow-breasted chat	None/None G5 / S3 SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	Not Expected	No suitable riparian habitat present on site. Project area is highly developed/disturbed.
<i>Lanius ludovicianus</i> loggerhead shrike	None/None G4 / S4 SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub & washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Not Expected	No suitable woodland, savannah, or scrub habitat present on site. Project area is highly developed/disturbed.
<i>Polioptila californica californica</i> coastal California gnatcatcher	Threatened/ None G4G5T2Q / S2 SSC	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	Not Expected	No suitable scrub habitat present on site. Project area is highly developed/disturbed.
<i>Spinus lawrencei</i> Lawrence's goldfinch	None/None G3G4 / S3S4	Nests in open oak or other arid woodland and chaparral, near water. Nearby herbaceous habitats used for feeding. Closely associated with oaks.	Not Expected	No suitable woodland or chaparral habitat present on site. Project area is highly developed/disturbed.
<i>Vireo bellii pusillus</i> least Bell's vireo	Endangered/ Endangered G5T2 / S2	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	Not Expected	No suitable riparian habitat present on site. Project area is highly developed/disturbed.
Mammals				
<i>Chaetodipus fallax fallax</i> northwestern San Diego pocket mouse	None/None G5T3T4 / S3S4 SSC	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego County. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	Not Expected	No suitable scrub or grassland habitats present on site. Project area is highly developed/disturbed.
<i>Dipodomys merriami parvus</i> San Bernardino kangaroo rat	Endangered/ Candidate Endangered G5T1/S1 SSC	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.	Not Expected	No suitable scrub or flood plain habitats present on site. Project area is highly developed/disturbed.

<i>Dipodomys stephensi</i> Stephens' kangaroo rat	Endangered/ Threatened G2 / S2	Primarily annual & perennial grasslands, but also occurs in coastal scrub & sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass and filaree. Will burrow into firm soil.	Not Expected	No suitable scrub or grassland habitats present on site. Project area is highly developed/disturbed.
<i>Eumops perotis californicus</i> western mastiff bat	None/None G5T4 / S3S4 SSC	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Not Expected	No suitable woodland, scrub, grassland or habitats present on site. Project area is highly developed/disturbed.
<i>Lasiurus xanthinus</i> western yellow bat	None/None G5 / S3 SSC	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	Not Expected	No suitable riparian habitats or trees for roosts present on site. Project area is highly developed/disturbed.
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	None/None G5T3T4 / S3S4 SSC	Intermediate canopy stages of shrub habitats & open shrub / herbaceous & tree / herbaceous edges. Coastal sage scrub habitats in Southern California.	Not Expected	No suitable scrub habitat present on site. Project area is highly developed/disturbed.
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	None/None G5T3T4 / S3S4 SSC	Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.	Not Expected	No suitable scrub habitat present on site. Project area is highly developed/disturbed.
<i>Nyctinomops femorosaccus</i> pocketed free-tailed bat	None/None G4 / S3 SSC	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	Not Expected	No suitable woodland, scrub, riparian or cliff habitats present on site. Project area is highly developed/disturbed.
<i>Onychomys torridus ramona</i> southern grasshopper mouse	None/None G5T3 / S3 SSC	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover. Feeds almost exclusively on arthropods, especially scorpions and orthopteran insects.	Not Expected	No suitable scrub habitat present on site. Project area is highly developed/disturbed.
<i>Perognathus longimembris brevinasus</i> Los Angeles pocket mouse	None/None G5T1T2 / S1S2 SSC	Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. Open ground with fine, sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead.	Not Expected	No suitable scrub or grassland habitat present on site. Project area is highly developed/disturbed.

<p>Status: Federal/State FE = Federal Endangered FT = Federal Threatened PFT = Proposed Federal Threatened FDL = Federal Delisted SE = State Endangered ST = State Threatened SR = State Rare SDL = State Delisted SSC = CDFW Species of Special Concern FP = CDFW Fully Protected WL = CDFW Watch List</p> <p>Other Statuses: G1 or S1 Critically Imperiled Globally or Subnationally (state) G2 or S2 Imperiled Globally or Subnationally (state) G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state) G4/5 or S4/5 Apparently secure, common and abundant GH or SH Possibly Extirpated – missing; known from only historical occurrences but still some hope of rediscovery</p> <p>Additional notations may be provided as follows: T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species) Q – Questionable taxonomy that may reduce conservation priority ? – Inexact numeric rank</p>	<p>CRPR (CNPS California Rare Plant Rank): 1A = Presumed Extinct in California 1B = Rare, Threatened, or Endangered in California and elsewhere 2 = Rare, Threatened, or Endangered in California, but more common elsewhere 3 = Need more information (a Review List) 4 = Plants of Limited Distribution (a Watch List)</p> <p>CRPR Threat Code Extension: .1 = Seriously endangered in California (>80% of occurrences threatened / high degree and immediacy of threat) .2 = Fairly endangered in California (20-80% of occurrences threatened) .3 = Not very endangered in California (<20% of occurrences threatened)</p>
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Special Status Plant Species. The proposed modifications site is located within a highly developed/disturbed transportation corridor, and primarily within the rights-of-way of existing dirt and paved roadways. Because of the lack of specific habitat types or suitable substrates as well as the high levels of historic and existing disturbance, sensitive plant species are not expected to occur on the site.

Special Status Wildlife Species. The proposed modifications site is located within a highly developed/disturbed transportation corridor, and primarily within rights-of-way of existing dirt and paved roadways. Because of the lack of specific habitats as well as high levels of historical and existing disturbance, the site is not suitable for most special status wildlife species. The literature review identified 38 special-status wildlife species recorded within five miles of the site. Twenty-eight of these species are not expected to occur due to lack of suitable habitat (e.g., riparian, scrub, woodland).

Low quality or marginal foraging and/or nesting habitat for two sensitive wildlife species, burrowing owl (*Athene cunicularia*) and California horned lark (*Eremophila alpestris actia*) occurs within and adjacent to the site. The site is largely dominated by bare ground and pavement with some disturbed areas containing low-growing non-native ruderal species. California horned lark are typically ground nesters and are capable of nesting on bare ground which is present within the site. In addition, burrows and California ground squirrels were present in the area surrounding the site, which indicates that there is suitable habitat for burrowing owls. However, habitat is considered low quality and the potential for these species to occur is low due to the site's location within a heavily travelled urban transportation corridor and high levels of existing disturbance which would likely deter individuals from long-term use of the site.

Nesting Birds. Shrubs and trees located near the proposed modifications site could provide suitable nesting habitat for several common avian species that were observed during the reconnaissance survey. Bird nests and eggs are protected by California Fish and Game Code (CFG) 3503 and the Migratory Bird Treaty Act (MBTA). Common species such as mourning dove and house finch have the potential to nest in scrub habitat, even in highly disturbed settings. Some species, such as horned larks, are typically ground nesters and are capable of nesting on bare ground which is present on

the site. No nests or birds exhibiting nesting behaviors were observed during the reconnaissance site visit.

In addition, burrows and California ground squirrels were present in the area surrounding the site, which indicates that there is suitable habitat for burrowing owls. However, habitat is considered low quality due to existing disturbances and proximity to heavily travelled roadways. No burrowing owls or signs of burrowing owls such as pellets or white wash were observed during the reconnaissance site visit.

Sensitive Plant Communities

No sensitive plant communities as defined by the CNDDDB or local ordinances are present on the site.

Jurisdictional Waters and Wetlands

Potentially jurisdictional features were identified; however, a formal jurisdictional delineation was not conducted. Therefore, the information below provides a general assessment of potentially jurisdictional features and does not provide a formal assessment of specific agency jurisdiction for each feature. Based on a review of existing data, including review of aerial imagery and the USFWS NWI (2020c), and onsite observations, several potentially jurisdictional features are present within or adjacent to the site as detailed below:

1. A constructed earthen storm channel is located east of I-215 off-ramp and north of Van Buren Boulevard but outside of the Project work limits. The channel conveys stormwater flows from north to south and supports low growing herbaceous vegetation as well as avian species. No standing water was observed in the basin during the April 2020 the site visit. Refer to Photograph 1 in Appendix A.
2. An existing detention basin is present west of the I-215 on-ramp and north of Van Buren Boulevard. The detention basin supports various grasses and shrubs and provides foraging and nesting habitat for avian species. A small pond of standing water was present within the detention basin during the April 2020 site visit. Refer to Photograph 2 in Appendix A.
3. A small depression is present within the surrounding disturbed non-native grassland habitat located east of 1-215 between the I-215 off-ramp and Van Buren Boulevard. It is adjacent to but outside the Project work limits. The depressed area contains some areas with bare soil in contrast to the dense non-native grasses in the surrounding areas. Within the depressed area soils are cracked, indicating water may have collected for brief periods following storm events that has since percolated into the ground or evaporated. No wet areas were observed within the depression during the April 2020 site visit following a wet winter with relatively recent rains. The depressed area is surrounded by stakes, indicating that it may have been previously fenced or flagged. Refer to Photograph 5 in Appendix A.

The Project has been designed to avoid the potentially jurisdictional features described above. However, Project-related groundwater would be discharged at two separate discharge points (refer to Figure 5) near the potentially jurisdictional features described below:

4. Discharge Point A consists of a partially earthen/partially concrete-lined v-ditch channel which conveys flows from north to south into two large concrete culverts. Review of aerial imagery indicates that the channel originates from underground approximately 400 feet north and 350 feet west of Discharge Point A. At Discharge Point A the channel is devoid of vegetation and does not provide habitat for sensitive biological resources. No riparian vegetation or wildlife were observed at this location. A small amount of water was present within the channel during the April 2020 site visit. Refer to Photograph 6 in Appendix A.

5. Discharge Point B consists of a concrete-lined trapezoidal channel which conveys flows from north to south along the east side of I-215. Review of aerial imagery indicates that Discharge Point B likely connects with Discharge Point A upstream approximately 1,000 feet northwest of Discharge Point B. At Discharge Point B, the channel is devoid of vegetation and does not provide habitat for sensitive biological resources. No riparian vegetation or wildlife were observed at this location. The channel was dry at the time of the April 2020 site visit. The channel conveys flows underground to the south and into Lateral B. Refer to Photograph 7 in Appendix A.
6. Lateral B is a 30-foot wide partially concrete-lined and partially earthen flood control channel maintained by Riverside County Flood Control and Water Conservation District. At Heacock Street, Lateral B transitions from a fully concrete-lined channel through rip-rap into an earthen channel. At this location the channel exhibits signs of regular disturbance including erosion from flows transitioning from the concrete channel, trash dumping and mowing for weed abatement. A small amount of ponded water was present at the time of the April 2020 site visit which appeared to support several avian species including barn swallows and killdeer. At this location the channel was mostly devoid of vegetation with the exception of a few weedy herbaceous species. No riparian vegetation was observed. Ground squirrel burrows were present within the earthen banks of the channel. Approximately 1,000 feet downstream of Heacock Street, Lateral B was dry and similarly mostly devoid of vegetation. This section of the channel was comprised of very compact soils and showed signs of erosion including incised areas of flow concentration within the larger channel bottom and some areas of ponded water where deeper pockets had been formed. This portion of the channel also exhibited signs of regular mowing for weed abatement. As Lateral B proceeds downstream toward the Perris Valley Storm Drain, the channel is less disturbed and more densely vegetated. At the inlet of Lateral B to the Perris Valley Storm Drain, the channel supports dense riparian vegetation including large willow trees (*Salix* sp.) and tamarisk (*Tamarix* sp.). At this location, Lateral B contained several inches of standing water and supported various avian species including mallard ducks (*Anas platyrhynchos*) during the April 2020 site visit. Due to the presence of standing water and riparian vegetation Lateral B is likely subject to the jurisdiction of CDFW and Regional Water Quality Control Board (RWQCB), and potentially subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE). Refer to Photograph 8 in Appendix A.
7. The Perris Valley Storm Drain is an approximately 300-foot wide partially concrete-lined and partially earthen bottom flood control channel maintained by Riverside County Flood Control and Water Conservation District. At the inlet of Lateral B, the Perris Valley Storm Drain was inundated with at least a foot of standing water and densely vegetated with riparian vegetation including willows, tamarisk and cattails (*Typha* sp.) during the April 2020 site visit. In this location, the Perris Valley Storm Drain supports riparian vegetation and provides foraging and nesting habitat for avian species. The Perris Valley Storm Drain is subject to the jurisdiction of all three regulatory agencies. Perris Valley Storm Drain is approximately 2.0 miles from Discharge Point A and Discharge Point B.

Wildlife Movement

According to the RCA WRMSHCP Information App, the Project site is not located within a WRMSHCP Criteria Area, Public-Quasi Public Reserve Lands or within a Core or Linkage (RCA 2018). The CDFW BIOS (2020b) does not include any mapped essential habitat connectivity areas in the immediate vicinity of the site. The closest mapped essential habitat connectivity areas are located approximately three miles

to the southeast in the vicinity of the Perris Reservoir and approximately four miles to the northeast in the vicinity of Box Springs Mountain Reserve Park. The site is separated from these habitat connectivity areas by existing development, major highways, and paved roadways. In addition, the site is surrounded by existing development and heavily traveled transportation corridors, including the BNSF/RCTC railroad, March Air Reserve Base and I-215 freeway, and is therefore, not expected to serve as a significant wildlife migratory corridor.

Resources Protected by Local Policies and Ordinances

The proposed modifications are located within the County of Riverside Stephen's Kangaroo Rat Plan and Fee Area. County of Riverside Ordinance No. 663 (Stephen's Kangaroo Rat Mitigation Fee Ordinance) requires that all proposed development projects located within the fee area are reviewed to determine the most appropriate course of action to ensure the survival of the species through one or more of the following: (1) on-site mitigation of impacts to the Stephens' Kangaroo Rat through the reservation or addition of lands included within or immediately adjacent to a potential habitat reserve site, or (2) payment of the Mitigation Fee or (3) any combination of (1) and (2) consistent with the intent and purpose of the ordinance. No other resources protected by local policies or ordinances are present on the site.

Conservation Plans

The proposed modifications are located within the boundaries of the WRMSHCP. Portions of the site are located within the survey area for burrowing owl, but not within a designated survey area identified for any other WRMSHCP covered species or for narrow endemic plant species. The proposed modifications are not located within a criteria cell or within Public/Quasi Public conserved lands. Public/Quasi-Public conserved lands are located approximately 0.5 mile west of the site on the opposite side of adjacent industrial development and approximately 1.4 miles east of the site on the opposite side of March Air Reserve Base (Western Riverside County Regional Conservation Authority (RCA), 2018).

Impact Analysis and Mitigation Measures

Special Status Species

As mentioned above, 14 sensitive plant species and 38 sensitive wildlife species are known to occur or have potential to occur within a five-mile radius of the site. Due to the lack of specific habitats or suitable substrates as well as the high levels of historical and existing disturbance, sensitive plant species are not expected to occur on the site. Therefore, impacts to sensitive plant species would be less than significant and the Project would not substantially increase the severity of the impacts identified in the 2005 EIR.

Of the 38 sensitive wildlife species identified, 36 of these species are not expected to occur due to lack of suitable habitat (e.g., riparian, scrub, woodland). The remaining two species with potential to occur within the site are burrowing owl (*Athene cunicularia*) and California horned lark (*Eremophila alpestris actia*). Construction activities associated with the proposed modifications are primarily located within existing dirt and paved roadways and will be installed underground with surfaces returned to pre-Project conditions following completion of construction. Therefore the proposed modifications are not expected to result in loss of suitable habitat for burrowing owl or California horned lark. In addition, the all-tunnel construction considered as part of the proposed modifications would result in less direct ground disturbance than the open trench construction analyzed in the 2005 EIR.

No special-status wildlife species were observed during the reconnaissance survey and the potential for these species to occur is low due to the site's location within a heavily travelled urban transportation corridor and high levels of existing disturbance which would likely deter individuals from long-term use of the Project site. However, construction activities associated with the proposed modifications will occur for a period of 52 weeks which would overlap with the nesting bird season. Metropolitan will implement standard best management practices (BMPs), including pre-construction nesting bird/burrowing owl surveys and avoidance/implementation of no-work buffers as appropriate, to ensure that no direct or indirect impacts to sensitive wildlife species or nesting birds would occur as a result of construction activities. Implementation of these standard BMPs would be required as part of Metropolitan's standard contractor specifications. As a result, impacts to sensitive wildlife species and nesting birds would be less than significant and the proposed modifications would not substantially increase the severity of the impacts identified in the 2005 EIR.

Pursuant to the federal ESA Section 7(a)(2), the proposed pipeline modifications would result in No Effect to the following federally-listed species: Munz's onion (*Allium munzii*; federally endangered), marsh sandwort (*Arenaria paludicola*; federally endangered), San Diego ambrosia (*Ambrosia pumila*; federally endangered), Nevin's barberry (*Berberis nevinii*; federally endangered), thread-leaved brodiaea (*Brodiaea fillifolia*; federally threatened), salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum*; federally endangered), slender-horned spineflower (*Dodecahema leptoceras*; federally endangered), Santa Ana River wooly-star (*Eriastrum densifolium* ssp. *sanctorum*; federally endangered), Gambel's water cress (*Nasturtium gambelii*; federally endangered), spreading navarretia (*Navarretia fossalis*; federally threatened), Quino checkerspot butterfly (*Euphydryas editha quino*; federally endangered), vernal pool fairy shrimp (*Branchinecta lynchi*; federally threatened), Riverside fairy shrimp (*Streptocephalus woottoni*; federally endangered), Santa Ana sucker (*Catostomus santaanae*; federally threatened), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*; federally threatened), southwestern willow flycatcher (*Empidonax traillii extimus*; federally endangered), coastal California gnatcatcher (*Polioptila californica californica*; federally threatened), least Bell's vireo (*Vireo bellii pusillus*; federally endangered), San Bernardino kangaroo rat (*Dipodomys merriami parvus*; federally endangered), and Stephen's kangaroo rat (*Dipodomys stephensi*; federally endangered). Likewise, pursuant to the CESA, the Project would result in No Take of the following state-listed species, nor will the Project cause species of special concern to trend towards warranting a listed status: Munz's onion (state candidate threatened), marsh sandwort (state candidate endangered), Nevin's barberry (state endangered), thread-leaved brodiaea (state candidate endangered), salt marsh bird's-beak (state candidate endangered), slender-horned spineflower (state candidate endangered), Santa Ana River wooly-star (state candidate endangered), Gambel's water cress (state candidate threatened), tricolored blackbird (*Agelaius tricolor*; state threatened), western yellow-billed cuckoo (state endangered), southwestern willow flycatcher (state endangered), least Bell's vireo (state endangered), San Bernardino kangaroo rat (state candidate endangered) and Stephen's kangaroo rat (state threatened). The Project would not impact any NMFS-protected resources.

Sensitive Plant Communities

The site does not contain riparian habitat or other sensitive natural communities. Therefore, no impacts are expected and the severity of the impact would be equal to that identified in the 2005 EIR.

Jurisdictional Waters and Wetlands

As detailed above, several potentially jurisdictional features are present within or adjacent to the site. The Project would be located outside of features 1-3 identified above. Additionally, Metropolitan would implement standard BMPs, including flagging of work area boundaries and installation of straw waddles

and/or silt fencing, to ensure that no direct or indirect impacts to adjacent potentially jurisdictional resources would occur as a result of construction activities. Implementation of these standard BMPs are required as part of Metropolitan's standard contractor specifications. Therefore, features 1-3 would not be impacted by the Project.

Project-related groundwater would be discharged at two separate points and may connect with downstream areas under the jurisdiction of CDFW, USACE, and RWQCB including Lateral B and the Perris Valley Storm Drain. Water would be discharged in accordance with the Project's National Pollutant Discharge Elimination System (NPDES) General Construction Permit and dewatering activities would comply with the conditions of the permit including preparation of a stormwater pollution prevention plan, implementation of BMPs, and monitoring to ensure impacts to water quality are minimized. Metropolitan conducted a hydraulic open channel flow analysis to estimate discharge flow and to assess potential for erosion/scour within Lateral B and the Perris Valley Storm Drain. Metropolitan's analysis indicated that the depth of discharge flow would be less than three inches with flow velocities around one foot per second. Metropolitan's analysis also concluded that the flow velocity for the projected maximum Project discharge would not result in erosion/scour within Lateral B or the Perris Valley Storm Drain. Additionally, based on a review of historic aerial imagery, Lateral B and the Perris Valley Storm Drain are routinely maintained as part of Riverside County Flood Control and Water Conservation District's maintenance program which includes grading and removal of all riparian vegetation within the channels. According to the Mitigated Negative Declaration for Riverside County Flood Control and Water Conservation District's Regional Permit for Maintenance of Existing Flood Control Facilities (March 2017), "It is important to note that conducting maintenance on existing flood control facilities is the existing conditions/CEQA baseline; on a daily basis the District currently maintains its facilities." The channels are also previously developed and subject to significant disturbance, including trash dumping and non-natural runoff from adjacent development. Based on these facts, the small amount of water that would be discharged into the channels from Project dewatering is not expected to adversely affect jurisdictional waters, riparian habitat, or wildlife beyond ambient conditions. Impacts would be less than significant and the proposed modifications would not substantially increase the severity of the impacts identified in the 2005 EIR. The Project is not expected to require a Lake and Streambed Alteration Agreement from CDFW pursuant to Section 1602 of the CFGC, a 404 permit from the USACE pursuant to the CWA, or a 401 Permit from the RWQCB, pursuant to the CWA.

Wildlife Movement

As discussed above, the site is not located within a WRMSHCP Criteria Area, Public-Quasi Public Reserve Lands or within a Core or Linkage (RCA 2018). In addition, CDFW BIOS (2020b) does not include any mapped essential habitat connectivity areas within the immediate vicinity of the site. The closest mapped essential habitat connectivity areas are located approximately three miles to the southeast in the vicinity of the Perris Reservoir and approximately four miles to the northeast in the vicinity of Box Springs Mountain Reserve Park. The site is separated from these habitat connectivity areas by existing development, major highways, and paved roadways. In addition, the site is surrounded by existing development and heavily traveled transportation corridors, including the BNSF/RCTC railroad, March Air Reserve Base and I-215 freeway, and is therefore, not expected to serve as a significant migratory wildlife corridor. Therefore, no impacts are expected and the severity of the impact would be equal to that identified in the 2005 EIR.

Local Policies and Ordinances

The proposed modifications are located within the County of Riverside Stephen's Kangaroo Rat Plan and Fee Area. County of Riverside Ordinance No. 663 (Stephens' Kangaroo Rat Mitigation Fee Ordinance)

requires that all proposed development projects located within the fee area are reviewed to determine the most appropriate course of action to ensure the survival of the species through one or more of the following: (1) on-site mitigation of impacts to the Stephens' Kangaroo Rat through the reservation or addition of lands included within or immediately adjacent to a potential habitat reserve site, or (2) payment of the Mitigation Fee or (3) any combination of (1) and (2) consistent with the intent and purpose of the ordinance. The proposed modifications site lacks suitable grassland, coastal scrub and sagebrush habitat to support Stephens' Kangaroo Rat and is located within a heavily travelled and disturbed transportation corridor primarily within the rights-of-ways of existing dirt and paved roadways. In addition, the proposed modifications would be installed underground with surfaces returned to pre-Project conditions following completion of construction. Further, the tunneling option would result in less direct ground disturbance than the open trench option analyzed in the 2005 EIR. Therefore the proposed modifications would not result in impacts to or loss of suitable habitat for Stephens' Kangaroo Rat. No other resources protected by local policies or ordinances are present on the site. Therefore, impacts to would be less than significant and the proposed modifications would not substantially increase the severity of the impacts identified in the 2005 EIR.

Conservation Plans

The proposed modifications are located within the boundaries of the WRMSHCP. Portions of the site are located within the survey area for burrowing owl, but not within a designated survey area identified for any other WRMSHCP covered species or for narrow endemic plant species. The proposed modifications are not located within a criteria cell or within Public/Quasi Public conserved lands. Public/Quasi-Public conserved lands are located approximately 0.5 mile west of the Project area on the opposite side of adjacent industrial development and approximately 1.4 miles east of the site on the opposite side of March Air Reserve Base. Based on the proposed modifications' distance and separation from Public/Quasi-Public lands as well as the limited scope and duration of activities (i.e., activities to occur within existing dirt and paved roadways), the proposed modifications are not expected to impact Public/Quasi-Public lands. As discussed above, no burrowing owls or their sign were observed during the reconnaissance-level biological resources field surveys. The potential for burrowing owl to occur is low due to the site's location within a heavily travelled urban transportation corridor and high levels of existing disturbance which would likely deter individuals from long-term use of the site. In addition, the proposed modifications would be installed underground with surfaces returned to pre-Project conditions following completion of construction. The proposed modifications are not expected to result in impacts to or loss of suitable habitat for burrowing owl and would not conflict with the WRMSHCP. Further, the tunneling option would result in less direct ground disturbance than the open trench option analyzed in the 2005 EIR. The Project qualifies as a Covered Activity, maintenance of existing flood control facilities, as per Section 7.3.1 of the WRMSHCP. These findings are included in the 2005 EIR (WMWD, 2005) and also in the 2017 Initial Study/Mitigated Negative Declaration for the Regional General Permit for Maintenance of Existing Flood Control Facilities (SCH No. 2017021032; Riverside County Flood Control and Water Conservation District, 2017). Additionally, the Project would not result in impacts to riparian/riverine habitat. Therefore, the Project would not require preparation of a Determination of Biologically Equivalent of Superior Preservation (DBESP) pursuant to the WRMSHCP. The proposed pipeline modifications are a Covered Activity; therefore the Project is exempt from further analysis under the WRMSHCP. Impacts would be less than significant and the proposed modifications would not substantially increase the severity of the impacts identified in the 2005 EIR.

Thank you for the opportunity to provide this Biological Resources Assessment. Please contact the undersigned with any questions.

Sincerely,

Rincon Consultants, Inc.



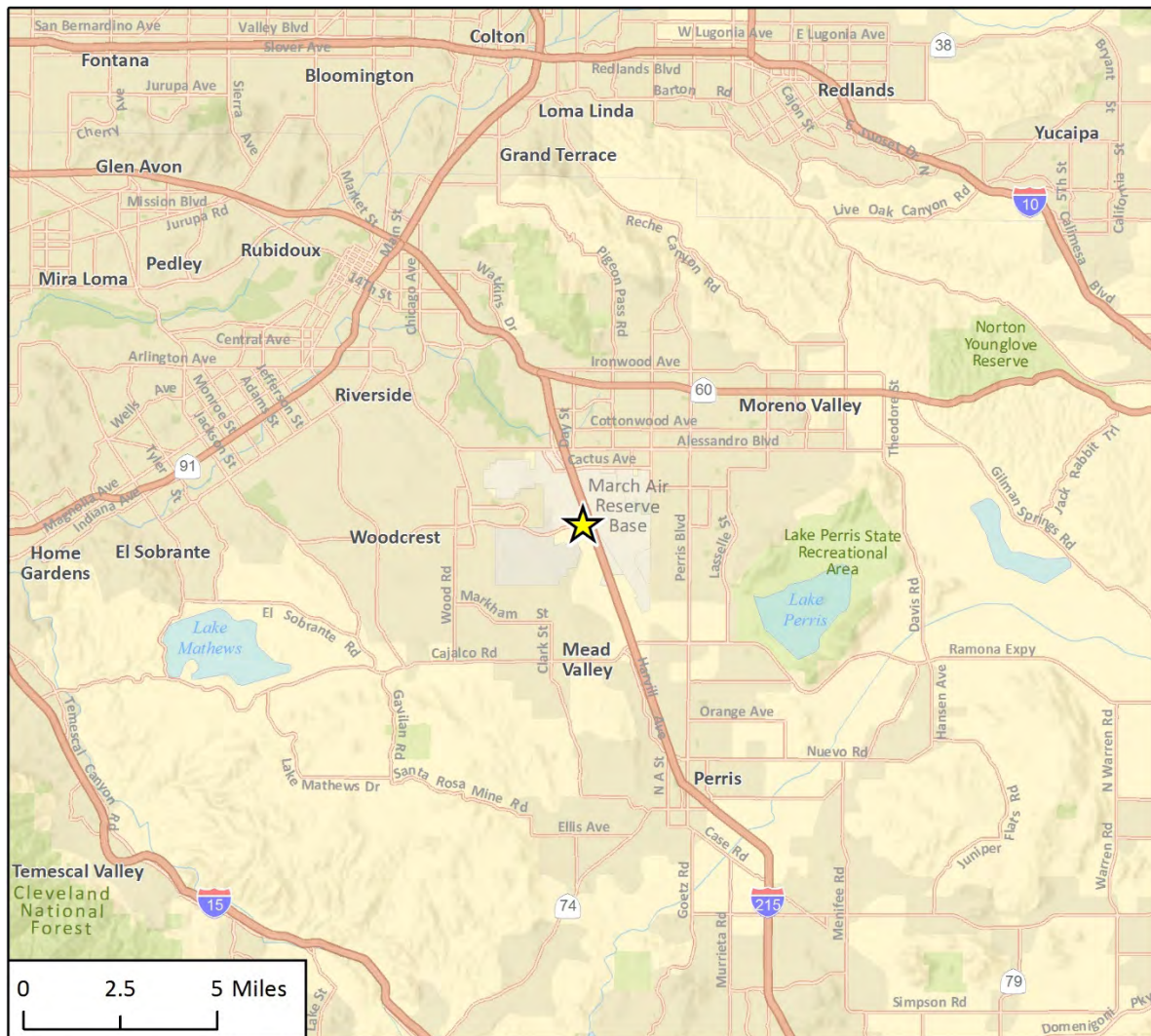
Christina Shushnar
Senior Project Manager / Biologist



Steven J. Hongola
Principal / Senior Ecologist

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Figure 1 Regional Location



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★ Project Location 

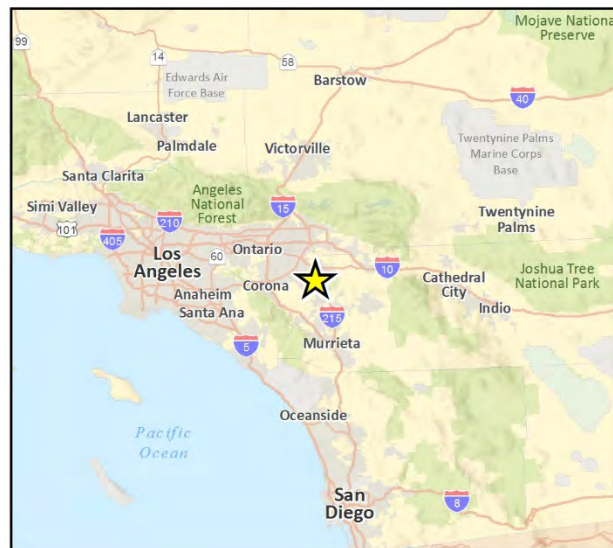
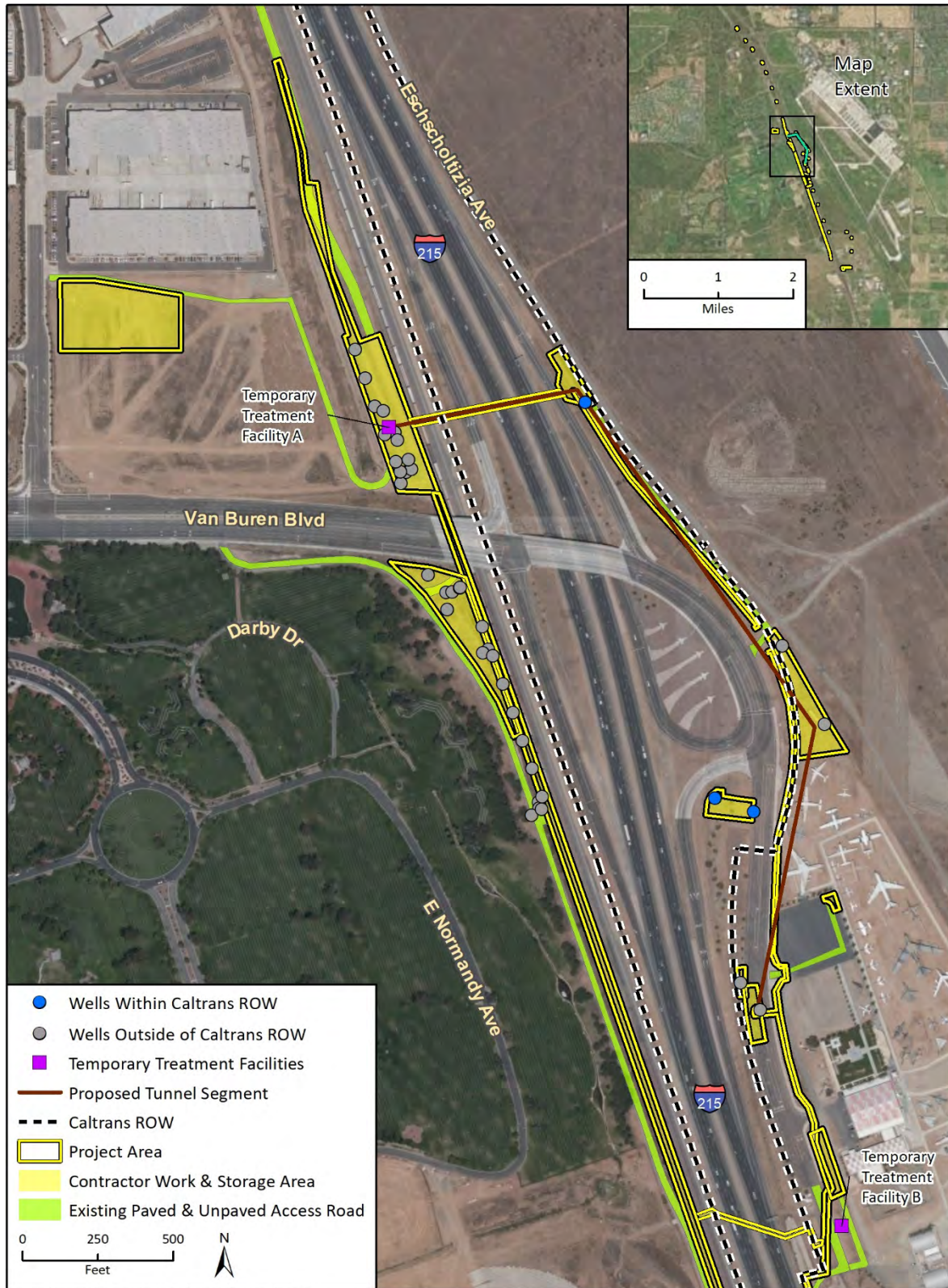


Fig. 1 Regional Location

Figure 2 Project Location



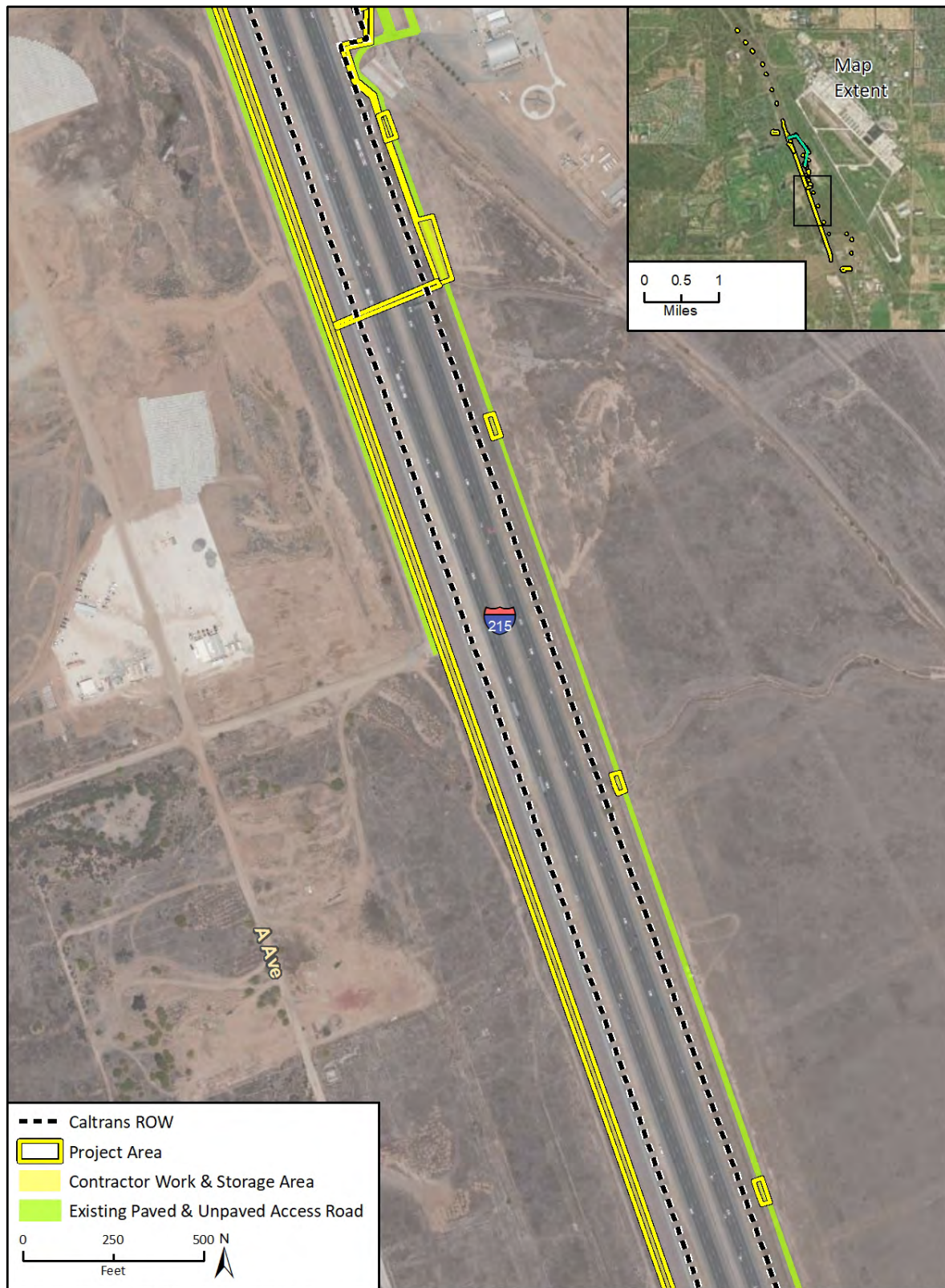
Figure 3 Proposed Modifications (1 of 3)



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Additional data provided by Metropolitan Water District of Southern California 2018.

Caltrans, Fig 4 Proposed Mods and Caltrans ROW Northern

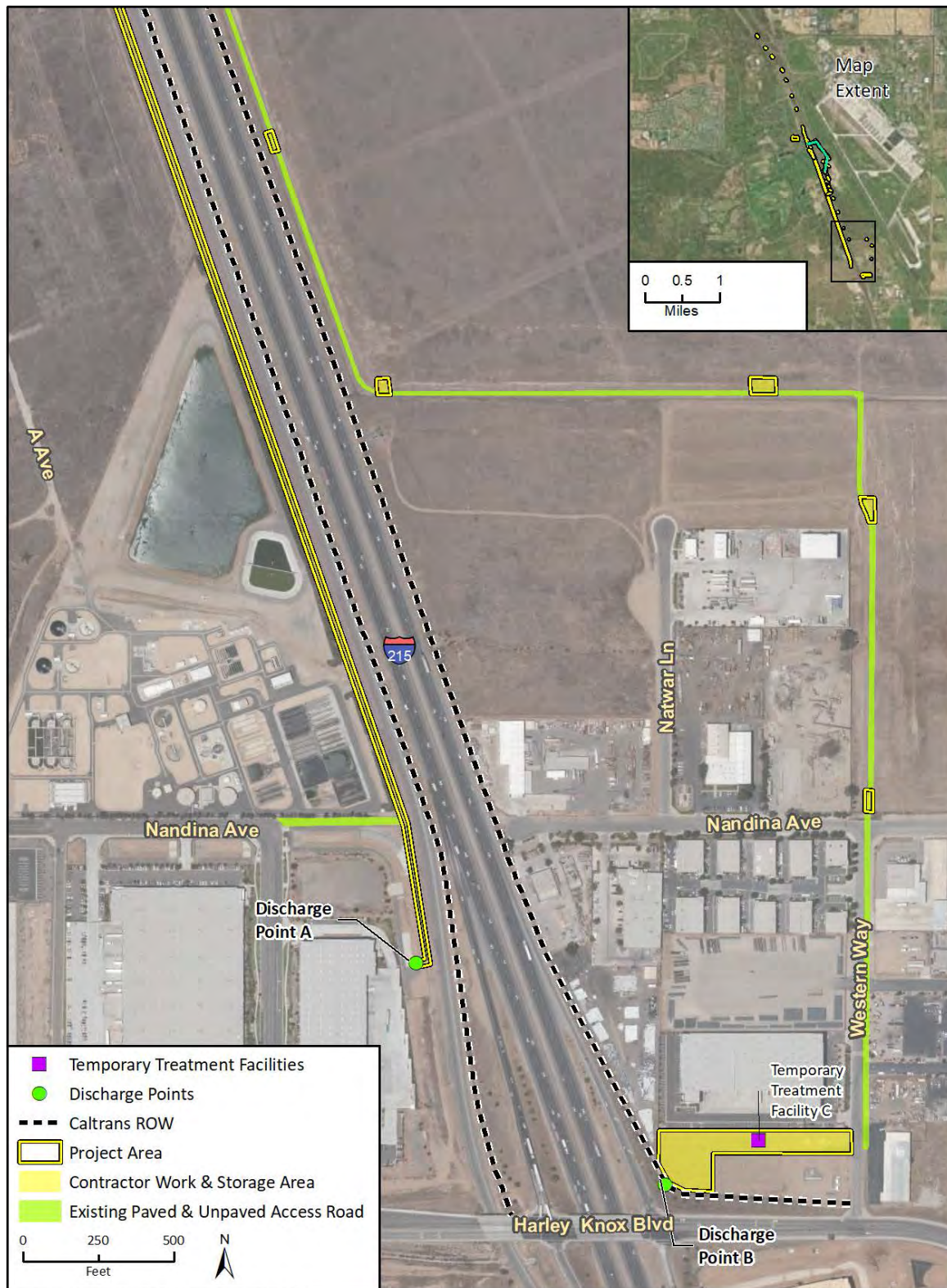
Figure 4 Proposed Modifications (2 of 3)



Imagery provided by Microsoft Bing and its licensors © 2020.
Additional data provided by Metropolitan Water District of Southern California 2018.

_Fig 5 Proposed Mods and Caltrans ROW Middle

Figure 5 Proposed Modifications (3 of 3)



Imagery provided by Microsoft Bing and its licensors © 2020.
Additional data provided by Metropolitan Water District of Southern California 2018.

Caltrans_Fig 6 Proposed Mods and Caltrans ROW Southern

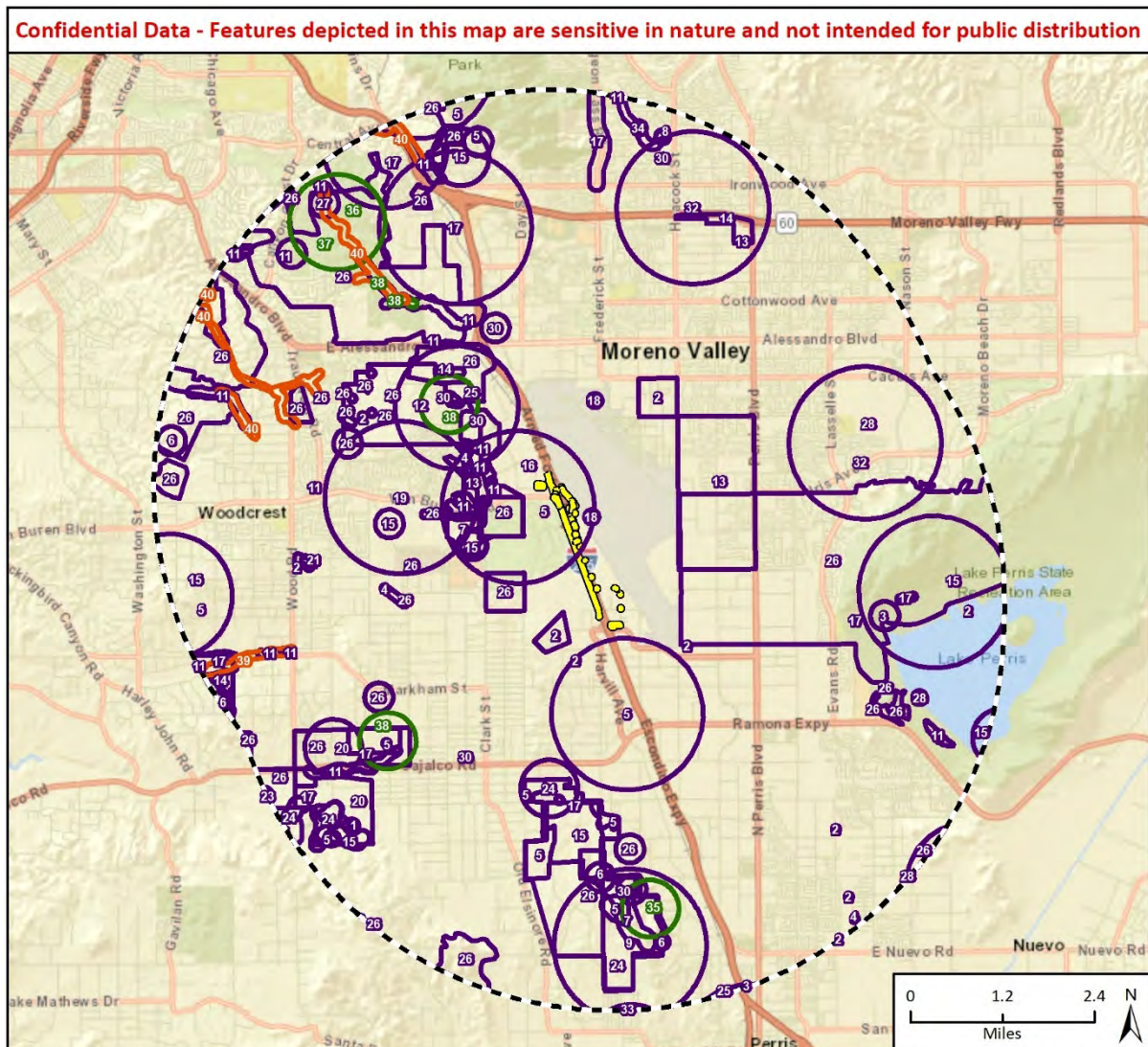
Figure 6 Mapped Soil Units in the Vicinity of Proposed Realignment



Imagery provided by Microsoft Bing and its licensors © 2020.
Additional data provided by USGS NRCS SSURGO, 2020.

Fig X Soils Map

Figure 7 CNDDDB Occurrences within 5-miles of the Proposed Realignment



Imagery provided by Esri and its licensors © 2020. Special status species data source: California Natural Diversity Database, September, 2020. Additional suppressed records reported by the CNDDDB known to occur or potentially occur within this search radius include: prairie falcon. For more information please contact the Department of Fish and Game.

- Survey Area
- 5-Mile Buffer
- CNDDDB***
- Animals
- Plants
- Natural Communities

- | | | |
|------------------------------------|---|---|
| 1 - Bell's sage sparrow | 14 - northwestern San Diego pocket mouse | 27 - tricolored blackbird |
| 2 - burrowing owl | 15 - orange-throated whiptail | 28 - western mastiff bat |
| 3 - California glossy snake | 16 - pocketed free-tailed bat | 29 - western pond turtle |
| 4 - California horned lark | 17 - red-diamond rattlesnake | 30 - western spadefoot |
| 5 - coast horned lizard | 18 - Riverside fairy shrimp | 31 - western yellow-billed cuckoo |
| 6 - coastal California gnatcatcher | 19 - San Bernardino kangaroo rat | 32 - western yellow bat |
| 7 - coastal whiptail | 20 - San Bernardino ringneck snake | 33 - white cuckoo bee |
| 8 - Cooper's hawk | 21 - San Diego black-tailed jackrabbit | 34 - yellow-breasted chat |
| 9 - Crotch bumble bee | 22 - San Diego desert woodrat | 35 - long-spined spineflower |
| 10 - Lawrence's goldfinch | 23 - Southern California legless lizard | 36 - Parry's spineflower |
| 11 - least Bell's vireo | 24 - southern California rufous-crowned sparrow | 37 - Robinson's pepper-grass |
| 12 - loggerhead shrike | 25 - southern grasshopper mouse | 38 - smooth tarplant |
| 13 - Los Angeles pocket mouse | 26 - Stephens' kangaroo rat | 39 - Southern Cottonwood Willow Riparian Forest |
| | | 40 - Southern Sycamore Alder Riparian Woodland |

**CNDDDB version 09/2020. Please Note: The occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDDB about a species or an area can never be used as proof that no special status species occur in an area.*

References

California Department of Fish and Wildlife (CDFW). 2020a. California Natural Diversity Database, Rarefind V. 5 (October 13, 2020).

____. 2020b. Biogeographic Information and Observation System (BIOS). Retrieved from: <http://bios.dfg.ca.gov> (October 13, 2020).

California Native Plant Society (CNPS). 2020. *Inventory of Rare and Endangered Plants*. (online edition, v8-02). California Native Plant Society, Sacramento, CA. Retrieved from: <http://www.rareplants.cnps.org> (October 13, 2020).

National Marine Fisheries Service. 2020. California Species List Tools. Available at: https://archive.fisheries.noaa.gov/wcr/maps_data/california_species_list_tools.html (October 13, 2020)

Riverside, County of. 2003. Final Western Riverside County Multiple Species Habitat Conservation Plan. June 2003. Available at: www.wrc-rca.org

Riverside County Flood Control District. 2017. Final CEQA Initial Study and Mitigated Negative Declaration for Regional General Permit for Maintenance of Existing Flood Control Facilities (SCH No. 2017021032). March 2017. Available at: http://content.rcflood.org/Documents/CEQA/RGP_Final%20IS-MND_March%202017.pdf

United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2018. Web Soil Survey. Retrieved from: <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm> (June 27, 2018).

United States Fish and Wildlife Service (USFWS). 2020a. Critical Habitat Portal. Retrieved from: <http://criticalhabitat.fws.gov> (October 13, 2020).

____. 2020b. Information for Planning and Conservation (IPaC). Retrieved from: <http://ecos.fws.gov/ipac/> (October 13, 2020).

____. 2020c. National Wetlands Inventory. Retrieved from: <http://www.fws.gov/wetlands/> (July 2, 2020).

Western Municipal Water District. 2005. Perris Valley Pipeline Project EIR.

Western Riverside County Regional Conservation Authority. 2018. MSHCP Information App. Available at: <http://wrcrca.maps.arcgis.com/apps/webappviewer/index.html?id=2ba3285ccc8841ed978d2d825e74c5fa> (June 27, 2018)

Appendix A

Project Site Photographs



Photograph 1. Existing earthen dirt storm channel along Van Buren Boulevard just east of I-215 and north of the March Air Reserve Base, facing southwest.



Photograph 2. Dirt access roads and existing detention basin adjacent to railroad tracks, within northwest corner of Project site, facing north. Temporary treatment facility 1 and Pit 1 is located in this general area.



Photograph 3. Dirt access road between March Air Reserve Base and Van Buren Boulevard/I-215 overpass, facing south. Discharge piping would be constructed at-grade in this location.



Photograph 4. Along Van Buren Boulevard just east of I-215, and across from March Air Reserve Base museum, facing south. Construction activities at this location include temporary treatment plant 2 and access. "Depression" is located behind the parked white truck inside the fence.



Photograph 5. Small depression within the surrounding disturbed non-native grassland habitat located east of I-215 between the I-215 off-ramp and Van Buren Boulevard.



Photograph 6. Discharge Point A (concrete-lined channel) located west of I-215 and north of Harley Knox Boulevard.



Photograph 7. Discharge Point B (concrete-lined channel) located east of I-215 and north of Harley Knox Boulevard.



Photograph 8. Lateral B where it transitions from concrete- to dirt-channel, with evidence of existing erosion, regular vegetation clearing, and debris. Located approximately 6,000 feet downstream of Discharge Point B.

Appendix B

Literature Review

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Riverside County, California



Local office

Carlsbad Fish And Wildlife Office

☎ (760) 431-9440

📅 (760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

<http://www.fws.gov/carlsbad/>

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

Stephens' Kangaroo Rat *Dipodomys stephensi* (incl. *D. cascus*)

Endangered

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/3495>

Birds

NAME	STATUS
Coastal California Gnatcatcher <i>Polioptila californica californica</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo <i>Vireo bellii pusillus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6749	Endangered

Fishes

NAME	STATUS
Santa Ana Sucker <i>Catostomus santaanae</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/3785	Threatened

Insects

NAME	STATUS
Quino Checkerspot Butterfly <i>Euphydryas editha quino</i> (=E. e. wrighti) There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5900	Endangered

Crustaceans

NAME	STATUS
Riverside Fairy Shrimp <i>Streptocephalus woottoni</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8148	Endangered

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Vernal Pool Fairy Shrimp *Branchinecta lynchi*

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/498>

Flowering Plants

NAME	STATUS
Munz's Onion <i>Allium munzii</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2951	Endangered
Nevin's Barberry <i>Berberis nevinii</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8025	Endangered
San Diego Ambrosia <i>Ambrosia pumila</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8287	Endangered
Santa Ana River Woolly-star <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6575	Endangered
Spreading Navarretia <i>Navarretia fossalis</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/1334	Threatened
Thread-leaved Brodiaea <i>Brodiaea filifolia</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6087	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE.

<p>Allen's Hummingbird <i>Selasphorus sasin</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637</p>	Breeds Feb 1 to Jul 15
<p>Burrowing Owl <i>Athene cunicularia</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9737</p>	Breeds Mar 15 to Aug 31
<p>California Thrasher <i>Toxostoma redivivum</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Jan 1 to Jul 31
<p>Common Yellowthroat <i>Geothlypis trichas sinuosa</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084</p>	Breeds May 20 to Jul 31
<p>Costa's Hummingbird <i>Calypte costae</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9470</p>	Breeds Jan 15 to Jun 10
<p>Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680</p>	Breeds Jan 1 to Aug 31
<p>Lawrence's Goldfinch <i>Carduelis lawrencei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464</p>	Breeds Mar 20 to Sep 20
<p>Nuttall's Woodpecker <i>Picoides nuttallii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410</p>	Breeds Apr 1 to Jul 20

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Rufous Hummingbird *Selasphorus rufus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8002>

Song Sparrow *Melospiza melodia*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds Feb 20 to Sep 5

Spotted Towhee *Pipilo maculatus clementae*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/4243>

Breeds Apr 15 to Jul 20

Wrentit *Chamaea fasciata*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Mar 15 to Aug 10

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

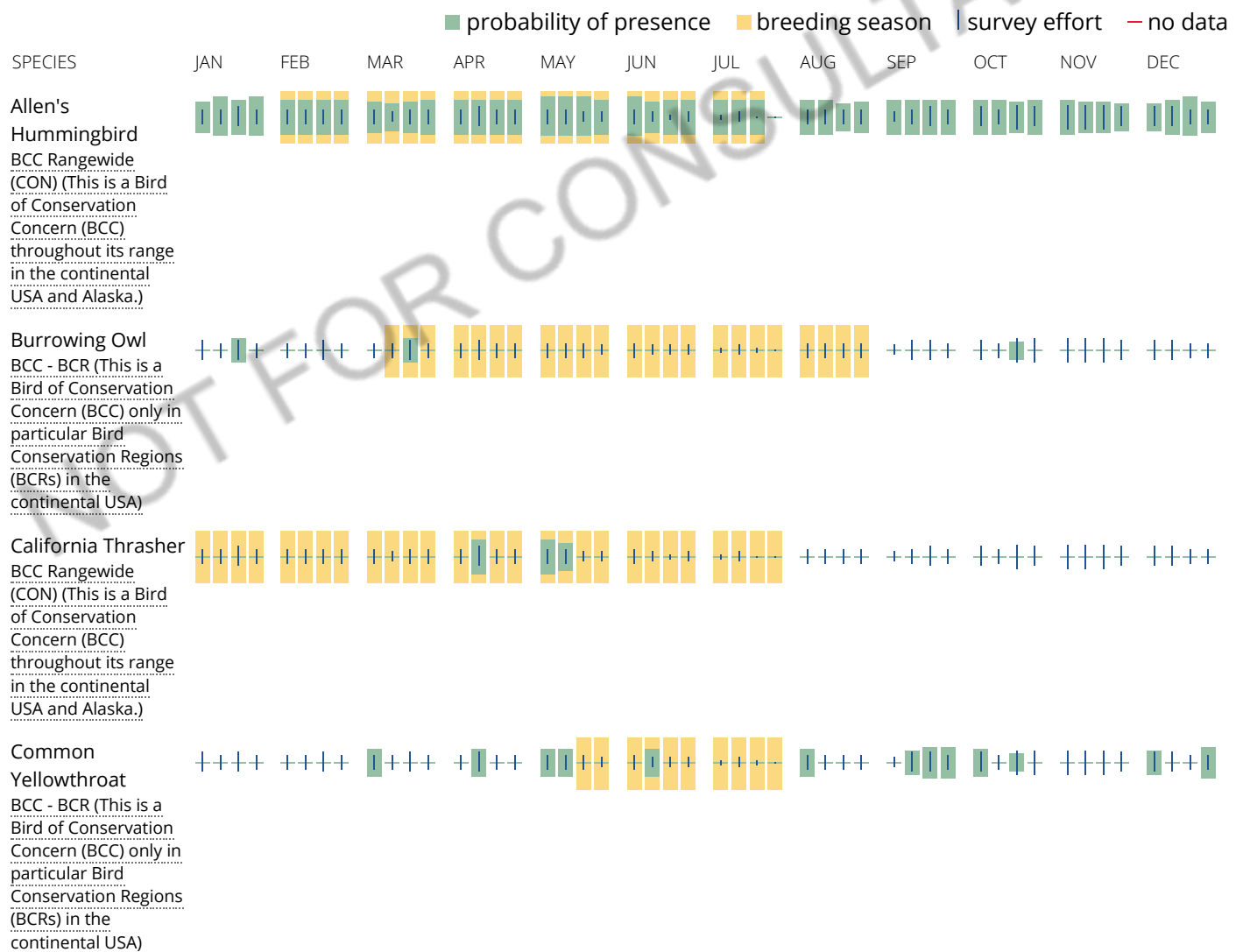
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



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7-3

Costa's

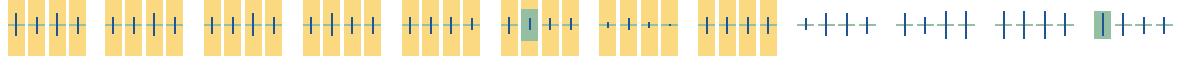
Hummingbird

BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Golden Eagle

Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Lawrence's Goldfinch

BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Nuttall's

Woodpecker

BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Rufous

Hummingbird

BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



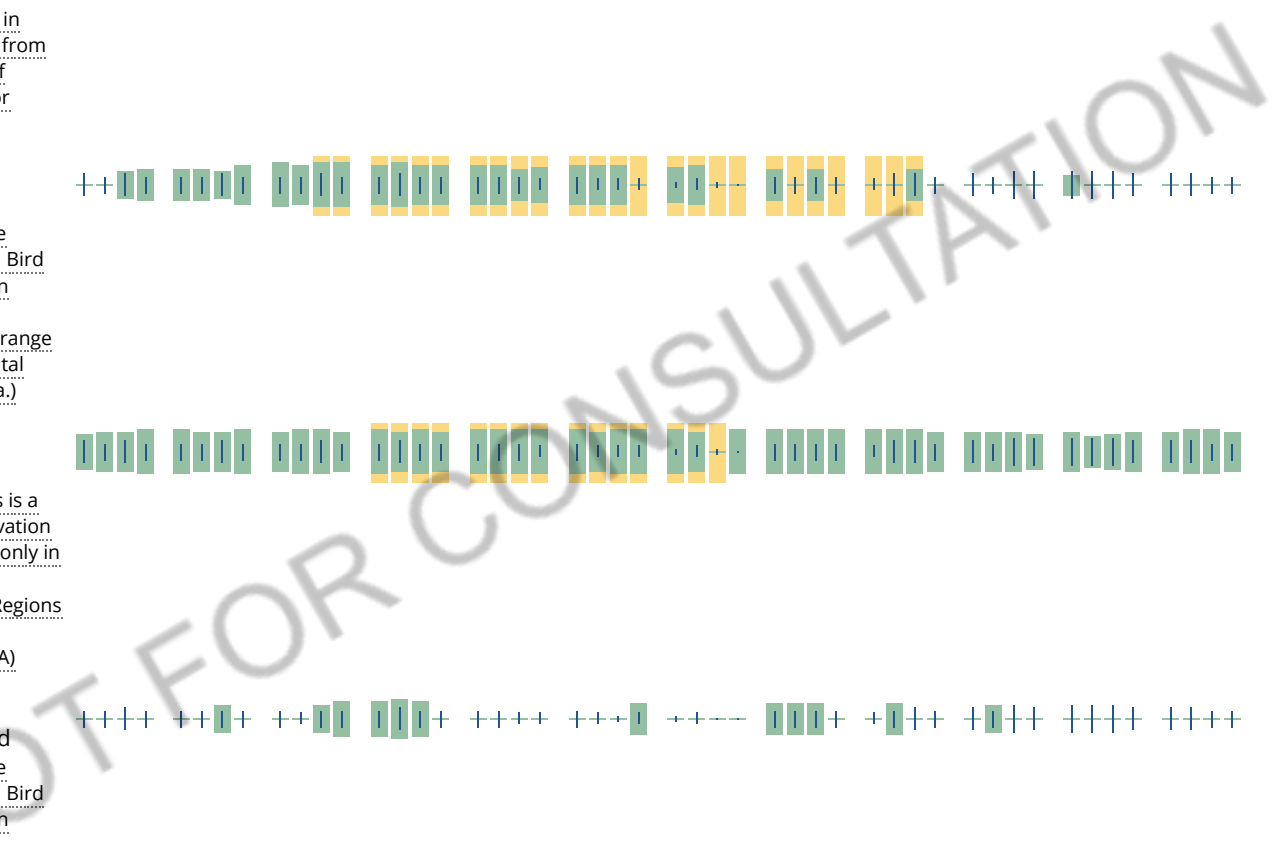
Song Sparrow

BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Spotted Towhee

BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Wrentit

BCC Rangewide
(CON) (This is a Bird
of Conservation
Concern (BCC)
throughout its range
in the continental
USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

[R4SBC](#)

[R4SBA](#)

[R5UBFx](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

NMFS Official ESA Species List**October 13, 2020**Quad Name **Steele Peak**Quad Number **33117-G3****ESA Anadromous Fish**

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

**See list at left and consult the NMFS Long Beach office
562-980-4000**

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Riverside East**

Quad Number **33117-H3**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -

Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

**See list at left and consult the NMFS Long Beach office
562-980-4000**

MMPA Cetaceans -
MMPA Pinnipeds -

SNAME	CNAME	ELMCODE	OCCN/FEDLIST	CALLIST	GRANK	SRANK	RPLANTRANK	CDFWSTATUS
Artemisiospiza belli belli	Bell's sage sparrow	ABPBX97021	33 None	None	G5T2T3	S3		WL
Athene cucularia	burrowing owl	ABNSB10010	1284 None	None	G4	S3		SSC
Athene cucularia	burrowing owl	ABNSB10010	1768 None	None	G4	S3		SSC
Athene cucularia	burrowing owl	ABNSB10010	1069 None	None	G4	S3		SSC
Athene cucularia	burrowing owl	ABNSB10010	882 None	None	G4	S3		SSC
Athene cucularia	burrowing owl	ABNSB10010	65 None	None	G4	S3		SSC
Athene cucularia	burrowing owl	ABNSB10010	249 None	None	G4	S3		SSC
Athene cucularia	burrowing owl	ABNSB10010	1769 None	None	G4	S3		SSC
Athene cucularia	burrowing owl	ABNSB10010	439 None	None	G4	S3		SSC
Athene cucularia	burrowing owl	ABNSB10010	628 None	None	G4	S3		SSC
Athene cucularia	burrowing owl	ABNSB10010	1070 None	None	G4	S3		SSC
Athene cucularia	burrowing owl	ABNSB10010	929 None	None	G4	S3		SSC
Athene cucularia	burrowing owl	ABNSB10010	1283 None	None	G4	S3		SSC
Arizona elegans occidentalis	California glossy snake	ARADB01017	103 None	None	G5T2	S2		SSC
Arizona elegans occidentalis	California glossy snake	ARADB01017	102 None	None	G5T2	S2		SSC
Arizona elegans occidentalis	California glossy snake	ARADB01017	106 None	None	G5T2	S2		SSC
Eremophila alpestris actia	California horned lark	ABPAT02011	62 None	None	G5T4Q	S4		WL
Eremophila alpestris actia	California horned lark	ABPAT02011	61 None	None	G5T4Q	S4		WL
Eremophila alpestris actia	California horned lark	ABPAT02011	37 None	None	G5T4Q	S4		WL
Phrynosoma blainvillii	coast horned lizard	ARACF12100	735 None	None	G3G4	S3S4		SSC
Phrynosoma blainvillii	coast horned lizard	ARACF12100	8 None	None	G3G4	S3S4		SSC
Phrynosoma blainvillii	coast horned lizard	ARACF12100	328 None	None	G3G4	S3S4		SSC
Phrynosoma blainvillii	coast horned lizard	ARACF12100	248 None	None	G3G4	S3S4		SSC
Phrynosoma blainvillii	coast horned lizard	ARACF12100	769 None	None	G3G4	S3S4		SSC
Phrynosoma blainvillii	coast horned lizard	ARACF12100	491 None	None	G3G4	S3S4		SSC
Phrynosoma blainvillii	coast horned lizard	ARACF12100	432 None	None	G3G4	S3S4		SSC
Phrynosoma blainvillii	coast horned lizard	ARACF12100	45 None	None	G3G4	S3S4		SSC
Phrynosoma blainvillii	coast horned lizard	ARACF12100	223 None	None	G3G4	S3S4		SSC
Phrynosoma blainvillii	coast horned lizard	ARACF12100	389 None	None	G3G4	S3S4		SSC
Phrynosoma blainvillii	coast horned lizard	ARACF12100	541 None	None	G3G4	S3S4		SSC
Polioptila californica californica	coastal California gnatcatcher	ABPBJ08081	758 Threatened	None	G4G5T2Q	S2		SSC
Polioptila californica californica	coastal California gnatcatcher	ABPBJ08081	151 Threatened	None	G4G5T2Q	S2		SSC
Polioptila californica californica	coastal California gnatcatcher	ABPBJ08081	525 Threatened	None	G4G5T2Q	S2		SSC
Polioptila californica californica	coastal California gnatcatcher	ABPBJ08081	339 Threatened	None	G4G5T2Q	S2		SSC
Polioptila californica californica	coastal California gnatcatcher	ABPBJ08081	762 Threatened	None	G4G5T2Q	S2		SSC
Polioptila californica californica	coastal California gnatcatcher	ABPBJ08081	526 Threatened	None	G4G5T2Q	S2		SSC
Polioptila californica californica	coastal California gnatcatcher	ABPBJ08081	340 Threatened	None	G4G5T2Q	S2		SSC
Aspidoscelis tigris stejnegeri	coastal whiptail	ARACJ02143	2 None	None	G5T5	S3		SSC
Aspidoscelis tigris stejnegeri	coastal whiptail	ARACJ02143	34 None	None	G5T5	S3		SSC
Accipiter cooperii	Cooper's hawk	ABNKC12040	72 None	None	G5	S4		WL
Bombus crotchii	Crotch bumble bee	IIHYM24480	215 None	Candidate Endangered	G3G4	S1S2		
Bombus crotchii	Crotch bumble bee	IIHYM24480	214 None	Candidate Endangered	G3G4	S1S2		
Spinus lawrencei	Lawrence's goldfinch	ABPBY06100	3 None	None	G3G4	S3S4		
Vireo bellii pusillus	least Bell's vireo	ABPBW01114	442 Endangered	Endangered	G5T2	S2		
Vireo bellii pusillus	least Bell's vireo	ABPBW01114	427 Endangered	Endangered	G5T2	S2		
Vireo bellii pusillus	least Bell's vireo	ABPBW01114	432 Endangered	Endangered	G5T2	S2		
Vireo bellii pusillus	least Bell's vireo	ABPBW01114	437 Endangered	Endangered	G5T2	S2		
Vireo bellii pusillus	least Bell's vireo	ABPBW01114	429 Endangered	Endangered	G5T2	S2		
Vireo bellii pusillus	least Bell's vireo	ABPBW01114	440 Endangered	Endangered	G5T2	S2		

Vireo bellii pusillus	least Bell's vireo	ABPBW01114	301	Endangered	Endangered	G5T2	S2	
Vireo bellii pusillus	least Bell's vireo	ABPBW01114	433	Endangered	Endangered	G5T2	S2	
Vireo bellii pusillus	least Bell's vireo	ABPBW01114	390	Endangered	Endangered	G5T2	S2	
Vireo bellii pusillus	least Bell's vireo	ABPBW01114	446	Endangered	Endangered	G5T2	S2	
Vireo bellii pusillus	least Bell's vireo	ABPBW01114	445	Endangered	Endangered	G5T2	S2	
Vireo bellii pusillus	least Bell's vireo	ABPBW01114	447	Endangered	Endangered	G5T2	S2	
Vireo bellii pusillus	least Bell's vireo	ABPBW01114	443	Endangered	Endangered	G5T2	S2	
Vireo bellii pusillus	least Bell's vireo	ABPBW01114	444	Endangered	Endangered	G5T2	S2	
Vireo bellii pusillus	least Bell's vireo	ABPBW01114	438	Endangered	Endangered	G5T2	S2	
Vireo bellii pusillus	least Bell's vireo	ABPBW01114	441	Endangered	Endangered	G5T2	S2	
Lanius ludovicianus	loggerhead shrike	ABPBR01030	2	None	None	G4	S4	SSC
Perognathus longimembris brevinasus	Los Angeles pocket mouse	AMAFD01041	19	None	None	G5T1T2	S1S2	SSC
Perognathus longimembris brevinasus	Los Angeles pocket mouse	AMAFD01041	28	None	None	G5T1T2	S1S2	SSC
Perognathus longimembris brevinasus	Los Angeles pocket mouse	AMAFD01041	41	None	None	G5T1T2	S1S2	SSC
Perognathus longimembris brevinasus	Los Angeles pocket mouse	AMAFD01041	29	None	None	G5T1T2	S1S2	SSC
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	AMAFD05031	17	None	None	G5T3T4	S3S4	SSC
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	AMAFD05031	54	None	None	G5T3T4	S3S4	SSC
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	AMAFD05031	22	None	None	G5T3T4	S3S4	SSC
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	AMAFD05031	25	None	None	G5T3T4	S3S4	SSC
Aspidoscelis hyperythra	orange-throated whiptail	ARACJ02060	209	None	None	G5	S2S3	WL
Aspidoscelis hyperythra	orange-throated whiptail	ARACJ02060	217	None	None	G5	S2S3	WL
Aspidoscelis hyperythra	orange-throated whiptail	ARACJ02060	358	None	None	G5	S2S3	WL
Aspidoscelis hyperythra	orange-throated whiptail	ARACJ02060	55	None	None	G5	S2S3	WL
Aspidoscelis hyperythra	orange-throated whiptail	ARACJ02060	260	None	None	G5	S2S3	WL
Aspidoscelis hyperythra	orange-throated whiptail	ARACJ02060	259	None	None	G5	S2S3	WL
Aspidoscelis hyperythra	orange-throated whiptail	ARACJ02060	187	None	None	G5	S2S3	WL
Aspidoscelis hyperythra	orange-throated whiptail	ARACJ02060	325	None	None	G5	S2S3	WL
Aspidoscelis hyperythra	orange-throated whiptail	ARACJ02060	75	None	None	G5	S2S3	WL
Aspidoscelis hyperythra	orange-throated whiptail	ARACJ02060	6	None	None	G5	S2S3	WL
Aspidoscelis hyperythra	orange-throated whiptail	ARACJ02060	348	None	None	G5	S2S3	WL
Aspidoscelis hyperythra	orange-throated whiptail	ARACJ02060	240	None	None	G5	S2S3	WL
Nyctinomops femorosaccus	pocketed free-tailed bat	AMACD04010	20	None	None	G4	S3	SSC
Crotalus ruber	red-diamond rattlesnake	ARADE02090	95	None	None	G4	S3	SSC
Crotalus ruber	red-diamond rattlesnake	ARADE02090	33	None	None	G4	S3	SSC
Crotalus ruber	red-diamond rattlesnake	ARADE02090	167	None	None	G4	S3	SSC
Crotalus ruber	red-diamond rattlesnake	ARADE02090	79	None	None	G4	S3	SSC
Crotalus ruber	red-diamond rattlesnake	ARADE02090	78	None	None	G4	S3	SSC
Crotalus ruber	red-diamond rattlesnake	ARADE02090	64	None	None	G4	S3	SSC
Crotalus ruber	red-diamond rattlesnake	ARADE02090	21	None	None	G4	S3	SSC
Crotalus ruber	red-diamond rattlesnake	ARADE02090	49	None	None	G4	S3	SSC
Streptocephalus woottoni	Riverside fairy shrimp	ICBRA07010	27	Endangered	None	G1G2	S1S2	
Streptocephalus woottoni	Riverside fairy shrimp	ICBRA07010	28	Endangered	None	G1G2	S1S2	
Dipodomys merriami parvus	San Bernardino kangaroo rat	AMAFD03143	83	Endangered	Candidate Endangered	G5T1	S1	SSC
Diadophis punctatus modestus	San Bernardino ringneck snake	ARADB10015	5	None	None	G5T2T3	S2?	
Lepus californicus bennettii	San Diego black-tailed jackrabbit	AMAEB03051	92	None	None	G5T3T4	S3S4	SSC
Neotoma lepida intermedia	San Diego desert woodrat	AMAFF08041	43	None	None	G5T3T4	S3S4	SSC
Anniella stebbinsi	Southern California legless lizard	ARACC01060	390	None	None	G3	S3	SSC
Aimophila ruficeps canescens	southern California rufous-crowned	ABPBX91091	188	None	None	G5T3	S3	WL
Aimophila ruficeps canescens	southern California rufous-crowned	ABPBX91091	119	None	None	G5T3	S3	WL
Aimophila ruficeps canescens	southern California rufous-crowned	ABPBX91091	187	None	None	G5T3	S3	WL

<i>Onychomys torridus ramona</i>	southern grasshopper mouse	AMAFF06022	30 None	None	G5T3	S3	SSC
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	AMAFF06022	33 None	None	G5T3	S3	SSC
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	27 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	69 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	200 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	96 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	98 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	54 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	247 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	250 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	82 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	231 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	241 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	3 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	215 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	189 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	30 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	245 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	240 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	222 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	121 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	70 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	239 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	87 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	76 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	4 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	73 Endangered	Threatened	G2	S2	
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	AMAFD03100	72 Endangered	Threatened	G2	S2	
<i>Agelaius tricolor</i>	tricolored blackbird	ABPBXB0020	217 None	Threatened	G2G3	S1S2	SSC
<i>Eumops perotis californicus</i>	western mastiff bat	AMACD02011	128 None	None	G5T4	S3S4	SSC
<i>Eumops perotis californicus</i>	western mastiff bat	AMACD02011	80 None	None	G5T4	S3S4	SSC
<i>Eumops perotis californicus</i>	western mastiff bat	AMACD02011	78 None	None	G5T4	S3S4	SSC
<i>Emys marmorata</i>	western pond turtle	ARAAD02030	849 None	None	G3G4	S3	SSC
<i>Spea hammondii</i>	western spadefoot	AAABF02020	33 None	None	G3	S3	SSC
<i>Spea hammondii</i>	western spadefoot	AAABF02020	1013 None	None	G3	S3	SSC
<i>Spea hammondii</i>	western spadefoot	AAABF02020	259 None	None	G3	S3	SSC
<i>Spea hammondii</i>	western spadefoot	AAABF02020	1383 None	None	G3	S3	SSC
<i>Spea hammondii</i>	western spadefoot	AAABF02020	230 None	None	G3	S3	SSC
<i>Spea hammondii</i>	western spadefoot	AAABF02020	68 None	None	G3	S3	SSC
<i>Spea hammondii</i>	western spadefoot	AAABF02020	1030 None	None	G3	S3	SSC
<i>Spea hammondii</i>	western spadefoot	AAABF02020	1120 None	None	G3	S3	SSC
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	ABNRB02022	168 Threatened	Endangered	G5T2T3	S1	
<i>Lasiurus xanthinus</i>	western yellow bat	AMACC05070	53 None	None	G5	S3	SSC
<i>Lasiurus xanthinus</i>	western yellow bat	AMACC05070	31 None	None	G5	S3	SSC
<i>Neolarra alba</i>	white cuckoo bee	IIHYM81010	5 None	None	GH	SH	
<i>Icteria virens</i>	yellow-breasted chat	ABPBX24010	96 None	None	G5	S3	SSC
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	long-spined spineflower	PDPGN040K1	18 None	None	G5T3	S3	1B.2
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	PDPGN040J2	81 None	None	G3T2	S2	1B.1
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	PDBRA1M114	9 None	None	G5T3	S3	4.3
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	PDAST4R0R4	7 None	None	G3G4T2	S2	1B.1

Centromadia pungens ssp. laevis	smooth tarplant	PDAST4R0R4	4	None	None	G3G4T2	S2	1B.1
Centromadia pungens ssp. laevis	smooth tarplant	PDAST4R0R4	88	None	None	G3G4T2	S2	1B.1
Southern Cottonwood Willow Riparian Fo	Southern Cottonwood Willow Ripari	CTT61330CA	74	None	None	G3	S3.2	
Southern Sycamore Alder Riparian Woodl	Southern Sycamore Alder Riparian V	CTT62400CA	175	None	None	G4	S4	
Southern Sycamore Alder Riparian Woodl	Southern Sycamore Alder Riparian V	CTT62400CA	173	None	None	G4	S4	
Southern Sycamore Alder Riparian Woodl	Southern Sycamore Alder Riparian V	CTT62400CA	176	None	None	G4	S4	
Southern Sycamore Alder Riparian Woodl	Southern Sycamore Alder Riparian V	CTT62400CA	174	None	None	G4	S4	

Family	Lifeform	CRPR	GRank	SRank	CESA	FESA	Blooming Habitat
Alliaceae	perennial bulbiferous herb	1B.1	G1	S1	CT	FE	Mar-May Chaparral, Cismontane woodland, Coastal scrub, Pinyon and juniper woodland, Valley and foothill grassland
Caryophyllaceae	perennial stoloniferous herb	1B.1	G1	S1	CE	FE	May-Aug Marshes and swamps (freshwater or brackish)
Berberidaceae	perennial evergreen shrub	1B.1	G1	S1	CE	FE	(Feb)Mar-J Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub
Themidaceae	perennial bulbiferous herb	1B.1	G2	S2	CE	FT	Mar-Jun Chaparral (openings), Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools
Orobanchaceae	annual herb (hemiparasitic)	1B.2	G4?T1	S1	CE	FE	May-Oct(N Coastal dunes, Marshes and swamps (coastal salt)
Polygonaceae	annual herb	1B.1	G1	S1	CE	FE	Apr-Jun Chaparral, Cismontane woodland, Coastal scrub (alluvial fan)
Polemoniaceae	perennial herb	1B.1	G4T1	S1	CE	FE	Apr-Sep Chaparral, Coastal scrub (alluvial fan)
Brassicaceae	perennial rhizomatous herb	1B.1	G1	S1	CT	FE	Apr-Oct Marshes and swamps (freshwater or brackish)

Appendix C

Noise Measurement Data

- Freq Weight : A
 - Time Weight : FAST
 - Level Range : 40-100
 - Max dB : 80.6 - 2008/06/18 13:24:41
 - Level Range : 40-100
 - SEL : 92.7
 - Leq : 63.3
 -

No. s	Date	Time	(dB)				
1	2018/06/08	13:16:01	45.6	46.3	59.9	48.2	51.7
6	2018/06/08	13:16:06	58.4	59.5	60.7	64.0	63.7
11	2018/06/08	13:16:11	63.3	64.3	66.1	65.5	65.8
16	2018/06/08	13:16:16	65.4	66.8	69.4	66.9	64.5
21	2018/06/08	13:16:21	61.7	71.9	62.4	62.8	60.4
26	2018/06/08	13:16:26	59.2	58.2	60.2	59.9	63.3
31	2018/06/08	13:16:31	69.9	67.7	66.7	66.7	63.8
36	2018/06/08	13:16:36	63.2	63.1	61.7	59.7	63.1
41	2018/06/08	13:16:41	67.0	67.7	65.7	66.2	69.0
46	2018/06/08	13:16:46	66.2	62.6	59.5	57.5	55.8
51	2018/06/08	13:16:51	53.2	51.4	51.5	50.8	51.9
56	2018/06/08	13:16:56	50.8	53.3	52.8	56.1	59.1
61	2018/06/08	13:17:01	54.6	52.5	50.0	48.5	47.3
66	2018/06/08	13:17:06	47.1	47.5	47.6	46.5	51.9
71	2018/06/08	13:17:11	48.1	53.2	56.8	59.1	60.7
76	2018/06/08	13:17:16	64.7	61.1	57.8	56.8	65.6
81	2018/06/08	13:17:21	66.0	66.2	67.2	61.9	61.9
86	2018/06/08	13:17:26	56.4	53.2	51.6	50.6	50.0
91	2018/06/08	13:17:31	48.6	50.5	51.3	49.9	52.0
96	2018/06/08	13:17:36	51.4	50.1	51.4	53.2	53.7
101	2018/06/08	13:17:41	54.0	55.0	56.3	59.7	58.0
106	2018/06/08	13:17:46	54.2	54.8	56.3	57.4	57.2
111	2018/06/08	13:17:51	58.6	58.0	56.4	55.3	61.0
116	2018/06/08	13:17:56	60.6	63.0	61.9	63.3	64.3
121	2018/06/08	13:18:01	63.8	62.6	61.4	62.2	63.7
126	2018/06/08	13:18:06	62.9	62.6	61.6	61.7	62.2
131	2018/06/08	13:18:11	62.4	62.4	62.3	63.0	66.2
136	2018/06/08	13:18:16	65.8	62.7	64.3	58.7	55.4
141	2018/06/08	13:18:21	52.0	49.5	48.4	48.4	48.1
146	2018/06/08	13:18:26	46.8	47.4	46.7	46.6	46.0
151	2018/06/08	13:18:31	47.3	49.9	52.5	55.1	58.3
156	2018/06/08	13:18:36	61.1	65.1	63.3	63.3	61.3
161	2018/06/08	13:18:41	59.8	60.8	58.7	58.3	59.1
166	2018/06/08	13:18:46	61.0	64.2	63.9	65.7	66.0
171	2018/06/08	13:18:51	66.5	63.4	60.6	59.6	61.3
176	2018/06/08	13:18:56	63.6	66.3	65.9	67.7	67.4
181	2018/06/08	13:19:01	66.0	65.9	65.1	63.6	63.8
186	2018/06/08	13:19:06	63.0	61.5	62.6	63.3	62.7
191	2018/06/08	13:19:11	63.0	61.3	62.8	63.4	63.9
196	2018/06/08	13:19:16	64.9	65.7	62.8	63.1	63.7
201	2018/06/08	13:19:21	65.2	65.0	62.9	60.5	58.8
206	2018/06/08	13:19:26	60.1	60.0	59.8	58.7	61.7
211	2018/06/08	13:19:31	62.8	59.9	59.1	56.2	54.7

216	2018/06/08	13: 19: 36	53. 3	52. 5	50. 3	51. 7	54. 7
221	2018/06/08	13: 19: 41	55. 5	55. 7	56. 0	56. 5	57. 2
226	2018/06/08	13: 19: 46	59. 1	58. 8	56. 6	58. 5	59. 7
231	2018/06/08	13: 19: 51	61. 6	62. 4	62. 3	62. 0	60. 0
236	2018/06/08	13: 19: 56	58. 9	55. 4	53. 8	53. 3	52. 5
241	2018/06/08	13: 20: 01	54. 1	54. 6	54. 5	58. 0	63. 4
246	2018/06/08	13: 20: 06	68. 1	69. 7	68. 0	68. 3	67. 2
251	2018/06/08	13: 20: 11	66. 3	64. 8	61. 8	56. 4	52. 3
256	2018/06/08	13: 20: 16	51. 3	51. 9	53. 1	55. 3	62. 2
261	2018/06/08	13: 20: 21	58. 7	57. 4	53. 3	52. 6	52. 4
266	2018/06/08	13: 20: 26	51. 8	51. 6	51. 5	50. 8	51. 4
271	2018/06/08	13: 20: 31	51. 9	51. 1	52. 7	51. 6	51. 7
276	2018/06/08	13: 20: 36	54. 0	58. 7	59. 4	57. 7	57. 2
281	2018/06/08	13: 20: 41	58. 8	63. 2	60. 2	59. 0	56. 0
286	2018/06/08	13: 20: 46	52. 8	49. 4	49. 2	48. 3	49. 7
291	2018/06/08	13: 20: 51	49. 4	49. 1	49. 3	50. 8	52. 1
296	2018/06/08	13: 20: 56	53. 6	55. 6	57. 1	58. 4	59. 3
301	2018/06/08	13: 21: 01	59. 8	60. 9	64. 1	64. 6	64. 4
306	2018/06/08	13: 21: 06	63. 5	63. 5	62. 0	62. 9	65. 0
311	2018/06/08	13: 21: 11	64. 0	64. 7	68. 2	72. 4	61. 4
316	2018/06/08	13: 21: 16	58. 1	60. 2	60. 9	60. 1	59. 4
321	2018/06/08	13: 21: 21	58. 5	60. 3	61. 5	60. 4	61. 4
326	2018/06/08	13: 21: 26	58. 8	60. 1	58. 3	56. 8	56. 8
331	2018/06/08	13: 21: 31	56. 7	56. 1	57. 1	57. 3	58. 8
336	2018/06/08	13: 21: 36	61. 3	62. 2	63. 0	62. 9	64. 5
341	2018/06/08	13: 21: 41	63. 8	61. 9	62. 4	61. 3	61. 6
346	2018/06/08	13: 21: 46	61. 8	61. 6	60. 4	61. 8	63. 5
351	2018/06/08	13: 21: 51	62. 9	59. 8	57. 0	60. 4	60. 6
356	2018/06/08	13: 21: 56	58. 1	60. 3	61. 2	58. 1	57. 8
361	2018/06/08	13: 22: 01	57. 8	57. 7	59. 9	65. 7	65. 0
366	2018/06/08	13: 22: 06	58. 4	57. 3	58. 2	57. 1	59. 3
371	2018/06/08	13: 22: 11	63. 7	63. 2	63. 4	63. 1	65. 0
376	2018/06/08	13: 22: 16	64. 7	65. 4	65. 5	64. 5	63. 7
381	2018/06/08	13: 22: 21	62. 8	60. 0	61. 6	60. 6	58. 7
386	2018/06/08	13: 22: 26	56. 7	57. 1	58. 3	60. 1	61. 7
391	2018/06/08	13: 22: 31	62. 7	60. 3	60. 3	63. 4	61. 2
396	2018/06/08	13: 22: 36	59. 5	61. 6	58. 6	56. 5	56. 9
401	2018/06/08	13: 22: 41	65. 2	62. 6	60. 4	60. 6	59. 5
406	2018/06/08	13: 22: 46	60. 8	57. 5	57. 4	54. 5	55. 3
411	2018/06/08	13: 22: 51	58. 9	61. 3	61. 7	60. 2	61. 0
416	2018/06/08	13: 22: 56	61. 6	58. 8	53. 7	52. 8	53. 3
421	2018/06/08	13: 23: 01	51. 9	52. 1	54. 7	59. 7	64. 0
426	2018/06/08	13: 23: 06	64. 3	62. 2	58. 0	55. 9	53. 9
431	2018/06/08	13: 23: 11	55. 3	61. 1	65. 3	65. 4	65. 6
436	2018/06/08	13: 23: 16	62. 8	58. 4	52. 6	52. 6	53. 4
441	2018/06/08	13: 23: 21	52. 2	51. 4	52. 5	55. 9	66. 3
446	2018/06/08	13: 23: 26	65. 7	65. 3	61. 8	58. 8	60. 3
451	2018/06/08	13: 23: 31	63. 4	64. 8	63. 3	59. 8	55. 5
456	2018/06/08	13: 23: 36	53. 1	53. 5	57. 1	61. 9	65. 1
461	2018/06/08	13: 23: 41	64. 8	63. 9	62. 7	61. 8	59. 1
466	2018/06/08	13: 23: 46	58. 3	62. 0	66. 8	62. 3	63. 5
471	2018/06/08	13: 23: 51	63. 6	63. 8	66. 1	63. 4	61. 9
476	2018/06/08	13: 23: 56	56. 3	55. 4	52. 9	54. 0	56. 9

481	2018/06/08	13: 24: 01	63. 7	64. 7	61. 7	58. 2	53. 5
486	2018/06/08	13: 24: 06	58. 2	60. 8	61. 5	59. 6	56. 5
491	2018/06/08	13: 24: 11	61. 4	64. 7	64. 1	60. 6	60. 6
496	2018/06/08	13: 24: 16	62. 9	59. 3	59. 9	56. 4	52. 9
501	2018/06/08	13: 24: 21	51. 5	54. 6	51. 7	50. 2	52. 1
506	2018/06/08	13: 24: 26	52. 8	51. 1	50. 5	46. 9	47. 6
511	2018/06/08	13: 24: 31	48. 3	48. 4	52. 2	52. 5	56. 2
516	2018/06/08	13: 24: 36	58. 8	63. 0	61. 9	66. 6	72. 5
521	2018/06/08	13: 24: 41	80. 5	74. 6	69. 2	69. 5	67. 6
526	2018/06/08	13: 24: 46	65. 2	66. 6	68. 9	66. 4	72. 9
531	2018/06/08	13: 24: 51	75. 7	74. 6	71. 1	68. 7	65. 4
536	2018/06/08	13: 24: 56	63. 1	64. 1	62. 7	62. 2	63. 5
541	2018/06/08	13: 25: 01	63. 4	63. 9	63. 3	62. 5	62. 0
546	2018/06/08	13: 25: 06	60. 1	60. 9	61. 5	61. 2	61. 4
551	2018/06/08	13: 25: 11	62. 3	64. 0	64. 1	63. 6	63. 3
556	2018/06/08	13: 25: 16	64. 6	64. 9	67. 2	65. 4	64. 9
561	2018/06/08	13: 25: 21	63. 6	62. 7	62. 4	61. 8	60. 8
566	2018/06/08	13: 25: 26	62. 0	61. 3	62. 2	61. 5	62. 7
571	2018/06/08	13: 25: 31	63. 1	61. 9	61. 5	61. 9	64. 1
576	2018/06/08	13: 25: 36	63. 6	64. 6	64. 5	60. 0	61. 5
581	2018/06/08	13: 25: 41	64. 5	62. 7	62. 1	59. 9	58. 7
586	2018/06/08	13: 25: 46	62. 2	61. 6	61. 2	61. 7	61. 2
591	2018/06/08	13: 25: 51	61. 9	60. 0	58. 6	57. 2	55. 2
596	2018/06/08	13: 25: 56	54. 9	54. 3	54. 7	55. 0	56. 9
601	2018/06/08	13: 26: 01	59. 8	63. 3	64. 2	60. 7	58. 7
606	2018/06/08	13: 26: 06	56. 6	56. 2	55. 4	55. 1	59. 5
611	2018/06/08	13: 26: 11	63. 9	64. 3	63. 7	65. 8	64. 4
616	2018/06/08	13: 26: 16	62. 2	59. 8	57. 4	59. 2	58. 7
621	2018/06/08	13: 26: 21	60. 5	60. 6	59. 7	59. 9	59. 0
626	2018/06/08	13: 26: 26	59. 0	60. 1	59. 7	59. 3	60. 4
631	2018/06/08	13: 26: 31	61. 3	63. 0	66. 8	65. 3	66. 6
636	2018/06/08	13: 26: 36	68. 7	64. 8	66. 4	63. 5	59. 9
641	2018/06/08	13: 26: 41	57. 5	56. 4	55. 9	55. 0	55. 2
646	2018/06/08	13: 26: 46	54. 5	54. 2	55. 0	55. 3	57. 5
651	2018/06/08	13: 26: 51	59. 7	61. 3	59. 1	59. 0	56. 7
656	2018/06/08	13: 26: 56	57. 1	57. 6	57. 0	57. 3	58. 8
661	2018/06/08	13: 27: 01	62. 0	63. 8	65. 4	65. 8	63. 2
666	2018/06/08	13: 27: 06	60. 8	58. 1	58. 9	64. 8	67. 7
671	2018/06/08	13: 27: 11	67. 0	65. 7	66. 9	71. 1	69. 5
676	2018/06/08	13: 27: 16	66. 3	63. 5	57. 7	56. 6	56. 3
681	2018/06/08	13: 27: 21	56. 8	57. 4	59. 4	68. 6	71. 9
686	2018/06/08	13: 27: 26	67. 4	64. 7	60. 4	58. 5	57. 2
691	2018/06/08	13: 27: 31	57. 8	57. 3	57. 5	60. 1	62. 7
696	2018/06/08	13: 27: 36	63. 0	64. 2	66. 8	67. 6	71. 1
701	2018/06/08	13: 27: 41	70. 2	68. 1	65. 6	61. 5	58. 7
706	2018/06/08	13: 27: 46	57. 5	59. 7	62. 0	58. 0	56. 8
711	2018/06/08	13: 27: 51	55. 1	55. 2	56. 7	56. 5	57. 1
716	2018/06/08	13: 27: 56	57. 9	59. 9	61. 9	63. 4	63. 9
721	2018/06/08	13: 28: 01	62. 7	63. 1	65. 3	66. 4	69. 0
726	2018/06/08	13: 28: 06	70. 2	68. 9	65. 3	61. 3	57. 5
731	2018/06/08	13: 28: 11	56. 0	56. 2	56. 8	58. 0	59. 4
736	2018/06/08	13: 28: 16	59. 4	59. 0	60. 9	62. 5	61. 7
741	2018/06/08	13: 28: 21	63. 3	65. 7	65. 6	64. 7	62. 8

746	2018/06/08	13: 28: 26	63. 6	62. 6	65. 3	64. 5	67. 1
751	2018/06/08	13: 28: 31	64. 3	59. 7	59. 6	62. 3	62. 2
756	2018/06/08	13: 28: 36	61. 0	67. 4	74. 8	77. 2	69. 2
761	2018/06/08	13: 28: 41	66. 9	62. 2	60. 8	60. 5	61. 8
766	2018/06/08	13: 28: 46	62. 5	62. 9	60. 7	59. 8	58. 8
771	2018/06/08	13: 28: 51	58. 6	58. 8	57. 0	57. 7	58. 8
776	2018/06/08	13: 28: 56	58. 5	59. 5	61. 8	63. 5	61. 9
781	2018/06/08	13: 29: 01	62. 3	62. 0	61. 4	60. 4	59. 5
786	2018/06/08	13: 29: 06	58. 1	56. 9	55. 3	55. 3	55. 8
791	2018/06/08	13: 29: 11	56. 7	55. 1	54. 7	55. 9	57. 2
796	2018/06/08	13: 29: 16	56. 4	56. 0	55. 8	57. 4	56. 0
801	2018/06/08	13: 29: 21	56. 8	59. 9	57. 6	61. 2	62. 0
806	2018/06/08	13: 29: 26	61. 4	61. 4	64. 0	65. 1	66. 6
811	2018/06/08	13: 29: 31	67. 4	66. 2	66. 9	65. 8	63. 8
816	2018/06/08	13: 29: 36	62. 2	63. 2	63. 9	61. 8	62. 2
821	2018/06/08	13: 29: 41	63. 3	62. 4	63. 1	63. 5	68. 1
826	2018/06/08	13: 29: 46	68. 0	65. 1	63. 6	61. 5	59. 3
831	2018/06/08	13: 29: 51	56. 9	55. 5	53. 9	54. 7	55. 1
836	2018/06/08	13: 29: 56	54. 0	54. 9	53. 7	54. 3	54. 7
841	2018/06/08	13: 30: 01	55. 2	56. 5	56. 5	57. 5	57. 1
846	2018/06/08	13: 30: 06	59. 7	61. 0	62. 2	62. 3	60. 9
851	2018/06/08	13: 30: 11	60. 4	58. 9	57. 7	63. 0	59. 5
856	2018/06/08	13: 30: 16	61. 7	63. 8	65. 8	68. 5	62. 8
861	2018/06/08	13: 30: 21	61. 4	58. 9	59. 3	59. 6	58. 6
866	2018/06/08	13: 30: 26	62. 0	63. 6	62. 7	60. 6	60. 3
871	2018/06/08	13: 30: 31	63. 1	60. 6	62. 4	66. 0	67. 9
876	2018/06/08	13: 30: 36	67. 2	67. 2	64. 9	65. 3	68. 6
881	2018/06/08	13: 30: 41	70. 9	70. 4	68. 1	66. 4	65. 9
886	2018/06/08	13: 30: 46	65. 0	66. 0	63. 0	60. 8	60. 7
891	2018/06/08	13: 30: 51	59. 8	59. 1	57. 7	58. 0	58. 2
896	2018/06/08	13: 30: 56	62. 5	62. 6	61. 6	66. 0	74. 4

- Freq Weight : A
 - Time Weight : FAST
 - Level Range : 40-100
 - Max dB : 90.1 - 2008/06/18 14:28:59
 - Level Range : 40-100
 - SEL : 97.4
 - Leq : 67.8
 -

No. s	Date	Time	(dB)					
1	2018/06/08	14:17:25	64.9	64.2	64.9	65.6	64.8	
6	2018/06/08	14:17:30	64.4	63.5	64.2	63.4	63.8	
11	2018/06/08	14:17:35	64.6	64.0	63.7	63.5	63.2	
16	2018/06/08	14:17:40	63.4	63.3	63.1	62.0	62.0	
21	2018/06/08	14:17:45	61.5	62.9	62.4	62.1	62.8	
26	2018/06/08	14:17:50	62.6	62.7	63.6	63.5	63.6	
31	2018/06/08	14:17:55	63.3	63.9	63.8	63.7	63.1	
36	2018/06/08	14:18:00	61.8	61.7	62.3	62.1	62.3	
41	2018/06/08	14:18:05	60.7	61.2	61.7	61.0	61.9	
46	2018/06/08	14:18:10	65.0	66.3	65.0	66.2	63.0	
51	2018/06/08	14:18:15	63.4	62.0	60.7	61.6	62.1	
56	2018/06/08	14:18:20	62.4	63.9	65.4	64.5	61.7	
61	2018/06/08	14:18:25	62.1	61.9	63.3	63.5	63.2	
66	2018/06/08	14:18:30	63.7	62.9	63.1	62.5	63.0	
71	2018/06/08	14:18:35	62.4	60.8	62.0	61.9	61.8	
76	2018/06/08	14:18:40	63.0	63.2	63.2	63.1	63.3	
81	2018/06/08	14:18:45	62.1	61.1	64.2	63.0	62.7	
86	2018/06/08	14:18:50	61.9	62.5	62.3	62.4	62.7	
91	2018/06/08	14:18:55	62.8	62.9	61.6	62.5	62.0	
96	2018/06/08	14:19:00	62.7	64.1	64.0	62.8	60.9	
101	2018/06/08	14:19:05	60.5	61.3	61.2	62.6	61.5	
106	2018/06/08	14:19:10	60.8	61.3	62.1	62.0	62.8	
111	2018/06/08	14:19:15	63.2	65.8	64.2	61.9	63.3	
116	2018/06/08	14:19:20	63.6	64.0	63.6	63.7	63.1	
121	2018/06/08	14:19:25	62.2	61.6	62.7	62.2	62.1	
126	2018/06/08	14:19:30	62.2	62.4	62.7	64.0	63.2	
131	2018/06/08	14:19:35	64.0	64.0	64.5	64.6	64.6	
136	2018/06/08	14:19:40	63.7	62.8	62.9	61.4	62.0	
141	2018/06/08	14:19:45	60.6	63.7	63.7	62.5	62.2	
146	2018/06/08	14:19:50	61.6	63.1	62.5	62.5	63.7	
151	2018/06/08	14:19:55	62.1	63.2	62.9	63.2	62.5	
156	2018/06/08	14:20:00	62.5	62.9	62.1	62.8	63.9	
161	2018/06/08	14:20:05	63.6	63.1	63.1	62.3	62.1	
166	2018/06/08	14:20:10	62.4	63.3	65.8	66.0	67.2	
171	2018/06/08	14:20:15	68.0	63.1	62.7	63.2	62.7	
176	2018/06/08	14:20:20	61.6	61.4	60.2	59.5	62.4	
181	2018/06/08	14:20:25	62.2	61.8	60.3	61.1	60.7	
186	2018/06/08	14:20:30	61.3	62.2	63.5	64.1	64.0	
191	2018/06/08	14:20:35	63.5	62.7	63.0	63.0	62.5	
196	2018/06/08	14:20:40	63.7	63.7	61.7	61.9	61.8	

201	2018/06/08	14: 20: 45	61. 6	62. 4	63. 2	63. 0	63. 7
206	2018/06/08	14: 20: 50	63. 1	65. 2	62. 6	61. 2	62. 7
211	2018/06/08	14: 20: 55	64. 6	63. 3	62. 4	62. 0	62. 5
216	2018/06/08	14: 21: 00	60. 8	60. 7	61. 9	60. 1	62. 1
221	2018/06/08	14: 21: 05	60. 2	61. 0	61. 4	63. 0	64. 2
226	2018/06/08	14: 21: 10	67. 5	66. 8	63. 9	62. 9	63. 1
231	2018/06/08	14: 21: 15	62. 4	61. 9	62. 7	62. 9	62. 8
236	2018/06/08	14: 21: 20	70. 0	67. 6	64. 4	61. 7	63. 3
241	2018/06/08	14: 21: 25	62. 5	60. 9	61. 4	59. 6	60. 8
246	2018/06/08	14: 21: 30	60. 4	61. 6	60. 9	61. 9	62. 0
251	2018/06/08	14: 21: 35	61. 6	61. 4	61. 6	60. 9	61. 9
256	2018/06/08	14: 21: 40	62. 2	60. 1	61. 1	61. 6	61. 0
261	2018/06/08	14: 21: 45	62. 5	63. 1	63. 2	63. 8	63. 1
266	2018/06/08	14: 21: 50	63. 4	65. 5	64. 4	63. 3	62. 4
271	2018/06/08	14: 21: 55	63. 6	62. 7	61. 8	61. 9	61. 3
276	2018/06/08	14: 22: 00	62. 4	61. 8	62. 1	60. 7	61. 4
281	2018/06/08	14: 22: 05	61. 7	62. 6	63. 2	63. 6	62. 9
286	2018/06/08	14: 22: 10	62. 7	62. 4	63. 1	62. 7	61. 5
291	2018/06/08	14: 22: 15	62. 5	62. 9	63. 7	64. 6	65. 3
296	2018/06/08	14: 22: 20	64. 9	64. 1	63. 7	63. 4	62. 7
301	2018/06/08	14: 22: 25	62. 2	62. 8	63. 2	62. 6	65. 1
306	2018/06/08	14: 22: 30	65. 1	64. 6	64. 9	63. 9	65. 9
311	2018/06/08	14: 22: 35	64. 9	64. 6	66. 3	65. 3	64. 2
316	2018/06/08	14: 22: 40	67. 5	69. 4	70. 4	69. 2	67. 3
321	2018/06/08	14: 22: 45	65. 2	63. 4	62. 0	61. 7	63. 4
326	2018/06/08	14: 22: 50	64. 1	63. 1	63. 4	65. 3	66. 7
331	2018/06/08	14: 22: 55	65. 2	64. 9	64. 6	65. 1	65. 2
336	2018/06/08	14: 23: 00	64. 1	63. 0	62. 5	62. 3	62. 3
341	2018/06/08	14: 23: 05	62. 9	59. 9	60. 5	58. 8	59. 5
346	2018/06/08	14: 23: 10	60. 2	61. 3	61. 5	60. 8	60. 4
351	2018/06/08	14: 23: 15	62. 2	62. 0	64. 0	64. 1	63. 3
356	2018/06/08	14: 23: 20	62. 5	61. 8	62. 3	61. 8	62. 4
361	2018/06/08	14: 23: 25	62. 2	62. 4	62. 8	61. 9	61. 8
366	2018/06/08	14: 23: 30	62. 1	61. 8	61. 6	61. 1	61. 3
371	2018/06/08	14: 23: 35	60. 9	61. 3	62. 3	62. 4	62. 0
376	2018/06/08	14: 23: 40	62. 6	62. 5	62. 6	62. 8	63. 0
381	2018/06/08	14: 23: 45	63. 4	63. 6	63. 3	61. 4	61. 2
386	2018/06/08	14: 23: 50	60. 6	61. 2	62. 4	63. 3	64. 2
391	2018/06/08	14: 23: 55	64. 4	64. 2	62. 9	62. 1	62. 7
396	2018/06/08	14: 24: 00	62. 8	61. 7	61. 3	61. 3	61. 2
401	2018/06/08	14: 24: 05	63. 6	66. 1	64. 4	64. 1	63. 7
406	2018/06/08	14: 24: 10	62. 6	62. 1	63. 5	63. 4	63. 7
411	2018/06/08	14: 24: 15	63. 3	63. 3	63. 2	65. 1	65. 7
416	2018/06/08	14: 24: 20	65. 8	67. 4	67. 2	66. 2	64. 5
421	2018/06/08	14: 24: 25	64. 9	65. 2	64. 7	65. 1	64. 1
426	2018/06/08	14: 24: 30	63. 9	63. 7	64. 2	65. 3	64. 5
431	2018/06/08	14: 24: 35	63. 1	62. 8	62. 2	62. 6	62. 4
436	2018/06/08	14: 24: 40	63. 0	63. 6	63. 0	63. 7	63. 6
441	2018/06/08	14: 24: 45	63. 4	62. 9	63. 7	62. 8	61. 7
446	2018/06/08	14: 24: 50	62. 7	61. 9	61. 3	61. 8	63. 1

451	2018/06/08	14: 24: 55	62. 4	63. 2	63. 9	62. 2	61. 5
456	2018/06/08	14: 25: 00	62. 5	62. 1	62. 9	62. 7	64. 2
461	2018/06/08	14: 25: 05	64. 2	63. 0	62. 2	61. 8	61. 5
466	2018/06/08	14: 25: 10	61. 0	59. 5	60. 3	60. 8	61. 0
471	2018/06/08	14: 25: 15	61. 0	61. 0	61. 5	62. 0	62. 5
476	2018/06/08	14: 25: 20	61. 9	63. 2	62. 6	61. 8	62. 3
481	2018/06/08	14: 25: 25	61. 8	61. 9	61. 4	62. 0	61. 9
486	2018/06/08	14: 25: 30	62. 4	61. 9	60. 9	61. 4	62. 4
491	2018/06/08	14: 25: 35	62. 2	63. 6	65. 2	63. 2	61. 5
496	2018/06/08	14: 25: 40	61. 6	60. 9	60. 8	62. 0	62. 2
501	2018/06/08	14: 25: 45	63. 1	65. 8	64. 6	63. 1	64. 0
506	2018/06/08	14: 25: 50	63. 8	63. 5	63. 4	63. 6	63. 1
511	2018/06/08	14: 25: 55	61. 5	60. 0	60. 0	60. 1	60. 6
516	2018/06/08	14: 26: 00	61. 6	60. 1	60. 5	60. 1	61. 4
521	2018/06/08	14: 26: 05	61. 4	61. 8	62. 2	62. 7	62. 5
526	2018/06/08	14: 26: 10	63. 1	62. 6	63. 3	63. 4	62. 3
531	2018/06/08	14: 26: 15	62. 4	62. 2	61. 3	61. 9	61. 6
536	2018/06/08	14: 26: 20	62. 0	61. 6	61. 0	60. 1	59. 5
541	2018/06/08	14: 26: 25	60. 2	61. 0	61. 5	61. 2	61. 1
546	2018/06/08	14: 26: 30	63. 6	62. 0	61. 5	61. 9	62. 6
551	2018/06/08	14: 26: 35	64. 0	65. 1	65. 9	65. 5	66. 6
556	2018/06/08	14: 26: 40	68. 2	69. 5	69. 0	65. 5	64. 2
561	2018/06/08	14: 26: 45	63. 9	64. 7	63. 5	63. 7	63. 4
566	2018/06/08	14: 26: 50	62. 8	61. 1	62. 4	61. 9	62. 8
571	2018/06/08	14: 26: 55	64. 4	63. 9	64. 6	63. 5	62. 7
576	2018/06/08	14: 27: 00	62. 1	61. 8	62. 7	62. 9	63. 4
581	2018/06/08	14: 27: 05	62. 1	62. 0	62. 5	64. 0	64. 0
586	2018/06/08	14: 27: 10	62. 7	63. 7	61. 5	62. 3	63. 0
591	2018/06/08	14: 27: 15	62. 1	64. 2	63. 8	63. 7	62. 4
596	2018/06/08	14: 27: 20	61. 9	61. 5	60. 8	59. 8	59. 8
601	2018/06/08	14: 27: 25	59. 7	61. 6	63. 1	63. 8	64. 1
606	2018/06/08	14: 27: 30	63. 2	63. 5	62. 2	63. 6	61. 7
611	2018/06/08	14: 27: 35	61. 9	62. 4	62. 8	62. 0	62. 2
616	2018/06/08	14: 27: 40	63. 4	62. 2	62. 5	62. 0	63. 2
621	2018/06/08	14: 27: 45	62. 8	62. 1	62. 5	61. 8	62. 5
626	2018/06/08	14: 27: 50	63. 8	64. 7	63. 6	63. 3	63. 7
631	2018/06/08	14: 27: 55	63. 4	63. 4	63. 8	63. 8	64. 2
636	2018/06/08	14: 28: 00	62. 5	62. 5	61. 8	62. 1	59. 6
641	2018/06/08	14: 28: 05	60. 3	61. 1	62. 0	62. 5	60. 5
646	2018/06/08	14: 28: 10	60. 9	61. 2	62. 6	64. 0	64. 7
651	2018/06/08	14: 28: 15	61. 4	61. 3	60. 1	61. 4	61. 2
656	2018/06/08	14: 28: 20	61. 7	61. 0	61. 6	62. 2	62. 9
661	2018/06/08	14: 28: 25	63. 4	65. 1	63. 3	63. 2	62. 2
666	2018/06/08	14: 28: 30	61. 4	60. 7	62. 0	61. 4	62. 1
671	2018/06/08	14: 28: 35	62. 1	62. 4	63. 2	63. 5	63. 2
676	2018/06/08	14: 28: 40	62. 1	60. 6	60. 1	61. 8	62. 0
681	2018/06/08	14: 28: 45	62. 5	63. 8	63. 9	64. 1	65. 6
686	2018/06/08	14: 28: 50	65. 4	64. 5	64. 9	67. 3	70. 5
691	2018/06/08	14: 28: 55	69. 2	72. 5	78. 4	86. 4	87. 1
696	2018/06/08	14: 29: 00	87. 1	89. 1	85. 9	86. 1	82. 6

701	2018/06/08	14: 29: 05	82. 0	82. 5	77. 6	74. 6	72. 6
706	2018/06/08	14: 29: 10	72. 0	72. 4	70. 6	69. 6	69. 1
711	2018/06/08	14: 29: 15	69. 7	70. 1	66. 2	65. 6	66. 0
716	2018/06/08	14: 29: 20	67. 4	68. 3	68. 3	67. 5	64. 7
721	2018/06/08	14: 29: 25	64. 9	65. 6	65. 0	63. 7	63. 3
726	2018/06/08	14: 29: 30	64. 2	65. 7	64. 6	63. 7	63. 0
731	2018/06/08	14: 29: 35	62. 8	64. 7	62. 5	62. 9	63. 1
736	2018/06/08	14: 29: 40	63. 3	62. 7	63. 3	63. 6	64. 5
741	2018/06/08	14: 29: 45	64. 2	64. 1	64. 3	64. 7	64. 7
746	2018/06/08	14: 29: 50	64. 6	65. 3	66. 1	66. 3	65. 3
751	2018/06/08	14: 29: 55	65. 3	65. 0	64. 3	65. 0	63. 7
756	2018/06/08	14: 30: 00	63. 4	63. 3	63. 1	62. 1	62. 6
761	2018/06/08	14: 30: 05	62. 0	62. 5	62. 6	62. 2	62. 9
766	2018/06/08	14: 30: 10	61. 2	61. 6	61. 9	63. 4	64. 8
771	2018/06/08	14: 30: 15	64. 3	63. 5	63. 2	65. 2	65. 9
776	2018/06/08	14: 30: 20	66. 9	69. 3	67. 2	69. 0	67. 8
781	2018/06/08	14: 30: 25	67. 1	66. 6	67. 2	67. 6	64. 4
786	2018/06/08	14: 30: 30	64. 3	63. 7	63. 1	63. 0	62. 3
791	2018/06/08	14: 30: 35	62. 5	62. 3	62. 5	63. 2	64. 0
796	2018/06/08	14: 30: 40	67. 0	65. 4	66. 6	64. 9	64. 2
801	2018/06/08	14: 30: 45	64. 7	65. 3	64. 0	64. 5	65. 6
806	2018/06/08	14: 30: 50	68. 2	67. 5	63. 4	72. 7	68. 6
811	2018/06/08	14: 30: 55	65. 4	63. 3	63. 3	63. 1	63. 6
816	2018/06/08	14: 31: 00	62. 3	62. 9	63. 7	63. 0	63. 6
821	2018/06/08	14: 31: 05	64. 0	64. 1	62. 6	62. 3	62. 3
826	2018/06/08	14: 31: 10	61. 7	62. 0	63. 0	62. 7	63. 8
831	2018/06/08	14: 31: 15	62. 2	63. 0	62. 3	62. 5	60. 8
836	2018/06/08	14: 31: 20	62. 0	62. 3	62. 0	59. 5	59. 9
841	2018/06/08	14: 31: 25	60. 3	62. 4	66. 3	67. 7	66. 0
846	2018/06/08	14: 31: 30	65. 3	60. 8	65. 0	67. 5	64. 8
851	2018/06/08	14: 31: 35	62. 5	62. 3	61. 3	63. 5	61. 8
856	2018/06/08	14: 31: 40	62. 9	64. 1	64. 6	63. 9	64. 9
861	2018/06/08	14: 31: 45	64. 6	64. 3	64. 2	63. 5	63. 0
866	2018/06/08	14: 31: 50	62. 4	62. 3	62. 4	62. 0	62. 1
871	2018/06/08	14: 31: 55	62. 1	62. 8	62. 7	62. 3	63. 1
876	2018/06/08	14: 32: 00	62. 9	62. 3	62. 7	64. 0	64. 3
881	2018/06/08	14: 32: 05	63. 4	62. 8	63. 9	65. 8	65. 1
886	2018/06/08	14: 32: 10	64. 7	62. 9	63. 1	63. 9	64. 9
891	2018/06/08	14: 32: 15	63. 4	62. 7	62. 5	61. 2	61. 9
896	2018/06/08	14: 32: 20	64. 3	63. 3	63. 7	63. 4	62. 9

Appendix D

RCNM Noise Modeling Worksheets

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 05/23/2019
 Case Description: Clearing

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Riverside National Cemetery	Residential	65.0	65.0	45.0

Description	Impact Device	Usage (%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40	77.7	250.0	0.0	
Concrete Saw	No	20	89.6	250.0	0.0	
Jackhammer	Yes	20	88.9	250.0	0.0	
Vacuum Street Sweeper	No	10	81.6	250.0	0.0	
Pickup Truck	No	40	75.0	250.0	0.0	
Pickup Truck	No	40	75.0	250.0	0.0	
Pickup Truck	No	40	75.0	250.0	0.0	
Pickup Truck	No	40	75.0	250.0	0.0	

Results

Noise Limit Exceedance (dBA) Noise Limits (dBA)

Equipment	Day		Calculated (dBA) Evening		Day Night		Evening		Night
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Compressor (air)	N/A	N/A	63.7	59.7	N/A	N/A	N/A	N/A	N/A
Concrete Saw	N/A	N/A	75.6	68.6	N/A	N/A	N/A	N/A	N/A
Jackhammer	N/A	N/A	74.9	67.9	N/A	N/A	N/A	N/A	N/A
Vacuum Street Sweeper	N/A	N/A	67.6	57.6	N/A	N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Total	75.6	72.3	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences (SW)	Residential	65.0	65.0	45.0

Description	Impact Device	Usage (%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Compressor (air)	No	40		77.7	5000.0	0.0
Concrete Saw	No	20		89.6	5000.0	0.0
Jackhammer	Yes	20		88.9	5000.0	0.0
Vacuum Street Sweeper	No	10		81.6	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0

Results

Noise Limit Exceedance (dBA)					Noise Limits (dBA)				
-----					-----				
Day		Calculated (dBA)			Day		Evening		Night
		Evening			Night				
-----		-----			-----		-----		-----
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
-----		-----			-----		-----		-----
-----		-----			-----		-----		-----

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 05/23/2019
 Case Description: Trenching

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Riverside National Cemetery	Residential	65.0	45.0	45.0

Description	Impact Device	Usage (%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	250.0	0.0
Dump Truck	No	40		76.5	250.0	0.0
Dump Truck	No	40		76.5	250.0	0.0
Pickup Truck	No	40		75.0	250.0	0.0
Pickup Truck	No	40		75.0	250.0	0.0
Pickup Truck	No	40		75.0	250.0	0.0
Pickup Truck	No	40		75.0	250.0	0.0
Pickup Truck	No	40		75.0	250.0	0.0
Pickup Truck	No	40		75.0	250.0	0.0
Pickup Truck	No	40		75.0	250.0	0.0
Vacuum Street Sweeper	No	10		81.6	250.0	0.0
Pumps	No	50		80.9	250.0	0.0
Pumps	No	50		80.9	250.0	0.0
Pumps	No	50		80.9	250.0	0.0
Pumps	No	50		80.9	250.0	0.0

Results

Noise Limit Exceedance (dBA)					Noise Limits (dBA)				
Day		Calculated (dBA) Evening		Day Night		Evening		Night	
Leq	Lmax	Leq	Lmax	Lmax	Leq	Lmax	Leq	Lmax	
Backhoe		63.6	59.6	N/A	N/A	N/A	N/A	N/A	

N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck			62.5	58.5	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck			62.5	58.5	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vacuum Street Sweeper			67.6	57.6	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pumps			67.0	64.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pumps			67.0	64.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pumps			67.0	64.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pumps			67.0	64.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Total	67.6	72.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences (SW)	Residential	65.0	45.0	45.0

Description	Impact Device	Usage (%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	5000.0	0.0
Dump Truck	No	40		76.5	5000.0	0.0
Dump Truck	No	40		76.5	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0

Dump Truck			62.5	58.5	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck			62.5	58.5	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vacuum Street Sweeper			67.6	57.6	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compactor (ground)			69.3	62.3	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vacuum Street Sweeper			67.6	57.6	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pumps			67.0	64.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pumps			67.0	64.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pumps			67.0	64.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pumps			67.0	64.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Total	69.3	72.4	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences (SW)	Residential	65.0	45.0	45.0

Description	Impact Device	Usage (%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dump Truck	No	40		76.5	5000.0	0.0
Dump Truck	No	40		76.5	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0

Pumps			40.9	37.9	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Pumps			40.9	37.9	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Pumps			40.9	37.9	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Pumps			40.9	37.9	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Total	43.2	46.3	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A			

Dozer			67.7	63.7	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch			60.0	56.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator			66.7	63.6	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vacuum Street Sweeper			67.6	57.6	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pumps			67.0	64.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pumps			67.0	64.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pumps			67.0	64.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pumps			67.0	64.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Total	67.7	72.6	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences (SW)	Residential	65.0	45.0	45.0

Description	Impact Device	Usage (%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	5000.0	0.0
Dozer	No	40		81.7	5000.0	0.0
Welder / Torch	No	40		74.0	5000.0	0.0
Generator	No	50		80.6	5000.0	0.0
Vacuum Street Sweeper	No	10		81.6	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0
Pumps	No	50		80.9	5000.0	0.0

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 05/23/2019
 Case Description: Restoration

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Riverside National Cemetery	Residential	65.0	45.0	45.0

Description	Impact Device	Usage (%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50	77.2	250.0	0.0	
Vacuum Street Sweeper	No	10	81.6	250.0	0.0	
Pickup Truck	No	40	75.0	250.0	0.0	
Pickup Truck	No	40	75.0	250.0	0.0	
Pickup Truck	No	40	75.0	250.0	0.0	
Pickup Truck	No	40	75.0	250.0	0.0	

Results

Noise Limit Exceedance (dBA) Noise Limits (dBA)

Equipment	Day		Calculated (dBA) Evening		Day Night		Evening		Night
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Paver	N/A	N/A	63.2	60.2	N/A	N/A	N/A	N/A	N/A
Vacuum Street Sweeper	N/A	N/A	67.6	57.6	N/A	N/A	N/A	N/A	N/A
Pickup Truck	N/A	N/A	61.0	57.0	N/A	N/A	N/A	N/A	N/A
Pickup Truck	N/A	N/A	61.0	57.0	N/A	N/A	N/A	N/A	N/A
Pickup Truck	N/A	N/A	61.0	57.0	N/A	N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Pickup Truck			61.0	57.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A			
		Total	67.6	65.6	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A			

**** Receptor #2 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences (SW)	Residential	65.0	45.0	45.0

Description	Impact Device	Usage (%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	5000.0	0.0
Vacuum Street Sweeper	No	10		81.6	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0
Pickup Truck	No	40		75.0	5000.0	0.0

Results

Noise Limit Exceedance (dBA) Noise Limits (dBA)

Day		Calculated (dBA) Evening		Day Night		Evening		Night	
Equipment	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver			37.2	34.2	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Vacuum Street Sweeper			41.6	31.6	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Pickup Truck			35.0	31.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Pickup Truck			35.0	31.0	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A			

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 04/14/2020
 Case Description: Trenching for Dewatering Facilities - Install

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Cemetery (200 ft)	Commercial	65.0	55.0	45.0

Equipment						
Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Man Lift	No	20		74.7	200.0	0.0
Backhoe	No	40		77.6	200.0	0.0
Backhoe	No	40		77.6	200.0	0.0
Man Lift	No	20		74.7	200.0	0.0

Results

Noise Limit Exceedance (dBA) Noise Limits (dBA)

Equipment	Night	Calculated (dBA)				Day		Evening		Lmax
		Day	Evening	Day	Night	Lmax	Leq	Lmax	Leq	
Man Lift	N/A		62.7	55.7	N/A	N/A	N/A	N/A	N/A	
Backhoe	N/A		65.5	61.5	N/A	N/A	N/A	N/A	N/A	
Backhoe	N/A		65.5	61.5	N/A	N/A	N/A	N/A	N/A	
Man Lift	N/A		62.7	55.7	N/A	N/A	N/A	N/A	N/A	
		Total	65.5	65.5	N/A	N/A	N/A	N/A	N/A	

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 05/23/2019
 Case Description: Well Decommissioning

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Riverside National Cemetery	Residential	65.0	45.0	45.0

Description	Impact Device	Usage (%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Drill Rig Truck	No	20		79.1	50.0	0.0
Backhoe	No	40		77.6	50.0	0.0
Dump Truck	No	40		76.5	50.0	0.0
Pickup Truck	No	40		75.0	50.0	0.0

Results

Noise Limit Exceedance (dBA) Noise Limits (dBA)

Equipment	Night	Day	Calculated (dBA)		Day		Evening		Lmax
			Leq	Lmax	Leq	Lmax	Leq	Lmax	
Drill Rig Truck	N/A	N/A	79.1	72.2	N/A	N/A	N/A	N/A	N/A
Backhoe	N/A	N/A	77.6	73.6	N/A	N/A	N/A	N/A	N/A
Dump Truck	N/A	N/A	76.5	72.5	N/A	N/A	N/A	N/A	N/A
Pickup Truck	N/A	N/A	75.0	71.0	N/A	N/A	N/A	N/A	N/A
Total			79.1	78.4	N/A	N/A	N/A	N/A	N/A

