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East West Valley Interceptor Sewer

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Executive Summary

ES.1 Introduction

The City of Los Angeles (City) is proposing to construct the East West Valley Interceptor Sewer (proposed Project) to divert wastewater from existing sewers in the North Hollywood area, and convey that wastewater to the west for treatment at the Donald C. Tillman Water Reclamation Plant (DCTWRP). The proposed Project would increase the production and use of recycled water in the City and help address concerns over the long-term reliability of imported water.

Implementation of the proposed Project would require various approvals and permits, starting with approval from the City. Prior to that approval, the City must consider the proposed Project's environmental effects, which are identified in this Environmental Impact Report (EIR). The EIR serves to inform decision-makers and the public about the environmental effects of the proposed Project and has been prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) (California Public Resources Code [PRC] Section 21000 et seq.) and the Guidelines for Implementation of the California Environmental Quality Act of 1970 (State CEQA Guidelines) (14 California Code of Regulations [CCR] Section 15000 et seq.).

ES.2 Purpose of the Draft EIR

This Draft EIR will be used to inform decision-makers, regulatory agencies, and the public about the potentially significant physical impacts (i.e., direct, indirect, and cumulative) of the proposed project, in accordance with the provisions set forth in the CEQA Guidelines. This Draft EIR is being provided to the public for review, comment, and participation in the planning process. After public review and comment, a Final EIR will be prepared that will include responses to comments on the Draft EIR received from agencies, organizations, and individuals. The Final EIR would then provide the basis for decision-making by the City and other agencies. Other state and local agencies, as described in Chapter 1, Introduction in the Draft EIR, that have jurisdiction over an element of the proposed Project, or a resource area affected by the proposed Project are expected to use this Draft EIR as part of their approval or permitting process. This Draft EIR would support permit applications, construction contracts, and other actions required to implement the proposed Project and to adopt mitigation measures that, where possible, could reduce or eliminate significant environmental impacts.

ES.3 Draft EIR Organization

The Draft EIR is divided into the following:

Executive Summary – provides an overview of the proposed Project and summarizes the analysis of significant impacts, proposed mitigation measures, environmental impacts after mitigation (if any), and alternatives to the Project that reduce or avoid significant effects on the environment. This summary also presents areas of controversy, including issues raised by members of the public and agencies during the public scoping period. Detailed analyses of the proposed Project's impacts on the environment are contained in the main body of the document.

Introduction (Chapter 1) – describes the purpose of the EIR, a list of other agencies that may utilize the EIR, the availability of the Draft EIR, and a brief outline of organization of this document.

Project Description (Chapter 2) – describes the Project location, presents the purpose, need and objectives of the proposed Project, and provides a description of the proposed Project and the anticipated project assumptions.

Environmental Analysis (Chapter 3) – describes the setting (regulatory framework and existing conditions) for each environmental resource area, discusses the impact analysis approach and methodology, evaluates the environmental impacts that could result from the proposed Project, and recommends the mitigation measures (if any) that would reduce or avoid any identified significant impacts. This section also identifies the criteria used to assess the significance of environmental impacts, discloses whether a given impact is significant, and determines whether the recommended mitigation measures, if implemented, would reduce the impact to a less than significant level.

CEQA-Plus Evaluation (Chapter 4) - this Draft EIR has also been prepared to address compliance with the ‘federal cross-cutting’ environmental authorities under the National Environmental Policy Act (NEPA). The CEQA-Plus chapter will evaluate the principal federal authorities (i.e., programs, regulations, policies) that directly apply to the proposed Project. The inclusion of the additional analysis in this chapter will assist the City in the event federal funding is pursued for the Project.

Cumulative Impacts Analysis (Chapter 5) – contains a discussion of significant cumulative impacts and whether the proposed Project would cause related impacts that would result in either a direct cumulatively significant impact or a cumulatively considerable contribution to an existing cumulative significant impact.

Alternatives Analysis (Chapter 6) – evaluates two other build alternatives to the proposed Project. It describes impacts that would result from the No Project Alternative and two build alternatives, compares the significant environmental impacts of the alternatives to the proposed Project, and identifies the Environmentally Superior Alternative. It also identifies alternatives initially considered but not carried forward for detailed review.

Other CEQA Considerations (Chapter 7) – includes a discussion of growth-inducing impacts, irreversible environmental changes, and identification of unavoidable significant impacts (i.e., impacts that cannot be mitigated to a level less than significant) from implementation of the proposed Project.

References (Chapter 8) – identifies the materials and documents consulted in preparing this Draft EIR.

List of Preparers (Chapter 9) – lists the individuals involved in preparing this Draft EIR.

Acronyms and Abbreviations (Chapter 10) – provides the full names for acronyms and abbreviations used in this document.

Technical Appendices – includes the Notice of Preparation (NOP) and comments received on the NOP, as well as supporting background documents and technical information associated with the environmental impact analyses in Chapter 3.

ES.4 Project Location and Setting

The proposed Project would be located in the San Fernando Valley northeast of the Sepulveda Basin Recreational Area near the San Diego Freeway/Interstate -405 and extend east through the North Hollywood area (see Figure ES-1, Regional Location Map). The proposed Project alignment is along Victory Boulevard between Vineland Avenue on the east and Haskell Avenue on the west within the Southeast Valley communities of North Hollywood – Valley Village and Van Nuys – North Sherman Oaks.

Figure ES-2 (Project Alignment Map) shows the Project location and alignment.

ES.5 Proposed Project

ES.5.1 Background

The City of Los Angeles owns, operates and maintains one of the largest wastewater collection systems in the nation. The collection system conveys approximately 400 million gallons per day of sewage through a network of 6,700 miles of sewer pipes to one of the City's four water reclamation plants. In order to serve the City's need to increase the production of recycled water, the City's Bureau of Sanitation is looking to convey additional wastewater from the North Hollywood, Van Nuys/Sylmar, and Pacoima sewer basin areas to the DCTWRP.

ES.5.2 Project Objectives

The primary purpose of the proposed Project is to increase the production and use of recycled water in the City to help address concerns over the long-term reliability of imported water. The proposed Project would address the following Project objectives:

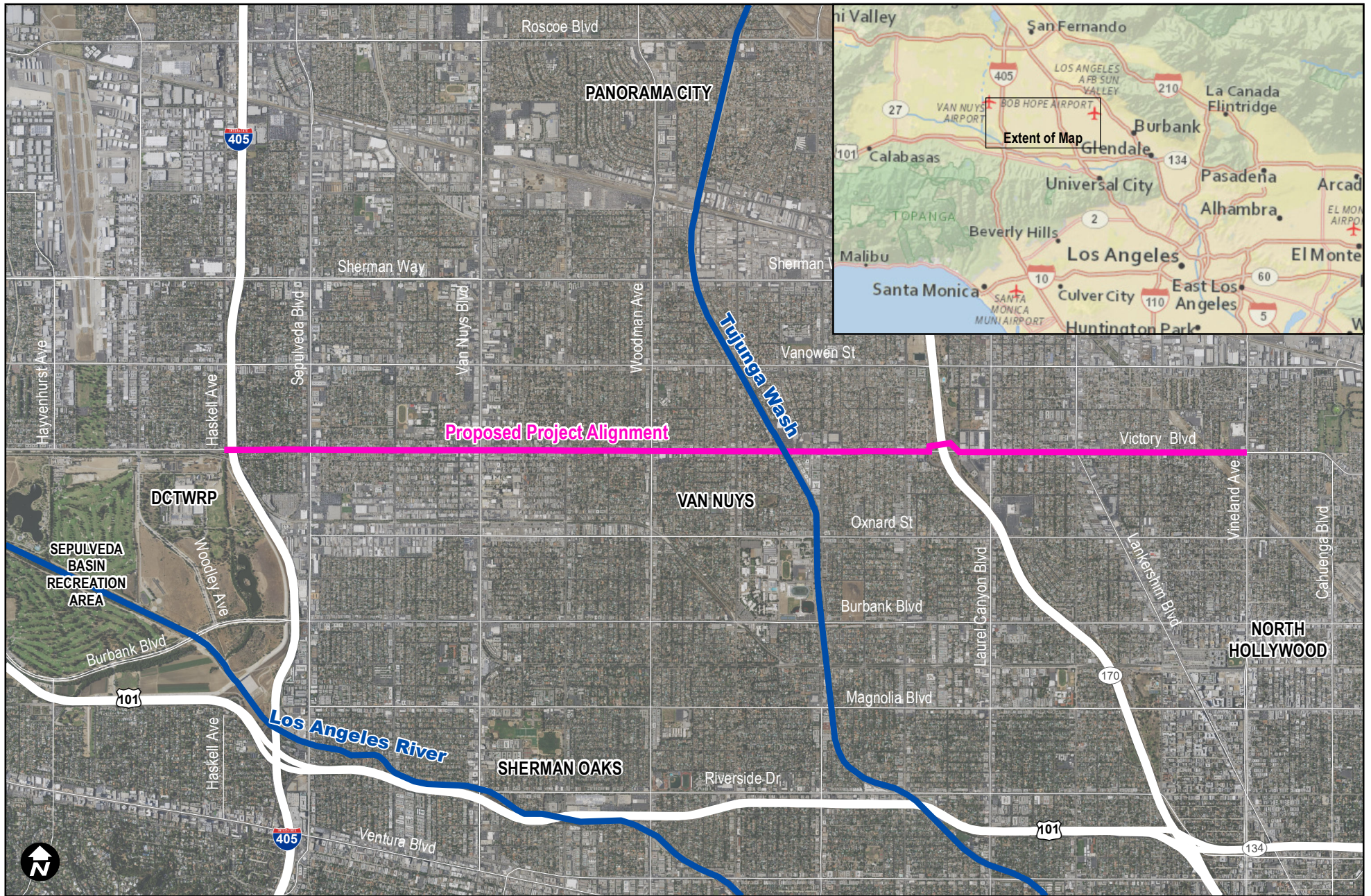
- Divert and convey wastewater from the eastern portions of the San Fernando Valley to the DCTWRP, where it would be used to generate recycled water.
- Maximize recycled water production.

Diverted wastewater that is recycled at DCTWRP would be distributed through the existing recycled water distribution system that extends from DCTWRP. The City produces recycled water to be used in place of potable (drinking) water for industrial, landscape and recreational purposes in addition to other beneficial uses, including groundwater replenishment.



Source: CDM Smith, 2018.

Figure ES-1



Source: National Geographic, 2018.

ES.5.3 Project Characteristics

As described further below, implementation of the proposed Project would include constructing a force main sewer line and six diversion structures (to divert wastewater from existing sewers), one junction structure (to connect the force main to an existing sewer that connects with the DCTWRP), and six pumping stations (to pump the diverted wastewater through the force main to DCTWRP). The proposed Project would also include ancillary components, such as access structures, electrical vaults, and control boxes. Following construction, the Project would convey wastewater from the North Hollywood, Van Nuys/Sylmar, and Pacoima sewer basin areas to the DCTWRP.

Force Main

Under the proposed Project, the approximately 6-mile long force main sewer would convey wastewater diverted from the North Hollywood area to the DCTWRP. The force main would be made of ductile iron pipe with inside diameters that range from 24 inches to 42 inches. The force main would be comprised of six stretches (described from east to west) that are defined by the pump station connections and the junction structure:

- Stretch 1 – Vineland to Tujunga
- Stretch 2 – Tujunga to Lankershim
- Stretch 3 – Lankershim to Laurel Canyon
- Stretch 4 – Laurel Canyon to Whitsett
- Stretch 5 – Whitsett to Fulton
- Stretch 6 – Fulton to Haskell

Diversion/Junction Structures and Connecting Sewers

Wastewater from six existing sewers that cross Victory Boulevard would be diverted and routed to the force main via pump stations). The diversion structures would allow flow to be diverted either to the proposed Project or to continue flowing within the existing system. Figure ES-2 shows the proposed alignment with the locations of the proposed diversion and junction structures, as well as the connecting sewers.

Pump Stations

The proposed Project would include six pump stations that would pump the diverted wastewater to DCTWRP via the new force main. The pump stations are currently planned to be located in the public right-of-way near each diversion (beneath the sidewalk or median) with only a control panel box above ground. Each pump station would utilize submersible pumps, which would be a wet pit application. The six pump stations are:

- Vineland Pump Station
- Tujunga Pump Station
- Lankershim Pump Station

- Laurel Canyon Pump Station
- Whitsett Pump Station
- Fulton Pump Station

Access Structures

Access structures (such as maintenance holes and vaults) would be installed at key locations along the force main and accessory structures to facilitate future maintenance and repairs. Examples of potential access structure locations include diversion and junction structures and tie in points.

Other Project Features

Electrical power for operation of the pumping stations and diversion structure control gates would be provided by Los Angeles Department of Water and Power via connections to existing powerlines in the vicinity of each pump station. Operation of the flow control gates within the diversion structures and the pump stations would be integrated into the City's wastewater management system, which could be controlled from the DCTWRP and/or the Hyperion Treatment Plant (HTP). In addition, air release valves may be required at locations along the force main.

ES.5.4 Project Phasing

As currently planned, construction of the proposed Project would occur over an approximately 30-month period (2.5 years) from April 2021 through November 2023. Installation rates of the force main using open cut methods could range from approximately 50 feet per day (sections where the pipeline diameter is larger and deeper sections that require beam and sheet shoring) to up to 100 feet per day (sections where the pipeline has the smallest diameter and is shallow enough for sheet and horizontal shoring methods to be used).

Locations where the force main would be installed by microtunneling or jack and bore would each require between 6 to 9 months.

Diversion and junction structures would each require approximately 6 to 8 months, but the junction structure at the EWVIS to EVIS connection would take longer due to the depth.

Each pump station is estimated to take between 12 to 18 months to construct.

In order to complete the proposed Project within the anticipated 30-month period (2.5 years), construction of the Project components would likely overlap one another.

ES.5.5 Construction Assumptions

Construction of the proposed Project components would utilize several construction methods, including open cut, open pit methods, and trenchless methods such as microtunneling or jack and bore), which are described below.

Open Cut

Open Cut (also known as Cut and Cover) is the traditional method of construction for pipelines. The existing soil is removed by trenching, pipe bedding is placed at the bottom of the trench, followed by installation of the pipe, and backfilling with a certified fill material. This method may be used for various pipe diameters, soil types, and pipe materials. The maximum recommended depth for this

type of construction is 25 feet. Most of the Project components would utilize this method because the depths of most components are less than 25 feet in depth. Components that could be installed using open cut methods include: the force main; diversion structures; junction structures; connecting sewers; pump stations; and, access structures.

Microtunneling or Jack and Bore

Microtunneling is the process where a sewer or pipe is installed underground between two pits, without the need to open cut the entire pipeline length. Typical pipe installations via microtunneling range from 18 to 102 inches in diameter at depths ranging from 20 to 50 feet below grade. A directionally adjustable tunnel boring machine (non-man entry) is used to tunnel between the two pits. The tunnel boring machine has a cutting head that augers through the soil as it is pushed or jacked through the ground at the required slope from a launching pit. Excavated soil is mixed with a slurry, which is removed by pumping back to the launch pit, where it is removed. The pipe segments are installed (pushed) immediately behind the tunnel boring machine and this process continues until the pipe reaches the receiving pit.

Staging Areas

Staging areas to support construction of the Project components would be required but have not yet been identified. The staging areas would need to be along or located fairly close the Project site (also referred to throughout the EIR as the “Project alignment”).

ES.5.6 Project Operations

Following completion of Project construction and commissioning, operation of the force main would commence. The diversion structure gates would be controlled to divert flow from the existing sewers to the pump stations, which would begin pumping once the proper level is reached in each pump station wet well. The control gates at the diversion structures and pump station operations would be monitored and controllable from DCTWRP and HTP.

Each pump station would be inspected monthly and require maintenance twice per year. Occasionally, a pump may require replacement, however, they would occur on an as-needed basis. Monthly maintenance would consist of a two-person crew for approximately 2 hours and bi-yearly maintenance would consist of a four-person crew for approximately 8 hours.

Except for the control panel boxes located aboveground at the pump station locations, the operation of the proposed Project would be automated, located underground, and require minimal maintenance.

ES.6 Alternatives to the Proposed Project

Three alternatives to the proposed Project were carried forward and evaluated in the EIR.

ES.6.1 Alternative 1: No Project

The No Project Alternative is required by CEQA and represents what would reasonably be expected to occur in the foreseeable future if the proposed Project were not approved. Under this alternative, no new force main sewer and associated pump stations would be constructed, and no additional wastewater flows from the North Hollywood area would be diverted to the DCTWRP. Under the No Project Alternative, additional recycled water would not be produced that could help address

concerns over the long-term reliability of imported water. The No Project Alternative would not meet any of the project objectives.

ES.6.2 Alternative 2: Oxnard Alignment

Under Alternative 2: Oxnard Alignment, the approximately 6.5-mile long force main sewer would convey wastewater diverted from the North Hollywood area to the DCTWRP in an alignment along Oxnard Street between Vineland Avenue and Kester Avenue, in Kester Avenue between Oxnard Street and Victory Boulevard, and in Victory Boulevard from Kester Avenue to the EVIS at Haskell Avenue. As with the proposed Project, the force main would be ductile iron pipe with inside diameters that range from 24-inches to 42-inches in diameter. Under Alternative 2, six pump stations would be required, but would be located along Oxnard Street at the same cross streets as the proposed Project. Similarly, diversion structures under Alternative 2 would be located along Oxnard Street at the same cross streets as the proposed Project. The connection of EWVIS to the EVIS under Alternative 1 would be the same as the proposed Project. Alternative 2 would satisfy all of the project objectives.

ES.6.3 Alternative 3: Two-Phased Construction

Under Alternative 3: Two-Phased Construction, although the proposed Project would be built as proposed, the construction would occur in two phases to reduce impacts along the Project area. All the elements of the proposed Project would be implemented; however, the construction of the approximately 6-mile long force main sewer and four of the proposed six pump stations/diversions, applicable connecting sewers, and the EVIS junction/connection would be built first. The second phase, consisting of the remaining two pump stations/diversions/connecting sewers would add approximately 12 months (one year) to the construction schedule (total of approximately 42 months or 3.5 years) and would commence immediately following Phase 1. Alternative 3 would satisfy all of the project objectives, although due to the phasing the objectives would not be maximized as quickly as with the proposed Project. Following is the Alternative 3 project components by phase:

Phase 1

- Six (6)-mile force main sewer
- Vineland Avenue (eastern terminus) – pump station/diversion and connecting sewer
- Lankershim Boulevard – pump station/diversion and connecting sewer
- Whitsett Avenue – pump station/diversion and connecting sewer
- Fulton Avenue – pump station/diversion and connecting sewer
- EVIS Junction

Phase 2

- Tujungua Avenue – pump station/diversion and connecting sewer
- Laurel Canyon Boulevard – pump station/diversion and connecting sewer

The proposed Project (which are also Alternative 3 components) are described in detail in Section 2.4.2 in Chapter 2, Project Description. As noted above, the elements detailed in the construction schedule associated with the proposed Project would be similar for Alternative 3; however, the

overlap of construction of the components would be as described above and there would be an increase in construction by one year.

ES.7 Terminology Used in the Environmental Analysis

Environmental Baseline

Section 15125(a)(1) of the State CEQA Guidelines states that “[g]enerally the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published....”

The NOP for this EIR was published on January 25, 2019. In accordance with the provisions of CEQA, 2019 is the baseline year for characterizing existing conditions in the environmental analysis. Where existing conditions data specific to 2019 were not available or where 2019, by itself, was not an appropriate representation of baseline conditions, this EIR identifies this fact, explains what data was used to determine existing conditions, and provides evidence of why this information is representative of baseline conditions.

Impacts and Mitigation

In evaluating the potential impacts of the proposed Project, the level of significance is determined by applying the threshold of significance (significance criteria) presented for each resource area. The following terms are used to describe each impact and, where significant impacts are determined, how mitigation measures are addressed:

- *No Impact* – Designation of no impact is given when the proposed Project does not apply to the impact category or would not create an impact. In addition, no impact is identified if no adverse or beneficial changes in the environment are expected.
- *Less Than Significant Impact* – A less than significant impact is identified when the proposed Project would cause no substantial adverse change in the environment (i.e., the impact would not reach the threshold of significance), or where impacts have been reduced to less than significant after application of mitigation.
- *Significant Impact* – A significant impact would create a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the proposed Project. Such an impact would exceed the applicable significance threshold established by CEQA prior to application of mitigation.
- *Significant Unavoidable Impact* – Per Section 15126.2(b) of the CEQA Guidelines, a significant and unavoidable impact is a Project-related substantial adverse effect that cannot be reduced to a less than significant level through any feasible mitigation measure(s).
- *Mitigation* – Mitigation refers to measures that would be implemented to avoid or lessen potentially significant impacts. Mitigation includes:
 - avoiding the impact completely by not taking a certain action or parts of an action;
 - minimizing the impact by limiting the degree or magnitude of the action and its implementation;

- rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and/or
- compensating for the impact by replacing or providing substitute resources or environments.

The mitigation measures would be proposed as a condition of Project approval and would be monitored to ensure compliance and implementation.

ES.8 Scope of the Analysis and Environmental Impact

This Draft EIR has been prepared in conformance with CEQA (PRC Sections 21000 *et seq.*); the State CEQA Guidelines (14 CCR Sections 15000 *et seq.*). The scope of this Draft EIR was established based on the NOP/IS prepared pursuant to CEQA (see Appendix A of this Draft EIR) and comments received during the NOP review process.

Under CEQA, a “threshold of significance” can be defined as an “identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant” (State CEQA Guidelines, Section 15064.7 [a]). The criteria for determining the significance of environmental impacts in this Draft EIR analysis are described in the section titled “Thresholds of Significance” under each resource topic in Chapter 3. The threshold of significance for a given environmental effect is the level at which the City finds a potential effect of the proposed Project or alternative to be significant. Mitigation measures to reduce impacts to less than significant levels are proposed whenever feasible. Summary descriptions of the impacts, mitigation measures, and residual impacts for the proposed Project are provided in Table ES 1.

Based on the NOP/IS, the following issues have been determined to be potentially significant and are therefore evaluated in this Draft EIR:

- Air Quality
- Cultural Resources and Tribal Cultural Resources
- Greenhouse Gases and Energy
- Hazards and Hazardous Materials
- Noise and Vibration
- Transportation and Traffic

In addition to CEQA, this EIR also includes a ‘CEQA-Plus’ evaluation (Chapter 4), which will assist the City in the event federal funding is pursued for the Project. At the current time, there is no federal lead agency associated with the Project, so while this EIR includes the content needed for ‘federal cross-cutter’/NEPA compliance, it does not include all the processes required to complete NEPA (Notice of Intent, Notice of Availability, filing with the Federal Register, or preparing a Record of Decision). Under NEPA a federal agency may use a completed CEQA document if that document meets NEPA requirements.

ES.9 Impacts Not Considered in this Draft EIR

The NOP/Initial Study (IS) (Appendix A) indicated the potential impacts associated with the proposed Project are due to its construction, with the exception of potential impacts associated with objectional localized odors that may affect a substantial number of people during operation. Other operational components associated with the proposed Project would be minimal and no further evaluation in the EIR of Project operations is required. Further the NOP/IS determined that there would be no construction impact to agriculture and forest resources, mineral resources, and recreation. The NOP/IS also indicated that there would be a less than significant construction impact related to aesthetics, biological resources, geology and soils, hydrology and water quality, land use and planning, population and housing, public services, and utilities and service systems. As such, these resource areas are not evaluated in this EIR in accordance with State CEQA Guidelines Section 15063(c)(3)(B). In accordance with Sections 15063(c)(3)(A) and 15128 of the State CEQA Guidelines, further analysis of specific issue areas where impacts were determined to be less than significant in the Initial Study is not required and will not be provided in this EIR.

Recent updates/amendments have been made to the State CEQA Guidelines, including updates to the IS Checklist. The changes include the addition of 'Wildfires' as a resource topic to evaluate. As described in the IS, the proposed Project is not located near wildlands that could be susceptible to wildland fire. Further, the proposed Project is not located in or near state responsibility areas or lands classified as high fire severity zones. Therefore, this issue is not evaluated in this EIR.

ES.10 Summary of Environmental Impacts

ES.10.1 Environmental Impacts of the Proposed Project

In Chapter 3, Environmental Analysis, of the Draft EIR the proposed Project was analyzed for six environmental resource areas for construction, and potential odor impacts during operation.

Table ES-1 summarizes the environmental impacts from implementation of the proposed project, as identified in Chapter 3 of this EIR.

ES.10.2 Significant and Unavoidable Impacts

Based on the detailed analysis provided in Sections 3.1 through 3.6 and Chapter 4, Cumulative Impacts Analysis, the proposed Project would result in the following significant and unavoidable impacts during construction and/or operation of the Project:

- **Air Quality**
 - **Construction** – Construction of the proposed Project would result in significant impacts for regional NO_x emissions in all construction years, as well as localized NO₂, PM₁₀, and PM_{2.5} emissions for construction years 2021 and 2022 and localized PM₁₀, and PM_{2.5} for construction year 2023 after implementation of mitigation measure MM-AQ-1, which would serve to reduce air pollutant emission, but not to a less than significant level. Emissions are primarily attributable to combustion exhaust from construction equipment. There are no other feasible means to mitigate the emissions. As such, the proposed Project would violate an air quality standard or contribute substantially to an

existing or projected air quality violation; therefore, construction of the proposed Project would result in *significant and unavoidable* impacts.

- **Cumulative Impacts – Construction** – Several large related-projects in the vicinity of the proposed Project could be constructed concurrently. Construction of these related-projects are likely to generate criteria pollutants that exceed the SCAQMD’s significance thresholds, and thus, the related-projects would result in a significant cumulative impact to air quality during construction. With implementation of mitigation measure MM-AQ-1, construction emission would be reduced; however, emissions would still exceed the SCAQMD’s regional NO_x emission threshold, as well as the LST thresholds for PM₁₀, PM_{2.5}, and NO₂ emissions. Construction of the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact to air quality after mitigation measure MM-AQ-1, which would be *significant and unavoidable*.
- **Cultural Resources and Tribal Cultural Resources**
 - **Construction** – Construction of the proposed Project has the potential to encounter unknown archaeological resources, which would be considered to be significant. Mitigation measures MM-CR-2 and MM-CR-3 would be implemented; however, potentially *significant and unavoidable* impacts to archaeological resources from the Project excavation would remain. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.
 - Construction of the proposed Project has the potential to encounter unknown paleontological resources at deep excavation locations that can extend down into older Quaternary Alluvium (Tujunga Wash microtunnel, Kester Avenue microtunnel, and EVIS junction), would be considered to be significant. Mitigation measures MM-CR-2 and MM-CR-4 would be implemented; however, potentially *significant and unavoidable* impacts to paleontological resources from the Project excavation would remain. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.
 - The Gabrieleño Band of Mission Indians – Kizh Nation identified the potential for a Project impact on tribal cultural resources in the Project area. Construction of the proposed Project has the potential to cause a substantial adverse change in the significance of a tribal cultural resource, as either a site, feature, place, or 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, which would be a potentially *significant and unavoidable* impact, even after implementation of mitigation measure MM-CR-5. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.
 - **Cumulative Impacts – Construction** – As the other related-projects would be located in the San Fernando Valley and could be located near historic waterways and areas of past Native American activities (including village sites, trade routes, etc.), the related projects could also adversely affect such resources; therefore, construction of the related-projects could result significant cumulative impacts to tribal cultural resources. Even with

implementation of mitigation measure MM-CR-5, the proposed Project's contribution to a significant cumulative impact to tribal cultural resources with cultural value to a California Native American tribe could be cumulatively considerable, which would be ***significant and unavoidable***.

- **Noise and Vibration**

- **Construction** – Construction of the force main and related Project elements in Victory Boulevard would result in temporary elevated noise levels during construction. Even with implementation of mitigation measure MM-NV-1, construction noise impacts would be ***significant and unavoidable***. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.
- Construction of the force main and related Project elements in Victory Boulevard would result in increased vibration levels during construction, in particular pavement breaking, drilling, and truck loading. The increases in vibration levels on nearby sensitive receptors or structures could exceed the vibration significance thresholds (for annoyance and/or architectural damage). Mitigation measure MM-MV-2 would reduce potential vibration impacts to structures to a less than significant level; however, construction vibrations could still exceed the significance threshold for vibration annoyance at some sensitive receptors after mitigation, which is considered ***significant and unavoidable***. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.
- **Cumulative Impacts – Construction** – Related-projects could occur close to the Project site, which could result in additive noise level increases relative to ambient levels at nearby noise sensitive receptors and structures. Mitigation measure MM-MV-2 would reduce potential vibration impacts to structures to a less than significant level; however, construction vibrations could still exceed the significance threshold for vibration annoyance at some sensitive receptors after mitigation, which would still be ***significant and unavoidable***; therefore, construction of the proposed Project could make a cumulative considerable contribution to a significant cumulative vibration impact.

- **Transportation and Traffic**

- **Construction:** Construction of the proposed Project would reduce the level of service at study intersections and segments beyond LOS thresholds, and therefore would make a temporary but ***significant and unavoidable*** impact even after implementation of mitigation measure MM-TRA-1. In addition, some drivers are likely to voluntarily divert to other streets as alternative travel routes to Victory Boulevard during construction. Although temporary, there is a potential that rerouted traffic would reduce the LOS on other streets in the Project area, which could also be significant and unavoidable. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.
- **Cumulative Impacts – Construction** – Various related-projects are expected to require construction within the streets in the Project area that would overlap with Project

construction. These related-projects can result in temporary reductions in transportation system capacity, which can in turn can cause levels of service to temporarily fall below acceptable levels. As a consequence, construction of the related-projects can result in significant temporary cumulative impacts to the transportation system. Construction of the proposed Project would overlap with construction of the related-projects, which would result in reduced capacity along Victory Boulevard segments and intersections. In addition, there is a potential that rerouted traffic associated with the combined related-projects and proposed Project would reduce the LOS on other streets in the Project area such that although temporary could be significant. As a consequence, construction of the proposed Project would make a temporary *significant and unavoidable* impact; therefore, a cumulative considerable contribution to a significant cumulative traffic impact could occur.

ES.10.3 Summary of Significant Impacts that Can Be Mitigated, Avoided, or Substantially Lessened

Table ES-1 identifies the significant impacts that can be mitigated, avoided or substantially lessened. This Draft EIR has determined that implementation of the proposed Project would result in significant impacts that can be mitigated to less than significant on:

- **Cultural Resources and Tribal Resources**
 - With implementation of mitigation, construction of the proposed project would not cause an adverse change in the significance of an unknown historical resource (associated with indirect vibration).
- **Hazards and Hazardous Materials**
 - With implementation of mitigation, construction of the proposed Project would not create 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.
 - Although construction of the proposed Project could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school, impacts would be mitigated to less than significant.
- **Transportation and Traffic**
 - With implementation of mitigation, construction of the proposed Project could result in inadequate emergency access.
 - With implementation of mitigation, construction of the proposed Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

ES.10.4 Summary of Less than Significant Impacts

Table ES-1 identifies the resource areas where less than significant impacts were determined. This Draft EIR has determined that implementation of the proposed Project would result in a less than significant impact on:

- **Air Quality**

- The proposed Project would not conflict with or obstruct implementation of the applicable air quality management plan.
- The proposed Project would not expose receptors to significant levels of toxic air contaminants.
- Construction and operation of the proposed Project would not result in other emissions such as those leading to odors adversely affecting a substantial number of people.

- **Greenhouse Gases and Energy**

- Proposed Project construction would not generate GHGs that may have a significant impact on the environment.
- Construction and operation of the proposed Project would not result in wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources.
- The proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

- **Hazards and Hazardous Materials**

- Although the proposed Project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, it would not create a significant hazard to the public or the environment.

Table ES-1: Summary of Impacts and Mitigation Associated with the Proposed Project

Environmental Impacts	Impact Determination	Mitigation Measures	Impact after Mitigation
3.2 Air Quality			
Impact 3.1-1: The proposed Project would not conflict with or obstruct implementation of the applicable air quality plan.	Less than Significant	No mitigation is required	Less than Significant
Impact 3.1-2: The proposed Project would violate an air quality standard or contribute substantially to an existing or projected air quality violation.	Potentially Significant	<p>MM-AQ-1: USEPA Tier 4 Off-road Diesel-Powered Construction Equipment. All off-road diesel-powered construction equipment greater than 50 horsepower shall meet, at a minimum, USEPA Tier 4 (final) off-road emissions standards. Contractor requirements to utilize Tier 4 (final) equipment or next cleanest equipment available will be subject to the provisions of this mitigation unless the Contractor provides a written finding that:</p> <ul style="list-style-type: none"> ▪ The Contractor does not have the required types of Tier 4 trucks or equipment within its current available inventory and has made a good faith effort to lease or rent such trucks or equipment, but they are not available. ▪ The Contractor has been awarded funding that would provide some or all of the cost to retrofit, repower, or purchase trucks or equipment that comply with Tier 4, but the funding has not yet been provided and the Contractor has attempted in good faith to lease or rent such trucks or equipment but they are not available. ▪ Contractor has ordered equipment or trucks in compliance with Tier 4 at least 60 days before that equipment or vehicle is needed at the project site, but that equipment or vehicle has not yet arrived, and the Contractor has attempted in good faith to lease or rent such trucks or equipment, but they are not available. ▪ Certain construction-related diesel equipment or trucks that will only be used on the project site or as a project haul truck for fewer than 20 calendar days per calendar year may have engines that do not meet Tier 4 standards. Note that the project site includes all areas that are under construction at any time in a given calendar year. <p>In any of the situations described above, the Contractor/Subcontractor shall provide the next cleanest piece of equipment or truck as provided by the step-down schedules in Table A for Off-road Equipment and Table B for On-road Equipment.</p> <p>Nothing in the above shall require an emissions control device (i.e., CARB-verified Diesel Emission Control Strategies -VDECS) that does not meet Occupational Safety and Health Administration standards.</p>	<p>Significant and Unavoidable for localized NO₂, PM₁₀, and PM_{2.5} emissions for construction years 2021 and 2022 and localized PM₁₀, and PM_{2.5} for construction year 2023.</p> <p>The air quality impact in 2023 for localized NO₂ construction impacts would be reduced to less than significant after mitigation.</p> <p>In addition, there would be a significant unavoidable impact for regional NO_x emissions for all construction years after mitigation.</p>

Table ES-1: Summary of Impacts and Mitigation Associated with the Proposed Project

Environmental Impacts	Impact Determination	Mitigation Measures	Impact after Mitigation																																										
		<table border="1"> <thead> <tr> <th colspan="3" data-bbox="940 370 1682 427">MM-AQ-1: Table A Off-road Equipment Compliance Step Down Schedule</th> </tr> <tr> <th data-bbox="940 427 1220 483">Compliance Alternative</th> <th data-bbox="1220 427 1434 483">Engine Standard</th> <th data-bbox="1434 427 1682 483">VDECS</th> </tr> </thead> <tbody> <tr> <td data-bbox="940 483 1220 516">1</td> <td data-bbox="1220 483 1434 516">Tier 4 interim</td> <td data-bbox="1434 483 1682 516">N/A*</td> </tr> <tr> <td data-bbox="940 516 1220 548">2</td> <td data-bbox="1220 516 1434 548">Tier 3</td> <td data-bbox="1434 516 1682 548">Level 3</td> </tr> <tr> <td data-bbox="940 548 1220 581">3</td> <td data-bbox="1220 548 1434 581">Tier 3</td> <td data-bbox="1434 548 1682 581">Uncontrolled</td> </tr> <tr> <td colspan="3" data-bbox="940 581 1682 670">* Tier 4 (interim or final) or 2007 model year equipment not already supplied with a factory-equipped diesel particulate filter shall be outfitted with Level 3 VDECS.</td> </tr> <tr> <td colspan="3" data-bbox="940 670 1682 727">Equipment less than Tier 3 shall not be permitted.</td> </tr> <tr> <th colspan="3" data-bbox="940 727 1682 784">MM-AQ-1: Table B On-road Trucks Compliance Step Down Schedule</th> </tr> <tr> <th data-bbox="940 784 1220 841">Compliance Alternative</th> <th data-bbox="1220 784 1434 841">Engine Model Year</th> <th data-bbox="1434 784 1682 841">VDECS</th> </tr> <tr> <td data-bbox="940 841 1220 873">1</td> <td data-bbox="1220 841 1434 873">2007</td> <td data-bbox="1434 841 1682 873">N/A*</td> </tr> <tr> <td data-bbox="940 873 1220 906">2</td> <td data-bbox="1220 873 1434 906">2004</td> <td data-bbox="1434 873 1682 906">Level 3</td> </tr> <tr> <td data-bbox="940 906 1220 938">3</td> <td data-bbox="1220 906 1434 938">2004</td> <td data-bbox="1434 906 1682 938">Uncontrolled</td> </tr> <tr> <td colspan="3" data-bbox="940 938 1682 995">* 2007 Model Year equipment not already supplied with a factory-equipped diesel particulate filter shall be outfitted with Level 3 VDECS.</td> </tr> <tr> <td colspan="3" data-bbox="940 995 1682 1052">Equipment with a model year earlier than Model Year 2004 shall not be permitted.</td> </tr> </tbody> </table> <p data-bbox="961 1101 1709 1360">USEPA Tier 4 Final engine standards shall be met for all equipment except that which is unavailable within 100 miles of the City of Los Angeles and the contractor is able to provide proof to the satisfaction of the City. Under this circumstance, the availability of Tier 4 construction equipment shall be reassessed on an annual basis. For example, if a piece of equipment is not available on January 1, 2021, the contractor shall reassess this availability on January 1, 2022. If available, the contractor shall replace the non-Tier 4 equipment by March 1, 2022. If the circumstance described above where Tier 4 equipment is not available, the equipment shall meet USEPA Tier 3 emission standards.</p>	MM-AQ-1: Table A Off-road Equipment Compliance Step Down Schedule			Compliance Alternative	Engine Standard	VDECS	1	Tier 4 interim	N/A*	2	Tier 3	Level 3	3	Tier 3	Uncontrolled	* Tier 4 (interim or final) or 2007 model year equipment not already supplied with a factory-equipped diesel particulate filter shall be outfitted with Level 3 VDECS.			Equipment less than Tier 3 shall not be permitted.			MM-AQ-1: Table B On-road Trucks Compliance Step Down Schedule			Compliance Alternative	Engine Model Year	VDECS	1	2007	N/A*	2	2004	Level 3	3	2004	Uncontrolled	* 2007 Model Year equipment not already supplied with a factory-equipped diesel particulate filter shall be outfitted with Level 3 VDECS.			Equipment with a model year earlier than Model Year 2004 shall not be permitted.			
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Table ES-1: Summary of Impacts and Mitigation Associated with the Proposed Project

Environmental Impacts	Impact Determination	Mitigation Measures	Impact after Mitigation
Impact 3.1-3: The proposed Project would not expose sensitive receptors to substantial pollutant concentrations.	Less than Significant	No mitigation is required	Less than Significant
Impact 3.1-4: The proposed Project would not result in other emissions such as those leading to odors adversely affecting a substantial number of people.	Less than Significant	No mitigation is required	Less than Significant
3.2 Cultural Resources and Tribal Cultural Resources			
Impact 3.2-1: Construction of the proposed Project could cause a substantial adverse change in the significance of an unknown historical resource as defined by State CEQA Guidelines Section 15064.5(a).	Potentially Significant Impact (indirect vibration)	<p>MM-NV-2: Vibration During Construction. To limit the potential impacts of vibration on structures within 21 feet of the nearest edge of the construction work zone (when measured from the closest work zone boundary), and to limit vibration annoyances to receptors along the alignment, the City (or its Contractor) shall implement vibration reduction measures during construction including, but are not limited to:</p> <ul style="list-style-type: none"> - Prohibition of certain types of impact equipment (e.x., pile driver); - Requirement for lighter tracked or wheeled equipment; and - Phasing operations to avoid simultaneous vibration sources. <p>Prior to construction of project components with work zones located within 21 feet of structure(s), the City (or its Contractor) shall retain a Professional Structural Engineer with experience in structural vibration analysis to perform the following tasks:</p> <ul style="list-style-type: none"> ▪ Review the project plans to determine the potential construction impact zone and conduct pre- and post-construction surveys of the structures located within 21 feet of the work zone to document the pre- and post-construction conditions of all structures surveyed; and ▪ Prepare and submit a report to the City's Project Manager that includes, but not be limited to, the description of pre-and post-construction conditions of all structures surveyed. <p>In the event of vibration-caused damage, the Structural Engineer shall recommend necessary repairs based on the pre- and post-construction conditions (as documented in the Structural Engineers report). If the damaged structure(s) are potentially historic, mitigation measure MM-CR-1 shall apply. The Contractor shall be responsible to remedy vibration-caused damage as a result of construction of the project to pre-construction conditions as documented in the Structural Engineers report. The City shall confirm that the Contractor has completed all remedies associated with vibration impacts prior to close of the construction contract.</p>	Less than Significant Impact

Table ES-1: Summary of Impacts and Mitigation Associated with the Proposed Project

Environmental Impacts	Impact Determination	Mitigation Measures	Impact after Mitigation
		<p>MM-CR-1: Repair of Historic Structures. In the event that potentially historic structures are damaged as a result of construction vibrations, as determined through implementation of MM-NV-2, any repairs shall be undertaken and completed as required to conform to the Secretary of the Interior’s Standards for the Treatment of Historic Properties (36 Code of Federal Regulations 68) and shall apply the California Historical Building Code (California Code of Regulations, Title 24, Part 8) and other applicable codes.</p>	
<p>Impact 3.2-2: Construction of the proposed Project could cause a substantial adverse change in the significance of an unknown archaeological resource pursuant to §15064.5.</p>	<p>Potentially Significant Impact</p>	<p>MM-CR-2: Pre-construction Worker Training. Prior to the commencement of ground disturbing activities, a qualified archaeologist, paleontologist, and Native American monitor who is a member of a Tribe that has ancestral ties to the Project location as identified by the Native American Heritage Commission and that has participated in consultation pursuant to Assembly Bill 52 be retained for the construction of the East West Valley Interceptor Sewer Project, shall provide training to construction personnel to provide information on regulatory requirements for the protection of cultural resources. This training shall include examples of cultural resources (i.e., archaeological, Native American, and paleontological resources) to look for and protocols to follow if discoveries are made. The training shall also include safety procedures for working with archaeological, Native American and paleontological monitors. The Contractor or Subcontractor(s) shall ensure that all construction personnel are made available for and attend the training and shall retain documentation demonstrating attendance. The archaeologist, paleontologist and Native American monitor shall develop the training and any supplemental materials necessary to execute said training.</p> <p>MM-CR-3: Archaeological Resources. Ground disturbing (i.e., excavation) activities in native soils, has the potential to impact archaeological resources qualifying as historical resources or unique archaeological resources (as determined by a qualified archaeologist). Prior to construction, a qualified archaeologist (with ongoing working relationships with Native American group(s) that are traditionally and culturally affiliated with the Project location as identified by the Native American Heritage Commission) and an archaeological monitor under the archaeologist’s direction shall be retained to provide monitoring during ground disturbing (i.e., excavation) activities in native soils. During Project construction, should subsurface archaeological resources be discovered, all activity within 50 feet of the find shall stop and</p>	<p>Significant and Unavoidable</p>

Table ES-1: Summary of Impacts and Mitigation Associated with the Proposed Project

Environmental Impacts	Impact Determination	Mitigation Measures	Impact after Mitigation
		<p>a qualified archaeologist shall assess the significance of the find according to CEQA Guidelines Section 15064.5.</p> <ul style="list-style-type: none"> ▪ If any find is determined to be significant, the archaeologist shall determine, in consultation with the implementing agency, appropriate avoidance measures or other appropriate mitigation. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources. ▪ Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency, as applicable. When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared by the archaeologist prior to any excavation of the resource being undertaken. Any resulting data recovery reports shall be deposited with the California Historical Resources Regional Information Center or a legal repository. ▪ If an archaeological site does not qualify as an historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site shall be treated in accordance with the provisions of Section 21083.2. ▪ Within three months of the close of monitoring, a compliance report will be submitted to the implementing agency that summarizes the monitoring efforts, after the artifacts have been processed in the laboratory. The final report will be submitted to the South Central Coastal Information Center. 	
<p>Impact 3.2-3: Construction of the proposed Project could directly or indirectly destroy an unknown or unique paleontological resource or site or unique geologic feature.</p>	<p>Potentially Significant Impact</p>	<p>MM-CR-2 MM-CR-4: Paleontological Resources. Although no known paleontological sites or resources are known in the area of potential effect, there is a potential for the discovery of unknown paleontological resources during construction, with a greater chance of discovery in old Quaternary alluvium at greater depths. Therefore, prior to construction a professional paleontologist and a paleontological monitor under the paleontologist’s direction shall be retained. A paleontological monitor shall be on site during excavation of the microtunneling pits associated with the Kester Avenue Storm Drain and</p>	<p>Significant and Unavoidable</p>

Table ES-1: Summary of Impacts and Mitigation Associated with the Proposed Project

Environmental Impacts	Impact Determination	Mitigation Measures	Impact after Mitigation
		<p>Tujunga Wash, as well as excavation associated with the East Valley Interceptor Sewer Junction. If the resource is found to be significant, the paleontologist shall systematically remove and stabilize the specimen(s) in anticipation of preservation. If necessary, collection of soil samples will be taken per Society of Vertebrate Paleontologists standards. After basic laboratory analysis and cataloging has been completed, curation of the specimen(s) shall be assessed into a qualified research facility, such as the Los Angeles County Natural History Museum or other legal repository. Within three months of the laboratory analysis, a compliance report will be submitted to the implementing agency that summarizes the efforts and result. The final report will be submitted to the Los Angeles County Natural History Museum or other legal repository.</p>	
<p>Impact 3.2-4: Construction of the proposed Project could cause a substantial adverse change in the significance of an unknown tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, or 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.</p>	<p>Potentially Significant Impact</p>	<p>MM-CR-5: Native American Tribal Cultural Resources. A qualified Native American monitor(s) who is affiliated with a Tribe that has ancestral ties to the Project location as identified by the Native American Heritage Commission and that has participated in consultation pursuant to Assembly Bill 52 shall be retained during ground disturbing activities in native soil, which has the potential to impact Tribal cultural resources. The Native American monitor will complete daily monitoring logs that will provide descriptions of the day’s activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the Project site grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant have indicated that the site has a low potential for impacting Tribal cultural resources. Should Tribal cultural resources be discovered during Project construction, all activity within 50 feet of the find shall stop and the Native American monitor shall determine the appropriate treatment methods or options for the Tribal cultural resources. The discovery is to be kept confidential and secure to prevent any further disturbance. Within one month of the close of monitoring, a compliance report that summarizes the monitoring efforts will be submitted to the NAHC and placed in a legal repository.</p>	<p>Significant and Unavoidable</p>
<p>3.3 Greenhouse Gases and Energy</p>			
<p>Impact 3.3-1: Construction and operation of the proposed Project would not generate GHGs, either</p>	<p>Less than significant</p>	<p>No mitigation is required</p>	<p>Less than significant</p>

Table ES-1: Summary of Impacts and Mitigation Associated with the Proposed Project

Environmental Impacts	Impact Determination	Mitigation Measures	Impact after Mitigation
directly or indirectly, that may have a significant impact on the environment.			
Impact 3.3-2: Construction and operation of the proposed Project would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs.	Less than significant	No mitigation is required	Less than significant
Impact 3.3-3: The proposed Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation.	Less than Significant	No mitigation is required	Less than Significant
Impact 3.3-4: The proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less than Significant	No mitigation is required	Less than Significant
3.4 Hazards and Hazardous Materials			
Impact 3.4-1: Construction of the proposed Project could create 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.	Potentially Significant	<p>MM-HW-1: Preparation of Hazardous Materials Management Plan. Prior to site excavation activities at the Project site, a Hazardous Materials Management Plan shall be prepared and include the following:</p> <ul style="list-style-type: none"> ▪ Delineation of roles and responsibilities, including those of the Contractor ▪ Procedures for identification, initial screening, and notification, of contaminated soil and/or groundwater encountered during site excavation; ▪ Procedures to secure/cordon-off area known or suspected of being contaminated; ▪ Procedure for assessing the nature and extent of contamination, and the approach to managing the contaminated soil/perched groundwater, including excavation/pumping, handling, storage, transport, and disposition (i.e., treatment/disposal); and ▪ Site-specific Health and Safety Plan for the safety and protection of construction workers and the general public from exposure to impacted soil, dust, and groundwater during construction activities. 	Less than Significant
Impact 3.4-2: Construction of the proposed Project could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste	Potentially Significant	MM-HW-1	Less than Significant

Table ES-1: Summary of Impacts and Mitigation Associated with the Proposed Project

Environmental Impacts	Impact Determination	Mitigation Measures	Impact after Mitigation
within one-quarter mile of an existing or proposed school.			
Impact 3.4-3: The proposed Project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and could create a significant hazard to the public or the environment.	Less than Significant	No mitigation is required	Less than Significant
3.5 Noise and Vibration			
Impact 3.5-1: Construction of the proposed Project would generate a substantial temporary 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.	Potentially Significant Impact	<p>MM-NV-1: Construction Noise Mitigation. Prepare and Implement a Construction Noise Control and Mitigation Plan to Reduce Construction Noise at Noise-Sensitive Land Uses.</p> <p>The project sponsor shall develop a noise control plan to reduce construction noise and vibration noise levels such at the ambient noise level is not exceeded by 5 dBA, as determined by a qualified acoustical consultant. The plan shall require:</p> <p>Construction contractors shall specify noise-reducing construction practices that will be employed to reduce noise from construction activities. The measures specified by the project sponsor shall be reviewed and approved by the City prior to the issuance of building permits. Measures that can be used to limit noise include, but are not limited to those below.</p> <ul style="list-style-type: none"> a) Construction Hours. Limit construction to the hours of 7:00 AM to 9:00 PM on weekdays, between 8:00 AM and 6:00 PM on Saturdays, and prohibit construction equipment noise anytime on Sundays and holidays. Construction personnel shall not be permitted on the project site (including laydown and storage areas), and material or equipment deliveries and collections shall not be permitted during the prohibited hours. b) Construction Equipment. All construction equipment powered by internal combustion engines shall be property muffled and maintained. (Poor maintenance of equipment may cause excessive noise levels.) Require that all construction equipment powered by gasoline or diesel engines have sound control devise that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation. 	Significant and Unavoidable

Table ES-1: Summary of Impacts and Mitigation Associated with the Proposed Project

Environmental Impacts	Impact Determination	Mitigation Measures	Impact after Mitigation
		<ul style="list-style-type: none"> c) Idling Prohibitions. Unnecessary idling (i.e. more than 2 minutes) of internal combustion engines near noise-sensitive areas shall be prohibited. d) Stationary Equipment. All stationary noise-generating construction equipment, such as air compressors and portable power generators, shall be located as far as is practical from existing noise sensitive land uses; they shall be muffled and enclosed within temporary enclosures and shielded by barriers, to the extent feasible. e) Use Quiet Equipment. Contractors shall utilize the quietest equipment available, and all internal combustion powered equipment shall be equipped with properly operating mufflers and kept in tune to avoid backfires. In addition, if exposed, engines shall be fitted with protective shrouds to reduce motor noise. f) Use Electrical Power when feasible. If ample local grid power is available, electricity shall be obtained from the local power grid to avoid the use of portable generators. g) Temporary Noise Barriers. Erect temporary noise attenuation barriers adjacent to stationary construction equipment directly between the equipment and sensitive receptors, where necessary and feasible. Construction equipment that is to be stationary for extended periods (e.g., compressors, generators, etc.) shall be shielded, if appropriate, by erecting temporary noise attenuation barriers. The need for and feasibility of noise attenuation barriers shall be evaluated on a case-by-case basis considering the distance to noise-sensitive receptors, the available space at the construction location, and taking account of safety and operational considerations. If used, the barriers shall be installed directly between the equipment and the nearest noise-sensitive use to the construction site. h) Noise enclosures. Use noise-reducing enclosures around noise-generating equipment that has the potential to disturb nearby off-site land uses or where otherwise necessary to comply with City Code noise limits for receiving zones. i) Ensure that equipment and trucks used for project construction utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, intake silencers, ducts, engine 	

Table ES-1: Summary of Impacts and Mitigation Associated with the Proposed Project

Environmental Impacts	Impact Determination	Mitigation Measures	Impact after Mitigation
		<p>enclosures, acoustically attenuating shields or shrouds) wherever feasible.</p> <p>j) Noise producing signals. The use of noise producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.</p> <p>k) Impact tools. Impact tools (e.g. pavement breakers) used for project construction shall be hydraulically or electrically powered (where feasible) to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. Quieter procedures shall be used, such as drills rather than impact equipment, where feasible.</p> <p>l) All construction equipment used on the proposed project that is regulated for noise by a local, state, or federal agency shall comply with such regulation while in the course of project activity and use on-site.</p> <p>m) Construction employees shall be trained in the proper operation and use of the equipment. (Careless or improper operation or inappropriate use of equipment an increase noise levels. Poor loading, unloading, excavation, and hauling techniques are examples of how a lack of adequate guidance and training may lead to increased noise levels.)</p> <p>n) Construction equipment shall be stored on the project site or designated laydown areas while in use, to the extent feasible. This will eliminate noise associated with repeated transportation of the equipment to and from the site.</p> <p>o) Monitor the effectiveness of noise attenuation measures by taking noise measurements.</p> <p>p) Prior to the issuance of the building permit, along with submission of construction documents, the project sponsor shall submit to the Planning Department and Department of Building Inspection a list of measures for controlling noise and respond to and tracking complaints pertaining to construction noise. These measures shall include:</p> <ul style="list-style-type: none"> a. Identification of measures that will be implemented to control construction noise. 	

Table ES-1: Summary of Impacts and Mitigation Associated with the Proposed Project

Environmental Impacts	Impact Determination	Mitigation Measures	Impact after Mitigation
		<ul style="list-style-type: none"> b. Identification of locations where it is infeasible to limit noise to be in compliance with applicable City Standards. c. A procedure and phone numbers for notifying the Department of Building Inspection, the Department of Health, or the Police Department of complaints. d. Designation of a disturbance coordinator for responding to noise complaints, with his/her name and telephone complaint number to be clearly posted at the construction site and shall be answered at all times during construction. e. A plan for notification of neighboring residences and non-residential building managers within 300 feet of the project construction area at least 30 days in advance of extreme noise-generating activities (defined as activities that generate noise levels of 9- dBA or greater) about the estimated duration of activity and the associated control measures that will be implemented to reduce noise levels. 	
<p>Impact 3.5-2: Construction of the proposed Project would result in the generation of excessive groundborne vibration or groundborne noise levels.</p>	<p>Potentially Significant Impact</p>	<p>MM-NV-1 and MM-NV-2</p>	<p>Significant and Unavoidable – Human Annoyance</p> <p>Less than Significant - Structures</p>
<p>3.14 Transportation and Traffic</p>			
<p>Impact 3.6-1: Construction of the proposed Project would conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.</p>	<p>Potentially Significant</p>	<p>MM-TR-1: Construction Traffic Management Plan. Prior to the start of construction, the City (or Contractor[s]) shall prepare a construction traffic management plan and submit it to the Los Angeles Department of Transportation (LADOT) for review and approval. The construction traffic management plan shall include street closure information, a detour plan, haul routes, and a staging plan. Furthermore, it shall include, but not limited to, the following measures:</p> <ul style="list-style-type: none"> ▪ Temporary pedestrian, bicycle, and vehicular traffic controls (including but not limited to detours) during all construction activities along the Project corridor. These controls shall include flag people trained in pedestrian safety and bicycle safety. ▪ Temporary traffic control during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways. 	<p>Significant and Unavoidable</p>

Table ES-1: Summary of Impacts and Mitigation Associated with the Proposed Project

Environmental Impacts	Impact Determination	Mitigation Measures	Impact after Mitigation
		<ul style="list-style-type: none"> ▪ Require the Contractor(s) to coordinate construction activities with emergency service providers (i.e., Los Angeles Fire and Police Departments, as well as other emergency service providers) and maintain a supply of steel plates or access ramps on-site or nearby in order to provide access (local or emergency) to adjacent properties as needed. ▪ Coordination with Los Angeles County Metropolitan Transportation Authority and LADOT to address the relocation of the bus stops. ▪ Safety precautions for pedestrian and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate. ▪ Advance, bilingual notification of adjacent property owners and occupants of upcoming construction activities, including durations and daily hours of operation. ▪ Identification of a construction manager and provision of a telephone number for any inquiries or complaints from residents regarding construction activities. The telephone number shall be posted at the site readily visible to any interested part during site preparation and construction. ▪ Other applicable requirements per the latest edition of the City of Los Angeles Department of Public Works Brown Book and Standard Specifications for Public Works Construction ('Green Book'). 	
Impact 3.6-3: Construction of the proposed Project could result in inadequate emergency access.	Potentially Significant	MM-TR-1	Less than Significant
Impact 3.6-4: Construction of the proposed Project could conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	Potentially Significant	MM-TR-1	Less than Significant

ES.10.5 Environmentally Superior Alternative

Section 15126.6(e)(2) of the State CEQA Guidelines indicates that an analysis of alternatives to a proposed project shall identify an environmentally superior alternative among the alternatives evaluated in an EIR. The State CEQA Guidelines also state that should it be determined that the No Project Alternative is the environmentally superior alternative, the EIR shall identify another environmentally superior alternative among the remaining alternatives. With respect to identifying an environmentally superior alternative among those analyzed in this EIR, the range of alternatives includes Alternative 1 - No Project, Alternative 2 – Oxnard Alignment, and Alternative 3 – Two-Phased Construction. Based on the above comparison of environmental impacts associated with each alternative, the No Project Alternative would avoid all the construction-related impacts of the proposed Project and is therefore environmentally superior to the build alternatives. Of the build alternatives, Alternative 3 – Two-Phased Construction is considered to be the environmentally superior alternative as it would only slightly lessen the significant impacts to air quality and potentially traffic circulation that would otherwise occur under the proposed Project. However, Alternative 3 would extend construction impacts by constructing the Vineland and Laurel Canyon pump stations/diversions and connecting sewers at a later date and would still not lower impacts to air quality or traffic to a less than significant level compared to the proposed Project.

ES.11 Public Comment

ES.11.1 Issues Raised and Areas of Controversy

The NOP was prepared and circulated pursuant to CEQA, and responses were received during the scoping period. The NOP was published on January 25, 2019 and is included as Appendix A of this Draft EIR along with the comment letters received during the review period. The 30-day review period took place from January 25 to February 25, 2019, with one scoping meeting held on February 13, 2019. Six (6) comment letters¹ were received during the NOP review period.

Following is a general summary of issues raised during the scoping process:

- Request for tribal consultation regarding possible presence of Tribal Cultural Resources
- Localized air quality impacts should be quantified using SCAQMD methodology and guidance
- Potential adverse air quality impacts should be identified for all phases of the proposed Project
- Any closures/impacts to State transportation facilities will require review/approval from Caltrans.
- Use of methods such as, but not limited to, pedestrian and bicyclist warning signage, flashing beacons, crosswalks, signage and striping, to indicate to motorists that they should expect to see and yield to pedestrians and bicyclists should be considered.

¹ This includes emails, letters, and comments submitted at the public scoping meeting/open house.

ES.11.2 Issues to be Resolved

The major issues to be resolved include decisions by the lead agency as to whether:

- The proposed Project is preferable over one of the alternatives,
- The recommended mitigation measures should be adopted or modified, and
- The proposed Project should or should not be approved for implementation.

ES.11.3 Availability of the Draft EIR

The City of Los Angeles solicits comments regarding environmental issues associated with Project implementation from all interested parties requesting notice, responsible agencies, agencies with jurisdiction by law, trustee agencies, and other involved agencies in accordance with Section 15087 of the State CEQA Guidelines.

The Draft EIR for the proposed Project is being distributed directly to agencies, organizations, and interested groups and persons for comment during the formal review period in accordance with Sections 15085, 15086, and 15087 of the State CEQA Guidelines. Additionally, during the 45-day public review period, which begins on June 13, 2019 and ends on July 29, 2019 at 5:00 PM, the Draft EIR is available for general public review on the website www.lacitysan.org/sewerprojects or at the following locations:

- Valley Plaza Library, 12311 Vanowen Street, North Hollywood, CA 91605
- Council District 2 Office, 5240 N. Lankershim Boulevard, Ste 200, North Hollywood, CA 91601
- Council District 6 Office, 14410 Sylvan Street, Suite 215, Van Nuys, CA 91401
- City of Los Angeles Department of Public Works, Bureau of Sanitation. (LA Sanitation/Wastewater Engineering Services Division), 2714 Media Center Drive, Los Angeles, CA 90065

Because of time limits mandated by state law, written comments must be provided at the earliest possible date, but no later than 5:00 PM on July 29, 2019. Comments may be submitted by:

- Mail to Mr. Eduardo Perez, Project Manager, City of Los Angeles, Department of Public Works, Bureau of Sanitation, LA Sanitation/Wastewater Engineering Services Division, 2714 Media Center Drive, Los Angeles, CA 90065;
- Email to Eduardo.Perez@lacity.org (please include “East West Valley Interceptor Sewer” in the subject line); or,
- Fax to Eduardo Perez at (323) 342-6210 (please include “East West Valley Interceptor Sewer” in the subject line).

Upon completion of the public review period, written responses to all comments on environmental issues raised by commenters will be prepared and incorporated into the Final EIR. These comments, and their responses, will be included in the Final EIR for consideration by the Board of Public Works, Council Committees and the City Council.

Chapter 1

Introduction

1.1 Introduction

The City of Los Angeles (City) is proposing to construct the East West Valley Interceptor Sewer (proposed Project) to divert wastewater from existing sewers in the North Hollywood area, and convey that wastewater to the west for treatment at the Donald C. Tillman Water Reclamation Plant (DCTWRP). As described in detail in Chapter 2, Project Description, the proposed Project would increase the production and use of recycled water in the City and help address concerns over the long-term reliability of imported water.

Implementation of the proposed Project would require various approvals and permits, starting with approval from the City. Prior to that approval, the City must consider the proposed Project's environmental effects, which are identified in this Environmental Impact Report (EIR). The EIR serves to inform decision-makers and the public about the environmental effects of the proposed Project and has been prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) (California Public Resources Code [PRC] Section 21000 et seq.) and the Guidelines for Implementation of the California Environmental Quality Act of 1970 (State CEQA Guidelines) (14 California Code of Regulations [CCR] Section 15000 et seq.).

This chapter provides a brief summary of the proposed Project followed by a discussion of the purpose and organization of this EIR. This chapter also includes a list of the locations where the Draft EIR is available for general public review, and a discussion of the process for submitting comments on the Draft EIR.

1.2 Project Overview

The proposed Project includes a force main sewer that extends within Victory Boulevard from Vineland Avenue to Haskell Avenue, to divert and convey wastewater from the eastern portions of the San Fernando Valley to the DCTWRP.

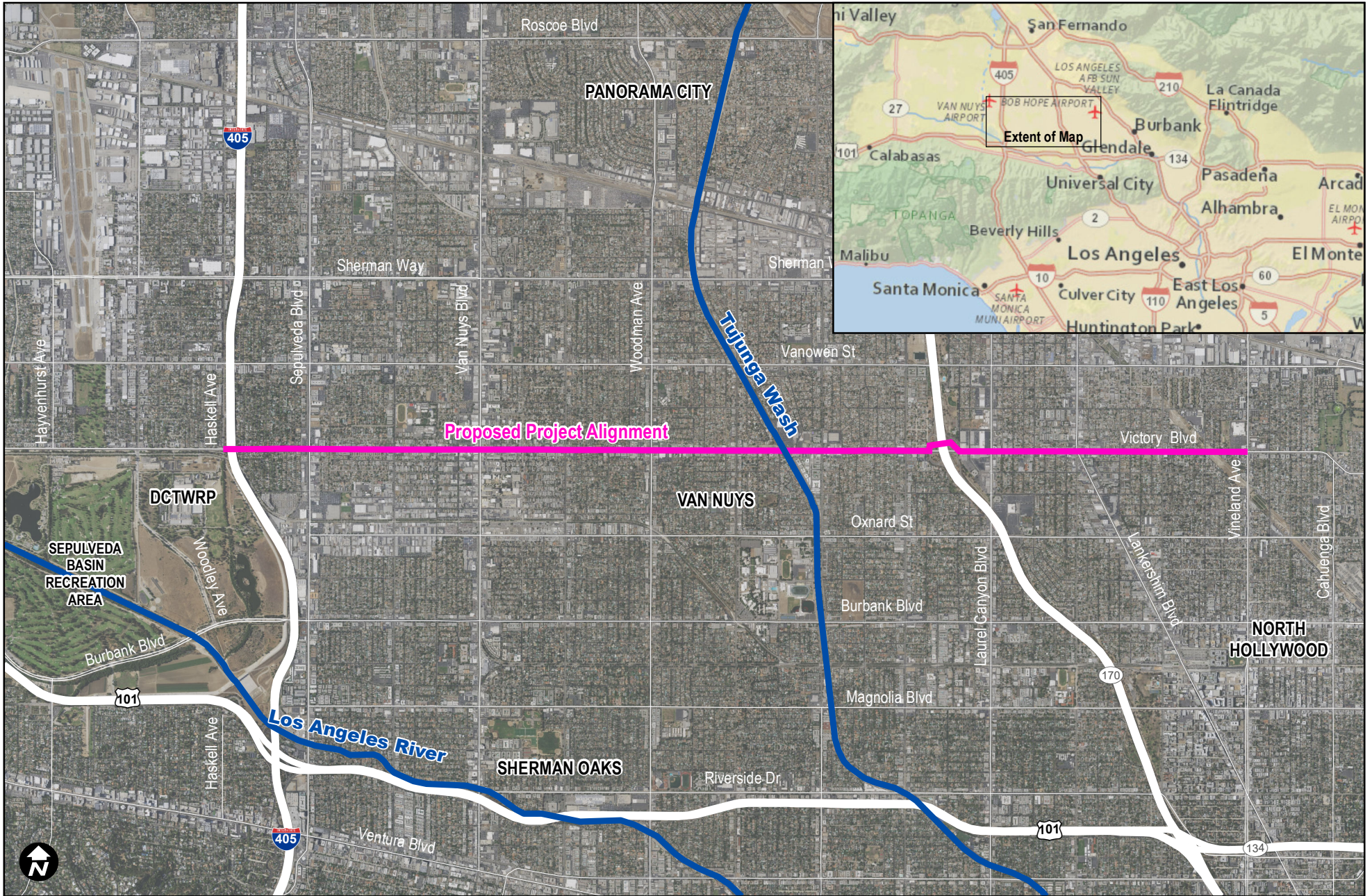
1.2.1 Location

The proposed Project alignment is located in the San Fernando Valley east of the Sepulveda Basin Recreational Area near the San Diego Freeway/Interstate 405 (I-405) and extends east through the North Hollywood area (Figure 1-1). The proposed Project alignment is along Victory Boulevard between Vineland Avenue on the east and Haskell Avenue on the west (Figure 1-2) within the Southeast Valley communities of North Hollywood – Valley Village and Van Nuys – North Sherman Oaks.



Source: CDM Smith, 2018.

Figure 1-1



Source: National Geographic, 2018.

Figure 1-2

1.2.2 Project Summary

Implementation of the proposed Project would include constructing a force main sewer line and six diversion structures (to divert wastewater from existing sewers), one junction structure (to connect the force main to an existing sewer that connects with the DCTWRP), and six pumping stations (to pump the diverted wastewater through the force main to DCTWRP). The proposed Project would also include ancillary components, such as access structures, electrical vaults, and control boxes. Construction of the proposed Project components would utilize several construction methods, including open cut, open pit methods, and trenchless methods such as microtunneling or jack and bore. Following construction, the Project would convey wastewater from the North Hollywood, Van Nuys/Sylmar, and Pacoima sewer basin areas to the DCTWRP.

The details of the proposed Project and construction phasing are provided in Chapter 2, Project Description.

1.3 Document Purpose and Organization

This section describes the purpose of this document and its organization.

1.3.1 Document Purpose

The purpose of an EIR is to inform the decision-makers, regulatory agencies, and the public about the potentially significant environmental impacts of a proposed project prior to consideration of project approval. CEQA requires public agency decision-makers to consider and document the environmental effects of their actions, and whenever possible, to avoid adverse effects to the environment. When a state or local agency determines that a proposed project has the potential to significantly affect the environment, an EIR is normally prepared. In addition, an EIR identifies alternatives that can reduce the proposed project's significant effects, while achieving most of the project objectives. A lead agency must mitigate or avoid significant environmental impacts of projects it carries out or approves, whenever feasible. In instances where significant impacts cannot be avoided or mitigated, the project could nonetheless be carried out or approved if the approving agency finds that the project provides economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, which outweigh the project's unavoidable adverse environmental effects.

1.3.2 Draft EIR Organization

The Draft EIR is divided into the following:

Executive Summary – provides an overview of the proposed Project and summarizes the analysis of significant impacts, proposed mitigation measures, environmental impacts after mitigation (if any), and alternatives to the Project that reduce or avoid significant effects on the environment. This summary also presents areas of controversy, including issues raised by members of the public and agencies during the public scoping period. Detailed analyses of the proposed Project's impacts on the environment are contained in the main body of the document.

Introduction (Chapter 1) – describes the purpose of the EIR, a list of other agencies that may utilize the EIR, the availability of the Draft EIR, and a brief outline of organization of this document.

Project Description (Chapter 2) – describes the Project location, presents the purpose, need and objectives of the proposed Project, and provides a description of the proposed Project and the anticipated project phasing.

Environmental Analysis (Chapter 3) – describes the setting (regulatory framework and existing conditions) for each environmental resource area, discusses the impact analysis approach and methodology, evaluates the environmental impacts that could result from the proposed Project, and recommends the mitigation measures (if any) that would reduce or avoid any identified significant impacts. This section also identifies the criteria used to assess the significance of environmental impacts, discloses whether a given impact is significant, and determines whether the recommended mitigation measures, if implemented, would reduce the impact to a less than significant level.

CEQA-Plus Evaluation (Chapter 4) - this Draft EIR has also been prepared to address compliance with the ‘federal cross-cutting’ environmental authorities under the National Environmental Policy Act (NEPA). The CEQA-Plus chapter will evaluate the principal federal authorities (i.e., programs, regulations, policies) that directly apply to the proposed Project. The inclusion of the additional analysis in this chapter will assist the City in the event federal funding is pursued for the Project.

Cumulative Impacts Analysis (Chapter 5) – contains a discussion of significant cumulative impacts and whether the proposed Project would cause related impacts that would result in either a direct cumulatively significant impact or a cumulatively considerable contribution to an existing cumulative significant impact.

Alternatives Analysis (Chapter 6) – evaluates one other build alternative to the proposed Project. It describes impacts that would result from the alternative, compares the significant environmental impacts of the alternative to the proposed Project, and identifies the Environmentally Superior Alternative. It also identifies alternatives initially considered but not carried forward for detailed review.

Other CEQA Considerations (Chapter 7) – includes a discussion of growth-inducing impacts, irreversible environmental changes, and identification of unavoidable significant impacts (i.e., impacts that cannot be mitigated to a level less than significant) from implementation of the proposed Project.

References (Chapter 8) – identifies the materials and documents consulted in preparing this Draft EIR.

List of Preparers (Chapter 9) – lists the individuals involved in preparing this Draft EIR.

Acronyms and Abbreviations (Chapter 10) – provides the full names for acronyms and abbreviations used in this document.

The EIR will include technical appendices, including the Notice of Preparation (NOP) and comments received on the NOP, as well as supporting background documents and technical information for the environmental impact analyses.

1.3.3 Scope

The scope of the Draft EIR was established based on the NOP prepared and circulated pursuant to CEQA, and responses received during the NOP review period. The NOP was published on January 25, 2019 and is included as Appendix A of this Draft EIR along with the comment letters received during the review period. The 30-day review period took place from January 25 to February 25, 2019, with one scoping meeting held on February 13, 2019. Six (6) comment letters¹ were received during the NOP review period.

The scope of analysis and technical work developed as part of preparing this Draft EIR were designed to ensure that the comments pertaining to the potential environmental impacts of the Project received during the NOP review process were addressed.

Table 1-1 presents a summary of the key comments received during the NOP public comment period and provides references to the sections of this Draft EIR addressing the comments received.

Table 1-1: Summary of NOP Comments

Commenter	Key Issues Raised	Sections Addressed
Gabrileno Band of Mission Indians – Kizh Nation	<ul style="list-style-type: none"> ▪ Request for consultation. 	Section 3.2, Cultural and Tribal Cultural Resources, which includes mitigation during excavation.
South Coast Air Quality Management District (SCAQMD)	<ul style="list-style-type: none"> ▪ Requests copy of Draft EIR along with all appendices and related technical documents. ▪ Notes that the SCAQMD CEQA Air Quality Handbook (1993) is available to assist with preparation of the air quality analysis, and that CalEEMOD is the preferred land use emissions model. ▪ Recommends quantifying localized air quality impacts using SCAQMD methodology and guidance and compare the results to SCAQMD's localized significance thresholds (LSTs) or performing dispersion modeling if necessary. ▪ The Lead Agency should identify any potential adverse air quality impacts for all phases of the project (construction, operation, direct and indirect impacts) and include in the analysis. Recommends a mobile source health risk assessment in the event the proposed Project generates or attracts vehicle trips, especially heavy-duty diesel-fueled vehicles. ▪ Provided guidance on siting incompatible land uses. ▪ Notes that CEQA requires the identification of all feasible mitigation measures, including those that go beyond what is required by law. If significant impacts, consider alternatives to avoid or substantially lessen the significant impact. ▪ If project requires a permit from SCAQMD, SCAQMD should be identified as a Responsible Agency. ▪ Notes the location of SCAQMD data sources (rules and reports). 	<p>SCAQMD will receive a copy of the Draft EIR along with native files associated with the air quality and greenhouse gas analysis;</p> <p>Section 3.1, Air Quality and Section 3.3 Greenhouse Gas and Energy</p> <p>The proposed Project is an infrastructure project that would be sited within public right-of-way; therefore, there would be no incompatible land use (see Appendix A: NOP/IS).</p> <p>No permits are required by the City from the SCAQMD</p>

¹ This includes emails, letters, and comments submitted at the public scoping meeting/open house.

Table 1-1: Summary of NOP Comments

Commenter	Key Issues Raised	Sections Addressed
Charter Communications	<ul style="list-style-type: none"> Maps showing the location within the project limits of Charter aerial/or underground facilities was provided. In addition, the Contract Manager contact was provided. 	The maps and contact information will be provided to the engineers designing the project, for utility planning and coordination.
Los Angeles County Metropolitan Transportation Authority (Metro)	<ul style="list-style-type: none"> Metro provided two resources: 1) the Metro Adjacent Development Handbook, which provides an overview of common concerns for development adjacent to Metro-owned right-of-way and 2) the Adjacent Construction Manual with technical information. Comments provided specific to Metro's existing bus service, bus stop condition, projects in the area (i.e., East San Fernando Valley Transit Corridor and Sepulveda Transit Corridor), and contacts provided. 	Section 3.6, Transportation and Traffic
State of California Department of Transportation (Caltrans)	<ul style="list-style-type: none"> The project alignment crosses underneath State Route 170 (SR-170) and I-405. Caltrans recommends the EIR please include a detailed Traffic Impact Study (TIS) for SR-170 and I-405, and the ramps affected by this project. Please submit all construction designs underneath the freeways and Caltrans' Right of Way for Caltrans' review/approval. Please inform Caltrans of any freeway or ramp closures that are to be expected during the construction period. Any closures/impacts to State facilities will require review/approval from Caltrans. Caltrans seeks to promote safe, accessible multimodal transportation. Methods to reduce pedestrian and bicyclist exposure to vehicles improve safety by lessening the time that the user is in the likely path of a motor vehicle. Caltrans recommends the project to consider the use of methods such as, but not limited to, pedestrian and bicyclist warning signage, flashing beacons, crosswalks, signage and striping, be used to indicate to motorists that they should expect to see and yield to pedestrians and bicyclists. Visual indication from signage can be reinforced by road design features such as lane widths, landscaping, street furniture, and other design elements. As a reminder, any transportation of heavy construction equipment and/or materials which requires use of oversized-transport vehicles on State highways will need a Caltrans transportation permit. We recommend large size truck trips be limited to off-peak commute periods. 	<p>Section 3.6, Transportation and Traffic</p> <p>Submittal of designs would occur during the permitting process, prior to construction.</p> <p>Potential impacts to Caltrans facilities will be addressed in Section 3.6, Transportation and Traffic. Any closures/impacts during construction would be coordinated with Caltrans prior to and during construction</p>
Anne Mosberger	<ul style="list-style-type: none"> Scoping Meeting comment: Very good meeting, very good information, thank you for the presentation 	Appendix A of the Draft EIR

1.3.4 Scope of Analysis

This Draft EIR has been prepared in conformance with CEQA (PRC Sections 21000 *et seq.*); the State CEQA Guidelines (14 CCR Sections 15000 *et seq.*) and includes all of the sections required by CEQA.

Under CEQA, a “threshold of significance” can be defined as an “identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant” (State CEQA Guidelines, Section 15064.7 [a]). The criteria for determining the significance of environmental impacts in this Draft EIR analysis are described in the section titled “Thresholds of Significance” under each resource topic in Chapter 3. The threshold of significance for a given environmental effect is the level at which the City finds a potential effect of the proposed Project or alternative to be significant.

The following environmental resource areas are evaluated in this Draft EIR:

- Air Quality
- Cultural Resources and Tribal Cultural Resources
- Greenhouse Gases and Energy
- Hazards and Hazardous Materials
- Noise and Vibration
- Transportation and Traffic

In addition to CEQA, this EIR also includes a ‘CEQA-Plus’ evaluation (Chapter 4), which will assist the City in the event federal funding is pursued for the Project. At the current time, there is no federal lead agency associated with the Project, so while this EIR includes the content needed for ‘federal cross-cutter’/NEPA compliance, it does not include all the processes required to complete NEPA (Notice of Intent, Notice of Availability, filing with the Federal Register, or preparing a Record of Decision). Under NEPA a federal agency may use a completed CEQA document if that document meets NEPA requirements.

1.3.5 Lead Agency

The lead agency is the public agency that has the principal responsibility for carrying out or approving a project that may have a significant effect upon the environment (PRC Section 21067). The proposed Project requires discretionary approvals of the Project by state and local agencies. Therefore, the City of Los Angeles has the primary responsibility for approving the Project as a whole and is the appropriate public agency to act as lead agency (State CEQA Guidelines Section 15051[b]), including evaluating potential impacts and identifying mitigation measures under state CEQA laws.

Several other agencies have special roles with respect to the proposed Project and will use this EIR as the basis for their decisions to issue any approvals and/or permits that might be required. These agencies may also be consulted for information and input related to the proposed Project. Section 15381 of the State CEQA Guidelines defines a “responsible agency” as:

...a public agency which proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA, the term “Responsible Agency” includes all public agencies other than the Lead Agency which have discretionary approval power over the project.

Additionally, Section 15386 of the State CEQA Guidelines defines a “trustee agency” as:

...a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California.

Table 1-2 lists the proposed state and local agencies and associated actions required for approval of the proposed Project. Those agencies may rely on the EIR in a review capacity or as a basis for issuance of a permit or other approval.

Table 1-2: Agencies, Permits and Approvals

Agency	Potential Permits and/or Approvals
California Regional Water Quality Control Board	General Construction permit National Pollutant Discharge Elimination System (NPDES) permit Stormwater Pollution Prevention Plan (SWPPP)
California Division of Occupational Safety and Health Tunneling and Mining Unit	Tunnel Safety Order Classification
California Department of Transportation (Caltrans)	Encroachment Permits for SR-170 and I-405 crossings
City of Los Angeles	"B", "E" or "U" Permit Stormwater Discharge Wastewater Discharge Industrial Waste Discharge (dewatered groundwater) Temporary Traffic Control Permanent Power Supply and Peak Hour Exemptions (if necessary) Noise Control Ordinance Variance (should night construction be required)
Los Angeles County Flood Control	Encroachment Permits for Tujunga Wash Central Branch and the Tujunga Wash crossings
U.S. Army Corp of Engineers	408 permit for Tujunga Wash Central Branch and the Tujunga Wash crossings
Private Individuals or owners	Temporary & Permanent Easements

1.4 Availability of References

Documents relied upon or cited in the EIR are listed in Chapter 8 and are available for public inspection in electronic format from 8:00 AM to 5:00 PM at the following address:

City of Los Angeles Department of Public Works
Bureau of Sanitation. (LA Sanitation/Wastewater Engineering Services Division)
2714 Media Center Drive, Los Angeles, CA 90065

1.5 Availability of the Draft EIR

The City of Los Angeles solicits comments regarding environmental issues associated with Project implementation from all interested parties requesting notice, responsible agencies, agencies with jurisdiction by law, trustee agencies, and other involved agencies in accordance with Section 15087 of the State CEQA Guidelines.

The Draft EIR for the proposed Project is being distributed directly to agencies, organizations, and interested groups and persons for comment during the formal review period in accordance with Sections 15085, 15086, and 15087 of the State CEQA Guidelines. Additionally, during the 45-day public review period, which begins on June 13, 2019 and ends on July 29, 2019 at 5:00 PM, the Draft

EIR is available for general public review on the website www.lacitysan.org/sewerprojects or at the following locations:

- Valley Plaza Library, 12311 Vanowen Street, North Hollywood, CA 91605
- Council District 2 Office, 5240 N. Lankershim Boulevard, Ste 200, North Hollywood, CA 91601
- Council District 6 Office, 14410 Sylvan Street, Suite 215, Van Nuys, CA 91401
- City of Los Angeles Department of Public Works, Bureau of Sanitation. (LA Sanitation/Wastewater Engineering Services Division), 2714 Media Center Drive, Los Angeles, CA 90065

Because of time limits mandated by state law, written comments must be provided at the earliest possible date, but no later than 5:00 PM on July 29, 2019. Comments may be submitted by:

- Mail to Mr. Eduardo Perez, Project Manager, City of Los Angeles, Department of Public Works, Bureau of Sanitation, LA Sanitation/Wastewater Engineering Services Division, 2714 Media Center Drive, Los Angeles, CA 90065;
- Email to Eduardo.Perez@lacity.org (please include “East West Valley Interceptor Sewer” in the subject line); or,
- Fax to Eduardo Perez at (323) 342-6210 (please include “East West Valley Interceptor Sewer” in the subject line).

Upon completion of the public review period, written responses to all comments on environmental issues raised by commenters will be prepared and incorporated into the Final EIR. These comments, and their responses, will be included in the Final EIR for consideration by the Board of Public Works, Council Committees and the City Council.

Chapter 2

Project Description

2.1 Introduction

The proposed Project would divert and convey wastewater from the eastern portions of the San Fernando Valley to DCTWRP, where it would be used to generate recycled water. Diverted wastewater that is recycled at DCTWRP would be distributed through the existing recycled water distribution system that extends from DCTWRP.

The proposed Project includes a new force main sewer that extends within Victory Boulevard from Vineland Avenue to Haskell Avenue, as well as six diversion structures (to divert wastewater from existing sewers), one junction structure (to connect the force main to an existing sewer that connects with the DCTWRP), and six pumping stations to pump the diverted wastewater through the force main to DCTWRP. The existing sewers that would be diverted to the proposed Project are located at lower elevations than the DCTWRP; therefore, the proposed Project would require pump stations to convey the diverted flow. The proposed Project would also include ancillary components, such as access structures, electrical vaults, and control boxes.

Under CEQA Guidelines Section 15124, the project description in an EIR is required to contain the following information: (1) a map showing the location and boundaries of the proposed project; (2) a statement of project objectives; (3) a general description of the project's technical, economic, and environmental characteristics; and (4) a statement briefly describing the intended uses of the EIR. The CEQA Guidelines state that a project description need not be exhaustive but should provide the level of detail needed for the evaluation and review of potential environmental impacts.

The project description is the starting point for all environmental analysis required by CEQA. Section 15146 of the CEQA Guidelines states that the degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity, which is described in the EIR. The following project description serves as the basis for the environmental analysis contained in Chapter 3, Environmental Analysis, of this Draft EIR.

2.2 Project Location and Setting

2.2.1 Location

The proposed Project would be located in the San Fernando Valley northeast of the Sepulveda Basin Recreational Area near the San Diego Freeway/ I-405 and extend east through the North Hollywood area (see Figure 1-1, Regional Location Map in Chapter 1, Introduction). The proposed Project alignment is along Victory Boulevard between Vineland Avenue on the east and Haskell Avenue on the west within the Southeast Valley communities of North Hollywood – Valley Village and Van Nuys – North Sherman Oaks. Figure 1-2 (Project Alignment Map in Chapter 1, Introduction) shows the Project location and alignment.

2.2.2 Setting

The City of Los Angeles owns, operates and maintains one of the largest wastewater collection systems in the nation. The collection system conveys approximately 400 million gallons per day (MGD) of sewage through a network of 6,700 miles of sewer pipes to one of the City's four water reclamation plants (LASAN, 2018). In order to serve the City's need to increase the production of recycled water, the City's Bureau of Sanitation (LASAN) is looking to convey additional wastewater from the North Hollywood, Van Nuys/Sylmar, and Pacoima sewer basin areas to the DCTWRP.

2.3 Project Objective

The primary purpose of the East West Valley Interceptor Sewer (proposed Project) is to increase the production and use of recycled water in the City to help address concerns over the long-term reliability of imported water. The proposed Project would address the following Project objective:

- Divert and convey wastewater from the eastern portions of the San Fernando Valley to the DCTWRP, where it would be used to generate recycled water.
- Maximize recycled water production.

Diverted wastewater that is recycled at DCTWRP would be distributed through the existing recycled water distribution system that extends from DCTWRP. The City produces recycled water to be used in place of potable (drinking) water for industrial, landscape and recreational purposes in addition to other beneficial uses, including groundwater replenishment.

2.4 Project Characteristics

The proposed Project would include the following components, which are described in further detail below:

- Force Main,
- Diversion/Junction Structures and Connecting Sewers,
- Pump Stations,
- Access Structures,
- Others (electrical connections and operation control system, air release valves, etc.).

2.4.1 Force Main

Under the proposed Project, the approximately 6-mile long force main sewer would convey wastewater diverted from the North Hollywood area to the DCTWRP. The force main would be made of ductile iron pipe (DIP) with inside diameters that range from 24 inches to 42 inches. Figure 2-1 shows the proposed Project features along the alignment.



Source: Arcadis, 2017.

Figure 2-1

The force main would be comprised of six stretches (described from east to west) that are defined by the pump station connections and the junction structure, as follows:

Stretch 1 – Vineland to Tujunga. This stretch of force main would be approximately 2,660 feet long and would have an inside diameter of 24 inches. The force main pipe invert is currently planned to be approximately 7 feet below the existing grade but could be deeper to provide clearances with existing utilities.

Stretch 2 – Tujunga to Lankershim. This stretch of force main would be approximately 2,635 feet long and would have an inside diameter of 24 inches. The force main pipe invert is currently planned to be approximately 7 feet below the existing grade but could be deeper to provide clearances with existing utilities.

Stretch 3 – Lankershim to Laurel Canyon. This stretch of force main would be approximately 2,631 feet long and would have an inside diameter of 30 inches. The force main pipe invert is currently planned to range from approximately 7 feet to 11 feet below the existing grade but could be deeper to provide clearances with existing utilities.

Stretch 4 – Laurel Canyon to Whitsett. This stretch of force main would be approximately 2,636 feet long and would have an inside diameter of 36 inches. The force main pipe invert is currently planned to range from approximately 7 feet to 12 feet below the existing grade but could be deeper to provide clearances with existing utilities. Within this stretch, the force main would cross beneath the Hollywood Freeway/ SR-170 within a steel pipe case (at least 60 inches in diameter).

Stretch 5 – Whitsett to Fulton. This stretch of force main would be approximately 5,223 feet long and would have an inside diameter of 36 inches. The force main pipe invert is currently planned to range from approximately 8 feet to 10 feet below the existing grade but could be deeper to provide clearances with existing utilities. Within this stretch, the force main would cross beneath the Tujunga Wash within a steel pipe case (at least 60 inches in diameter).

Stretch 6 – Fulton to Haskell. This stretch of force main would be approximately 15,876 feet long and would have an inside diameter of 42 inches. The force main pipe invert is currently planned to range from approximately 6 feet to 39 feet below the existing grade but the inverts of shallower sections could be deeper than 6 feet to provide clearances with existing utilities. At approximately Van Nuys Boulevard, additional concrete encasement would be required due to the shallow depth of the force main. In addition, this stretch would cross beneath a large subsurface drain in the vicinity of Kester Avenue, which would require installation by microtunneling. The force main would cross beneath I-405, which may also require installation by microtunneling. At Haskell Avenue, the force main would join via a new junction structure with the existing East Valley Interceptor Sewer (EVIS), which connects with DCTWRP.

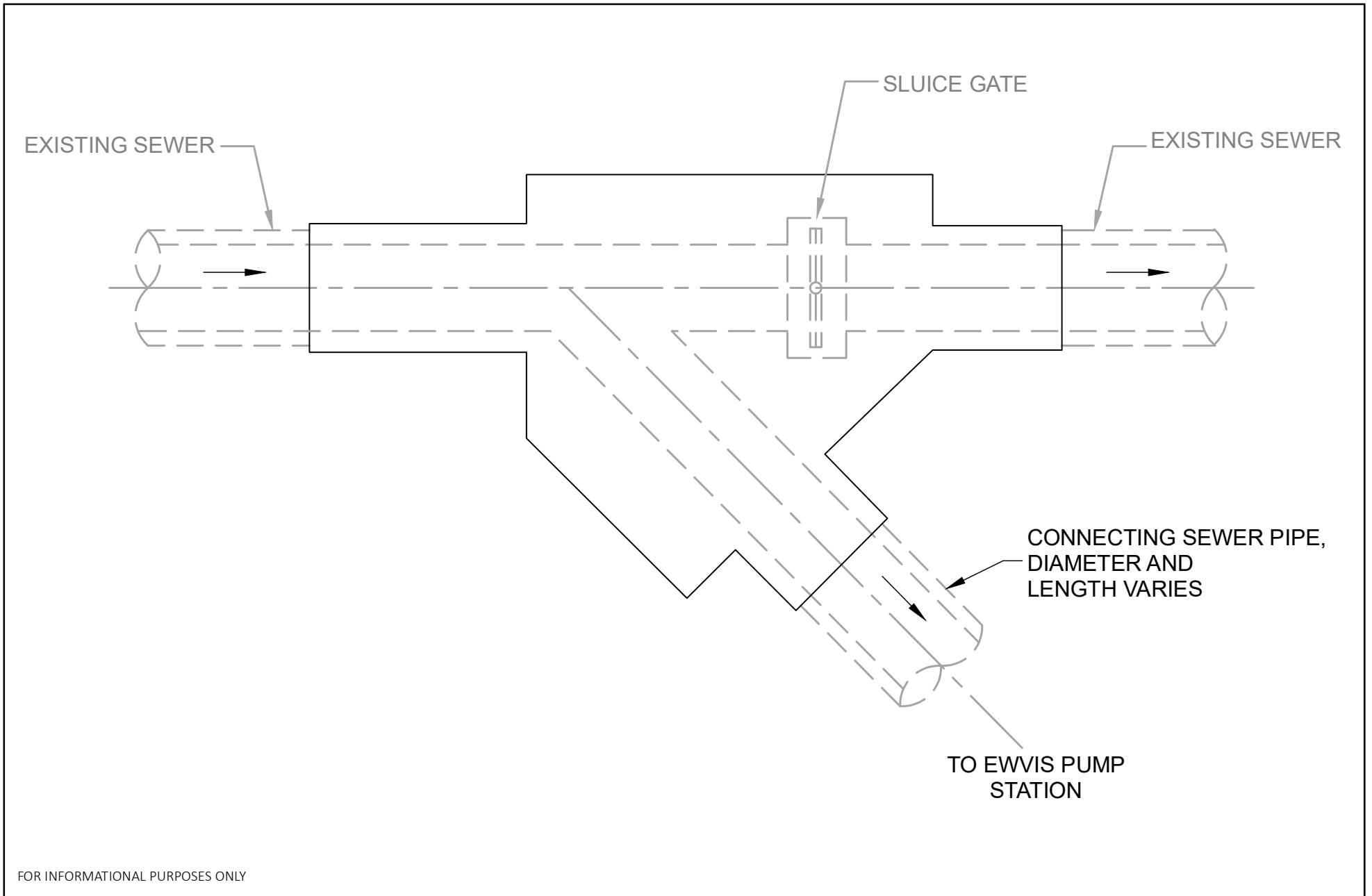
2.4.2 Diversion/Junction Structures and Connecting Sewers

As detailed in Table 2-1, wastewater from six existing sewers that cross Victory Boulevard would be diverted and routed to the force main via pump stations (described below). A plan of a typical diversion structure is shown in Figure 2-2. The diversion structures would allow flow to be diverted either to the proposed Project or to continue flowing within the existing system. Figure 2-1 also shows the proposed alignment with the locations of the proposed diversion and junction structures, as well as the connecting sewers.

Table 2-1: EWVIS Diversion/Junction Structures and Connecting Sewers

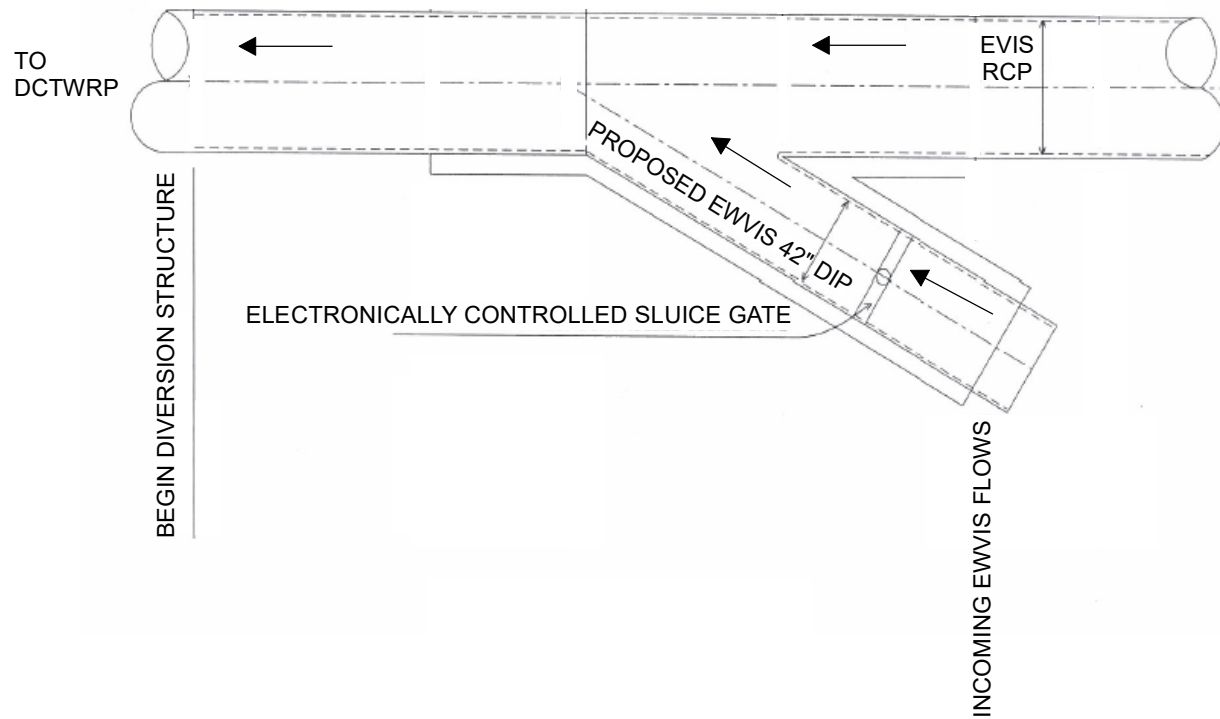
Diversion/Junction Location	Diversion/Junction Description
Vineland Avenue (eastern terminus)	Diversion Structure to divert wastewater from the existing 24-inch sewer in Vineland Avenue (approximately 11 feet deep). 24-inch diameter connecting sewer to the Vineland Pump Station.
Tujunga Avenue	Diversion Structure to divert wastewater from the existing 15-inch sewer in Tujunga Avenue (approximately 14 feet deep) and potentially an 8-inch sewer in Victory Boulevard. 15-inch connecting sewer to the Tujunga Pump Station.
Lankershim Boulevard	Diversion Structure to divert wastewater from the 18-inch sewer in Lankershim Boulevard (approximately 14 feet deep). 18-inch connecting sewer to the Lankershim Pump Station.
Laurel Canyon Boulevard	Diversion Structure to divert wastewater from the 21-inch sewer in Laurel Canyon Boulevard (approximately 13 feet deep). 21-inch connecting sewer to the Laurel Canyon Pump Station.
Whitsett Avenue	Diversion Structure to divert wastewater from the 21-inch sewer in Whitsett Avenue (approximately 14 feet deep). 21-inch connecting sewer to the Whitsett Pump Station.
Fulton Avenue	Diversion Structure to divert wastewater from the 21-inch sewer in Fulton Avenue (approximately 13 feet deep). 21-inch connecting sewer to the Fulton Pump Station.
EVIS Junction	Junction structure to connect the new force main to the existing 84-inch diameter EVIS located in Victory Boulevard at Haskell Avenue. EVIS is approximately 39 feet deep at the junction point. Figure 2-3 shows a typical junction structure.

Details of the proposed Project features, including the location of each diversion structure and connections to pump stations (described below), are shown in Figures 2-4a through 2-4f.



Source: Arcadis, 2017.

Figure 2-2



LEGEND

RCP = reinforced concrete pipe

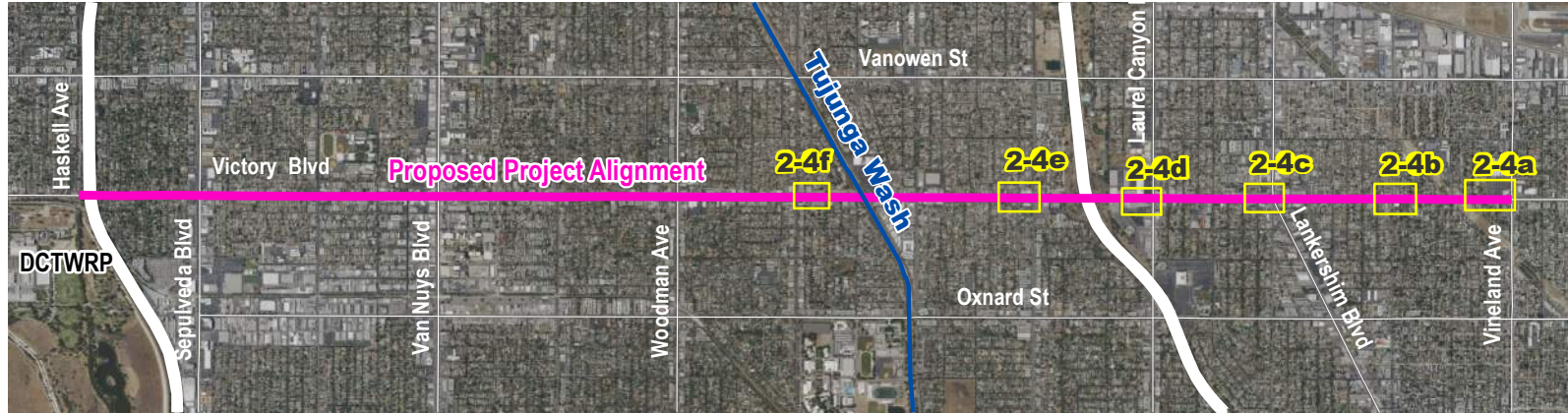
DIP = ductile iron pipe

DCTWRP = Donald C. Tillman Water Reclamation Plant

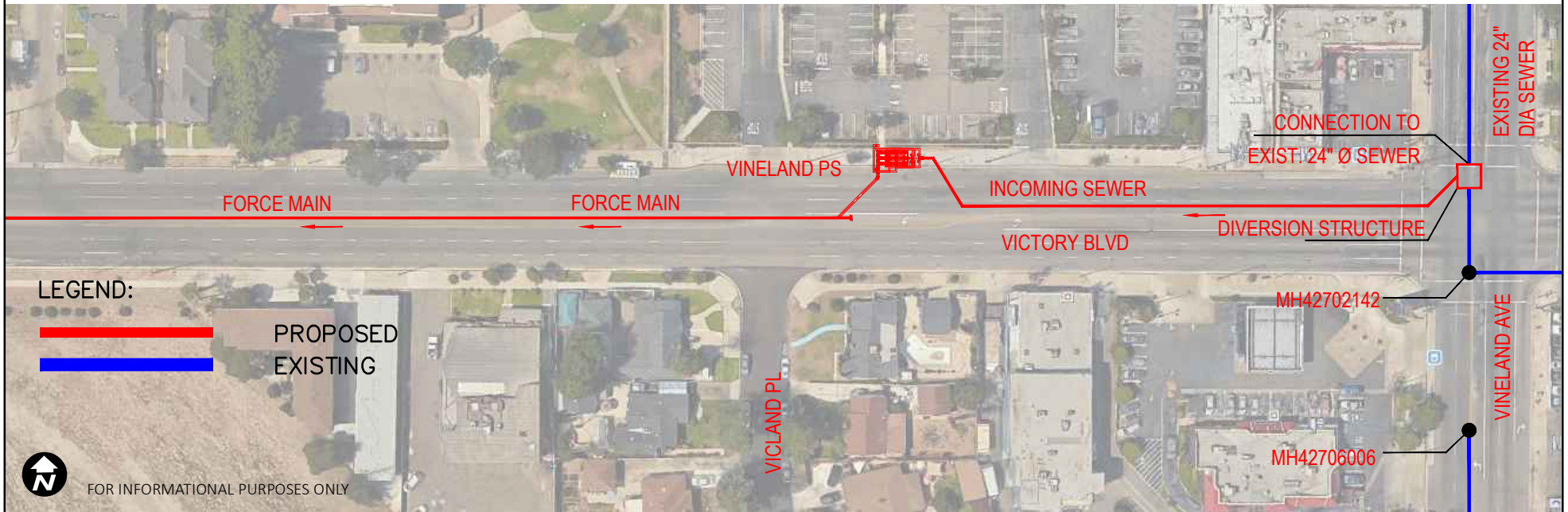
FOR INFORMATIONAL PURPOSES ONLY

Source: Arcadis, 2017.

Figure 2-3

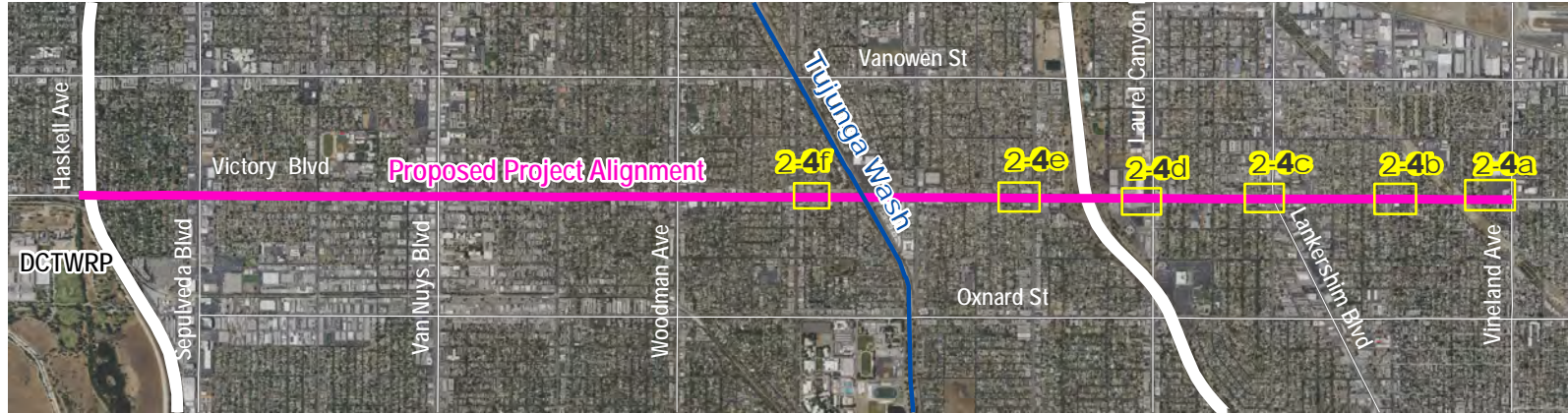


Index Map

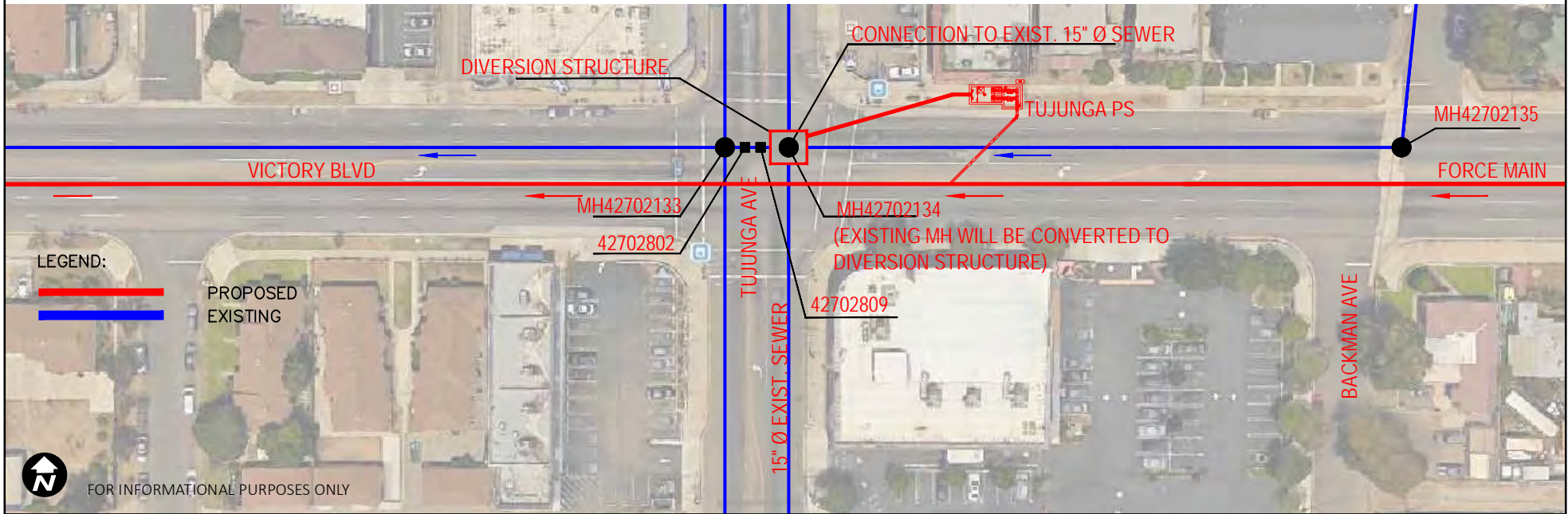


Source: Arcadis, 2017.

Figure 2-4a

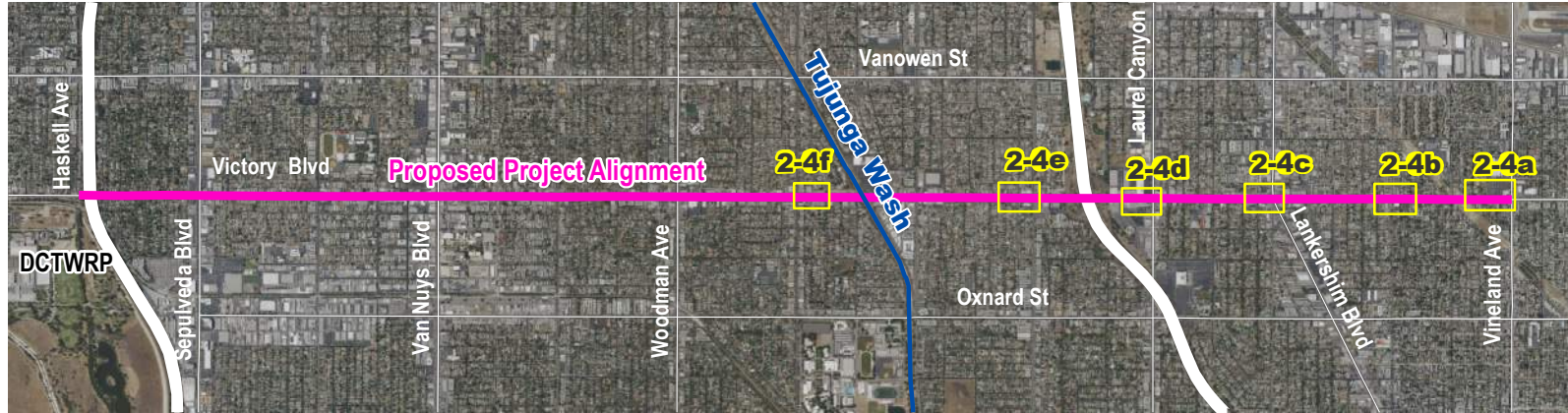


Index Map

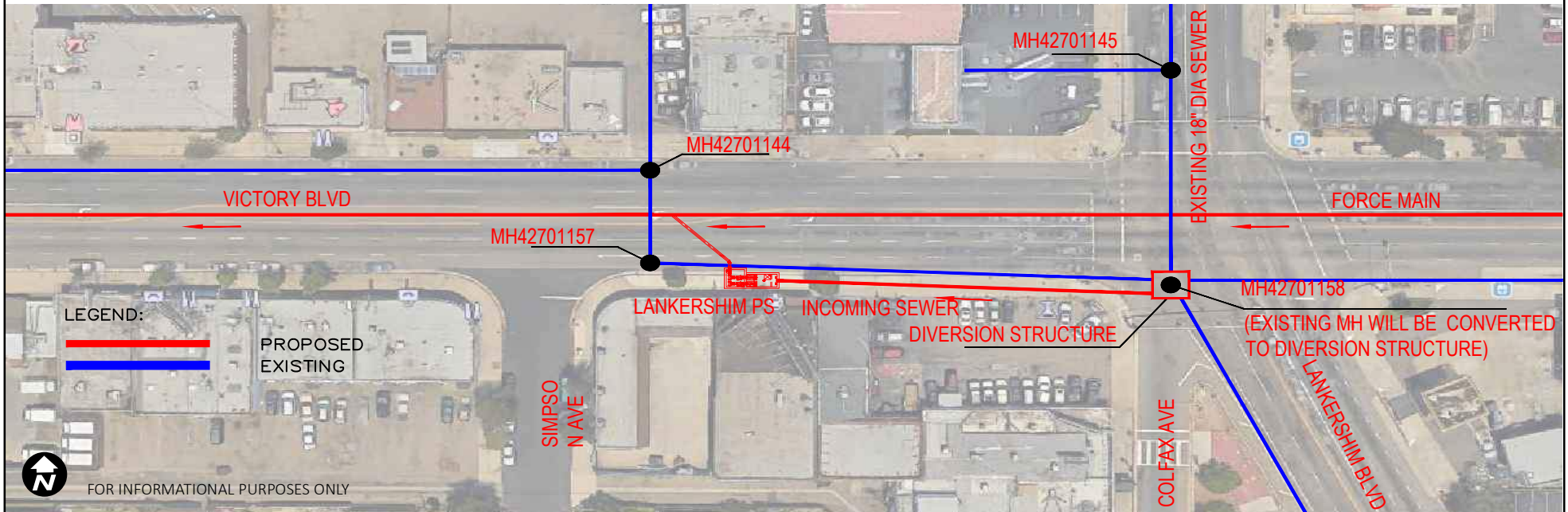


Source: Arcadis, 2017.

Figure 2-4b

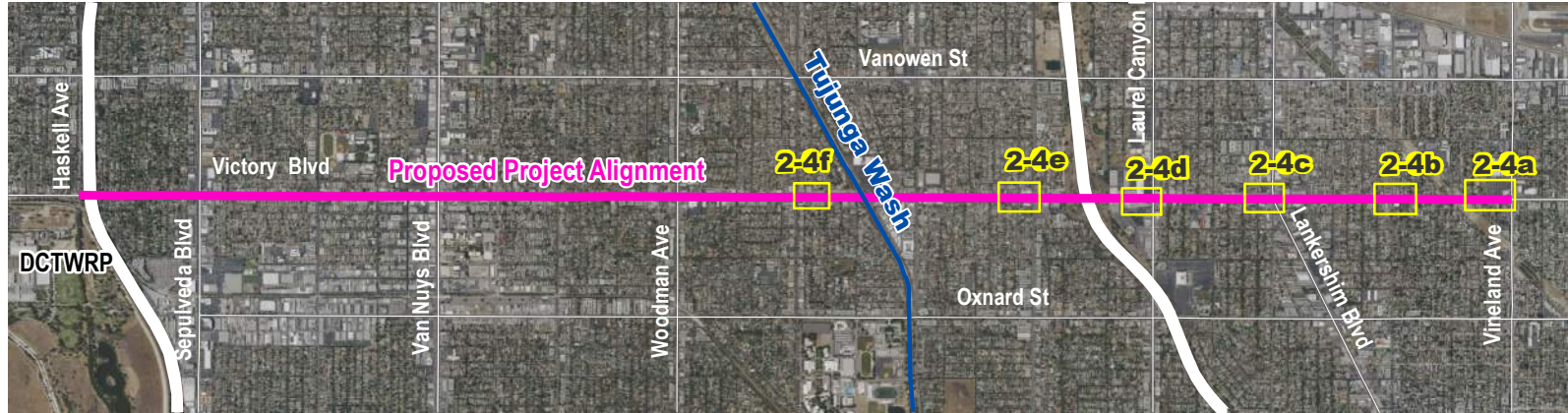


Index Map

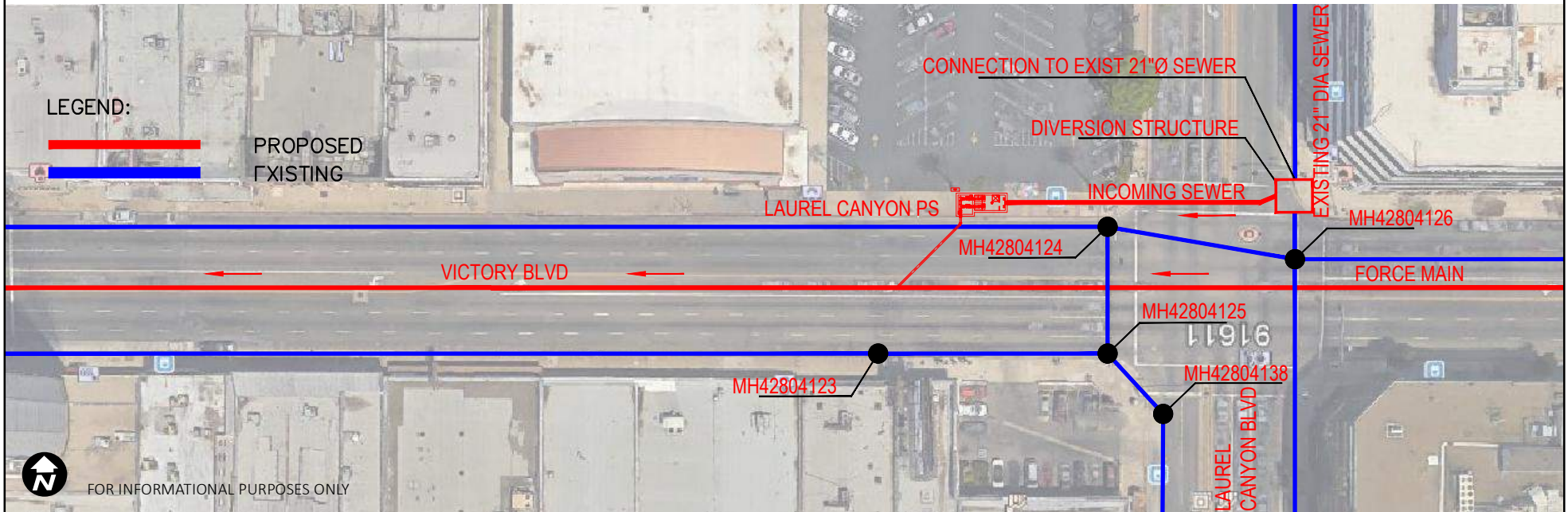


Source: Arcadis, 2017.

Figure 2-4c

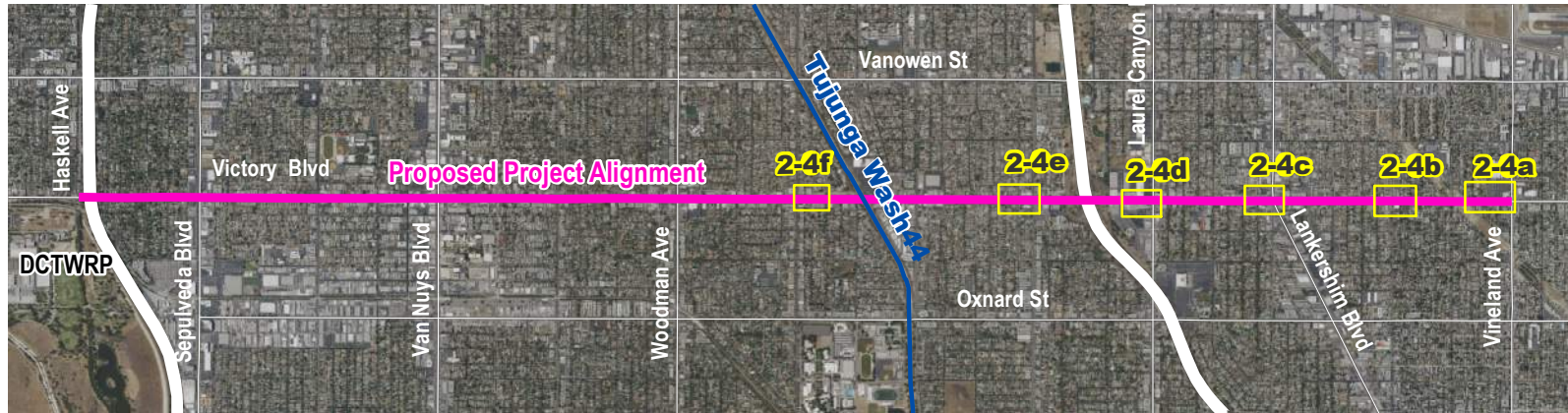


Index Map

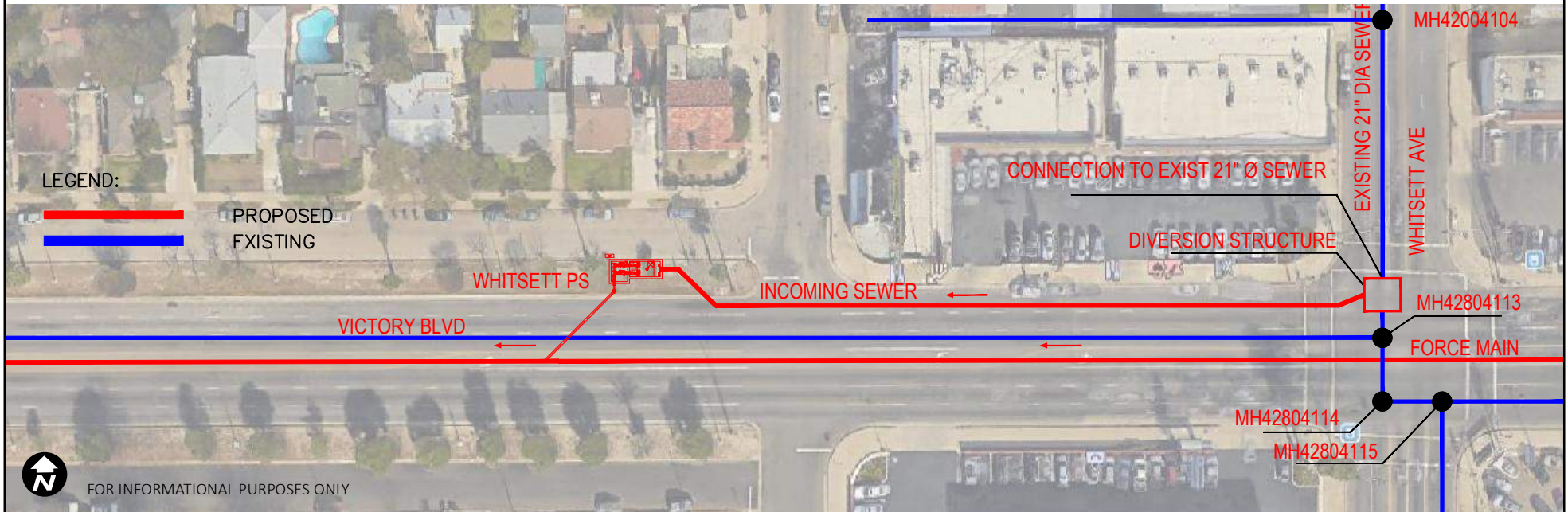


Source: Arcadis, 2017.

Figure 2-4d

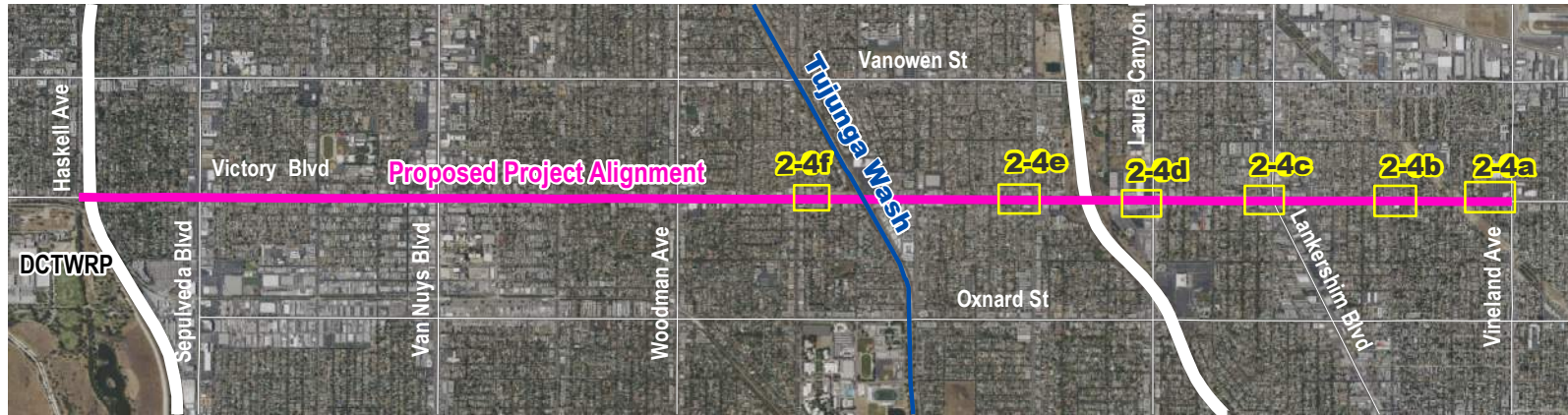


Index Map

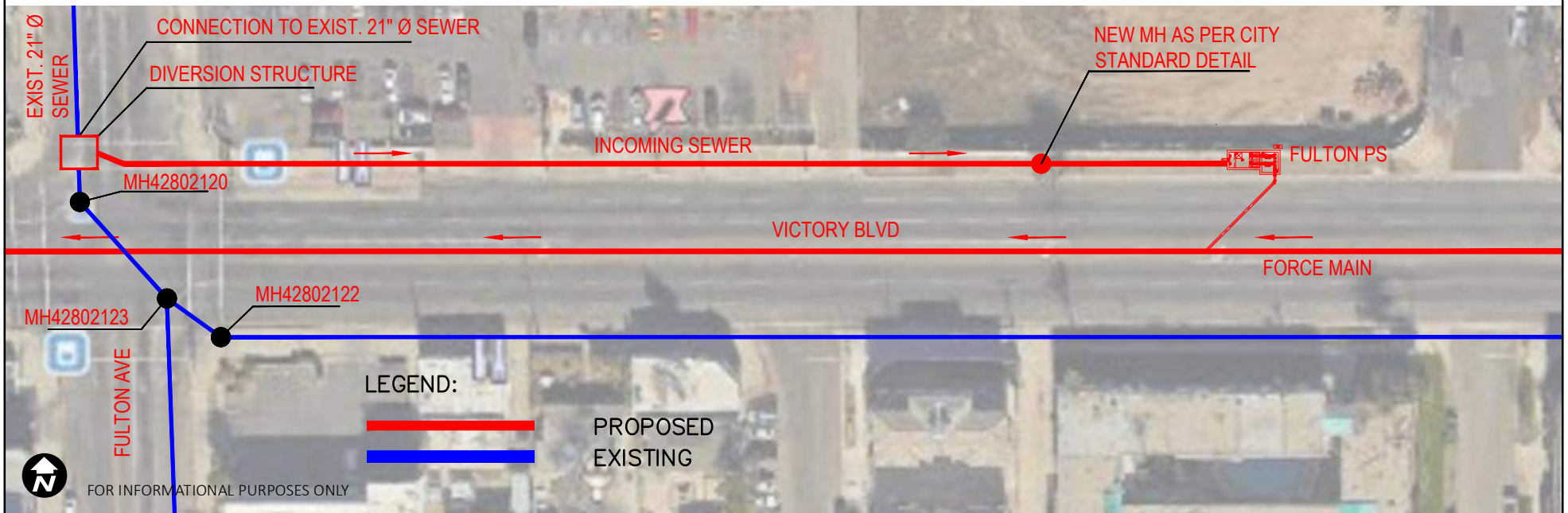


Source: Arcadis, 2017.

Figure 2-4e



Index Map



Source: Arcadis, 2017.

Figure 2-4f

2.4.3 Pump Stations

The proposed Project would include six pump stations that would pump the diverted wastewater to DCTWRP via the new force main. The pump stations are currently planned to be located in the public right-of-way near each diversion (beneath the sidewalk or median) with only a control panel box above ground.

Each pump station would utilize submersible pumps, which would be a wet pit application. Figure 2-5 shows a cross section of a typical pump station using a wet pit application.

Table 2-2 describes each of the six pump stations. In addition, the proposed Project features, including the locations of each pump station, is shown in Figures 2-4a through 2-4f.

Table 2-2: EWWIS Pump Stations

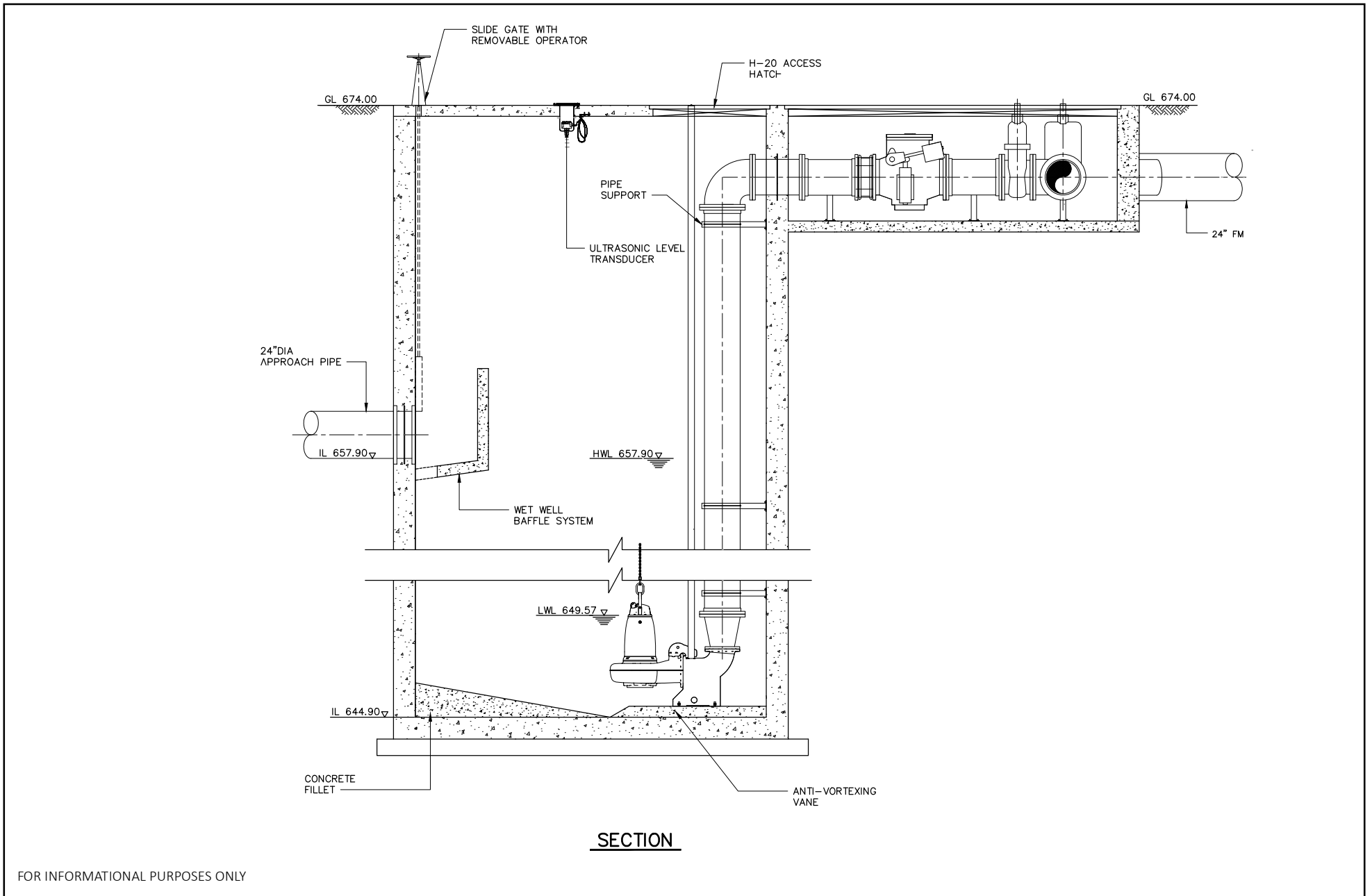
Vineland Pump Station	Pump station dimensions: approximately 35 feet x 15 feet x 29 feet 3 pumps (150/150/200 horse power-hp): 1 operational, 1 standby, 1 flush 18-inch diameter pipe from pump station to force main.
Tujung Pump Station	Pump station dimensions: approximately 26 feet x 12 feet x 28 feet 2 pumps (50/50 hp): 1 operational, 1 standby 12-inch diameter pipe from pump station to force main.
Lankershim Pump Station	Pump station dimensions: approximately 29 feet x 13 feet x 31 feet 2 pumps (60/60 hp): 1 operational, 1 standby 14-inch diameter pipe from pump station to force main.
Laurel Canyon Pump Station	Pump station dimensions: approximately 27 feet x 12 feet x 24 feet 2 pumps (30/30 hp): 1 operational, 1 standby 10-inch diameter pipe from pump station to force main.
Whitsett Pump Station	Pump station dimensions: approximately 28 feet x 12 feet x 28 feet 2 pumps (30/30 hp): 1 operational, 1 standby 12-inch diameter pipe from pump station to force main.
Fulton Pump Station	Pump station dimensions: approximately 28 feet x 12 feet x 28 feet 2 pumps (40/40 hp): 1 operational, 1 standby 12-inch diameter pipe from pump station to force main.

2.4.4 Access Structures

Access structures (such as maintenance holes and vaults) would be installed at key locations along the force main and accessory structures to facilitate future maintenance and repairs. Examples of potential access structure locations include diversion and junction structures and tie in points.

2.4.5 Other Project Features

Electrical power for operation of the pumping stations and diversion structure control gates would be provided by Los Angeles Department of Water and Power (LADWP) via connections to existing powerlines in the vicinity of each pump station. Operation of the flow control gates within the diversion structures and the pump stations would be integrated into the City's wastewater management system, which could be controlled from the DCTWRP and/or the Hyperion Treatment Plant (HTP). In addition, air release valves may be required at locations along the force main.



Source: Arcadis, 2017.

Figure 2-5

2.4.6 Project Phasing

As currently planned, construction of the proposed Project would occur over an approximately 30-month period (2.5 years) from April 2021 through November 2023. In general, construction would occur between the hours of 9:00 a.m. to 3:30 p.m. Monday through Friday, and between 8:00 a.m. and 6:00 p.m. on Saturday, in compliance with Executive Directive No. 2 (2005 Mayors Directive) and the City's Noise Ordinance. Should a variance from Executive Directive No. 2 be obtained, construction could occur in the morning and evening peak hours.

Installation rates of the force main using open cut methods could range from approximately 50 feet per day (sections where the pipeline diameter is larger and deeper sections that require beam and sheet shoring) to up to 100 feet per day (sections where the pipeline has the smallest diameter and is shallow enough for sheet and horizontal shoring methods to be used).

Locations where the force main would be installed by microtunneling or jack and bore would each require between 6 to 9 months.

Diversion and junction structures would each require approximately 6 to 8 months, but the junction structure at the EWVIS to EVIS connection would take longer due to the depth.

Each pump station is estimated to take between 12 to 18 months to construct.

In order to complete the proposed Project within the anticipated 30-month period (2.5 years), construction of the Project components would likely overlap one another, and the construction sequence provided in Table 2-3 below is assumed for this evaluation. A more detailed construction sequence is provided in Appendix B.

2.5 Construction Assumptions

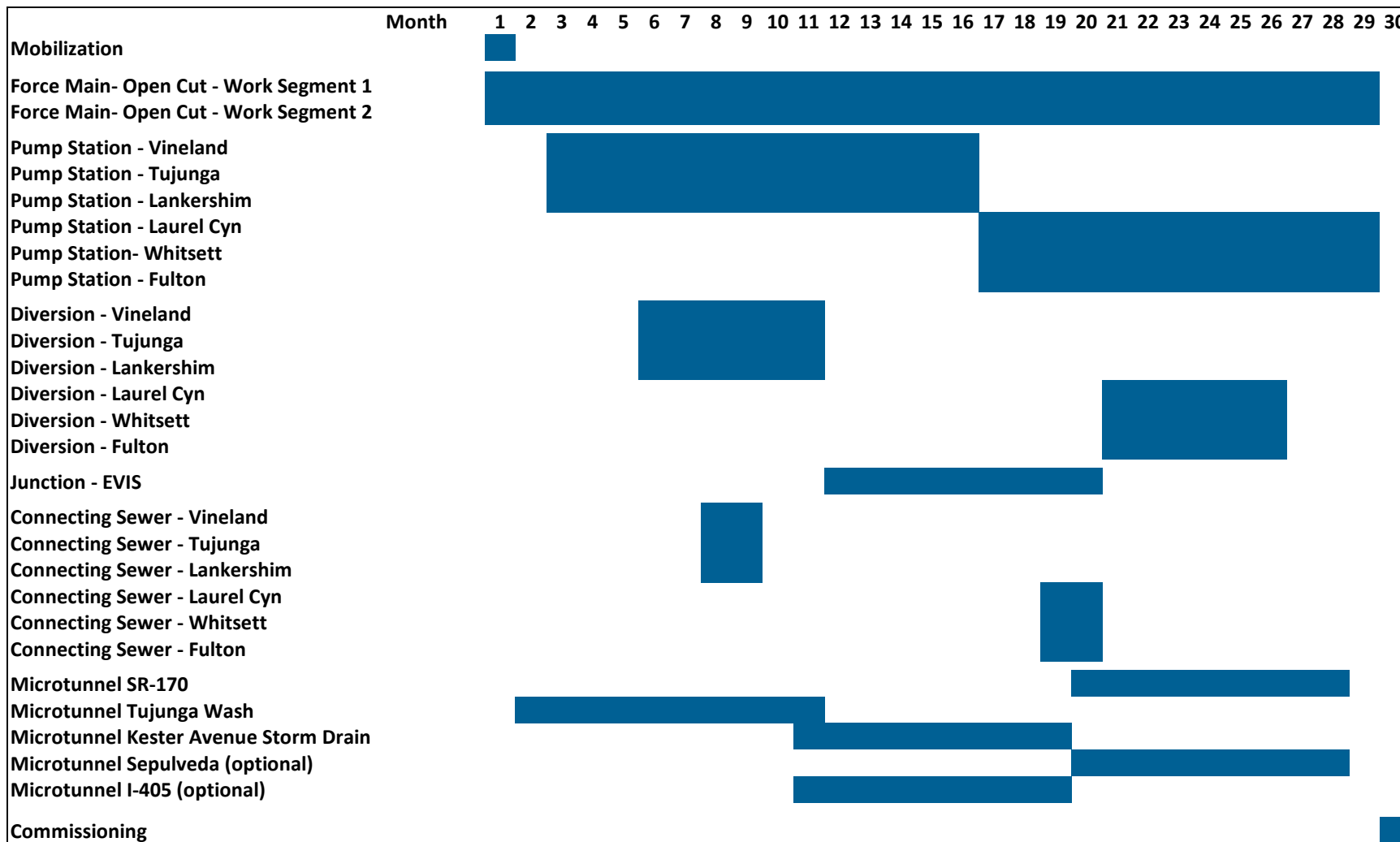
2.5.1 General

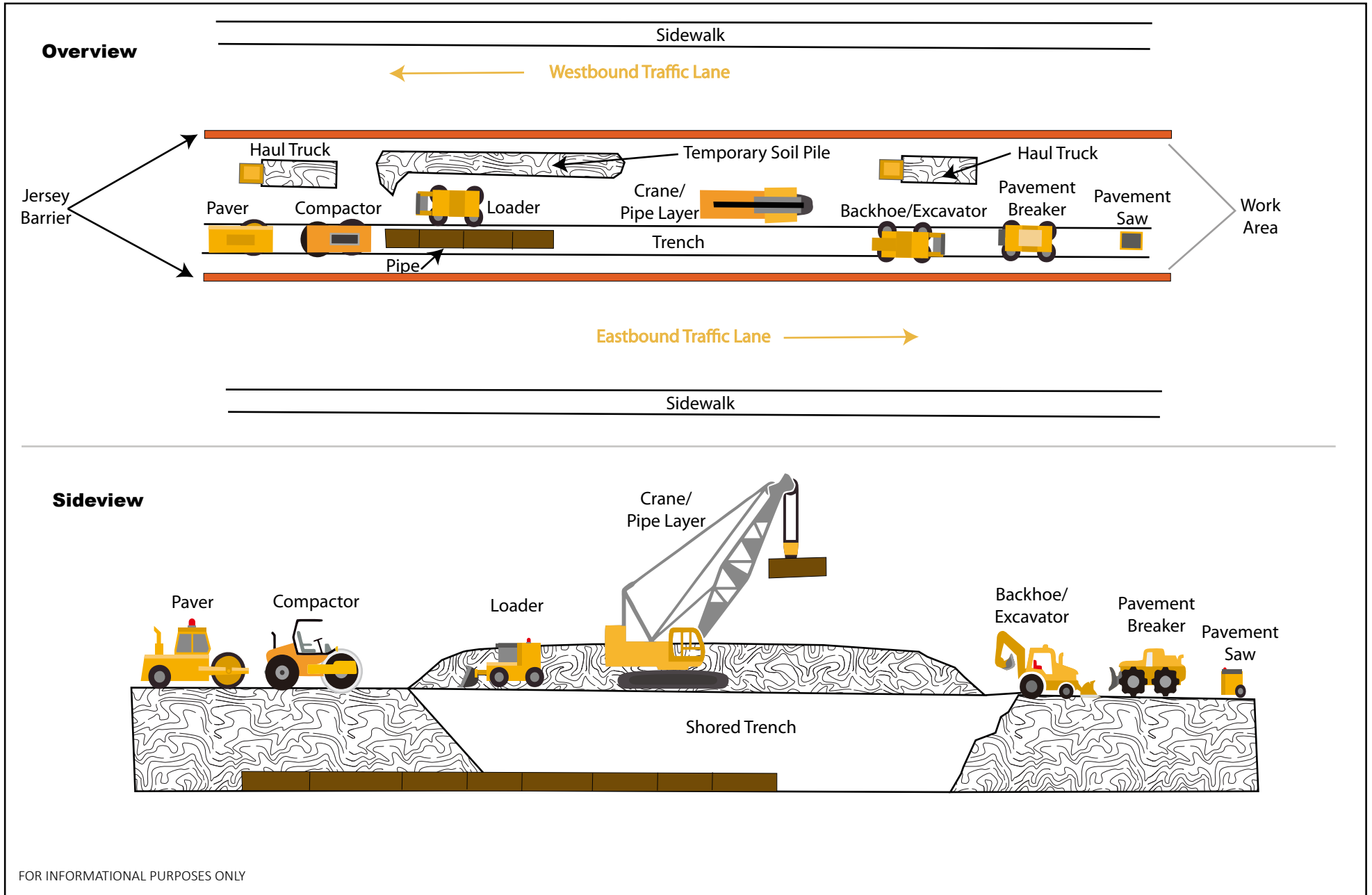
Construction of the proposed Project components would utilize several construction methods, including open cut, open pit methods, and trenchless methods such as microtunneling or jack and bore), which are described below.

2.5.1.1 Open Cut

Open Cut (also known as Cut and Cover) is the traditional method of construction for pipelines (refer to Figure 2-6 for a sketch of a typical open cut operation). The existing soil is removed by trenching, pipe bedding is placed at the bottom of the trench, followed by installation of the pipe, and backfilling with a certified fill material. This method may be used for various pipe diameters, soil types, and pipe materials. The maximum recommended depth for this type of construction is 25 feet. Most of the Project components would utilize this method because the depths of most components are less than 25 feet in depth. Components that could be installed using open cut methods include: the force main; diversion structures; junction structures; connecting sewers; pump stations; and, access structures.

Table 2-3: Construction Sequence





Source: CDM Smith, 2018.

Figure 2-6

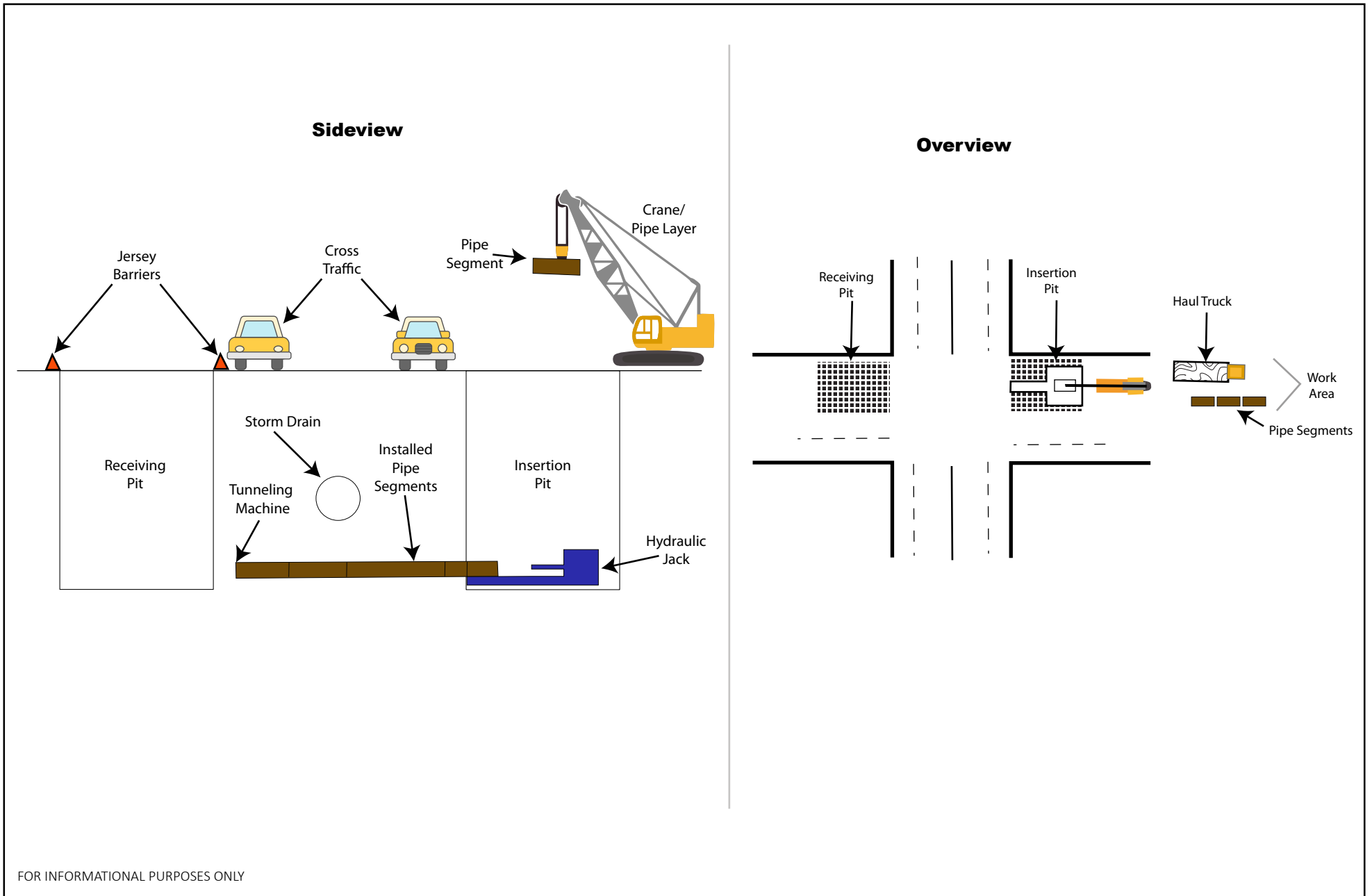
Open Cut for Force Main Installation. When installing the force main within Victory Boulevard, the open cut process would occur within a linear work zone, where the pavement would be removed, the trench excavated, and the trench walls shored. Shoring options for the trench walls may include beam and sheet shoring (installation of vertical H-beams along each side of the trench with steel sheeting between the beams), or similar shoring methods. Pipe support bedding would then be placed at the bottom of the trench. Typically, crushed miscellaneous base or other aggregate base would be placed at the bottom of the trench, to be used as the support bedding. Pipe segments would then be placed on the bedding at the proper depth and slope. When a suitable length of force main has been installed, it would be inspected and be pressure tested. The trench would be backfilled with certified fill/soil and compacted, followed by placement of temporary paving material over the compacted fill. This process would be repeated along the force main alignment until the entire force main is installed. If groundwater is encountered along the alignment, it would be dewatered prior to trench excavation. In the vicinity of Van Nuys Boulevard, an approximately 1,000-foot section of the force main would require additional concrete encasement due to the shallow pipeline depth.

Open Cut Construction for Diversion/Junction Structures and Connecting Sewers. The construction of diversion structures, connecting sewers from the diversion structures to the applicable pump station, and the junction structure at the EWVIS connection with EVIS would occur similar to the open cut process for the force main. Diversion and junction structures would be cast-in-place in excavated and shored pits, and an access structure constructed. The excavation would subsequently be backfilled with certified fill/soil and compacted, followed by placement of temporary paving material over the compacted fill. Shoring for the pits would use beams and sheeting, or similar methods. In the case of the junction structure at the EVIS, the pit or shaft could be shored using other methods that could include rings and lagging, or secant piles due to the depth at this location (excavated depth of approximately 45 feet).

Open Cut for Construction of Pump Stations. Pump station structures would be cast-in-place within excavated and shored pits, followed by installation of equipment and controls. After completion, the excavations would be backfilled with certified fill/soil and compacted, followed by placement of temporary paving material over the compacted fill. Shoring for the pits would use beams and sheeting, or similar methods.

2.5.1.2 Microtunneling or Jack and Bore

Microtunneling is the process where a sewer or pipe is installed underground between two pits, without the need to open cut the entire pipeline length (refer to Figure 2-7 for a sketch of typical microtunneling operations). Typical pipe installations via microtunneling range from 18 to 102 inches in diameter at depths ranging from 20 to 50 feet below grade. A directionally adjustable tunnel boring machine (non-man entry) is used to tunnel between the two pits. The tunnel boring machine has a cutting head that augers through the soil as it is pushed or jacked through the ground at the required slope from a launching pit. Excavated soil is mixed with a slurry, which is removed by pumping back to the launch pit, where it is removed. The pipe segments are installed (pushed) immediately behind the tunnel boring machine and this process continues until the pipe reaches the receiving pit.



Source: CDM Smith, 2018.

Figure 2-7

Microtunneling is generally limited to straight alignments with a maximum distance of approximately 3,000 feet between launching and receiving pits. However, this technique typically requires an access pit every 1,500 to 2,000 linear feet.

The jack and bore construction method involve installing a pipe casing that is typically 1.5 to 2.0 times greater than the final pipe. However, rather using a tunnel boring machine to install the finished pipe (as with microtunneling), with jack and bore construction, a casing pipe would first be hydraulically pushed through the soil from the launching pit to the receiving pit. Once installed, the soil within the casing pipe would then be removed using small excavation equipment or by hand. The final force main pipe line is then installed within the casing, and the space between the force main pipe exterior and the casing pipe is grouted. Jack and bore methods are typically used to tunnel distances up to 800 feet depending on soil conditions.

Microtunneling and/or jack and bore would be used to install some sections of the force main, as follows:

- SR-170
- Tujunga Wash
- Kester Avenue (Storm Drain)

Other potential microtunnel and/or jack and bore locations could include:

- Sepulveda Boulevard
- I-405

2.5.1.3 Staging Areas

Staging areas to support construction of the Project components would be required but have not yet been identified. Typically, each staging area would be used to store construction supplies such as pipe segments, shoring materials, base, and concrete, as well as equipment and construction management trailers. Staging areas could also be used to temporarily store excavated soil. The staging areas would need to be located along or fairly close to the Project site (also referred to throughout the EIR as the “Project alignment”). In addition, dedicated staging areas may be required to support the separate Project components, such as pump stations, microtunneling operations, and force main construction.

2.6 Project Operations

Following completion of Project construction and commissioning, operation of the force main would commence. The diversion structure gates would be controlled to divert flow from the existing sewers to the pump stations, which would begin pumping once the proper level is reached in each pump station wet well. Flows at each pump station would be pumped to the force main to the junction with EVIS, where they would flow to DCTWRP.

The control gates at the diversion structures and pump station operations would be monitored and controllable from DCTWRP and HTP. In this manner, flows can remain in the existing sewers and

continue downstream to HTP via other existing sewer connections, or they can be diverted to DCTWRP to increase production of recycled water.

Each pump station would be inspected monthly and require maintenance twice per year. Occasionally, a pump may require replacement, however, they would occur on an as-needed basis.

Monthly maintenance would consist of a two-person crew for approximately 2 hours and bi-yearly maintenance would consist of a four-person crew for approximately 8 hours.

Except for the control panel boxes located aboveground at the pump station locations, the operation of the proposed Project would be automated, located underground, and require minimal maintenance. As discussed in the NOP/Initial Study (IS) (Appendix A of this Draft EIR), with the exception of potential odor impacts during operation (discussed in Section 3.1, Air Quality), no further evaluation of Project operations is required in this Draft EIR.

Chapter 3.0

Environmental Analysis

3.0.1 Introduction

This chapter describes the structure and format of the analysis provided for each of six environmental resource areas addressed herein and defines the terminology used in characterizing the level of significance for each potential impact and, where appropriate, associated mitigation.

The following six resource areas addressed in this chapter were determined by the City to require further evaluation.

- Air Quality
- Cultural Resources and Tribal Cultural Resources
- Greenhouse Gases and Energy
- Hazards and Hazardous Materials
- Noise and Vibration
- Transportation and Traffic

The analysis of each resource area includes the following components:

- *Introduction* – provides an introduction to the resource area analysis and summarizes any relevant NOP comments.
- *General Approach and Methodology* – identifies how potential impacts on a resource area were determined.
- *Regulatory Framework* – contains an overview of the federal, state, regional, and local laws and regulations that apply to the proposed Project relative to each resource area.
- *Environmental Setting* – describes current conditions with regard to the resource area reviewed. CEQA Guidelines Section 15125 states that “An EIR must include a description of the physical environmental conditions in the vicinity of the proposed Project. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to an understanding of the significant effects of the proposed Project and its alternatives.”
- *Thresholds of Significance* – presents the criteria against which the significance of impacts is judged for the resource area.
- *Project Impacts* – presents the determination made for each threshold of significance (using terms detailed below, under Section 3.0.2) prior to mitigation, if applicable, and with application of proposed mitigation measures to reduce any potential impacts, if applicable. For purposes of determining significance, impacts were compared to the environmental baseline conditions, as further described in the Section 3.0.2.1 below.

- *Summary of Impact Determinations* – summarizes the conclusions of the impacts analysis associated with each threshold of significance.
- *Mitigation Measures* – lists the mitigation measures, if applicable, that would be implemented to reduce or avoid a significant impact.
- *Significant Unavoidable Impacts* – identifies significant unavoidable impacts, if any, to the resource area that would cause a substantial adverse effect on the environment that could not be reduced to a less than significant level through any feasible mitigation measure(s).

3.0.2 Terminology Used in This Environmental Analysis

3.0.2.1 Environmental Baseline

Section 15125(a)(1) of the State CEQA Guidelines states that “[g]enerally the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published....”

The NOP for this EIR was published on January 25, 2019. In accordance with the provisions of CEQA, 2019 is the baseline year for characterizing existing conditions in the environmental analysis. Where existing conditions data specific to 2019 were not available or where 2019, by itself, was not an appropriate representation of baseline conditions, this EIR identifies this fact, explains what data was used to determine existing conditions, and provides evidence of why this information is representative of baseline conditions.

3.0.2.2 Impacts and Mitigation

In evaluating the potential impacts of the proposed Project, the level of significance is determined by applying the threshold of significance (significance criteria) presented for each resource area. The following terms are used to describe each impact and, where significant impacts are determined, how mitigation measures are addressed:

- *No Impact* – Designation of no impact is given when the proposed Project does not apply to the impact category or would not create an impact. In addition, no impact is identified if no adverse or beneficial changes in the environment are expected.
- *Less Than Significant Impact* – A less than significant impact is identified when the proposed Project would cause no substantial adverse change in the environment (i.e., the impact would not reach the threshold of significance), or where impacts have been reduced to less than significant after application of mitigation.
- *Significant Impact* – A significant impact would create a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the proposed Project. Such an impact would exceed the applicable significance threshold established by CEQA prior to application of mitigation.
- *Significant Unavoidable Impact* – Per Section 15126.2(b) of the CEQA Guidelines, a significant unavoidable (sometimes referred to as ‘significant and unavoidable’) impact is a Project-related substantial adverse effect that cannot be reduced to a less than significant level through any feasible mitigation measure(s).

- *Mitigation* – Mitigation refers to measures that would be implemented to avoid or lessen potentially significant impacts. Mitigation includes:
 - avoiding the impact completely by not taking a certain action or parts of an action;
 - minimizing the impact by limiting the degree or magnitude of the action and its implementation;
 - rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
 - reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and/or
 - compensating for the impact by replacing or providing substitute resources or environments.

The mitigation measures would be proposed as a condition of Project approval and would be monitored to ensure compliance and implementation.

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Section 3.1

Air Quality

3.1.1 Introduction

This section analyzes the proposed Project's impacts on air quality, including impacts from both construction and operational activities. As part of this analysis, this section describes the approach, methodologies and models used to estimate the air quality impacts associated with the proposed Project. The results are compared to both federal and state air quality criteria and thresholds. Relevant information pertaining to the regulatory framework, current air quality conditions and air quality improvement plans are discussed.

Although the Project components are operated as a closed system, air release valves may be required along the force main, which could result in localized odors that may affect a substantial number of people. Therefore, this analysis addresses the potential for the force main to result in localized odors during construction and operation. As discussed in the NOP/IS (Appendix A of this Draft EIR), other operational components associated with air quality would be minimal and no further evaluation in the EIR is required.

Air quality-related comments received in response to the NOP were provided by the following agency:

- South Coast Air Quality Management District (SCAQMD)
 - Requests copy of Draft EIR along with all appendices and related technical documents.
 - Notes that the SCAQMD CEQA Air Quality Handbook (1993) is available to assist with preparation of the air quality analysis, and that CalEEMOD is the preferred land use emissions model.
 - Recommends quantifying localized air quality impacts using SCAQMD methodology and guidance and compare the results to SCAQMD's localized significance thresholds (LSTs) or performing dispersion modeling if necessary.
 - The Lead Agency should identify any potential adverse air quality impacts for all phases of the project (construction, operation, direct and indirect impacts) and include in the analysis. Recommends a mobile source health risk assessment in the event the proposed Project generates or attracts vehicle trips, especially heavy-duty diesel-fueled vehicles.
 - Provided guidance on siting incompatible land uses.
 - Notes that CEQA requires the identification of all feasible mitigation measures, including those that go beyond what is required by law. If significant impacts, consider alternatives to avoid or substantially lessen the significant impact.

- If project requires a permit from SCAQMD, SCAQMD should be identified as a Responsible Agency.

Copies of the referenced NOP correspondence are available in Appendix A. Impacts directly related to the air quality comments above are addressed in this section with two exceptions: (1) As the proposed Project is an infrastructure project that would be sited within public right-of-way, there would be no incompatible land use (see Appendix A: NOP/IS); and (2) The SCAQMD is not identified as a Responsible Agency as the proposed Project does not require any permits from SCAQMD.

3.1.2 Pollutants of Interest

Six criteria pollutants were evaluated for the proposed Project's construction and operational activities: ozone (O_3), using volatile organic compounds (VOCs) and oxides of nitrogen (NO_x) as surrogates due to their recognized role as ozone precursors; nitrogen dioxide (NO_2); carbon monoxide (CO); sulfur dioxide (SO_2); respirable particulate matter, or particulate matter with an aerodynamic diameter less than or equal to 10 micrometers (PM_{10}); and fine particulate matter, or particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers ($PM_{2.5}$).¹

Although lead (Pb) is a criteria pollutant, it was not evaluated in this section because the proposed Project would not use fuels or coatings with lead additives; therefore, the Project would have no impacts on Pb levels in the South Coast Air Basin (SCAB).

Additional information regarding the six criteria pollutants that were evaluated in the air quality analysis is presented below.

Ozone (O_3)²

O_3 , the main component of smog, is formed from precursor pollutants rather than being directly emitted from pollutant sources. O_3 forms as a result of VOCs and NO_x reacting in the presence of sunlight. O_3 levels are typically highest in warm-weather months and in urban areas. VOCs, typically associated with engine emissions, architectural coatings, and paving operations, and NO_x , typically associated with engine emissions, are termed " O_3 precursors" and their emissions are regulated in order to control the creation of O_3 . O_3 damages lung tissue and reduces lung function. Scientific evidence indicates that ambient levels of O_3 not only affect people with impaired respiratory systems (e.g., asthmatics), but also healthy children and adults. O_3 can cause health effects such as chest discomfort, coughing, respiratory tract irritation, and decreased pulmonary functions.

¹ The emissions of VOCs and reactive organic gases are essentially the same for the combustion emission sources that are considered in this EIR. This EIR will typically refer to reactive organic gases as VOCs.

² U.S. Environmental Protection Agency. Ozone Pollution – Basic Information about Ozone. Available: <https://www.epa.gov/ozone-pollution/ozone-basics>. Accessed February 2019.

Nitrogen Dioxide (NO₂)³

NO₂ is a reddish-brown to dark brown gas with an irritating odor. NO₂ forms when nitric oxide reacts with atmospheric oxygen. The primary source of NO₂ is fuel combustion. Sources of NO₂ associated with the proposed Project are construction equipment and vehicle exhaust. Breathing air with a high concentration of NO₂ can irritate airways in the human respiratory system. Such exposures over short periods can aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing). Longer exposures to elevated concentrations of NO₂ may contribute to the development of asthma and potentially increase susceptibility to respiratory infections.

Carbon Monoxide (CO)⁴

CO is an odorless, colorless, toxic gas. It is formed by incomplete fuel combustion. The primary source of CO is fuel combustion. Sources of CO associated with the proposed Project are construction equipment and vehicle exhaust. Breathing air with high concentrations of CO reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity, and impaired mental abilities.

Particulate Matter (PM₁₀) and Fine Particulate Matter (PM_{2.5})⁵

Particulate matter consists of solid and liquid particles of dust, soot, aerosols, and other matter small enough to remain suspended in the air for a long period of time. PM₁₀ refers to particulate matter with an aerodynamic diameter less than or equal to 10 micrometers (microns, um, or μm) and PM_{2.5} refers to particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers. Particles smaller than 10 micrometers (i.e., PM₁₀ and PM_{2.5}) represent that portion of particulate matter thought to represent the greatest hazard to public health.⁶ PM₁₀ and PM_{2.5} can accumulate in the respiratory system and are associated with a variety of negative health effects. Exposure to particulate matter can aggravate existing respiratory conditions, increase respiratory symptoms and disease, decrease long-term lung function, and possibly cause premature death. Segments of the population that are most sensitive to the negative effects of particulate matter in the air are the elderly, individuals with cardiopulmonary disease, and children. Aside from adverse health effects, particulate matter in the air causes a reduction of visibility and damage to paints and building materials.

A portion of particulate matter in the air comes from natural sources such as windblown dust and pollen. Man-made sources of particulate matter include fuel combustion, vehicle exhaust, field burning, cooking, tobacco smoking, factories, and vehicle movement, or other man-made disturbances, on unpaved areas. Secondary formation of particulate matter may occur in some

³ U.S. Environmental Protection Agency. Nitrogen Dioxide (NO₂) Pollution – Basic Information about NO₂. Available: <https://www.epa.gov/no2-pollution/basic-information-about-no2>. Accessed February 2019.

⁴ U.S. Environmental Protection Agency. Carbon Monoxide (CO) Pollution in Outdoor Air – Basic Information about Carbon Monoxide (CO) Outdoor Air Pollution. Available: <https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution>. Accessed February 2019.

⁵ U.S. Environmental Protection Agency. Particulate Matter (PM) Pollution – Particulate Matter (PM) Basics. Available: <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics>. Accessed February 2019.

⁶ U.S. Environmental Protection Agency. Particle Pollution and Your Health. September 2003. Available: <https://www3.epa.gov/airnow/particle/pm-color.pdf>. Accessed February 2019.

cases where gases like sulfur oxides (SO_x) and NO_x interact with other compounds in the air to form particulate matter. Fugitive dust generated by construction activities is a major source of suspended particulate matter. Sources of particulate matter associated with the proposed Project are construction equipment exhaust, vehicle exhaust, fugitive dust associated with soil handling, and road dust.

SO_x and NO_x , which are precursors to secondary formation of particulate matter in the atmosphere, are also precursors to acidic deposition (acid rain). NO_x reacts with ammonia, moisture, and other compounds to form nitric acid and related particles. Human health concerns of particulate matter include effects on breathing and the respiratory system, damage to lung tissue, and premature death. Small particles can penetrate into sensitive parts of the lungs and can cause or worsen respiratory disease.

Sulfur Dioxide (SO_2)⁷

Sulfur oxides are formed during combustion of fuel containing sulfur (typically, coal and oil). The term “sulfur oxides” accounts for distinct but related compounds, primarily SO_2 and sulfur trioxide. As a conservative assumption for this analysis, it was assumed that all SO_x are emitted as SO_2 ; therefore, SO_x and SO_2 are considered equivalent in this document and used interchangeably. Higher SO_2 concentrations are usually found in the vicinity of large industrial facilities.

Sources of SO_2 associated with the proposed Project are construction equipment and vehicle exhaust. The physical effects of SO_2 include temporary breathing impairment and respiratory illness. Children, the elderly, and those who suffer from asthma are most susceptible to the negative effects of SO_2 exposure.

3.1.3 General Approach and Methodology

The overall aim of the air quality analysis was to evaluate the potential effects of the proposed Project on regional and local air quality. Only construction emissions were quantified. Operation of the proposed Project would be passive, self-contained, and located underground. The NOP/IS determined that minimal maintenance during the life of the proposed Project would not result a violation of any air quality standard or contribute to an existing or project air quality violation, nor would it expose sensitive receptor to substantial pollutant concentrations. The NOP/IS also determined that since air release valves, located along the force main, could result in localized odors, this section addresses the potential for the force main to result in localized odors during operation.

3.1.3.1 Air Pollutant Emissions

Construction emissions were estimated over the proposed Project’s 30-month construction period (i.e., 2021, 2022 and 2023) and included construction equipment, construction vehicles, soil handling, road dust and asphaltting. Emissions of PM_{10} , $\text{PM}_{2.5}$, NO_x , SO_x , CO, and VOC were quantified.

⁷ U.S. Environmental Protection Agency. Sulfur Dioxide (SO_2) Pollution – Sulfur Dioxide Basics. Available: <https://www.epa.gov/so2-pollution/sulfur-dioxide-basics>. Accessed February 2019.

Construction assumptions are described in Section 2.5 of Chapter 2, Project Description. Emission factors were derived from the California Air Resources Board's (CARB) *OFFROAD 2017* model for construction equipment, CARB *EMFAC 2017* model for on-road vehicles and United States Environmental Protection Agency's (USEPA) *Compilation of Emission Factors Database (AP-42)* for fugitive dust emissions associated with construction and asphalt paving.^{8,9,10}

Emissions associated with each construction element were quantified separately and overlapping elements were added to calculate peak day emissions for each pollutant. Emissions were compared to the SCAQMD's regional CEQA significance thresholds for construction activities.

In addition to regional emissions, localized impacts were analyzed using the SCAQMD's Localized Significance Threshold (LST). The LST methodology is based on maximum daily allowable on-site emissions, the area of the emissions source, the ambient air quality in each source receptor area (SRA), and the distance to the nearest exposed individual. The LST is set up as a series of look-up tables for emissions of PM₁₀, PM_{2.5}, NO₂, and CO. If anticipated on-site emissions are below the LST look-up table emission levels, then the proposed activity is considered not to violate or substantially contribute to an existing or projected air quality standard.

Because proposed Project construction activities would be spread out over a six-mile alignment, construction activities in any single location would be unlikely to impact receptors near other construction locations. For this reason, the six-mile alignment was portioned into eight construction groupings for the purpose of the LST analysis. Groupings were conceived as construction activities separated by approximately 0.5 miles. The list of groupings and associated construction activities is included in Appendix C.

3.1.3.2 Air Quality Impact Analysis Models and Databases

As indicated above, the air quality impact analysis was conducted using appropriate models and databases from the USEPA and CARB. These models and databases are listed in Table 3.1-1. In all cases, the most recent versions were used.

Table 3.1-1: Air Quality Impact Analysis Models and Databases

Models/Databases	Sources	ADP Applications
Compilation of Emission Factors Database (AP-42)	USEPA	Emission factors for fugitive dust emissions and asphalt paving emissions associated with construction activities.
EMission FACTors (EMFAC2017)	CARB	California-based on-road motor vehicle emission factors.
OFFROAD 2017	CARB	California-based off/non-road motor vehicle and construction equipment emission factors.

⁸ California Air Resources Board. EMFAC2017 On-Road Emissions Inventory Estimation Model. Available: <https://www.arb.ca.gov/emfac/>. Accessed February 2019.

⁹ California Air Resources Board. OFFROAD2017 Off-Road Diesel Analysis and Inventory. Available: <https://www.arb.ca.gov/msei/ordiesel.htm>. Accessed February 2019.

¹⁰ U.S. Environmental Protection Agency. AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I, Section 13.2.1, Paved Roads, January 2011, Section 13.2.2 Unpaved Roads, November 2006, Section 13.2.3 Heavy Construction Operations, January 1995. Available: <https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emission-factors>. Accessed February 2019.

3.1.4 Regulatory Framework

Air quality is regulated by federal, state, and local laws. In addition to rules and standards contained in the federal Clean Air Act (CAA) and the California Clean Air Act (CCAA), air quality in Los Angeles County is subject to the rules and regulations established by CARB and SCAQMD with oversight provided by the USEPA, Region IX.

3.1.4.1 Federal

U.S. Environmental Protection Agency (USEPA)

The USEPA establishes the overall policies and regulations for protecting air quality nationwide. The USEPA sets the National Ambient Air Standards (NAAQS), standards for stationary (e.g., power plants, industrial boilers, incinerators), and new standards for mobile (e.g., motor vehicles, off/non-road vehicles) emission sources of air pollutants.

Clean Air Act (CAA)

In addition to enabling the USEPA to set air quality policy and form regulations, the CAA also requires designation of areas nationwide according to their compliance of the NAAQS. Under this regulation, areas that meet the NAAQS are assigned Attainment status; those that do not meet the standards are designated as Nonattainment; and those in transition from Nonattainment to Attainment are Maintenance. Areas for which a designation has not been assigned are noted as Unclassified. The current Attainment status of the SCAB is presented in Section 3.1.4.4.

State Implementation Plan (SIP)

In accordance with the federal CAA, areas that do not meet the NAAQS must prepare a SIP comprised of strategies, emission reduction measures and timeframes for achieving NAAQS attainment. The 2016 SIP Strategy, developed by CARB and submitted to USEPA for approval, focuses on regulatory and incentive programs designed to reduce emissions from mobile sources, fuels, and consumer products to achieve the NAAQS for O₃ and PM_{2.5}.

National Ambient Air Quality Standards (NAAQS)

Set by the USEPA, the NAAQS address seven pollutants, called “criteria” pollutants. The standards represent ambient (i.e., outdoor) levels that are considered adequately protective of human health (Primary Standards) and the environment and the quality of life (Secondary Standards). The current NAAQS are presented in Table 3.1-2.

3.1.4.2 State

California Air Resources Board (CARB)

CARB enforces the federal CAA statewide. CARB also develops the California Ambient Air Quality Standards (CAAQS) and additional air quality regulations that apply only in California. The CAAQS also include air quality standards for sulfates, hydrogen sulfide (H₂S) and visibility-reducing particles. Like the USEPA, CARB designates areas as Attainment and Nonattainment. The current Attainment status of the SCAB is presented in Section 3.1.4.4.

CARB regulations set exhaust emission standards for in-use off-road equipment and motor vehicles; these standards are more stringent than that USEPA standards for new off-road equipment and motor vehicles.

Table 3.1-2: National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards (CAAQS) ^a	Federal Standards (NAAQS) ^b	
			Primary	Secondary
Ozone (O ₃)	1 hour	0.070 ppm	—	Same as Primary Standard
	8-hour	0.09 ppm	0.070 ppm	
Particulate Matter (PM ₁₀)	24-hour	50 µg/m ³	150 µg/m ³	Same as Primary Standard
	Annual	20 µg/m ³	—	
Particulate Matter (PM _{2.5})	24-hour	—	35 µg/m ³	Same as Primary Standard
	Annual	12 µg/m ³	12 µg/m ³	
Carbon monoxide (CO)	1 hour	20 ppm	35 ppm	—
	8-hour	9 ppm	9 ppm	—
Nitrogen dioxide (NO ₂)	1 hour	180 ppb	100 ppb	—
	Annual	0.030 ppm	0.053 ppm	Same as Primary Standard
Sulfur dioxide (SO ₂)	1 hour	0.25 ppm	75 ppb	—
	3-hour	—	—	0.5 ppm
	24-hour	0.04 ppm	—	—
Lead (Pb) ^c	30-day average	1.5 µg/m ³	—	—
	Rolling 3-month average	—	0.15 µg/m ³	Same as Primary Standard
Sulfates ^c	24-hour	25 µg/m ³	--	--
Hydrogen Sulfide (H ₂ S) ^c	1-hour	42 µg/m ³	--	--
Vinyl Chloride ^c	24-hour	26 µg/m ³	--	--
Visibility Reducing Particles ^c	--	Reduction of 0.23 per kilometer	--	--

Source: CARB (<https://www.arb.ca.gov/research/aaqs/aaqs2.pdf>) and USEPA (<https://www.epa.gov/criteria-air-pollutants/naaqs-table>). Accessed February 2019.

Notes: -- Not applicable; µg/m³=micrograms per cubic meter; ppm=parts per million; ppb=parts per billion.

PM₁₀ are particles with a diameter of 10 microns or less and PM_{2.5} are particles with a diameter of 2.5 microns.

^a CAAQS for O₃, CO (except 8-hour Lake Tahoe), SO₂ (1 and 24 hour), NO₂, PM₁₀, PM_{2.5}, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

^b NAAQS (other than O₃, PM₁₀, PM_{2.5}, and those based on annual arithmetic mean are not to be exceeded more than once a year. The O₃ standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. To attain the 1-hour NO₂ national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. To attain the 1-hour SO₂ national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb.

^c Lead, sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles would not be expected to result from anticipated proposed Project activities.

California Ambient Air Quality Standards (CAAQS)

The CCAA, signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practicable date. The CAAQS, set by CARB, are often, but not always, more stringent than the NAAQS and include sulfates, H₂S and visibility-reducing particles (particles that contribute to “regional haze”). The current CAAQS are presented in Table 3.1-2.

3.1.4.3 Regional and Local

South Coast Air Quality Management District (SCAQMD)

SCAQMD is the agency principally responsible for comprehensive air pollution control in the SCAB. To that end, the SCAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments, and cooperates with state and federal government agencies. The SCAQMD develops rules and regulations, establishes permitting requirements, inspects emissions sources, and enforces such measures through educational programs or fines, when necessary. In coordination with CARB and the SCAG, SCAQMD also prepares and implements the Air Quality Management Plans (AQMPs), which is used by CARB in SIP development.

Air Quality Management Plan (AQMP)

The SCAQMD develops the AQMP in coordination with CARB. The SCAQMD submitted the latest 2016 AQMP to CARB for inclusion in the SIP in 2017. CARB included the AQMP in the SIP and submitted the SIP to USEPA. The SIP focuses on regulatory and incentive program, designed to reduce emissions from mobile sources, fuels, and consumer products necessary to achieve O₃ and PM_{2.5} NAAQS in the SCAB.¹¹

3.1.4.4 Attainment/Nonattainment Status

As discussed above, areas are designated as Attainment, Nonattainment or Maintenance based on air quality monitoring data and according to their compliance with the NAAQS and CAAQS. For the SCAB, these designations are identified in Table 3.1-3.

As shown, the SCAB is designated Attainment under the NAAQS for SO₂ and Pb; Attainment/Maintenance for PM₁₀, CO, and NO₂; and Nonattainment for O₃ and PM_{2.5}. With respect to the CAAQS, the SCAB is designated Attainment for CO, NO₂, SO₂, and sulfates; Nonattainment for O₃, PM₁₀ and PM_{2.5}.

¹¹ SCAQMD 2016 AQMP. Available: <http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan>. Last accessed May 29, 2019.

Table 3.1-3: Attainment/Nonattainment Designations for Proposed Project Area

Pollutants	Designations		Comments
	CAAQS	NAAQS	
Ozone (O ₃)	Nonattainment	Nonattainment (Extreme)	Designations based on violations of the NAAQS and CAAQS. Extreme signifies the worst level of Nonattainment of the NAAQS. O ₃ is a regional pollutant and generated from numerous sources of emissions throughout the Nonattainment area.
Particulate matter (PM ₁₀)	Nonattainment	Attainment/Maintenance	Meets the NAAQS but not the CAAQS, which is lower.
Particulate Matter (PM _{2.5})	Nonattainment	Nonattainment (Moderate)	Does not currently meet the NAAQS or CAAQS.
Carbon monoxide (CO)	Attainment	Attainment/Maintenance	Meets the CAAQS and NAAQS.
Nitrogen dioxide (NO ₂)	Attainment	Attainment/Maintenance	Meets the CAAQS and NAAQS.
Sulfur dioxide (SO ₂)	Attainment	Attainment	Meets the CAAQS and NAAQS.
Lead (Pb)	Nonattainment	Nonattainment	Lead in the SCAB is primarily associated with battery recyclers. Lead is not expected to result from anticipated proposed Project activities.
Sulfates	Attainment	--	No NAAQS for this pollutant. Sulfates are not expected to result from anticipated proposed Project activities.
Hydrogen Sulfide	Unclassified	--	There are not air quality data collected for this pollutant in the area and there are no NAAQS. Substantive levels of hydrogen sulfide are not expected to result from anticipated proposed Project activities.
Visibility Reducing Particles	Unclassified	--	Air quality data is not collected for this pollutant in the area and there are no NAAQS. Visibility reducing particles are not expected to result from anticipated proposed Project activities.

Sources: State Area Designations, <https://www.arb.ca.gov/degis/adm/adm.htm>; U.S. Environmental Protection Agency. Nonattainment Area for Criteria Pollutants (Green Book), <https://www.epa.gov/green-book>. Last accessed February 2019.

3.1.5 Environmental Setting

Project activities would be limited to the proposed development site and surrounding roadways, within the SCAB. The SCAB includes all of Orange County, and the non-desert portions of Los Angeles, San Bernardino, and Riverside counties. The SCAB covers an area of approximately 15,500 square kilometers (6,000 square miles) and is bounded on the west by the Pacific Ocean; on the north and east by the San Gabriel, San Bernardino, and San Jacinto mountains; and on the south by the San Diego county line.

3.1.5.1 Regional Climate and Meteorology

The climate of the region is classified as Mediterranean, which is characterized by warm summers with little precipitation and mild winters with moderate precipitation. The major influences on the regional climate are the Eastern Pacific High, a strong, persistent high-pressure system, and

the moderating effects of the Pacific Ocean. Seasonal variations in the position and strength of the Eastern Pacific High are key factors in the weather changes in the area.

The Eastern Pacific High attains its greatest strength and most northerly position during the summer, when it is centered west of northern California. In this location, this high effectively shelters southern California from the effects of polar storm systems. Large-scale atmospheric subsidence associated with the high produces an elevated temperature inversion along the West Coast. The base of this subsidence inversion is generally 1,000 to 2,500 feet above mean sea level during the summer. Vertical mixing is often limited to the base of the inversion, and air pollutants are trapped in the lower atmosphere.

The mountain ranges that surround the SCAB constrain the horizontal movement of air and inhibit the dispersion of air pollutants out of the region. These two factors, combined with the air pollution sources from more than 15 million people plus businesses and industries, are responsible for the high pollutant conditions that can occur in the SCAB. In addition, high solar radiation during the summer months promotes the formation of O₃.

The proximity of the Eastern Pacific High and a thermal low-pressure system in the desert interior to the east produces a sea breeze regime that prevails within the region for most of the year, particularly during the spring and summer months. During the fall and winter months, the Eastern Pacific High can combine with high pressure over the continent to produce light winds and extended inversion conditions in the region. These stagnant atmospheric conditions often result in elevated pollutant concentrations in the SCAB. Excessive buildup of high pressure in the desert interior can produce a “Santa Ana” condition, characterized by warm, dry, northeast winds in the basin and offshore regions. Santa Ana winds often help clear the SCAB of air pollutants.

Meteorological data, including temperatures and precipitation, are measured at meteorological stations operated by the National Weather Service. The average high and low air temperatures at the Burbank Valley Station (041194), the closest station with a complete temperature and precipitation record, located approximately 1.2 miles east of the Project site, were 77 degrees Fahrenheit (°F) and 52°F, respectively.¹²

The Eastern Pacific High weakens in the winter and shifts to the south, allowing storm systems to pass through the region. The number of days with precipitation varies substantially from year to year, which produces a wide range of variability in annual precipitation totals. The average annual precipitation at the Burbank Valley Station was 17 inches between 1981 and 2010. Approximately 90 percent of the annual rainfall occurs November through April, with a monthly average maximum of 4.5 inches in February. This wet-dry seasonal pattern is characteristic of most of California. Infrequent precipitation during the summer months usually occurs from tropical air masses that originate from continental Mexico or tropical storms off the west coast of Mexico.

3.1.5.2 Air Quality Monitoring Data

Air quality within the SCAB has improved since the inception of air pollutant monitoring in 1976 by the SCAQMD. This improvement is due to the implementation of stationary source emission-

¹² Western Regional Climate Center. *Cooperative Climatological Data Summaries*. <http://www.wrcc.dri.edu>. Accessed March 2019.

reduction strategies by SCAQMD and lower polluting on-road motor vehicles. This trend toward cleaner air has occurred despite continued population growth. For example, while the national 8-hour O₃ standard was exceeded on 139 days in 1988, at the Reseda monitoring station, the standard was exceeded on 64 days in 2017.¹³

CARB and SCAQMD operate a network of pollutant monitoring and meteorological stations in the SCAB. The station closest to the Project site is the Reseda monitoring station (ARB No. 70074), located approximately 3.4 miles northwest of the western end of the proposed Project alignment. Table 3.1-4 presents the maximum pollutant concentrations measured at the monitoring stations from 2015-2017, the three most recent available years. Exceedances of the CAAQS and NAAQS are shown in bold text.

Table 3.1-4: Pollutant Concentrations Measured at the Reseda Monitoring Station

Pollutant	Averaging Period	Standard	Concentration ^a / Number of Days Above Standard		
			2015	2016	2017
Ozone (ppm)	1-hour State	0.09	0.11 / 11	0.11 / 9	0.12 / 26
	8-hour National	0.07	0.084 / 32	0.085 / 23	0.089 / 64
	8-hour State	0.07	-- / --	-- / --	-- / --
CO (ppm)	1-hour National	35	-- / --	-- / --	-- / --
	1-hour State	20	-- / --	-- / --	-- / --
	8-hour National and State	9	-- / --	-- / --	-- / --
NO ₂ (ppm)	1-hour National ^b	0.100	0.052 / 0	0.046 / 0	0.054 / 0
	1-hour State	0.18	0.060 / 0	0.060 / 0	0.060 / 0
	Annual National	0.053	0.013 / --	0.013 / --	0.013 / --
	Annual State	0.030	0.013 / --	0.012 / --	0.012 / --
SO ₂ (ppm)	1-hour National	0.075	-- / --	-- / --	-- / --
	1-hour State	0.25	-- / --	-- / --	-- / --
	24-hour State	0.04	-- / --	-- / --	-- / --
PM ₁₀ (µg/m ³)	24-hour National	150	-- / --	-- / --	-- / --
	24-hour State	50	-- / --	-- / --	-- / --
	Annual State	20	-- / --	-- / --	-- / --
PM _{2.5} (µg/m ³)	24-hour National ^c	35	28.4 / 1	24.5 / 0	20.7 / 0
	Annual National	12	-- / --	-- / --	9.2 / --
	Annual State	12	10 / --	17 / --	17 / --

Notes:

^a Exceedances of the standards are shown in bold. With the exception of the 1-hour NO₂ national and 24-hour PM_{2.5} national, concentrations reported in this table are design values (i.e., values that can be directly compared to the CAAQS and NAAQS).

^b The national 1-hour NO₂ standard represents the 1-hour standard 98th percentile value.

^c The national 24-hour PM_{2.5} standard represents the 1-hour standard 98th percentile value.

Source: CARB. Air Quality Data Statistics (iADAM) (CARB, 2015-2017). <https://www.arb.ca.gov/adam/>. Accessed March 2019.

¹³ CARB. Air Quality Data Statistics (iADAM) (CARB, 2015-2017). <https://www.arb.ca.gov/adam/>. Accessed March 2019.

3.1.6 Thresholds of Significance

For this EIR, the City of Los Angeles has based the air quality thresholds of significance on a combination of the Air Quality issues identified in Section III of Appendix G of the State CEQA Guidelines and the SCAQMD CEQA Thresholds.^{14,15} These criteria and thresholds used in evaluation of the proposed Project are presented below.

The proposed Project would result in significant impacts related to air quality if it would:

Impact 3.1-1 Conflict with or obstruct implementation of the applicable air quality plan.

Impact 3.1-2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Impact 3.1-3 Expose sensitive receptors to substantial pollutant concentrations.

Impact 3.1-4 Result in other emissions such as those leading to odors adversely affecting a substantial number of people.

With respect to Impact 3.1-2, the SCAQMD recommends using their regional and localized thresholds to evaluate whether a proposed Project's criteria pollutant emissions would violate any air quality standard or contribute substantially to an existing or projected air quality violation. Whereas regional thresholds are mass emission thresholds that are the same for all projects, localized thresholds reflect NAAQS and CAAQS and can vary depending on project location. Since comparison to NAAQS and CAAQS, which are concentration-based standards, requires air dispersion modeling and as such can be time consuming, the SCAQMD developed the LST screening methodology that allows users to determine, in lieu of conducting air dispersion modeling, if a project would cause or contribute to an exceedance of the NAAQS or CAAQS. The LST methodology is described in Section 3.1.3, General Approach and Methodology.

With respect to Impact 3.1-3, the SCAQMD recommends using their thresholds to evaluate the proposed Project's impact from toxic air contaminants (TACs) on sensitive receptors.

Chapter 5 of this Draft EIR (Cumulative Impacts Analysis) contains a discussion of significant cumulative impacts and whether the proposed Project would result in a cumulatively considerable net increase of any criteria pollutant for which the region is nonattainment under an applicable federal or state ambient air quality standard.

The LST thresholds apply to on-site emissions and are dependent upon the location of the construction area, the separation distance of the emissions from a human receptor, and the size of construction area. The proposed Project would be located in SRA 7 and construction activities were assumed to occur approximately 25 meters from the closest human receptor, over an area of approximately 1 acre. It should be noted that LST thresholds based on the chosen separation distance of 25 meters and an area of 1 acre result in the lowest, most conservative thresholds. Construction activities spread over a larger area or occurring at a distance further than 25 meters would be subject to larger thresholds.

¹⁴ California Natural Resources Agency. Available: http://resources.ca.gov/ceqa/guidelines/Appendix_G.html. Accessed February 2019.

¹⁵ SCAQMD, CEQA Thresholds. March 2015. Available: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>. Accessed February 2019.

Table 3.1-5 shows regional and localized thresholds of significance which were applied in evaluating the proposed Project's impacts relative to Impact 3.1-2.

Table 3.1-5: Air Quality Thresholds for On-site Construction Emissions

Pollutants	Regional Threshold (lbs/day)	Localized Threshold (lb/day)
NOx/NO2	100	80
VOC	75	na
PM10	150	4
PM2.5	55	3
SOx	150	na
CO	550	498

Source:

Regional Thresholds: SCAQMD, CEQA Thresholds. March 2015. Available:

<http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>. Accessed February 2019.

Localized Thresholds: SCAQMD, Localized Significance Thresholds. Available:

<http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>. Accessed February 2019.

Notes:

na=not applicable. lb/day = pounds per day

SCAQMD LST thresholds apply to onsite activities.

3.1.7 Project Impacts

3.1.7.1 Impact 3.1-1

Impact 3.1-1: The proposed Project would not conflict with or obstruct implementation of the applicable air quality plan.

Construction of the proposed Project would produce emissions of nonattainment pollutants primarily from construction equipment, construction vehicles, and fugitive dust.

The 2016 AQMP proposes emission-reduction measures that are designed to bring the SCAB into attainment of the CAAQS and NAAQS. SCAQMD also adopts AQMP control measures into the SCAQMD rules and regulations, which are then used to regulate sources of air pollution in the SCAB. Compliance with these requirements would ensure that the proposed Project's construction activities would be consistent with the AQMP; therefore, proposed Project would not conflict with or obstruct implementation of the AQMP.

Similarly, the CARB integrates the AQMP into the SIP and associated SIP measures, which include mobile source control measures that are enforced at the state level. CARB adopts SIP measures into regulations designed to reduce pollutant emissions in California. Compliance with these requirements would ensure that the proposed Project's construction activities would be consistent with the SIP; therefore, the proposed Project would not conflict with or obstruct implementation of the SIP.

Because AQMP and SIP attainment strategies include mobile source control measures and clean fuel projects that are enforced at the state and federal levels on engine manufacturers, engine operators, and petroleum refiners and retailers, proposed Project construction activities would comply with these control measures.

Therefore, implementation of the proposed Project would not conflict with or obstruct implementation of the AQMP or SIP and would have a *less than significant impact*.

3.1.7.1.1 Mitigation Measures

No mitigation is required.

3.1.7.1.2 Significance of Impact After Mitigation

Impacts would be *less than significant*.

3.1.7.2 Impact 3.1-2

Impact 3.1-2: The proposed Project would violate an air quality standard or contribute substantially to an existing or projected air quality violation.

Air pollutant emissions associated with proposed construction activities would result from construction equipment exhaust, vehicles used to transfer construction material and construction waste, fugitive dust associated with soil handling and moving vehicles, and worker vehicles.

Emissions associated with each construction element, identified in Appendix C, were quantified separately. Overlapping elements were then added to calculate peak day emissions for each pollutant. Emissions were compared to the SCAQMD regional CEQA significance thresholds for construction activities. Table 3.1-6 presents the proposed Project's regional construction impacts for each construction year and source category.

As shown in Table 3.1-6, peak day construction emissions of NO_x would exceed SCAQMD CEQA significance thresholds in each construction year. In 2021 maximum NO_x impacts would occur during construction of the following overlapping activities: Force Main; Vineland, Tujunga and Lankershim Pump Stations; Vineland, Tujunga and Lankershim Diversions; Vineland, Tujunga and Lankershim Connection Sewers; and Tujunga Wash Microtunneling.

In 2022, NO_x maximum impacts would occur during construction of the following overlapping activities: Force Main; Laurel Canyon, Whitsett and Fulton Pump Stations; Laurel Canyon, Whitsett and Fulton Connection Sewers; Kester Avenue Stormdrain Microtunneling, I-405 Microtunneling; and EVIS Junction.

In 2023, NO_x maximum impacts would occur during construction of the following overlapping activities: Force Main; Laurel Canyon, Whitsett and Fulton Pump Stations; Laurel Canyon, Whitsett and Fulton Diversions; SR-170 Microtunneling; and Sepulveda Microtunneling.

Table 3.1-6: Regional Construction Impacts

Source Category	PM ₁₀ total (lb/day)	PM _{2.5} total (lb/day)	NO _x (lb/day)	SO _x (lb/day)	CO (lb/day)	VOC (lb/day)
2021						
Off-road Construction Equipment	12.3	15.8	364.9	0.6	371.7	44.6
On-road Construction Vehicles	18.4	8.2	99.8	0.3	36.5	5.7
Fugitive Emissions	32.3	3.5	0.0	0.0	0.0	0.2
Total Construction Year 2021	63.0	27.5	464.7	1.0	408.1	50.4
CEQA Impacts						
Significance Threshold	150	55	100	150	550	75
Significant?	No	No	YES	No	No	No
2022						
Off-road Construction Equipment	17.0	15.6	355.8	0.6	360.0	42.2
On-road Construction Vehicles	29.4	10.8	134.0	0.4	41.3	7.6
Fugitive Emissions	29.6	4.5	0.0	0.0	0.0	0.2
Total Construction Year 2022	75.9	30.9	489.9	1.0	401.3	49.9
CEQA Impacts						
Significance Threshold	150	55	100	150	550	75
Significant?	No	No	YES	No	No	No
2023						
Off-road Construction Equipment	11.3	10.4	237.9	0.4	246.9	29.6
On-road Construction Vehicles	17.7	6.5	78.5	0.3	27.6	4.5
Fugitive Emissions	26.1	4.0	0.0	0.0	0.0	0.0
Total Construction Year 2023	55.2	20.8	316.4	0.7	274.6	34.2
CEQA Impacts						
Significance Threshold	150	55	100	150	550	75
Significant?	No	No	YES	No	No	No

Notes:

On-road Construction Vehicle emissions include exhaust, road dust, tire wear and brake wear emissions.

Fugitive emissions include construction dust.

Emissions might not add precisely due to rounding.

In addition to regional thresholds of significance, the SCAQMD developed the LST significance thresholds. LST is a screening methodology that allows users to determine, in lieu of conducting a dispersion modeling analysis, if a project would cause or contribute to an exceedance of the NAAQS or CAAQS. The LST methodology and associated thresholds are described in greater detail in Section 3.1.3, General Approach and Methodology and in Section 3.1.6, Thresholds of Significance. Table 3.1-7 presents the proposed Project's localized construction impacts for each construction year.

Table 3.1-7: Localized Construction Impacts

Year	Peak Day Emissions (lb/day) - Residential Receptor				Peak Day Emissions (lb/day) – Off-site worker receptor			
	PM ₁₀	PM _{2.5}	NO ₂	CO	PM ₁₀	PM _{2.5}	NO ₂	CO
2021								
Total On-site Emissions	21	9	137	144	21	9	137	144
LST Threshold	4	3	80	498	na	na	80	498
Significance Determination	YES	YES	YES	No			YES	No
2022								
Total On-site Emissions	26	10	137	144	26	10	137	144
LST Threshold	4	3	80	498	na	na	80	498
Significance Determination	YES	YES	YES	No			YES	No
2023								
Total On-site Emissions	22	8	110	117	22	8	110	117
LST Threshold	4	3	80	498	na	na	80	498
Significance Determination	YES	YES	YES	No			YES	No

Notes:

PM₁₀ and PM_{2.5} LST thresholds are relevant to sensitive receptors reasonably likely to be present for ≥24 hours. Since off-site worker receptors are not expected to be present for this duration, significance for particulates have been omitted for off-site worker receptors.

Project Size: 1 acre

Closest residential land receptor: within 25 meters based on Google Earth

Closest worker receptor: within 25 meters based on Google Earth

SCAQMD Source Receptor Area: 7

Source: SCAQMD LST Thresholds, Appendix C Mass Lookup Tables

As shown in Table 3.1-7, peak day on-site construction emissions of PM₁₀, PM_{2.5}, and NO₂ would exceed SCAQMD’s LST CEQA significance thresholds in each construction year. Based on the above, construction emissions associated with the proposed Project would be **potentially significant**.

In addition, projects that increase on-road traffic may also have the potential to contribute to CO “hot spots” caused primarily by vehicles idling at intersections. A CO hot spot is an ambient CO concentration associated with traffic emissions that exceeds an ambient air quality standard, in close proximity to an intersection. In its 1993 CEQA Air Quality Handbook, SCAQMD recommends that a local CO hotspot analysis be conducted if the intersection meets one of the following criteria: 1) the intersection would operate at a level of service (LOS) D or worse and where the project increases the volume to capacity (v/c) ratio by 2 percent, or 2) the project decreases LOS at an intersection from C to D.¹⁶ Although the traffic analysis shows that some intersections may be affected as described above, the SCAB is designated as an attainment/maintenance area for state and federal CO standards and CO emissions have decreased in the SCAB despite population growth. The CARB SIP inventory shows that CO emissions have decreased from 2,890 tons per day in 2000 to 503 tons per day in 2017 and are projected to decrease further to 335 tons per

¹⁶ SCAQMD CEQA Air Quality Handbook. 1993. Available from the SCAQMD.

day by 2021, the first year of project construction, in Los Angeles County.¹⁷ In addition, a detailed CO analysis was conducted in the Federal Attainment Plan for CO for the SCAQMD's 2003 AQMP.¹⁸ The locations selected for CO modeling represented the most congested intersections in the SCAB and were intended to reflect intersections with the highest CO concentrations. Of these locations, the Wilshire Boulevard/Veteran Avenue intersection experienced the highest CO concentration (4.6 ppm), which is well below the 35-ppm 1-hr CO NAAQS and below the 20-ppm 1-hr CO CAAQS. At the time of the 2003 AQMP, the Wilshire Boulevard/Veteran Avenue intersection was one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection, it can be reasonably inferred that CO hotspots would not be experienced at any locations in the project area due to the volume of traffic that would occur as a result of implementation of the proposed Project. Therefore, impacts are anticipated to be *less than significant* in this regard.

3.1.7.2.1 Mitigation Measures

MM-AQ-1: USEPA Tier 4 Off-road Diesel-Powered Construction Equipment. All off-road diesel-powered construction equipment greater than 50 horsepower shall meet, at a minimum, USEPA Tier 4 (final) off-road emissions standards. Contractor requirements to utilize Tier 4 (final) equipment or next cleanest equipment available will be subject to the provisions of this mitigation unless the Contractor provides a written finding that:

- The Contractor does not have the required types of Tier 4 trucks or equipment within its current available inventory and has made a good faith effort to lease or rent such trucks or equipment, but they are not available.
- The Contractor has been awarded funding that would provide some or all of the cost to retrofit, repower, or purchase trucks or equipment that comply with Tier 4, but the funding has not yet been provided and the Contractor has attempted in good faith to lease or rent such trucks or equipment but they are not available.
- Contractor has ordered equipment or trucks in compliance with Tier 4 at least 60 days before that equipment or vehicle is needed at the project site, but that equipment or vehicle has not yet arrived, and the Contractor has attempted in good faith to lease or rent such trucks or equipment, but they are not available.
- Certain construction-related diesel equipment or trucks that will only be used on the project site or as a project haul truck for fewer than 20 calendar days per calendar year may have engines that do not meet Tier 4 standards. Note that the project site includes all areas that are under construction at any time in a given calendar year.

¹⁷ California Air Resources Board. California Emissions Projection Analysis Model (CEPAM) 2016 SIP Standard Emission Tool. Available at: <https://www.arb.ca.gov/app/emsinv/fcemssumcat/fcemssumcat2016.php>. Last accessed: May 29, 2019.

¹⁸ South Coast Air Quality Management District. 2003 AQMP. Appendix V. 2003. Available at: <https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/2003-aqmp>. Last accessed: May 29, 2019.

In any of the situations described above, the Contractor/Subcontractor shall provide the next cleanest piece of equipment or truck as provided by the step-down schedules in Table A for Off-road Equipment and Table B for On-road Equipment.

Nothing in the above shall require an emissions control device (i.e., CARB-verified Diesel Emission Control Strategies - VDECS) that does not meet Occupational Safety and Health Administration standards.

MM-AQ-1: Table A Off-road Equipment Compliance Step Down Schedule		
Compliance Alternative	Engine Standard	VDECS
1	Tier 4 interim	N/A*
2	Tier 3	Level 3
3	Tier 3	Uncontrolled
* Tier 4 (interim or final) or 2007 model year equipment not already supplied with a factory-equipped diesel particulate filter shall be outfitted with Level 3 VDECS.		
Equipment less than Tier 3 shall not be permitted.		

MM-AQ-1: Table B On-road Trucks Compliance Step Down Schedule		
Compliance Alternative	Engine Model Year	VDECS
1	2007	N/A*
2	2004	Level 3
3	2004	Uncontrolled
* 2007 Model Year equipment not already supplied with a factory-equipped diesel particulate filter shall be outfitted with Level 3 VDECS.		
Equipment with a model year earlier than Model Year 2004 shall not be permitted.		

USEPA Tier 4 Final engine standards shall be met for all equipment except that which is unavailable within 100 miles of the City of Los Angeles and the contractor is able to provide proof to the satisfaction of the City. Under this circumstance, the availability of Tier 4 construction equipment shall be reassessed on an annual basis. For example, if a piece of equipment is not available on January 1, 2021, the contractor shall reassess this availability on January 1, 2022. If available, the contractor shall replace the non-Tier 4 equipment by March 1, 2022. If the circumstance described above where Tier 4 equipment is not available, the equipment shall meet USEPA Tier 3 emission standards.

3.1.7.2.2 Significance of Impact After Mitigation

For the purposes of emission calculations and determination of significance, emission factors reflecting 50 percent Tier 3 and 50 percent Tier 4 emission standards were used. This is a conservative assumption because it provides a higher estimate of mitigated emissions, given that Tier 4 construction equipment may not be completely available. Table 3.1-8 presents regional construction impacts after mitigation. Table 3.1-9 presents localized construction impacts after mitigation.

Table 3.1-8: Regional Construction Impacts with Mitigation

Source Category	PM ₁₀ total	PM _{2.5} total	NO _x	SO _x	CO	VOC
2021						
Off-road Construction Equipment	7.6	10.7	256.0	0.6	395.0	15.1
On-road Construction Vehicles	18.4	8.2	99.8	0.3	36.5	5.7
Fugitive Emissions	32.3	3.5	0.0	0.0	0.0	0.2
Total Construction Year 2021	58.3	22.4	355.8	1.0	431.4	21.0
CEQA Impacts						
Significance Threshold	150	55	100	150	550	75
Significant?	No	No	YES	No	No	No
2022						
Off-road Construction Equipment	10.2	10.2	239.8	0.6	387.2	14.3
On-road Construction Vehicles	29.4	10.8	134.0	0.4	41.3	7.6
Fugitive Emissions	29.6	4.5	0.0	0.0	0.0	0.2
Total Construction Year 2022	69.2	25.5	373.8	1.0	428.5	22.0
CEQA Impacts						
Significance Threshold	150	55	100	150	550	75
Significant?	No	No	YES	No	No	No
2023						
Off-road Construction Equipment	7.1	7.1	170.2	0.4	261.0	10.0
On-road Construction Vehicles	17.7	6.5	78.5	0.3	27.6	4.5
Fugitive Emissions	26.1	4.0	0.0	0.0	0.0	0.0
Total Construction Year 2023	51.0	17.5	248.6	0.7	288.7	14.6
CEQA Impacts						
Significance Threshold	150	55	100	150	550	75
Significant?	No	No	YES	No	No	No

Notes:

On-road Construction Vehicle emissions include exhaust, road dust, tire wear and brake wear emissions.

Fugitive emissions include construction dust.

Emissions might not add precisely due to rounding.

Table 3.1-9: Localized Construction Impacts with Mitigation

Year	Peak Day Emissions (lb/day) - Residential Receptor				Peak Day Emissions (lb/day) – Off-site worker receptor			
	PM ₁₀	PM _{2.5}	NO ₂	CO	PM ₁₀	PM _{2.5}	NO ₂	CO
2021								
Total On-site Emissions	19	7	96	153	19	7	96	153
LST Threshold	4	3	80	498	na	na	80	498
Significance Determination	YES	YES	YES	No			YES	No
2022								
Total On-site Emissions	24	8	96	153	24	8	96	153
LST Threshold	4	3	80	498	na	na	80	498
Significance Determination	YES	YES	YES	No			YES	No
2023								
Total On-site Emissions	21	6	79	124	21	6	79	124
LST Threshold	4	3	80	498	na	na	80	498
Significance Determination	YES	YES	No	No			No	No

Notes:

PM₁₀ and PM_{2.5} LST thresholds are relevant to sensitive receptors reasonably likely to be present for ≥24 hours. Since off-site worker receptors are not expected to be present for this duration, significance for particulates have been omitted for off-site worker receptors.

Project Size: 1 acre

Closest residential land receptor: 25 meters from Google Earth

Closest worker receptor: 25 meters from Google Earth

SCAQMD Source Receptor Area: 7

Source: SCAQMD LST Thresholds, Appendix C Mass Lookup Tables

Table 3.1-8 shows that although regional NO_x impacts would be reduced with implementation of mitigation, they would remain above the level of significance. Table 3.1-9 shows that although localized NO₂, PM₁₀, and PM_{2.5} impacts would be reduced, they would remain above the LST thresholds for construction years 2021 and 2022, and localized PM₁₀, and PM_{2.5} for construction year 2023. Therefore, the air quality impact would be **significant and unavoidable** for NO₂, PM₁₀, and PM_{2.5} impacts for construction years 2021 and 2022 and localized PM₁₀, and PM_{2.5} for construction year 2023. The air quality impact in 2023 for localized NO₂ impacts would be reduced to **less than significant after mitigation**.

3.1.7.3 Impact 3.1-3

Impact 3.1-3: The proposed Project would not expose sensitive receptors to substantial pollutant concentrations.

Sensitive receptors include residences, hospitals, or convalescent facilities. The nearest sensitive receptors would be residences located within 25 meters of proposed Project alignment along Victory Boulevard between Vineland Avenue and Haskell Avenue. The closest off-site workers would also be located within 25 meters of proposed Project alignment.

Construction activities would result in short-term emissions of DPM, a TAC, along the six-mile alignment from the combustion of diesel fuel in off-road construction equipment engines and on-road vehicles. Impacts to sensitive receptors are typically evaluated in terms of exposure to TACs,

in accordance with the 2015 USEPA's Office of Environmental Health Hazard Assessment Guidelines.¹⁹

Proposed Project construction activities would occur over a period of approximately 30 months and would be spread out over a six-mile alignment. Construction activities in a given construction area are unlikely to impact receptors in another construction area along the alignment for the same reason as described in the LST discussion in Section 3.1.3, General Approach and Methodology, and under Impact 3.1-2. Furthermore, construction activities in any single location would be transitory and short-term. Assessment of cancer risk is typically based on a 30-year exposure period. Because exposure to diesel exhaust would be limited at any given location, construction is not anticipated to result in substantive elevated cancer risk to exposed persons due to the short-term and spread-out nature of the anticipated construction activities.

Therefore, construction and operation of the proposed Project would not expose sensitive receptors to substantial pollutant concentrations; therefore, the proposed Project would have a *less than significant* impact.

3.1.7.3.1 Mitigation Measures

No mitigation is required.

3.1.7.3.2 Significance of Impact After Mitigation

Impacts would be *less than significant*.

3.1.7.4 Impact 3.1-4

Impact 3.1-4: The proposed Project would not result in other emissions such as those leading to odors adversely affecting a substantial number of people.

Proposed Project construction activities would generate air pollutants from the combustion of diesel fuel and asphalt activities. Emissions associated with construction activities would be dispersed over the six-mile alignment, would be short-term at any single construction location, and transient. Furthermore, SCAQMD Rules 1108 and 1108.1 limit VOCs in cutback asphalt and emulsified asphalt products sold within the air district, reducing the potential for odor impacts.

In addition, the proposed Project would require connections to six existing sewers in order to divert their flows, and a force main connection to the EVIS. Flow within the existing sewers may need to be diverted via temporary connections to allow the diversion structure to be constructed. Once the diversion structures have been constructed, the temporary diversions would be removed, and the diversion structures would become operational. The temporary diversion would be made during periods of low flow, which typically occur in late evenings and early mornings. During placement and removal of the temporary diversions, some sewer gases can be released to the atmosphere. However, because the connections would be made during low flow periods when flows are minimal, and receptors are indoors, and because the diverted sewers are located high enough in the system that substantial odors would not be generated, the temporary connections are not substantial sewer gases and associated odors are not expected to adversely affect a substantial number of people. In addition, as detailed in Subsection 7-8.9 Odor

¹⁹ Office of Environmental Health Hazard Assessment. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, March 2015.

Control, f the City of Los Angeles Department of Public Works Brown Book, the Contractor shall furnish all construction labor, materials and equipment required and shall carry out effective measures whenever and as often as necessary to prevent the discharge of a nuisance odor from its operation into the atmosphere in such quantity as will violate the regulations of any legal constituted authority. During construction, the Contractor shall notify the City at least 48 hours in advance when potential odor-causing activities are scheduled for construction.²⁰

During operation, the proposed Project would convey wastewater after diversion from existing sanitary sewers. Generally, odors in the wastewater system increase as the wastewater ages during conveyance, with odors more likely to be generated the farther from its source. Wastewater generated within the San Fernando Valley and is conveyed in the sewers that would be diverted would typically travel farther downstream within the San Fernando Valley, be conveyed through the narrows near Griffith Park, then travel farther downstream beneath Downtown and South Los Angeles before heading westward through the Mid-Cities area towards the Hyperion Treatment Plant. Odors from organic compounds in sewer gases are more prevalent in areas lower in the system where the wastewater has aged. Sewer gases are conveyed in the air space above the wastewater within the wastewater collection system to the reclamation or treatment plants.

Sometimes odors can be released from maintenance hole locations if the system becomes overburdened (sewer pipes become too full) and the air spaces diminish. Wastewater is generated fairly close to their diversion points under the proposed Project and would not have aged to the point that it would generate substantial odors. Under the proposed Project, wastewater from those sanitary sewers would be diverted to the new force main, where it would be pumped to the DCTWRP.

Although the Project components would be operated as a closed, self-contained system, air release valves may be required along the alignment. All valves would be located underground, in valve vaults, covered by closed and sealed access covers. The location of the existing sewers that the Project proposes to divert or connect to are in an area of the wastewater collection system that are ‘upstream’ of the treatment facilities; therefore, there is less likelihood that sewer gases would develop within the sewers in the Project area.

To date, the City’s Bureau of Sanitation has not received odor complaints regarding the existing sewers in the Project area that the Project proposes to divert or connect to.²¹ Therefore, construction and operation of the proposed Project would not expose a substantial number of people to odors and the proposed Project would have a *less than significant* impact.

3.1.7.4.1 Mitigation Measures

No mitigation is required.

3.1.7.4.2 Significance of Impact After Mitigation

Impacts would be *less than significant*.

²⁰ City of Los Angeles Department of Public Works Brown Book, 7th Edition.

²¹ Personal communication, 2019. City of Los Angeles Bureau of Sanitation staff Vlad Lorenzo. March 2019

3.1.8 Summary of Impact Determinations

Table 3.1-10 summarizes the impact determinations of the proposed Project related to air quality, as described above in the detailed discussion in Section 3.1.7. Identified potential impacts are based on the significance criteria presented in Section 3.1.6, the information and data sources cited throughout Section 3.1.

Table 3.1-10: Air Quality Impacts and Mitigation Measures for the Proposed Project

Air Quality Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Impact 3.1-1: The proposed Project would not conflict with or obstruct implementation of the applicable air quality plan.	Less than Significant	No mitigation is required	Less than Significant
Impact 3.1-2: The proposed Project would violate an air quality standard or contribute substantially to an existing or projected air quality violation.	Potentially Significant	MM-AQ-1	Significant and Unavoidable for localized NO ₂ , PM ₁₀ , and PM _{2.5} emissions for construction years 2021 and 2022 and localized PM ₁₀ , and PM _{2.5} for construction year 2023. The air quality impact in 2023 for localized NO ₂ construction impacts would be reduced to less than significant after mitigation. In addition, there would be a significant unavoidable impact for regional NO _x emissions for all construction years after mitigation.
Impact 3.1-3: The proposed Project would not expose sensitive receptors to substantial pollutant concentrations.	Less than Significant	No mitigation is required	Less than Significant
Impact 3.1-4: The proposed Project would not result in other emissions such as those leading to odors adversely affecting a substantial number of people.	Less than Significant	No mitigation is required	Less than Significant

3.1.8.1 Mitigation Measures

MM-AQ-1: USEPA Tier 4 Off-road Diesel-Powered Construction Equipment. All off-road diesel-powered construction equipment greater than 50 horsepower shall meet, at a minimum, USEPA Tier 4 (final) off-road emissions standards. Contractor requirements to utilize Tier 4 (final) equipment or next cleanest equipment available

will be subject to the provisions of this mitigation unless the Contractor provides a written finding that:

- The Contractor does not have the required types of Tier 4 trucks or equipment within its current available inventory and has made a good faith effort to lease or rent such trucks or equipment, but they are not available.
- The Contractor has been awarded funding that would provide some or all of the cost to retrofit, repower, or purchase trucks or equipment that comply with Tier 4, but the funding has not yet been provided and the Contractor has attempted in good faith to lease or rent such trucks or equipment but they are not available.
- Contractor has ordered equipment or trucks in compliance with Tier 4 at least 60 days before that equipment or vehicle is needed at the project site, but that equipment or vehicle has not yet arrived, and the Contractor has attempted in good faith to lease or rent such trucks or equipment, but they are not available.
- Certain construction-related diesel equipment or trucks that will only be used on the project site or as a project haul truck for fewer than 20 calendar days per calendar year may have engines that do not meet Tier 4 standards. Note that the project site includes all areas that are under construction at any time in a given calendar year.

In any of the situations described above, the Contractor/Subcontractor shall provide the next cleanest piece of equipment or truck as provided by the step-down schedules in Table A for Off-road Equipment and Table B for On-road Equipment.

Nothing in the above shall require an emissions control device (i.e., CARB-verified Diesel Emission Control Strategies -VDECS) that does not meet Occupational Safety and Health Administration standards.

MM-AQ-1: Table A Off-road Equipment Compliance Step Down Schedule		
Compliance Alternative	Engine Standard	VDECS
1	Tier 4 interim	N/A*
2	Tier 3	Level 3
3	Tier 3	Uncontrolled
* Tier 4 (interim or final) or 2007 model year equipment not already supplied with a factory-equipped diesel particulate filter shall be outfitted with Level 3 VDECS.		
Equipment less than Tier 3 shall not be permitted.		

MM-AQ-1: Table B On-road Trucks Compliance Step Down Schedule		
Compliance Alternative	Engine Model Year	VDECS
1	2007	N/A*
2	2004	Level 3
3	2004	Uncontrolled
* 2007 Model Year equipment not already supplied with a factory-equipped diesel particulate filter shall be outfitted with Level 3 VDECS.		

Equipment with a model year earlier than Model Year 2004 shall not be permitted.

USEPA Tier 4 Final engine standards shall be met for all equipment except that which is unavailable within 100 miles of the City of Los Angeles and the contractor is able to provide proof to the satisfaction of the City. Under this circumstance, the availability of Tier 4 construction equipment shall be reassessed on an annual basis. For example, if a piece of equipment is not available on January 1, 2021, the contractor shall reassess this availability on January 1, 2022. If available, the contractor shall replace the non-Tier 4 equipment by March 1, 2022. If the circumstance described above where Tier 4 equipment is not available, the equipment shall meet USEPA Tier 3 emission standards.

No feasible mitigation measures, other than MM-AQ-1 are available.

3.1.9 Significant Unavoidable Impacts

Construction of the proposed Project would result in **significant unavoidable** impacts for regional NO_x emissions, as well as localized NO₂, PM₁₀, and PM_{2.5} emissions for construction years 2021 and 2022 and localized PM₁₀, and PM_{2.5} for construction year 2023. Therefore, the proposed Project would violate an air quality standard or contribute substantially to an existing or projected air quality violation. Emissions are primarily attributable to combustion exhaust from construction equipment.

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Section 3.2

Cultural Resources and Tribal Cultural Resources

3.2.1 Introduction

This section analyzes the proposed Project's construction impacts on cultural and tribal cultural resources. As part of this analysis, the section describes the general approach and methodology, regulatory framework, environmental setting, and significance criteria used to evaluate the proposed Project's cultural and tribal cultural resources effects. In addition, discussion of tribal cultural resources in this section includes discussion of tribal consultation completed in accordance with the requirements of Assembly Bill (AB) 52.

As discussed in the NOP/IS (Appendix A of this Draft EIR), operation of the proposed Project would be automated and located underground, with only control panel boxes at pump stations located above ground. The proposed Project components would be operated as a closed system, which would not affect cultural or tribal cultural resources. Therefore, no further evaluation in the EIR of Project operations is required.

One comment specific to tribal cultural resources was received during the NOP review process as follows:

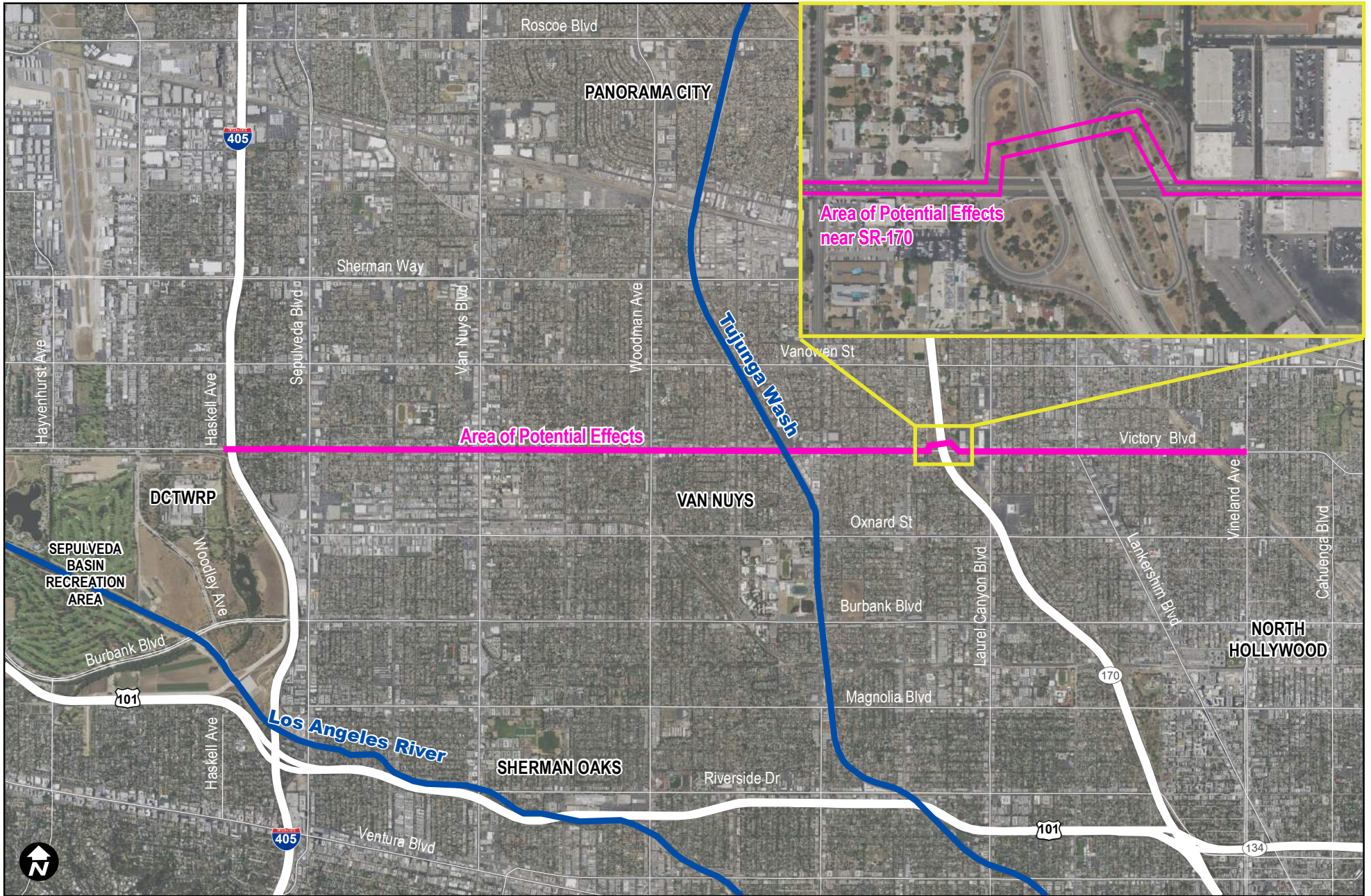
- Gabrieleno Band of Mission Indians - Kizh Nation (referred to herein as the Kizh Nation)
 - If any ground disturbance taking place our tribal government would like to consult with your lead agency.

To provide a technical basis for this impact analysis, ArchaeoPaleo Resource Management, Inc. (APRMI) prepared an Archeological and Paleontological Resources Phase I Assessment of cultural resources at or near the Project site and an assessment of the proposed Project's potential effects on those resources. That report, which was completed in March 2019, is attached to this EIR as Appendix D. The results of the APRMI report are summarized in Section 3.2.4, Environmental Setting.

3.2.2 General Approach and Methodology

The following describes the general approach to the cultural and tribal cultural resources investigation completed for the proposed Project, and the basis for how the specific resources evaluated in the impact's discussion were identified.

To establish the historic resources inventory for the property, an archaeological and paleontological survey and a records search were conducted with respect to the Area of Potential Effect (APE), which extends from the middle of the street curb to curb, along Victory Boulevard and extending belowground to the depth of proposed Project construction (as shown in Figure 3.2-1).



Source: National Geographic, 2018.

Figure 3.2-1

Six (6) proposed pump stations and accompanying diversion structures along Victory Boulevard would be installed on the pedestrian sidewalk that parallels the street. The APE boundary is the public right-of-way (street to the back of the sidewalks). Refer to Section 2.4, Project Characteristics, in Chapter 2, Project Description of this Draft EIR for details on the project components, and Appendix B, Detailed Construction Assumptions of this Draft EIR regarding the anticipated depth of construction. In addition, to address potential vibration impacts on unknown historic resources, any construction within 21 feet of adjacent structures was considered part of the APE.

The purpose of the archaeological and paleontological resources investigation (as detailed in Appendix D of this Draft EIR) was to locate and determine the potential for any cultural and tribal cultural resources to be affected by the proposed Project. This work was conducted pursuant to state and federal guidelines.

A cultural resource records and literature search at the South Central Coastal Information Center (SCCIC), the local repository for the California Historical Resources Information System, was conducted to identify any cultural resources on or within a half-mile radius of the Project site. Current inventories of the National Register of Historic Places (NRHP), California Historical Landmarks, California Points of Historical Interest, the California State Historic Resources Inventory for Los Angeles County, the California Register of Historical Resources, and the Los Angeles Historic-Cultural Monument (HCM) List were examined to determine any local resources that have been previously evaluated for historic significance. The California Office of Historic Preservation's definition of historic resources was used in that any building or object that is 45 years of age or older is considered historic.

Other resources reviewed included, the United States Geological Service archival topographic maps from 1894-1979, current 7.5' topographic maps of the Van Nuys/Burbank, CA quadrangles, and archival Google Earth aerial photographs of the region. The Los Angeles Historic Resources Inventory was examined for built environment, including architecturally significant buildings and places of social importance (historic districts, bridges, parks, and streetscapes).

A paleontological resources records search from the Vertebrate Paleontology Department of the Los Angeles Natural History Museum and a University of California Museum of Paleontology Specimen Search were conducted for any known fossil sites within the APE. Geologic maps were also observed for any fossiliferous formations that are located within the Project area.

Field reconnaissance was conducted to evaluate the presence of any archeological and paleontological sites along the alignment. A combination of pedestrian and windshield survey methods were utilized to cover the extent of the Project area.

Within the CEQA context, it is important to understand the distinction and relationship between *tribal cultural resources*, on one hand, and *archaeological resources*, on the other. Tribal cultural resources are those resources that a tribe or group of tribes considers significant or culturally important from a tribal perspective. For this reason, CEQA now requires that lead agencies consult with interested tribes to determine (i) whether such resources exist on a project site; (ii) whether they are significant; (iii) whether they will be adversely affected by a proposed project; and (iv) the best means to mitigate the anticipated impact and protect the resources in question. (See PRC Section 21080.3.2.) Archaeological resources, by contrast, are identified through an archaeological analysis using standard archaeological techniques. In some cases, the archaeological resources on

a given site will be related to Native American Indians, in which case the resources may be considered a tribal cultural resource as well. In any event, significant archaeological resources must be assessed and mitigated pursuant to the standards and rules set forth in the CEQA Guidelines, including CEQA Guidelines section 15126.4. The standards and rules differ somewhat from those that apply to tribal cultural resources.

A Sacred Lands File records search for the Project site was requested from the California Native American Heritage Commission (NAHC) to determine whether any Native American cultural resources in the NAHC database were located within the Project site or within a half-mile radius. A Sacred Lands File records search is one tool a lead agency can use to determine whether tribal cultural resources may exist within the vicinity of a project.

As discussed in Section 3.2.3 below, AB 52 establishes a consultation process between California Native American tribal governments and lead agencies applicable to any project for which an NOP, Notice of Intent to Adopt a Mitigated Negative Declaration, or Notice of Intent to Adopt a Negative Declaration is filed on or after July 1, 2015. When the City initiated preparation of the NOP for the proposed Project, the City had not received a written request from any tribe indicating its wish to be notified of projects within its traditionally and culturally affiliated areas, as required by PRC Section 21080.3.1(b). Nevertheless, commensurate with the intent of AB 52, the City sent letters of “Formal Notification of Consultation Opportunity Pursuant to PRC Section 21080.3.1” on February 5, 2019, to six Native American tribes identified by NAHC, providing formal notification of the City’s intent to undertake the proposed Project and identifying the opportunity to request consultation. The results of the AB 52 consultation process are discussed in Section 3.2.4.2 below.

3.2.3 Regulatory Framework

3.2.3.1 Federal

Antiquities Act of 1906

The Antiquities Act of 1906 (16 United States Code [U.S.C.] Section 431 et seq.), provides for the establishment and preservation of national monuments, historic landmarks, and historic or prehistoric structures, or other items of interest on federally owned lands. Additionally, Section 433 of this act prohibits the purposeful taking, excavation, damage, and destruction of historic or prehistoric ruins, monuments, or other objects of antiquity on federally owned lands. Other “objects of antiquity” are interpreted to include paleontological remains.

National Environmental Policy Act of 1969

NEPA of 1969, specifically Public Law 91-190, 83 Statue. 852, 42 U.S.C. Sections 4321-4327, mandates the preservation of “important historic, cultural, and natural aspects of our national heritage” (Section 101.b4). In addition, NEPA is interpreted as providing for the protection and preservation of paleontological remains.

Section 106 of the National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) mandates the following:

“The head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval

of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure or object that is included in or eligible for inclusion in the National Register [of Historic Places (NRHP)]. The head of any such Federal agency shall afford the Advisory Council on Historic Preservation [The Council], established under Title II of this Act, reasonable opportunity to comment with regard to such an undertaking.” [16 U.S.C. Section 470f]

An effect, or “adverse effect,” as defined by 36 Code of Federal Regulations (CFR) Section 800.5 (a)(1), occurs

when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register [NRHP] in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association.

To further clarify the meaning of what constitutes an adverse effect, 36 CFR Section 800.5 (a)(2) identifies the following: physical destruction, alteration that is not in keeping with the Secretary of the Interior’s Standards for the Treatment of Historic Properties per 36 CFR Section 68, removal, change of use, alteration of property setting, relocation, application of intrusive elements, neglect, and change of ownership (federal to non-federal).

The NHPA (16 U.S.C. 42 et seq.) defines a historic resource as significant if eligible for inclusion in the NRHP as defined by one of four eligibility criteria set forth in 36 CFR Section 60.4A. Determination of historic resource significance is carried out via implementation of the Section 106 process of the NHPA, as set forth by the Council per 36 CFR Section 800 “Protection of Historic Properties.” Such significant historic resources can include archaeological sites of pre-historic or historic context, historic buildings, structures, or objects of state, local, or federal importance that retain integrity of location, design, setting, feeling, association, material, and/or workmanship and

- (A) Are associated with events which have made a significant contribution to the broad patterns of our history, or
- (B) Are associated with the lives of persons significant in our past, or
- (C) Embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic value, or are representative of significant and distinguishable entity of which the component may lack individual distinction, or
- (D) Yield, or are likely to yield, data important to our understanding of prehistory and/or history.

Native American Graves Protection and Repatriation Act (25 U.S.C. Section 3001 et seq.)

The discovery of human remains is always a possibility during construction-related disturbances. The Native American Graves Protection and Repatriation Act, was enacted November 16, 1990. It states that the “ownership or control of Native American cultural items,” which include human remains, funerary objects, sacred objects, and objects of cultural patrimony, that are “excavated or discovered on Federal or tribal lands” after the law went into effect is held by the lineal descendants

of the Native American (or Hawaiian) to whom the objects originally belonged. If the lineal descendants cannot be found, then their ownership is conferred to the “Indian” tribe or Native Hawaiian organization on whose land the objects or remains were discovered or that has the closest cultural affiliation.

3.2.3.2 State

California Environmental Quality Act

According to Section 15064.5(a) of the State CEQA Guidelines (Title 14 CCR, Section 15064.5(a)), the term “historical resource” includes the following:

1. A resource listed in, or determined to be eligible by, the State Historical Resources Commission for listing in the California Register of Historic Place (CRHR) (PRC Sections 5024.1; Title 14 CCR, Section 4850 et seq.).
2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the CRHR (PRC Sections 5024.1, Title 14, Section 4852), including the following:
 - a) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
 - b) Is associated with the lives of persons important in our past;
 - c) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
 - d) Has yielded, or may be likely to yield, information important in prehistory or history.
4. The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC Section 5020.1[k]), or identified in an historical resources survey (meeting the criteria in PRC Section 5024.1[g]) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

According to Section 15064.5(b) of the State CEQA Guidelines, a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. CEQA defines a substantial adverse change as:

1. Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
2. The significance of an historical resource is materially impaired when a project:
 - a) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR; or
 - b) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
 - c) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA.

Section 15064.5(c) of the State CEQA Guidelines applies to effects on archaeological sites and contains the following additional provisions regarding archaeological sites:

1. When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subsection (a).
2. If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the PRC, Section 15126.4 of the guidelines, and the limits contained in Section 21083.2 of the PRC do not apply.
3. If an archaeological site does not meet the criteria defined in subsection (a), but does meet the definition of a unique archaeological resource in Section 21803.2 of the PRC, the site shall be treated in accordance with the provisions of Section 21083.2. The time and cost limitations described in PRC Section 21083.2 (c-f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.
4. If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and

the effect on it are noted in the IS or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

Assembly Bill 52

AB 52, approved by Governor Brown on September 25, 2014, establishes a new category of resources in CEQA called “tribal cultural resources” that considers tribal cultural values in addition to scientific and archaeological values when determining impacts and mitigation. Further, AB 52 establishes a consultation process between California Native American tribal governments and lead agencies applicable to any project for which a Notice of Preparation, Notice of Intent to Adopt a Mitigated Negative Declaration, or Notice of Intent to Adopt a Negative Declaration is filed on or after July 1, 2015.

Section 1 of AB 52 states the legislature’s intent as follows:

“In recognition of California Native American tribal sovereignty and the unique relationship of California local governments and public agencies with California Native American tribal governments, and respecting the interests and roles of project proponents, it is the intent of the Legislature, in enacting this act, to accomplish all of the following:

- (1) Recognize that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities.
- (2) Establish a new category of resources in the California Environmental Quality Act called “tribal cultural resources” that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation.
- (3) Establish examples of mitigation measures for tribal cultural resources that uphold the existing mitigation preference for historical and archaeological resources of preservation in place, if feasible.
- (4) Recognize that California Native American tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated. Because the California Environmental Quality Act calls for a sufficient degree of analysis, tribal knowledge about the land and tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources.
- (5) In recognition of their governmental status, establish a meaningful consultation process between California Native American tribal governments and lead agencies, respecting the interests and roles of all California Native American tribes and project proponents, and the level of required confidentiality concerning tribal cultural resources, at the earliest possible point in the California Environmental Quality Act environmental review process, so that tribal cultural resources can be identified, and culturally appropriate mitigation and mitigation monitoring programs can be considered by the decision-making body of the lead agency.

- (6) Recognize the unique history of California Native American tribes and uphold existing rights of all California Native American tribes to participate in, and contribute their knowledge to, the environmental review process pursuant to the California Environmental Quality Act (Division 13 [commencing with PRC Section 21000]).
- (7) Ensure that local and tribal governments, public agencies, and project proponents have information available, early in the California Environmental Quality Act environmental review process, for purposes of identifying and addressing potential adverse impacts to tribal cultural resources and to reduce the potential for delay and conflicts in the environmental review process.
- (8) Enable California Native American tribes to manage and accept conveyances of, and act as caretakers of, tribal cultural resources.
- (9) Establish that a substantial adverse change to a tribal cultural resource has a significant effect on the environment.”¹

Tribal cultural resources, as defined in PRC Section 21074, are a site, feature, place, or 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 either:

Listed or eligible for listing in the California Register of Historical Resources (California Register), or in a local register of historical resources as defined in PRC Section 5020.1(k), or

A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1(c). In applying the criteria set forth in PRC Section 5024.1(c) for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

The specific steps and timelines governing the notice and consultation process under AB 52 are as follows:

- (1) The NAHC will provide each tribe with a list of all public agencies that may be lead agencies under CEQA within the geographic area with which the tribe is traditionally and culturally affiliated, the contact information of those public agencies, and information on how the Tribe may request consultation. This list must be provided on or before July 1, 2016 (PRC 5097.94(m)).
- (2) If a tribe wishes to be notified of projects within its traditionally and culturally affiliated area, the tribe must submit a written request to the relevant lead agency (PRC Section 21080.3.1(b)).

¹ State of California, Governor’s Office of Planning and Research. Discussion Draft Technical Advisory: AB 52 and Tribal Cultural Resources in CEQA. May 2015. Available: https://www.opr.ca.gov/docs/DRAFT_AB_52_Technical_Advisory.pdf.

- (3) Within 14 days of determining that a project application is complete, or to undertake a project, the lead agency must provide formal notification, in writing, to the tribes that have requested notification of proposed projects as described in step 2, above. That notice must include a description of the project, its location, and must state that the tribe has 30 days to request consultation.
- (4) If it wishes to engage in consultation on the project, the tribe must respond to the lead agency within 30 days of receipt of the formal notification described in step 3, above. The tribe's response must designate a lead contact person. If the tribe does not designate a lead contact person, or designates multiple people, the lead agency shall defer to the individual listed on the contact list maintained by the NAHC.
- (5) The lead agency must begin the consultation process with the tribes that have requested consultation within 30 days of receiving the request for consultation.
- (6) Consultation concludes when either: 1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource, or 2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC Section 21080.3.2(b)(1) and (2)). Note that consultation can also be ongoing throughout the CEQA process.²

Office of Historic Preservation

The Office of Historic Preservation (OHP), an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also carries out the duties as set forth in the Public Resources Code and maintains the California Historical Resources Information System and the California Register. The State Historic Preservation Officer is an appointed official who implements historic preservation programs within the State's jurisdiction. CEQA requires project CEQA documents to identify, analyze, and provide feasible mitigation for substantial adverse impacts that may affect the significance of identified historical resources.

California Register of Historical Resources

The California Register was created by AB 2881, which was signed into law on September 27, 1992. The California Register is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change." The criteria for eligibility for the California Register are based on National Register criteria. Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the NRHP (also referred to as the National Register). Per OHP's Instructions for Recording Historical Resources, physical evidence of human activities more than 45 years old may be recorded for purposes of inclusion in OHP's filing system although, similar to the National Register, resources less than 45 years old may also be filed.

² State of California, Governor's Office of Planning and Research, Discussion Draft Technical Advisory: AB 52 and Tribal Cultural Resources in CEQA, May 2015. Available: https://www.opr.ca.gov/docs/DRAFT_AB_52_Technical_Advisory.pdf.

The California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally Determined Eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and
- California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Individual historical resources;
- Historical resources contributing to historic districts;
- Historical resources identified as significant in historical resources surveys with significance ratings of Categories 1 through 5; and
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as a historic preservation overlay zone.

To be eligible for the California Register, an historical resource must be significant at the local, state, or national level, under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

Additionally, an historical resource must retain enough of its historic character or appearance to be recognizable as an historical resource and to convey the reasons for its significance. Historical resources that have been rehabilitated or restored may be evaluated for listing. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. The resource must also be judged with reference to the particular criteria under which it is proposed for eligibility. It is possible that an historical resource may not retain sufficient integrity to meet the criteria for listing in the National Register but may still be eligible for listing in the California Register.³

³ 14 California Code of Regulations, Chapter 11.5, Section 4852(c). Types of Historical Resources and Criteria for Listing in the California Register of Historical Resources.

Under CEQA, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment."⁴ This statutory standard involves a two-part inquiry. The first part is a determination of whether the project involves an historical resource. If it does, the inquiry addresses whether the project may cause a "substantial adverse change in the significance" of the resource. State CEQA Guidelines Section 15064.5 provides that, for the purposes of CEQA compliance, the term "historical resources" shall include the following:

A resource listed in, or determined to be eligible by, the State Historical Resources Commission for listing in the California Register.

A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in an historical resource survey meeting the requirements in PRC Section 5024.1(g), shall be presumed to be historically or culturally significant. Public agencies must treat such resources as significant for purposes of CEQA unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets one of the criteria for listing on the California Register.

The fact that a resource is not listed in or determined to be eligible for listing in the California Register, not included in a local register of historical resources (pursuant to PRC Section 5020.1[k]), or identified in an historical resources survey (meeting the criteria in PRC Section 5024.1[g]) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

3.2.3.3 Local

City of Los Angeles General Plan

The policy of the City of Los Angeles is to "identify and protect significant archaeological and paleontological sites and/or resources known to exist or that are identified during land development, demolition or property modification activities."⁵ The City's General Plan Conservation Element⁶ protects endangered paleontological and archaeological resources by adhering to CEQA mandates. In regard to archaeological resources, a qualified archaeologist is to monitor excavations or other subsurface activities in a project area that has been determined to have archaeological significance and is to evaluate all potential impacts to archaeological materials.

⁴ California PRC Section 21084.1.

⁵ City of Los Angeles. Conservation Element of the Los Angeles General Plan, Chapter 2, Section 5. Available: <https://planning.lacity.org/cwd/gnlpln/consvelt.pdf>. Accessed April 2019.

⁶ City of Los Angeles. Conservation Element of the Los Angeles General Plan. Available: <https://planning.lacity.org/cwd/gnlpln/consvelt.pdf>. Accessed April 2019.

In regard to paleontological resources, a qualified paleontologist must assess a project's potential impact to a paleontological site and determine the appropriate mitigation if a paleontological site will be damaged or destroyed. If significant paleontological or archaeological resources are uncovered during a project, excavations may be halted in order to assess, document, protect, and possibly remove the resources.

Cultural Heritage Ordinance

Sec. 22.171.7. Monument Designation Criteria. For purposes of this article, a Historic-Cultural Monument is any site (including significant trees or other plant life located on the site), building or structure of particular historic or cultural significance to the City of Los Angeles. A proposed Historic-Cultural Monument may be designated by the City Council upon the recommendation of the Commission if it meets at least one of the following criteria:

1. Is identified with important events of national, state, or local history or exemplifies significant contributions to the broad cultural, economic or social history of the nation, state, city or community;
2. Is associated with the lives of historic personages important to national, state, city, or local history; or
3. Embodies the distinctive characteristics of a style, type, period, or method of construction; or represents a notable work of a master designer, builder, or architect whose individual genius influenced his or her age.

3.2.4 Environmental Setting

3.2.4.1 Cultural Setting

Following is summary of the cultural setting that is provided in full in Appendix D.

Prehistoric Background

Early human habitation in Los Angeles dates as far back as ~12,000 years ago. Evidence of this early habitation comes from discoveries such as Los Angeles Man and La Brea Woman sites found southeast of the San Fernando Valley within the City of Los Angeles. Both sites were found in association with numerous well-preserved Ice Age fossils. At the time of contact in the 16th century, during the transition from the prehistoric to the historic (often called protohistoric), the Gabrieleño Native American people widely occupied the local area. They lived in villages throughout the Los Angeles Basin, including the area along the Ballona Gap and Lagoon, southeast of the San Fernando Valley.

Subsequent archaeological periods are defined by:

Encinitas Tradition or Milling Stone Horizon, Topanga I Phase (7,500 - 5,000 Before Present [BP] or 5,500 - 3,000 Before Common Era [BCE]) - regional exploitation of food resources in California became more systematic and efficient resulting in environmental niche specialization and greater regional difference, as evidenced by the variety in tool kit assemblages.

Campbell Tradition or Intermediate Horizon, Topanga II and III phases (5,000 - 1000 BP [3,000 BCE – 1000 CE (Common or Current or Christian Era)]) - new forms of subsistence procurement and technology, as well as increasing societal changes, began to emerge throughout southern California. Core settlements increased in physical size and population.

Late Prehistoric (1,000 – 400 BP [1,000 – 1542 CE]) - Populations of culturally distinct groups as a result of regional differences continued to rise as did territorially-defined sedentary settlement patterns. Resource exploitation, including fishing, intensified on the one hand, while large-scale hunting and gathering operations provided varied sources of subsistence on the other.

European Contact

The name Gabrieleño was given to the local Native Americans by the Spaniards at the time of European contact in 1542. The Gabrieleño people at the time were regarded as one of the richest, largest, and most dominant group in southern California, in part due to the abundance of resources available to them in the general Los Angeles area.

Historic Period

The Historic Period is comprised of the following periods:

Spanish Period (A.D. 1769 to 1821) - At the time of the Spanish arrival in 1542, population estimates of California Indians were placed at about 310,000 individuals. The Spanish missions, which aimed to “convert” the Native Californians to Catholicism, forced Native Californians to work on the farms and ranches located on mission grounds. The majority of the Indians living on the coastal plains and valleys of southern California were forced to move to and provide labor for the San Fernando and San Gabriel missions. By 1800, the original Gabrielino villages were empty as the Gabrielino and other Native Americans provided much of the labor for the European ranches, farms, and communities. This forced interaction with the Spanish, along with diseases introduced by earlier explorers, marked the beginning of the decline of the Gabrielino as the principal inhabitants of the Los Angeles area. In 1819, the Indian population at the San Fernando Mission was only 1,080, and by the end of the Spanish reign, due to unhygienic Spanish population centers, European diseases, incarceration, excessive manual labor demands, and poor nutrition, the population declined significantly, by nearly one-third.

Mexican Period (A.D. 1821 to 1848) - Mexico became California’s new ruling government in 1821. During this period, extensive land grants were established in the interior regions to spread the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. The number of non-native inhabitants increased during this period because of the influx of explorers, trappers, and ranchers associated with the land grants. By the end of the period as a result of disease, homicide, and the loss of native environment and food sources, the Native California population had been reduced to approximately 100,000.

American Period (A.D. 1848 to Present) - In February 1848, California officially became a U.S. holding with the signing of the Treaty of Guadalupe Hidalgo. This treaty ended the Mexican-American War and ceded much of the southwest (California, Nevada, Utah, and portions of Arizona, New Mexico, Colorado, and Wyoming) to the United States. The arrival of rail roads and the discovery of gold near Sacramento led to a large influx of immigrants and made it difficult for

California Indians to obtain land. The past missionization, loss of territory, and vigilante groups established to kill Indians extinguished much of the tribal continuity throughout the state.

San Fernando Valley

The San Fernando Valley got its name from the San Fernando Mission established in the area. The San Fernando Mission was virtually abandoned in 1847. In 1869, a portion of the mission lands in the southern half of the San Fernando Valley were sold to the San Fernando Farm Homestead Association. This included the modern-day communities of North Hollywood, Van Nuys, Reseda, and Canoga Park as well as Sherman Oaks and Studio City. This land encompassed about 60,000 acres, and much of the southern portion of the San Fernando Valley was used to grow wheat in the late 1800s along with raising livestock.

Completion of the Los Angeles Aqueduct by the City of Los Angeles and William Mulholland brought Owens River water to the San Fernando Valley in 1913, thus allowing the introduction of vineyards, citrus groves, and other fruit orchards.

Major wagon and stage routes in the San Fernando Valley included a wagon road across the Sepulveda Pass for shipping grain, Old Santa Susana Stage Road, or Santa Susana Pass Wagon Road which was part of the main commercial overland route between Los Angeles and San Francisco until 1874 when the railroad arrived. Other major transportation routes (oxcart and wagon trails) in the San Fernando Valley included El Camino Real (modern-day Ventura Boulevard) and the Old Sepulveda Trail (modern-day Sepulveda Boulevard), and the Sepulveda Canyon (Pass).

In the 1870s, the Southern Pacific Railroad constructed a line between Los Angeles and Bakersfield that passed through the San Fernando Valley, which started the development of the San Fernando Valley. This development was initially mostly confined to the north end of the San Fernando Valley and did not become wide-spread until the San Fernando Valley gained access to the City of Los Angeles's water supply after annexation in 1915.

Los Angeles River

The Los Angeles River drains the watershed of the San Fernando Valley and its surrounding mountains and carries the water to the Pacific Ocean via Long Beach (San Pedro Bay). In the past, heavy rainfall could cause the Los Angeles River, as well as other rivers such as the San Gabriel River, to overflow its banks and flood nearby farms and houses. The River supported the indigenous inhabitants through other abundant food resources including animals for hunting as well as drinking water, water for bathing, and raw materials (plants) for clothing, tools, and houses. After California became a state, more migrants settled in Los Angeles resulting in ever increasing demand for water and a competition for the river's supply soon developed. In 1868, the Los Angeles City Water Company was formed, which built the framework for a more modern water distribution system and a diversion farther upstream on the River. Despite these advancements, the River soon became an inadequate source of water as the population, and demand for water, continued to increase and residential and industrial development started displacing farmland.

Sepulveda Dam Basin

The Sepulveda Dam, which was built by the US Army Corps. Of Engineers in 1941-1942 was purposed with regulating the peak flows of the Los Angeles River by capturing and storing floodwaters. The floodwaters would later be gradually released down the River. By the end of the 1960s, practically all the rivers and creeks in the Los Angeles area, including the Los Angeles River,

were encased in concrete channels. The Los Angeles River is encased in concrete for nearly its entire length and is only unlined in three sections, one of which is the Sepulveda Flood Control Basin.

The DCTWRP was initially named the Sepulveda Water Reclamation Plant until 1969 when the City of Los Angeles Department of Public Works leased 80 acres in the northeast corner of the Sepulveda Basin from the US Army Corps of Engineers. The plant currently provides wastewater services for the western and central San Fernando Valley in addition to “hydraulic relief for major interceptor sewers in the San Fernando Valley, as well as the North Outfall Sewer, the La Cienega-San Fernando Valley Relief Sewer tunnel through the Santa Monica Mountains, and downstream portions of the Hyperion system including the Hyperion Treatment Plant”, which is located near El Segundo.

3.2.4.2 Geologic Setting

Following is summary of the geological setting that is provided in full in Appendix D. The San Fernando Valley is part of Los Angeles County and located on the tectonic North American Plate. Approximately 17 to 18 million years ago in the early Miocene, the North American tectonic plate collided with the Pacific Plate due to the constant movement of plate tectonics. Prior to this collision, Los Angeles County was once above water, but the movement of the Pacific plate northward relative to the North American plate caused the area to submerge. In the middle Miocene Epoch, the Los Angeles County area was part of a deep submarine basin that quickly divided into deep, narrow, rapidly subsiding basins, that were formed when the tectonic blocks that make up today’s Transverse Ranges rotated up to 90 degrees clockwise in response to a shear along the San Andreas Fault. These steep-sided basins accumulated huge thicknesses of deep-water marine shales and sandstones, as well as deposits of siliceous shale and diatomites (formed from diatoms, or single-celled algae with cell walls made of silica). Marine sediment over 6 miles deep accumulated in what is now the Los Angeles County, including Culver City, in only 6 million years.

With the creation of these new basins, the San Fernando Basin (or Basin) started filling with sediments from the newly emerged mountain ranges and from marine sediments that were still accumulating over the area. Most of the buildup of mountains and marine sediments occurred in the last two million years, since the Pliocene. The sediment buildup continued through the Pleistocene, but sea level fluctuated due to the alternating glacial and interglacial episodes. Continuous non-marine deposition commenced in the later Quaternary period whereby alluvial stream deposits accumulated on top of the earlier marine deposits and was only interrupted by erosion. The San Fernando Basin and Los Angeles Basin experienced one last (shallow) marine episode during the late Pleistocene prior to the most recent glaciation period. This glaciation period saw an increase in precipitation and subsequent acceleration in erosion of the Santa Monica Mountains.

Underlying the alluvial sediments that composes the majority of the San Fernando Basin is Cenozoic basement rock and upper Mesozoic and Cretaceous sedimentary rocks. The northern edge of the basin is split by the Santa Susana thrust zone. Sediment along the northern and eastern edges of the Basin consists of sand and gravel contributed by the San Gabriel Mountains while southern and western edges of the Basin, consists of clay derived from the Santa Monica and Santa Susana Mountains including silt deposited by receding waters.

Surface geology of the Project area consists of Quaternary alluvium (*Qay1/Qay2*), with deposits of older alluvium (*Qao*). Quaternary alluvium is known to consist of unconsolidated sand and clay that

may produce invertebrate and vertebrate specimens. The Modelo Formation (*Tm*) is located within the Santa Monica Mountains south of the Project, consisting of sandstone, silt, and shale deposits that has produced invertebrate and vertebrate specimens. The Santa Monica Slate formation (*Jsm*) is adjacent to Modelo Formation within the Santa Monica Mountains and consisting of slate, sandstone, and siltstone. *Qay (1/2)* is described as Holocene alluvium that consists of unconsolidated and un-cemented gravel, sand, silt, and clay. *Qay1* is specifically undifferentiated and has an age of 1,000 to 10,000 years, while *Qay2* is deposited in proximity to the Los Angeles River and Tujunga Wash. Slight deposits of artificial fill crosses the Project area near Interstate 405 and State Route 170.

3.2.4.3 Cultural and Tribal Cultural Resources

Prehistoric Site

Results of the Cultural Resources Records Search included a prehistoric site within the half-mile radius of the Project. The site, designated as CA-LAn-345, was first documented in 1968 on the west side of a “nameless stream bank” within the Sepulveda Basin to the west of the Project site. The site was described as a Milling Stone Horizon Occupation Site and consisted of surface scatter made from manos, metates, and core tools. The site was later damaged by a bulldozer during the construction of Putting Green No. 1 of the Encino Municipal Golf Course (now Encino Golf Course). It was further destroyed in 1977 due to ongoing construction of the golf course and would not be affected by the Project.

Built Environment

Historic property results include 82 primary records that have recorded and evaluated historic buildings, landmarks, and places (built environment) for registry qualifications. Only seven buildings and/or places (Table 3.2-1) have been evaluated and approved to be listed in the NRHP, CRHR, or Los Angeles HCM within a half-mile radius of the Project. These sites are located outside of the APE and would not be directly affected by the Project.

The field reconnaissance performed for the proposed Project (see Appendix D) observed several unique and potentially historic buildings and structures adjacent to APE. These potentially historic buildings and structures varied in architectural types and ranged in approximate age of construction from the 1920's to modern age. The predominant type of architecture observed was Minimalist Traditional which began in the late 1930s and became dominant in Southern California during the 1940's, before and after the World War II, and used by both single and multi-family homes.

Table 3.2-1: Buildings listed in NRHR, CRHR, or Los Angeles HCM

Resource	Distance from Project Alignment	Comments	Register Qualified Under
Baird House (Volunteer League Community Center) 14603 – 14607 Hamlin St, Van Nuys California	Approximately 800 feet north of Victory Boulevard	Resource is still standing and would not be affected by Project.	HCM
Van Nuys Woman’s Club Building 14836 W. Sylvan St, Van Nuys California	Approximately 800 feet south of Victory Boulevard	Resource is still standing and would not be affected by Project.	HCM
Van Nuys Branch Library 14553 Sylvan Way, Van Nuys California	Approximately 980 feet south of Victory Boulevard	Resource is still standing and would not be affected by Project.	NRHP, CHR
Los Angeles Public Library – Original Van Nuys Branch 14555 W Sylvan Way, Van Nuys California	Approximately 980 feet south of Victory Boulevard	Resource is still standing and would not be affected by Project.	NRHP, HCM
Valley Municipal Building 14410 W. Sylvan St, Van Nuys California	Approximately 800 feet south of Victory Boulevard	Resource is still standing and would not be affected by Project.	HCM
Portal of the Folded Wings Shrine to Aviation and Museum 3898 Valhalla Dr, Burbank, California	Approximately 2,000 feet north of Victory Boulevard	Resource is still standing and would not be affected by Project.	NRHP, CHR
The Great Wall of Los Angeles (Mural)	Approximately 2,600 feet south of Victory Boulevard	Resource is still standing and would not be directly affected by Project.	NRHP

Source: Appendix D

Cultural Reports and Studies

There were 114 studies and assessments conducted within a half-mile radius from the Project and sections of the Project, but no significant prehistoric or historic artifacts, sites, or features were documented that would be directly or indirectly affected by the Project. According to the Pacific Electric Railway Historical Society, a Southern Pacific Rail Road segment extended in a north-south direction from the intersection of the current Chandler Avenue to Sherman Way and within the Project area at the intersections of Victory Boulevard/Van Nuys Boulevard, but this no longer present.

Paleontological Resources Records Search

There are no known vertebrate fossil localities within the direct boundaries of the Project, but fossil localities have been found in similar sedimentary deposits of Quaternary Alluvium (clay, sand, and gravel) that can occur below the Project area. Quaternary Alluvium deposits in the central and eastern portions of the Project, derived as alluvial fan deposits originating from the Verdugo Mountains and transported through the Tujunga Wash. The western portion of the Project consists of younger Quaternary Alluvium from fluvial deposits of the Los Angeles River. Deposits of Quaternary Alluvium do not always contain significant vertebrate fossils in the uppermost layers that are younger in age, but varying depths of older deposits do contain significant vertebrate fossils.

A search for known fossils was performed by the Natural History Museum of Los Angeles County (LACM). No vertebrate fossils are known within the proposed Project alignment. Nearby, vertebrate fossils are known from the Quaternary older alluvium, including locality LACM 3822 north of Oxnard Street between Sepulveda Boulevard and Kester Avenue that has produced fossil specimens of extinct peccary (*Platygonus*), camel (*Camelops*), and bison (Bison) at depths of 75 - 100 feet below the surface. Fossil site LACM 6208, is located approximately along Kester Avenue near Burbank Boulevard, and has produced specimens of bison (Bison) at depths of 20 feet below the surface. At the intersection of Kester Avenue and Otsego Street, south of LACM 6208, has produced specimens of horse (Equus) at a depth of 14 feet below the surface. On Lankershim Boulevard, at the intersection of the California Highway 134 (approximately three miles south of Victory Boulevard) near the Metrorail Redline Universal City Tunnel, LACM 6970 has produced specimens of camel (*Camelops hesternus*), bison (*Bison antiquus*), and ground sloth (*Glossotherium harlani*) at a depth of 60-80 feet below grade.

Field Reconnaissance

No known prehistoric artifacts, sites, or features were found on the surface of the Project area. Historic results include a historic isolate consisting of a brown glass bottle base shard with a partial embossment, found on the surface of the Whitnall Highway Utility Corridor approximately 25 feet northeast of the intersection at Victory Boulevard and Fair Avenue. The bottle base dates to 1953 and was found within a half-mile radius of the Project outside of the APE but was considered non-significant due to its highly damaged preservation, and no other remnants of the bottle could be found.

Sacred Lands File Search

A Sacred Lands File records search and a Native American Contacts list for the Project site was requested by APRMI from the NAHC. On December 28, 2018, the NAHC provided the Native American Contacts List (see Appendix D). In accordance with the recommendations of the NAHC, APRMI contacted all tribal representatives listed in the NAHC response letter. All letters sent to Native American correspondents and accompanying responses can be viewed in Appendix D.

On January 4, 2019, Robert Dorame, Chairperson for the Gabrielino Tongva Indians of California responded to APRMI through personal (verbal) communication and states he is interested in being a Native American monitor for the Project regarding any Native American resources within the Project area.

On January 4, 2019, Andrew Salas, Chairperson for Kizh Nation responded to APRMI through personal (verbal) communication and states he wants to be involved in all Project related updates and interested in being a Native American monitor for the Project regarding any Native American resources within the Project area. Additionally, the Kizh Nation responded to the NOP via email, stating that the tribal government would like to consult with the lead agency if any ground disturbance occurs.

3.2.4.4 AB 52 Tribal Consultation

A representative from the Kizh Nation, one of the six Native American tribes notified of the proposed Project, requested consultation regarding the proposed Project: The results of the AB 52 consultation between the City and Kizh Nation are discussed below.

On January 29, 2019, the City received an email from the Kizh Nation requesting consultation. On March 14, 2019, the City and its consultants, CDM Smith, EnviCraft and APRMI, met with Andrew Salas and Matthew Teutimez of the Kizh Nation to discuss the proposed Project and obtain input from the Kizh Nation regarding potential Project-related impacts to tribal cultural resources. The Kizh Nation provided the City with information indicating prehistoric uses and activities occurring in the vicinity of the Project site as well as characteristics that could identify the potential for tribal cultural resources to be located in the vicinity. The Kizh Nation presented a historic map from 1898 that indicates that the Project alignment follows prehistoric trade routes which could be the site of human burials and isolates. The trade routes have been used for 1,000 years so tribal cultural resources could be located at varied depths across the alignment. Additionally, the historical waterways that cross the alignment and a former artesian well to the south are also locations where human activities may have been concentrated. Some of these waterways are similar to the location of the existing channels, but there have been alterations over time. Existing landscape and the information and maps provided by the Kizh Nation indicate a potential for tribal cultural resources to be located in the Project vicinity. The Kizh Nation provided the City with their recommended mitigation measures. The City agreed to review the Kizh Nation's mitigation measures and consider their applicability to the proposed Project. It was agreed that a follow-up meeting would be scheduled for the City to present the proposed mitigation measures and, should the Kizh Nation concur with the proposed mitigation, consultation would be concluded at that time. The follow up meeting with City and the Kizh Nation to discuss proposed mitigation was held on May 29, 2019. Formal consultation with the Kizh Nation, which was initiated to fulfill the intent of PRC Section 21080.3.1(b), concluded on May 31, 2019.

In summary, for the following analysis the area of potential impacts is associated with the known and unknown resources within the APE and within 21 feet of the nearest edge of the construction work zone to adjacent structures (when measured from the closest work zone boundary).

3.2.5 Thresholds of Significance

A significant impact on cultural resources or tribal cultural resources would occur if the proposed Project would:

- Impact 3.2-1** Cause a substantial adverse change in the significance of an historical resource as defined by State CEQA Guidelines Section 15064.5(a).
- Impact 3.2-2** Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.
- Impact 3.2-3** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- Impact 3.2-4** Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, or 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:

Listed or eligible for listing in the California Register, or in a local register of historical resources as defined in PRC Section 5020.1(k), or

A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.2.6 Project Impacts

3.2.6.1 Impact 3.2-1

Impact 3.2-1: Construction of the proposed Project could cause a substantial adverse change in the significance of an unknown historical resource as defined by State CEQA Guidelines Section 15064.5(a).

Seven historic properties have been evaluated and approved to be listed in the NRHP, CRHR, or Los Angeles HCM within a half-mile radius of the proposed Project. These historic properties are located 800 feet or more from the proposed Project alignment. Given the distance between the Project alignment and the historic properties, no direct impacts would occur. However, potentially historic buildings and structures may still experience indirect effects along Victory Boulevard. Temporary impacts at the time of construction caused by indirect effects include visual and vibration impacts. Potential visual impacts would only occur temporarily during construction in front of a property (such as the construction associated with pump stations, diversion structures and connecting sewers located under the sidewalk). Because no substantial permanent visual change to historic properties would occur, construction activities would not result substantial adverse visual change in the significance of an historical resource.

Historic structures in the immediate vicinity of project construction can experience some architectural damage due to construction vibrations, depending on the age, condition, and construction materials of the buildings. As discussed in Section 3.5.6.2, a vibration threshold of 0.12 PPV has been established for extremely vibration sensitive buildings, such as historic structures. The vibration evaluation determined that vibration-producing construction (such as pavement breaking or drilling) within 21 feet of buildings could meet or exceed the 0.12 PPV vibration threshold (for architectural damage). The force main alignment would be located approximately in the middle of Victory Boulevard, which has a sidewalk to sidewalk width of approximately 100 feet. With a trench width of up to 8 feet, force main construction would be greater than 21 feet from the sidewalk boundaries, and are not expected to result in vibrations in excess of the 0.12 PPV threshold that could result in architectural damage to historic structures. However, if during the design of the force main the alignment needs to be shifted away from the center of Victory Boulevard (e.g. to avoid substructures), the design alignment could affect potentially historic structures if the work zone falls to within 21 feet of nearby structures.

Unlike the force main that would be constructed along a six-mile length of Victory Boulevard, construction of the diversion structures, connecting sewers and pump stations would occur at distinct locations, and construction-related impacts to potential historic structures due to vibrations would be as follows:

Vineland diversion structure, connecting sewer, and pump station: The Vineland diversion structure would be located within the intersection of Vineland Avenue and Victory Boulevard and the nearest structure (strip mall on the northwest corner) to the potential work zone is over 75 feet. The Vineland connecting sewer alignment would be installed in approximately the middle of the westbound fast lane in Victory Boulevard, and the work zone would likely occupy the fast and middle westbound lanes in Victory Boulevard, leaving a westbound travel lane adjacent to the curb. The nearest structure to the work zone is the strip mall approximately 25 feet away. The Vineland pump station would be located beneath the northern sidewalk in Victory Boulevard adjacent to a large parking lot, and no structures are located within 21 feet of the work zone. Construction of the Vineland diversion structure, connecting sewer, and pump station is not expected to result in vibrations in excess of the 0.12 PPV threshold that could result in architectural damage to historic structures.

Tujunga diversion structure, connecting sewer, and pump station: The Tujunga diversion structure would be located within the intersection of Tujunga Avenue and Victory Boulevard and the nearest structure (commercial building on the northeast corner) to the potential work zone is approximately 70 feet. The Tujunga connecting sewer alignment would be installed from the diversion structure to the Tujunga pump station adjacent to the commercial building, and thus the work zones for both the connecting sewer and Tujunga pump station would be within 21 feet of the commercial building and the apartment to the immediate east. These two structures, both built in approximately 1977, were not found to be unique or potentially historic, and thus construction of the Tujunga diversion structure, connecting sewer, and pump station is not expected to result in vibrations in excess of the 0.12 PPV threshold that could result in architectural damage to historic structures (potential vibration impacts to non-historic structures are addressed in Noise and Vibration, Section 3.5 of this Draft EIR).

Lankershim diversion structure, connecting sewer, and pump station: The Lankershim diversion structure would be located within the intersection of Colefax Avenue, Lankershim Boulevard, and Victory Boulevard and the nearest structure (medical building at the southwest corner of Victory Boulevard and Colfax Avenue) to the potential work zone is approximately 20 feet. The Lankershim connecting sewer alignment would be installed beneath the southern sidewalk in Victory Boulevard from the diversion structure westward to the Lankershim pump station adjacent to a medical building and two commercial buildings, and thus the work zones for both the connecting sewer and Lankershim pump station would be within 21 feet of these buildings. The medical building (a kidney dialysis center) is new construction and the two commercial structures (built in approximately 1947 to 1949 but highly altered) are being used as an auto repair facility. None of these structures are unique or potentially historic, and thus construction of the Lankershim diversion structure, connecting sewer, and pump station is not expected to result in vibrations in excess of the 0.12 PPV threshold that could result in architectural damage to historic structures (potential vibration impacts to non-historic structures are addressed in Noise and Vibration, Section 3.5 of this Draft EIR).

Laurel Canyon diversion structure, connecting sewer, and pump station: The Laurel Canyon diversion structure would be located within Laurel Canyon Boulevard adjacent to the northeast corner of Victory Boulevard. The commercial structure at the northeast corner would be located within 21 feet of the diversion structure work zone. The Laurel Canyon connecting sewer alignment would be installed beneath the northern sidewalk in Victory Boulevard from the diversion

structure westward to the Laurel Canyon pump station adjacent to a parking lot, and thus the work zones for both the connecting sewer and Laurel Canyon pump station would not be within 21 feet of a structure. The commercial structure, built in approximately 1984, on the northeast corner of this intersection is not unique or potentially historic, and thus construction of the Laurel Canyon diversion structure, connecting sewer, and pump station is not expected to result in vibrations in excess of the 0.12 PPV threshold that could result in architectural damage to historic structures (potential vibration impacts to non-historic structures are addressed in Noise and Vibration, Section 3.5 of this Draft EIR).

Whitsett diversion structure, connecting sewer, and pump station: The Whitsett diversion structure would be located within the intersection of Whitsett Avenue and Victory Boulevard. The nearest structure (strip mall on the northwest corner of the intersection) to the diversion structure works zone is over 60 feet away. The Whitsett connecting sewer alignment would be installed beneath the northern-most westbound travel lane in Victory Boulevard from the diversion structure westward to the Whitsett pump station, which would be located in the median just west of Babcock Avenue. The work zone for the connecting sewer would be located within 21 feet of a commercial structure (part of a strip mall) along the north side of Victory Boulevard just east of Babcock Avenue. The nearest structure to the Whitsett pump station work zone would be approximately 40 feet away. The commercial structure, built in 1966 and highly altered, on the northeast corner of Babcock Avenue and Victory Boulevard is not unique or potentially historic, and thus construction of the Whitsett diversion structure, connecting sewer, and pump station is not expected to result in vibrations in excess of the 0.12 PPV threshold that could result in architectural damage to historic structures (potential vibration impacts to non-historic structures are addressed in Noise and Vibration, Section 3.5 of this Draft EIR).

Fulton diversion structure, connecting sewer, and pump station: The Fulton diversion structure would be located within Fulton Avenue at Victory Boulevard. The nearest structure (strip mall on the northwest corner of the intersection) to the diversion structure works zone is over 40 feet away. The Fulton connecting sewer alignment would be installed beneath the northern sidewalk along Victory Boulevard from the diversion structure eastward to the Fulton pump station, which would be located just west of Atoll Avenue. The work zone for the connecting sewer and pump station would be located within 21 feet of two apartment complexes along the north side of Victory Boulevard just west of Atoll Avenue. These residential structures have been recently constructed and are not unique or potentially historic; thus, construction of the Fulton diversion structure, connecting sewer, and pump station is not expected to result in vibrations in excess of the 0.12 PPV threshold that could result in architectural damage to historic structures (potential vibration impacts to non-historic structures are addressed in Noise and Vibration, Section 3.5 of this Draft EIR).

EVIS junction structure: The EVIS junction structure (where the force main connects with the EVIS sewer that flows into DCTWRP) would be located in Victory Boulevard at Haskell Avenue. The nearest structures to the EVIS junction structure is a gas station canopy north of Victory Boulevard and west of Haskell Avenue, over 80 feet away. This structure is not considered to be potentially historic; thus, construction of the EVIS Junction structure is not expected to result in vibrations in excess of the 0.12 PPV threshold that could result in architectural damage to historic structures.

SR-170 Microtunnel: Microtunneling would be used to install the force main under SR-170. Two pits would be constructed on either side of SR-170 (one each within the loop ramps north of Victory Boulevard). There are no structures near the pit locations or freeway ramps; therefore, microtunneling beneath SR-170 is not expected to result in vibrations in excess of the 0.12 PPV threshold that could result in architectural damage to historic structures.

Tujunga Wash Microtunnel: Microtunneling would be used to install the force main under the Tujunga Wash. Two pits would be constructed on or close to the centerline of Victory Boulevard on either side of Tujunga Wash. The nearest structures to the pit work area east of Tujunga Wash is the commercial structure along the south side of Victory Boulevard (west of Morse Avenue) and is over 30 feet from the pit work zone. The nearest structures to the pit work area west of Tujunga Wash is the residential structure along the south side of Victory Boulevard (west of Ethel Avenue) and is approximately 40 feet from the pit work zone. Therefore, microtunneling beneath the Tujunga Wash is not expected to result in vibrations in excess of the 0.12 PPV threshold that could result in architectural damage to historic structures.

Kester Avenue Microtunnel: Microtunneling would be used to install the force main under Kester Avenue. Two pits would be constructed on or close to the centerline of Victory Boulevard on either side of Kester Avenue. The nearest structures to the pit work area east of Kester Avenue is the commercial structure along the north side of Victory Boulevard (northeast corner of Kester Avenue at Victory Boulevard) and is over 30 feet from the pit work zone. The nearest structure to the pit work area west of Kester Avenue is the gas station canopy along the north side of Victory Boulevard and is over 30 feet from the pit work zone. Therefore, microtunneling beneath the Kester Avenue is not expected to result in vibrations in excess of the 0.12 PPV threshold that could result in architectural damage to historic structures.

I-405 Microtunnel (optional): Should microtunneling be used to install the force main under I-405, two pits would be constructed on either side of I-405, and the pit west of I-405 may be combined with the EVIS junction structure pit. The pit east of I-405 would be located in approximately the middle of Victory Boulevard. The nearest structures to the pit are residences on either side of Victory Boulevard just east of the northbound I-405 on-ramp and are located at least 30 feet from the work zone. Because these structures are greater than 21 feet from the construction work zone, construction associated with the I-405 microtunneling (if required and combined with the EVIS junction structure) is not expected to result in vibrations in excess of the 0.12 PPV threshold that could result in architectural damage to historic structures.

Sepulveda Boulevard Microtunnel (optional): Should microtunneling be used to install the force main under Sepulveda Boulevard, two pits would be constructed on either side of Sepulveda Boulevard. The pits would be located in approximately the middle of Victory Boulevard. The nearest structures to the pits are commercial structures on the northeast corner, southeast corner and southwest corner of Victory Boulevard at Sepulveda Boulevard. These structures would be located at least 30 feet from the work zone. Because these structures are greater than 21 feet from the construction work zone, microtunneling beneath Sepulveda Boulevard is not expected to result in vibrations in excess of the 0.12 PPV threshold that could result in architectural damage to historic structures.

Construction of the proposed Project would not directly cause a substantial adverse change in the significance of an historical resource as defined by State CEQA Guidelines Section 15064.5(a) and

direct Project impacts would be *less than significant*. Although no direct impacts to potentially historic structures are anticipated based on the current force main alignment, there is the possibility that the alignment might shift during the design process to avoid subsurface structures in Victory Boulevard. If such alignment shifts occur and bring the construction work zone to within 21 feet of structures along Victory Boulevard, there is a potential for indirect vibration impacts to potentially historic structures within 21 feet from the construction zone, which would be considered *potentially significant*.

3.2.6.1.1 Mitigation Measures

In the event that the force main alignment shifts from the center of Victory Boulevard during project design, there is the potential for construction work zone and associated vibrations to move closer to potentially historic structures beyond the sidewalk boundaries of the APE. If the force main alignment shifts, mitigation measure MM-NV-2 would be implemented. In addition, if construction vibrations result in damage to potentially historic structures, the following mitigation measure would be implemented:

MM-NV-2: Vibration During Construction. To limit the potential impacts of vibration on structures within 21 feet of the nearest edge of the construction work zone (when measured from the closest work zone boundary), and to limit vibration annoyances to receptors along the alignment, the City (or its Contractor) shall implement vibration reduction measures during construction including, but are not limited to:

- Prohibition of certain types of impact equipment (e.x., pile driver);
- Requirement for lighter tracked or wheeled equipment; and
- Phasing operations to avoid simultaneous vibration sources.

Prior to construction of project components with work zones located within 21 feet of structure(s), the City (or its Contractor) shall retain a Professional Structural Engineer with experience in structural vibration analysis to perform the following tasks:

- Review the project plans to determine the potential construction impact zone and conduct pre- and post-construction surveys of the structures located within 21 feet of the work zone to document the pre- and post-construction conditions of all structures surveyed; and
- Prepare and submit a report to the City's Project Manager that includes, but not be limited to, the description of pre-and post-construction conditions of all structures surveyed.

In the event of vibration-caused damage, the Structural Engineer shall recommend necessary repairs based on the pre- and post-construction conditions (as documented in the Structural Engineers report). If the damaged structure(s) are potentially historic, mitigation measure MM-CR-1 shall apply. The Contractor shall be responsible to remedy vibration-caused damage as a result of construction of the project to pre-construction conditions as documented in the Structural Engineers report. The City

shall confirm that the Contractor has completed all remedies associated with vibration impacts prior to close of the construction contract.

MM-CR-1: Repair of Historic Structures. In the event that potentially historic structures are damaged as a result of construction vibrations, as determined through implementation of MM-NV-2, any repairs shall be undertaken and completed as required to conform to the Secretary of the Interior’s Standards for the Treatment of Historic Properties (36 Code of Federal Regulations 68) and shall apply the California Historical Building Code (California Code of Regulations, Title 24, Part 8) and other applicable codes.

3.2.6.1.2 Significance of Impact After Mitigation

Direct impacts would be *less than significant*. If the force main alignment shifts based on the design process, implementation of mitigation would be required, and the residual indirect impacts of vibration on potentially historic structures would be *less than significant after mitigation*.

3.2.6.2 Impact 3.2-2

Impact 3.2-2: Construction of the proposed Project could cause a substantial adverse change in the significance of an unknown archaeological resource pursuant to Section 15064.5.

As discussed above, there was one prehistoric site previously recorded within the half-mile search radius outside of the APE that was destroyed during the construction of the now Encino Golf Course in 1977. Additionally, previous studies conducted within a half-mile radius from the Project alignment showed that no significant archaeological prehistoric or historic sites were found that would be directly or indirectly impacted by the proposed Project. In addition, field reconnaissance yielded negative results for archaeological resources on the surface of the APE. However, excavations along the Project alignment could have occur in previously undisturbed soils that may contain archaeological resources. Further due to the proximity of the prerecorded prehistoric site with the half-mile search and the historic glass shard from a Brown “Owens Illinois” bottle base found at the time of the field reconnaissance, excavation for the proposed Project has the potential to uncover previously unknown archaeological resources. This could result in a substantial adverse change in the significance of archaeological resources, which would be a *potentially significant* impact.

3.2.6.2.1 Mitigation Measures

MM-CR-2: Pre-construction Worker Training. Prior to the commencement of ground disturbing activities, a qualified archaeologist, paleontologist, and Native American monitor who is a member of a Tribe that has ancestral ties to the Project location as identified by the Native American Heritage Commission and that has participated in consultation pursuant to Assembly Bill 52 be retained for the construction of the East West Valley Interceptor Sewer Project, shall provide training to construction personnel to provide information on regulatory requirements for the protection of cultural resources. This training shall include examples of cultural resources (i.e., archaeological, Native American, and paleontological resources) to look for and protocols to follow if discoveries are made. The training shall also include safety procedures for working with archaeological, Native American and paleontological monitors. The Contractor or Subcontractor(s) shall ensure that all construction personnel are made available for and attend the training and shall retain documentation demonstrating attendance. The

archaeologist, paleontologist and Native American monitor shall develop the training and any supplemental materials necessary to execute said training.

MM-CR-3: Archaeological Resources. Ground disturbing (i.e., excavation) activities in native soils, has the potential to impact archaeological resources qualifying as historical resources or unique archaeological resources (as determined by a qualified archaeologist). Prior to construction, a qualified archaeologist (with ongoing working relationships with Native American group(s) that are traditionally and culturally affiliated with the Project location as identified by the Native American Heritage Commission) and an archaeological monitor under the archaeologist's direction shall be retained to provide monitoring during ground disturbing (i.e., excavation) activities in native soils. During Project construction, should subsurface archaeological resources be discovered, all activity within 50 feet of the find shall stop and a qualified archaeologist shall assess the significance of the find according to CEQA Guidelines Section 15064.5.

- If any find is determined to be significant, the archaeologist shall determine, in consultation with the implementing agency, appropriate avoidance measures or other appropriate mitigation. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources.
- Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency, as applicable. When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared by the archaeologist prior to any excavation of the resource being undertaken. Any resulting data recovery reports shall be deposited with the California Historical Resources Regional Information Center or a legal repository.
- If an archaeological site does not qualify as an historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site shall be treated in accordance with the provisions of Section 21083.2.
- Within three months of the close of monitoring, a compliance report will be submitted to the implementing agency that summarizes the monitoring efforts, after the artifacts have been processed in the laboratory. The final report will be submitted to the South Central Coastal Information Center.

3.2.6.2.2 Significance of Impact After Mitigation

Even with implementation of mitigation measures MM-CR-2 and MM-CR-3, the potential of uncovering archaeological resources remains and impacts to archaeological resources would be *significant and unavoidable*.

3.2.6.3 Impact 3.2-3

Impact 3.2-3: Construction of the proposed Project could directly or indirectly destroy an unknown or unique paleontological resource or site or unique geologic feature.

There are no known vertebrate fossil localities within the boundaries of the Project, but fossil localities have been found in similar sedimentary deposits of Quaternary Alluvium (clay, sand, and gravel) that can occur below the surface in Project area. Deposits of Quaternary Alluvium do not often contain significant vertebrate fossils in the uppermost layers that are younger in age, but varying depths of older deposits may contain significant vertebrate fossils.

Surface grading or shallow excavations in the younger Quaternary Alluvium exposed throughout the proposed Project area are unlikely to produce significant vertebrate fossil remains. However, excavations that extend down into older Quaternary Alluvium may well encounter significant fossil vertebrate specimens. Paleontological resources could be potentially encountered and impacted during Project excavation. This would be a *potentially significant* impact.

3.2.6.3.1 Mitigation Measures

In addition to MM-CR-2: Pre-construction Worker Training in Section 3.2.6.5.1 above, the following mitigation would be implemented:

MM-CR-4: Paleontological Resources. Although no known paleontological sites or resources are known in the area of potential effect, there is a potential for the discovery of unknown paleontological resources during construction, with a greater chance of discovery in old Quaternary alluvium at greater depths. Therefore, prior to construction a professional paleontologist and a paleontological monitor under the paleontologist's direction shall be retained. A paleontological monitor shall be on site during excavation of the microtunneling pits associated with the Kester Avenue Storm Drain and Tujunga Wash, as well as excavation associated with the East Valley Interceptor Sewer Junction. If the resource is found to be significant, the paleontologist shall systematically remove and stabilize the specimen(s) in anticipation of preservation. If necessary, collection of soil samples will be taken per Society of Vertebrate Paleontologists standards. After basic laboratory analysis and cataloging has been completed, curation of the specimen(s) shall be assessed into a qualified research facility, such as the Los Angeles County Natural History Museum or other legal repository. Within three months of the laboratory analysis, a compliance report will be submitted to the implementing agency that summarizes the efforts and result. The final report will be submitted to the Los Angeles County Natural History Museum or other legal repository.

3.2.6.3.2 Significance of Impact After Mitigation

Even with implementation of mitigation measures MM-CR-2 and MM-CR-4, the potential of uncovering paleontological resources remains and Project impacts to paleontological resources would be *significant and unavoidable*.

3.2.6.4 Impact 3.2-4

Impact 3.2-4: Construction of the proposed Project could cause a substantial adverse change in the significance of an unknown tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, or 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:

- **Listed or eligible for listing in the California Register, or in a local register of historical resources as defined in PRC Section 5020.1(k), or**
- **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

There are no known Tribal Cultural Resources located in the Project area and none were identified in the results of the Sacred Lands File search requested from the NAHC. However, the City received a request for consultation pursuant to AB 52 from the Kizh Nation. Consultation between the City and Gabrieleño Band of Mission Indians – Kizh Nation commenced on March 14, 2019 and concluded on May 31, 2019. As part of the consultation process, the Kizh Nation provided the City with information indicating that due to landscape indicators such as the presence of historic waterways and past Native American activities such as documented trade routes in the vicinity of the Project area, excavation associated with the proposed Project would have a potential for the discovery of tribal cultural resources. Therefore, although no known tribal cultural resources were identified, there is a potential for the proposed Project to impact sensitive Native American resources. As a consequence, construction of the proposed Project could cause a substantial adverse change in the significance of a tribal cultural resource, as either a site, feature, place, or 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, which would be a *potentially significant* impact.

3.2.6.4.1 Mitigation Measures

MM-CR-5: Native American Tribal Cultural Resources. A qualified Native American monitor(s) who is affiliated with a Tribe that has ancestral ties to the Project location as identified by the Native American Heritage Commission and that has participated in consultation pursuant to Assembly Bill 52 shall be retained during ground disturbing activities in native soil, which has the potential to impact Tribal cultural resources. The Native American monitor will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the Project site grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant have indicated that the site has a low potential for impacting Tribal cultural resources. Should Tribal cultural resources be discovered during Project construction, all activity within 50 feet of the find shall stop and the Native American monitor shall determine the appropriate treatment methods or options for the Tribal

cultural resources. The discovery is to be kept confidential and secure to prevent any further disturbance. Within one month of the close of monitoring, a compliance report that summarizes the monitoring efforts will be submitted to the NAHC and placed in a legal repository.

3.2.6.4.2 Significance of Impact After Mitigation

Even with implementation of mitigation measure MM CR-5, the potential of uncovering tribal cultural resources remains and proposed Project impacts to tribal cultural resources would be *significant and unavoidable*.

3.2.7 Summary of Impact Determinations

Table 3.2-2 summarizes the impact determinations of the proposed Project related to cultural resources and tribal cultural resources, as described above in the detailed discussion in Section 3.2.6. Identified potential impacts are based on the significance criteria presented in Section 3.2.5, the information and data sources cited throughout Section 3.2, and the professional judgment of the report preparers, as applicable.

Table 3.2-2: Summary Matrix of Potential Impacts and Mitigation Measures Associated with the Proposed Project Related to Cultural Resources and Tribal Cultural Resources

Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Impact 3.2-1: Construction of the proposed Project could cause a substantial adverse change in the significance of an unknown historical resource as defined by State CEQA Guidelines Section 15064.5(a).	Potentially Significant (indirect vibration)	MM-NV-2 MM-CR-1	Less than Significant Impact
Impact 3.2-2: Construction of the proposed Project could cause a substantial adverse change in the significance of an unknown archaeological resource pursuant to §15064.5.	Potentially Significant	MM-CR-2 MM-CR-3	Significant and Unavoidable
Impact 3.2-3: Construction of the proposed Project could directly or indirectly destroy an unknown or unique paleontological resource or site or unique geologic feature.	Potentially Significant	MM-CR-2 MM-CR-4	Significant and Unavoidable
Impact 3.2-4: Construction of the proposed Project could cause a substantial adverse change in the significance of an unknown tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, or 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.	Potentially Significant	MM-CR-5	Significant and Unavoidable

3.2.7.1 Mitigation Measures

MM-NV-2: Vibration During Construction. To limit the potential impacts of vibration on structures within 21 feet of the nearest edge of the construction work zone (when measured from the closest work zone boundary), and to limit vibration annoyances to receptors along the alignment, the City (or its Contractor) shall implement vibration reduction measures during construction including, but are not limited to:

- Prohibition of certain types of impact equipment (e.x., pile driver);
- Requirement for lighter tracked or wheeled equipment; and
- Phasing operations to avoid simultaneous vibration sources.

Prior to construction of project components with work zones located within 21 feet of structure(s), the City (or its Contractor) shall retain a Professional Structural Engineer with experience in structural vibration analysis to perform the following tasks:

- Review the project plans to determine the potential construction impact zone and conduct pre- and post-construction surveys of the structures located within 21 feet of the work zone to document the pre- and post-construction conditions of all structures surveyed; and
- Prepare and submit a report to the City's Project Manager that includes, but not be limited to, the description of pre-and post-construction conditions of all structures surveyed.

In the event of vibration-caused damage, the Structural Engineer shall recommend necessary repairs based on the pre- and post-construction conditions (as documented in the Structural Engineers report). If the damaged structure(s) are potentially historic, mitigation measure MM-CR-1 shall apply. The Contractor shall be responsible to remedy vibration-caused damage as a result of construction of the project to pre-construction conditions as documented in the Structural Engineers report. The City shall confirm that the Contractor has completed all remedies associated with vibration impacts prior to close of the construction contract.

MM-CR-1: Repair of Historic Structures. In the event that potentially historic structures are damaged as a result of construction vibrations, as determined through implementation of MM-NV-2, any repairs shall be undertaken and completed as required to conform to the Secretary of the Interior's Standards for the Treatment of Historic Properties (36 Code of Federal Regulations 68) and shall apply the California Historical Building Code (California Code of Regulations, Title 24, Part 8) and other applicable codes.

MM-CR-2: Pre-construction Worker Training. Prior to the commencement of ground disturbing activities, a qualified archaeologist, paleontologist, and Native American monitor who is a member of a Tribe that has ancestral ties to the Project location as identified by the Native American Heritage Commission and that has participated in consultation pursuant to Assembly Bill 52 be retained for the construction of the East West Valley

Interceptor Sewer Project, shall provide training to construction personnel to provide information on regulatory requirements for the protection of cultural resources. This training shall include examples of cultural resources (i.e., archaeological, Native American, and paleontological resources) to look for and protocols to follow if discoveries are made. The training shall also include safety procedures for working with archaeological, Native American and paleontological monitors. The Contractor or Subcontractor(s) shall ensure that all construction personnel are made available for and attend the training and shall retain documentation demonstrating attendance. The archaeologist, paleontologist and Native American monitor shall develop the training and any supplemental materials necessary to execute said training.

MM-CR-3: Archaeological Resources. Ground disturbing (i.e., excavation) activities in native soils, has the potential to impact archaeological resources qualifying as historical resources or unique archaeological resources (as determined by a qualified archaeologist). Prior to construction, a qualified archaeologist (with ongoing working relationships with Native American group(s) that are traditionally and culturally affiliated with the Project location as identified by the Native American Heritage Commission) and an archaeological monitor under the archaeologist's direction shall be retained to provide monitoring during ground disturbing (i.e., excavation) activities in native soils. During Project construction, should subsurface archaeological resources be discovered, all activity within 50 feet of the find shall stop and a qualified archaeologist shall assess the significance of the find according to CEQA Guidelines Section 15064.5.

- If any find is determined to be significant, the archaeologist shall determine, in consultation with the implementing agency, appropriate avoidance measures or other appropriate mitigation. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources.
- Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency, as applicable. When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared by the archaeologist prior to any excavation of the resource being undertaken. Any resulting data recovery reports shall be deposited with the California Historical Resources Regional Information Center or a legal repository.
- If an archaeological site does not qualify as an historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site shall be treated in accordance with the provisions of Section 21083.2.

- Within three months of the close of monitoring, a compliance report will be submitted to the implementing agency that summarizes the monitoring efforts, after the artifacts have been processed in the laboratory. The final report will be submitted to the South Central Coastal Information Center.

MM-CR-4: Paleontological Resources. Although no known paleontological sites or resources are known in the area of potential effect, there is a potential for the discovery of unknown paleontological resources during construction, with a greater chance of discovery in old Quaternary alluvium at greater depths. Therefore, prior to construction a professional paleontologist and a paleontological monitor under the paleontologist's direction shall be retained. A paleontological monitor shall be on site during excavation of the microtunneling pits associated with the Kester Avenue Storm Drain and Tujunga Wash, as well as excavation associated with the East Valley Interceptor Sewer Junction. If the resource is found to be significant, the paleontologist shall systematically remove and stabilize the specimen(s) in anticipation of preservation. If necessary, collection of soil samples will be taken per Society of Vertebrate Paleontologists standards. After basic laboratory analysis and cataloging has been completed, curation of the specimen(s) shall be assessed into a qualified research facility, such as the Los Angeles County Natural History Museum or other legal repository. Within three months of the laboratory analysis, a compliance report will be submitted to the implementing agency that summarizes the efforts and result. The final report will be submitted to the Los Angeles County Natural History Museum or other legal repository.

MM-CR-5: Native American Tribal Cultural Resources. A qualified Native American monitor(s) who is affiliated with a Tribe that has ancestral ties to the Project location as identified by the Native American Heritage Commission and that has participated in consultation pursuant to Assembly Bill 52 shall be retained during ground disturbing activities in native soil, which has the potential to impact Tribal cultural resources. The Native American monitor will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the Project site grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant have indicated that the site has a low potential for impacting Tribal cultural resources. Should Tribal cultural resources be discovered during Project construction, all activity within 50 feet of the find shall stop and the Native American monitor shall determine the appropriate treatment methods or options for the Tribal cultural resources. The discovery is to be kept confidential and secure to prevent any further disturbance. Within one month of the close of monitoring, a compliance report that summarizes the monitoring efforts will be submitted to the NAHC and placed in a legal repository.

3.2.8 Significant Unavoidable Impacts

The construction of the proposed Project has the potential of uncovering cultural and tribal cultural resources, which would be *significant and unavoidable*.

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Section 3.3

Greenhouse Gases and Energy

3.3.1 Introduction

This section analyzes the proposed Project's impacts from both construction and operational activities as related to greenhouse gas (GHG) emissions and related global climate change (GCC). Included in this section is an overview of GCC and GHGs, as well as a description of the approach, methodologies and models used to estimate GHG emissions in the analysis. Relevant information pertaining to the regulatory framework, plans, and policies adopted to reduce GHG emissions also is discussed, as are features that are proposed to be incorporated into the proposed Project to reduce GHG emissions.

The State CEQA Guidelines Appendix F requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing wasteful, inefficient, and unnecessary consumption of energy. It provides lists of energy impacts and conservation measures that may be applicable and relevant to particular projects. In addition, PRC Section 21100(b)(3) states that an EIR shall include "mitigation measures proposed to minimize significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy." Similarly, State CEQA Guidelines Section 15126.4(a)(1)(C) states that "Energy conservation measures, as well as other appropriate mitigation measures, shall be discussed when relevant." Therefore, this section provides information about the proposed Project's energy consumption.

No comments specific to GHG, GCC, or energy were received during the NOP review process.

3.3.2 Overview of Global Climate Change and Greenhouse Gases

3.3.2.1 Global Climate Change

Briefly stated, GCC is a change in the average climatic conditions of the earth, as characterized by changes in wind patterns, storms, precipitation, and temperature. The baseline by which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. Many of the recent concerns over GCC use these data to extrapolate a level of statistical significance, specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change (IPCC) developed several emission projections of GHGs needed to stabilize global temperatures and climate change impacts. The IPCC predicted that the global mean temperature change from 2005 to 2100, given six ambient carbon dioxide (CO₂) scenarios, could range from 1.5 to 4.8 degrees Celsius (°C). Regardless of analytical

methodology, global average temperature and mean sea level are expected to rise under all scenarios.¹

Almost all climate scenarios include a continuing trend of warming through the end of the century given the substantial amounts of GHGs already released, and the difficulties associated with reducing emissions to a level that would stabilize the climate. According to California's Fourth Climate Change Assessment, the following climate change effects are predicted in California over the course of the next century.²

- A diminishing Sierra snowpack that threatens the State's water supply, reduces generation of hydroelectric power, and increases the probability of wildfires along electrical transmission line corridors. By 2050, the average water supply from snowpack is projected to decline to 2/3 from historical levels. If emissions reductions do not occur, water from snowpack could fall to less than 1/3 of historical levels by 2100.
- If GHG emissions continue at current rates, California could experience average daily high temperatures that are warmer than the historical average by 2.7F from 2006 to 2039, by 5.8F from 2040 to 2069, and by 8.8F from 2079 to 2100. Projected temperature increase could lead to the number of days when ozone pollution levels are exceeded in urban areas.
- If GHG emissions continue at current rates, total sea-level rise by 2100 is expected to be 54 inches.
- Increasing air temperatures are associated with wildfires. Large wildfires (greater than 25,000 acres) could become 50% more frequent by the end of century.
- Annual demand for residential electricity is projected to increase in inland and Southern California, with more moderate increases in cool coastal areas.
- Miles of highway at risk of flooding in a 100-year storm event could triple from current levels to 370 miles by 2100.
- Agricultural production could face climate-related water shortages of up to 16% in certain regions.
- Under mid to high sea-level rise scenarios, 31 to 67 percent of Southern California beaches could completely erode by 2100 without large-scale human interventions.

As such, temperature increases would lead to adverse environmental impacts in a wide variety of areas, including sea level rise, reduced snowpack resulting in changes to existing water resources, increased risk of wildfires, and public health hazards associated with higher peak temperatures, heat waves, and decreased air quality.

¹ Intergovernmental Panel on Climate Change. Climate Change 2014 – Mitigation of Climate Change. Working Group III Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. 2014. p. 439. Available: https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_full.pdf. Accessed March 2019.

² California Climate Change Center. California Fourth Climate Change Assessment. Summary Brochure. 2018. Available: <http://www.climateassessment.ca.gov/state/overview/>. Accessed March 2019.

3.3.2.2 Greenhouse Gases

Parts of the Earth’s atmosphere act as an insulating blanket, trapping sufficient solar energy to keep the global average temperature in a suitable range. The blanket is a collection of atmospheric gases called GHGs. Many GHGs occur naturally in the atmosphere, such as CO₂, methane (CH₄), water vapor, and N₂O, while others are synthetic. Those that are man-made include the chlorofluorocarbons, hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), as well as sulfur hexafluoride (SF₆). These gases all act as effective global insulators, reflecting back to earth visible light and infrared radiation. Human activities, such as producing electricity and driving vehicles, have elevated the concentrations of these gases in the atmosphere. Many scientists believe that these elevated levels, in turn, are causing the earth’s temperature to rise. As discussed above, a warmer earth may lead to changes in rainfall patterns, much smaller polar ice caps, a rise in sea level, and a wide range of impacts on plants, wildlife, and humans.

Climate change is driven by “forcings” and “feedbacks.” Radiative forcing is the difference between the incoming energy and outgoing energy in the climate system. A feedback is “an internal climate process that amplifies or dampens the climate response to a specific forcing.”³

The global warming potential (GWP) of each GHG is “[a] measure of the total energy that a gas absorbs over a particular period of time (usually 100 years), compared to carbon dioxide”. Individual GHGs have varying GWP and atmospheric lifetimes. The carbon dioxide equivalent (CO₂e) – the mass emissions of an individual GHG multiplied by its GWP – is a consistent methodology for comparing GHG emissions because it normalizes various GHG emissions to a consistent metric. The reference gas for GWP is CO₂, which has a GWP of 1. CH₄ has a GWP of 25, and therefore has a greater global warming effect than CO₂ on a molecule-per-molecule basis. Table 3.3-1 identifies the GWP of several select GHGs.

Table 3.3-1: Global Warming Potentials and Atmospheric Lifetimes of Select Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100 Year Time Horizon)
Carbon Dioxide CO ₂	50-200	1
Methane (CH ₄)	12	25
Nitrous Oxide (N ₂ O)	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC: Perfluoromethane (CF ₄)	50,000	7,390
PFC: Perfluoroethane (C ₂ F ₆)	10,000	12,200
Sulfur Hexafluoride (SF ₆)	3,200	22,800

Source: IPCC 4th Assessment Report. Available: <https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-ts-1.pdf>. Accessed: March 2019.⁴

³ National Research Council of the National Academies. Radiative Forcing of Climate Change: Expanding the Concept and Addressing Uncertainties. 2005.

⁴ Global Warming Potential values have been updated in IPCC’s subsequent assessment report, the Fifth Assessment Report. However, in accordance with international and U.S. convention to maintain the value of the carbon dioxide “currency,” GHG emission inventories are calculated using the GWPs from the IPCC Fourth Assessment Report.

GHG emissions are classified into direct and indirect emissions, which in turn are classified as follows:

- Scope 1. All direct GHG emissions.
- Scope 2. Indirect GHG emissions from consumption of purchased electricity, heat, or steam (i.e., GHG emissions generated at the power plant that provides electricity at the demand of the site/facility).
- Scope 3. Other indirect (optional) GHG emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g., transmission and distribution losses) not covered in Scope 2, outsourced activities, waste disposal, and construction.

3.3.3 General Approach and Methodology

Construction emissions were estimated over the proposed Project's 30-month construction period (i.e., 2021, 2022 and 2023) and included construction equipment and construction vehicles. Construction assumptions are described in Section 2.5 of Chapter 2, Project Description. Emission factors were derived from the CARB *OFFROAD 2017* model for construction equipment, CARB *EMFAC 2017* model for on-road vehicles.^{5,6}

Per SCAQMD, construction GHG emissions were amortized over the life of the project and included in the proposed Project's annual GHG emissions totals. For the purposes of determining GHG impacts under CEQA, SCAQMD defines 'life of the project' as 30 years for industrial projects. Although the proposed Project is expected to exist for longer than 30 years, this analysis assumed 30-year duration. This assumption is conservative because amortization of construction emissions over 30 years would result in higher annual GHG emissions than amortization over a longer duration. GHGs are reported as CO₂ equivalents (i.e., CO₂e) expressed in metric tons (MT) based on their GWP, per Table 3.3-1.

Operation of the proposed Project would be automated, self-contained, and located underground. Emissions associated with maintenance activities, consisting of approximately one vehicle per month would be minimal and were not quantified. During operation, electrical pumps, used to deliver wastewater to DCTWRP, would consume electricity and contribute to indirect GHG emissions associated with electricity production at power plants. These indirect emissions were quantified using the anticipated electrical pump activity at the six pump stations and USEPA's Emissions & Generation Resource Integrated Database (known as eGRID), a comprehensive source of data on the environmental characteristics of electric power generated in the United States.⁷

⁵ California Air Resources Board (CARB). EMFAC2017 On-Road Emissions Inventory Estimation Model. Available: <https://www.arb.ca.gov/emfac/>. Accessed February 2019.

⁶ CARB. OFFROAD2017 Off-Road Diesel Analysis and Inventory. Available: <https://www.arb.ca.gov/msei/ordiesel.htm>. Accessed February 2019.

⁷ USEPA. Emissions & Generation Resource Integrated Database (eGRID).

GHG impacts in relation to global climate change are, by nature, cumulative impacts. Therefore, no separate cumulative impacts analysis is required.

Appendix F of the State CEQA Guidelines requires that project-level assessments “...include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy.” This analysis has been prepared to address energy consumption and conservation related to the proposed Project consistent with the guidance in Appendix F of the State CEQA Guidelines.

Construction emission calculations are presented in Appendix C1. Operation of the proposed Project would not generate substantial direct emissions and maintenance activities would be minimal, thus direct emissions from operation were not quantified. Operation of the proposed Project would however generate indirect emissions associated with electricity demand and therefore the indirect emissions were quantified. Appendix C4 summarizes potential energy usage with respect to both construction and operation of the proposed Project.

Sources of energy consumption during construction include fossil fuel usage in heavy duty off-road construction equipment, on-road trucks, and worker vehicles. When considering the potential energy impacts of construction, a baseline of no work, is assumed; therefore, construction inherently causes a temporary increase in energy consumption. As a result, energy consumption associated with construction sources is quantified in Section 3.3.7.3 below.

Sources of energy consumption during operation include electricity demand from water pumps. When considering the potential energy impacts of operation, a baseline of no project (in this case, same as existing conditions), is assumed; therefore, installation of the project pumps would lead to an increase in energy consumption. As a result, energy consumption associated with operational sources is quantified in Section 3.3.7.3 below.

Energy consumption is quantified in different ways depending on the type of equipment being analyzed. For equipment which consumes fuel which is combusted to generate power, fuel consumption per time is not an appropriate measure as intensity of activity may change fuel consumption rates over time. Instead, consistent with guidance established by the IPCC and approved by CARB, fuel emissions for combustion sources is calculated from total CO₂ emissions associated with the operation of the combustion equipment.⁸ Factors for the conversion of CO₂ emissions to fuel consumption, based on fuel type, are established by the U.S. Energy Information Administration. For quantification of electrical demand, pumps were anticipated to operate intermittently. Annual hours of operation were based on the maximum projected diverted flow of 21.01 MGD.⁹

⁸ Intergovernmental Panel on Climate Change. 2006 IPCC Guidelines for National Greenhouse Gas Inventories. 2006. Available: <https://www.ipcc-nggip.iges.or.jp/public/2006gl/>. Accessed March 2019.

⁹ City of Los Angeles Department of Public Works. East West Valley Interceptor Sewer Concept Report. 2017.

3.3.4 Regulatory Framework

This section describes the most relevant international, federal, state and local agency policies, directives and regulations pertaining to GHG emissions.

3.3.4.1 International Plans and Policies

International Governmental Panel on Climate Change

In 1988, the United Nations and the World Meteorological Organization established the IPCC to assess “the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.” Since its inception, the IPCC has delivered five comprehensive scientific reports about climate change, with the latest (the Fifth Assessment Report) released in four parts between September 2013 and November 2014.¹⁰

United Nations Framework Convention on Climate Change

In March 1994, the U.S. joined other countries around the world in signing the United Nations Framework Convention on Climate Change (UNFCCC). Under the Convention, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

Kyoto Protocol

The Kyoto Protocol is a treaty made under the UNFCCC. More than 160 countries, accounting for 55 percent of global emissions, have signed the protocol, under which they commit to reduce their emissions of GHGs or engage in emissions trading. The U.S. symbolically signed the Kyoto Protocol in 1998; however, the U.S. Senate did not ratify the protocol. The original GHG reduction commitments made under the Kyoto Protocol expired at the end of 2012. An extension of the commitment period to December 31, 2020 was agreed to at the Doha, Qatar meeting held in December 2012.

Paris Agreement

Negotiations held to discuss measures to be taken after the end of the Kyoto Protocol commitment period resulted in the 2015 adoption of the Paris Agreement. The U.S. formally entered the Paris Agreement in September 2016 through an executive order; however, the agreement was not submitted to Congress for approval. In June 2017, the U.S. announced its intent to withdraw from the agreement. The earliest effective date of a withdrawal by the U.S. is November 2020.

¹⁰ Intergovernmental Panel on Climate Change. History. Available: <https://www.ipcc.ch/about/history/>. Accessed: March 2019.

3.3.4.2 Federal Plans, Policies, and Regulations

USEPA Endangerment Findings

In 2010, the USEPA adopted an endangerment finding for GHGs under the CAA Section 202(a) under which the Administrator determined that (1) six GHGs, taken in combination, endanger both the public health and welfare of current and future generations, and (2) the combined emissions of GHGs from new motor vehicles contribute to this GHG air pollution.¹¹ These findings themselves did not impose any requirements on industry or other entities. However, this action was a prerequisite for implementing GHG emissions standards for vehicles.

GHG and Fuel Efficiency Standards for Passengers Cars and Light-Duty Trucks

In April 2010, the USEPA and National Highway Traffic Safety Administration (NHTSA) finalized GHG standards for new (model year 2012 through 2016) passenger cars, light-duty trucks, and medium-duty passenger vehicles that would decrease CO₂ emission limits for a combined fleet of cars and light trucks. If all of the necessary emission reductions were made from fuel economy improvements, the standards would correspond to a combined fuel economy of 30.1 miles per gallon (mpg) in 2012 and 35.5 mpg in 2016.¹² The agencies also issued a joint final rule for model years 2017 to 2025 light-duty vehicles in August 2012 that would correspond to a combined fuel economy of 36.6 mpg in 2017 and 54.5 mpg in 2025.

As part of the 2012 rulemaking establishing the model year 2017-2025 light-duty vehicle GHG standards, the USEPA made a regulatory commitment to conduct a Midterm Evaluation of the standards for model years 2022-2025. As a part of this process, the USEPA was to examine a wide range of factors, such as developments in powertrain technology, vehicle electrification, light-weighting and vehicle safety impacts, the penetration of fuel-efficient technologies in the marketplace, consumer acceptance of fuel-efficient technologies, trends in fuel prices and the vehicle fleet, employment impacts, and many others. In April 2018, the USEPA Administrator signed the Mid-term Evaluation Final Determination, which found that the model year 2022-2025 GHG standards are not appropriate in light of the record before the USEPA and, therefore, should be revised. The USEPA, in partnership with NHTSA, will initiate a notice and comment rulemaking in a forthcoming Federal Register notice to further consider appropriate standards for model years 2022–2025 light-duty vehicles.¹³

¹¹ Federal Register, Vol. 74, No. 239. Part V Environmental Protection Agency, 40 CFR Chapter I, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, Final Rule. December 2009, pp. 66496 - 66546. Available: https://www.epa.gov/sites/production/files/2016-08/documents/federal_register-epa-hq-oar-2009-0171-dec.15-09.pdf. Accessed: March 2019.

¹² U.S. Environmental Protection Agency. Regulatory Announcement: EPA and NHTSA Finalize Historic National Program to Reduce Greenhouse Gases and Improve Fuel Economy for Cars and Trucks. April 2010. Available: <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100AKHW.PDF?Dockey=P100AKHW.PDF>. Accessed March 2019.

¹³ U.S. Environmental Protection Agency. Midterm Evaluation of Light-Duty Vehicle Greenhouse Gas Emissions Standards for Model Years 2022-2025 – Overview. Available: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/midterm-evaluation-light-duty-vehicle-greenhouse-gas#overview>. Accessed: March 2019.

GHG and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles

In October 2010, the USEPA and NHTSA announced a program to reduce GHG emissions and to improve fuel efficiency for medium- and heavy-duty-vehicles (model years 2014 through 2018). These standards were signed into law in August 2011.¹⁴ In October 2016, the USEPA and NHTSA adopted Phase 2 GHG and fuel efficiency standards for medium- and heavy-duty engines and vehicles. The standards are expected to lower CO₂ emissions by approximately 1.1 billion MT and reduce oil consumption by up to two billion barrels over the lifetime of the vehicles sold under the program.¹⁵

3.3.4.3 State Plans, Policies, and Regulations

The legal framework for GHG emission reduction in California has come about through Executive Orders, legislation, and regulation. The major components of California's climate change initiatives are reviewed below.

California Environmental Quality Act

CEQA requires lead agencies to consider the reasonably foreseeable adverse environmental effects of projects they are considering for approval. GHG emissions have the potential to adversely affect the environment because they contribute to GCC. In turn, GCC has the potential to raise sea levels, affect rainfall and snowfall, and affect habitat.

Senate Bill (SB) 97, enacted in August 2007, required OPR to prepare guidelines to submit to the California Natural Resources Agency (CNRA) regarding feasible mitigation of GHG emissions or the effects of GHG emissions as required by CEQA.¹⁶ The CNRA adopted amendments to the State CEQA Guidelines addressing GHG emissions in December 2009. The amendments became effective in March 2010. The guidelines are reflected in this EIR.

The significance of GHG emissions are specifically addressed in State CEQA Guidelines Section 15064.4. Section 15064.4 calls for a lead agency to make a "good-faith effort" to "describe, calculate or estimate" GHG emissions in CEQA environmental documents. Section 15064.4 further states that the analysis of GHG impacts should include consideration of (1) the extent to which the project may increase or reduce GHG emissions, as compared to the existing environmental setting; (2) whether the project emissions would exceed a locally applicable threshold of significance; and (3) the extent to which the project would comply with "regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions." The guidelines also state that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including plans or regulations for the reduction of GHG emissions) that

¹⁴ U.S. Environmental Protection Agency. Regulatory Announcement. EPA and NHTSA Adopt First-Ever Program to Reduce Greenhouse Gas Emissions and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles. August 2011. Available: <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100BOT1.PDF?Dockkey=P100BOT1.PDF>. Accessed March 2019.

¹⁵ U.S. Environmental Protection Agency. Final Rule for Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles - Phase 2. Available: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-greenhouse-gas-emissions-and-fuel-efficiency#rule-history>. Accessed: March 2019.

¹⁶ California Senate Bill 97, Chapter 185, Statutes of 2007.

provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located (State CEQA Guidelines Section 15064[h][3]). The State CEQA Guidelines do not, however, set a numerical threshold of significance for GHG emissions.

Executive Order S-3-05

Executive Order (EO) S-3-05 established statewide GHG emission reduction targets as follows: reduce GHG emissions to 2000 levels by 2010; reduce GHG emissions to 1990 levels by 2020; and reduce GHG emissions to 80 percent below 1990 levels by 2050. EO S-3-05 required state agencies to implement measures to achieve these targets and required the development of a Scoping Plan that reflects these targets. EO S-3-05 also created the Climate Action Team, which develops assessment reports on climate change and adaptation options for California.

Executive Order B-30-15

EO B-30-15 established a mid-term GHG reduction target for California of 40 percent below 1990 levels by 2030. EO B-30-15 requires state agencies to implement measures to achieve these targets and requires the development of a Scoping Plan that reflects these targets.

Assembly Bill 32 - California Global Warming Solutions Act of 2006, Senate Bill 32 (2016), Scoping Plan (2008), and Scoping Plan Update (2014)

The California Global Warming Solutions Act of 2006, also known as AB 32, was adopted by California legislature in response to EO S-3-05. AB 32 set the 2020 emission reduction goals of EO S-3-05 into law and required CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB was directed to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner. AB 32 also required CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

On December 11, 2008, CARB adopted the AB 32 Scoping Plan, which set forth the framework for facilitating the state's GHG goal as described in EO S-3-05. In 2014, CARB adopted an update to the 2008 Scoping Plan that builds upon the initial Scoping Plan with new strategies and recommendations. The 2008 Scoping Plan and 2014 Scoping Plan Update require that reductions in GHG emissions come from virtually all sectors of the economy and be accomplished from a combination of policies, planning, direct regulations, market approaches, incentives and voluntary efforts. These efforts target GHG emission reductions from cars and trucks, electricity production, fuels, and other sources.

SB 32 codified the EO B-30-15 target through 2030 and directed State regulatory agencies to develop rules and regulations to meet the 2030 State target. In 2016, in response to EO B-30-15, CARB released a 2030 draft Target Scoping Plan Update to address the state's mid-term 2030 GHG target. This update is expected to go to CARB's board in late 2016 or early 2017.

Assembly Bill 1493

Enacted in July 2002, AB 1493, commonly known as the Pavley law (named for then-Assembly Member Fran Pavley, who sponsored the bill), required CARB to develop and adopt regulations that will lead to a reduction in GHGs emitted by passenger vehicles and light-duty trucks. Subsequent regulations adopted by CARB, often referred to as the Pavley regulations, apply to 2009 through 2016 vehicles. CARB estimated that the regulations would reduce GHG emissions from the light-duty and passenger vehicle fleet by 18 percent in 2020 and by 27 percent in 2030, compared to recent years. In 2011, the U.S. Department of Transportation, the USEPA, and California announced a single timeframe for proposing fuel and economy standards, thereby aligning the Pavley regulations with the federal standards for passenger cars and light-duty trucks. Emission estimates included in this analysis account for the Pavley standards.

Advanced Clean Cars Program

In January 2012, CARB approved a new emissions-control program for vehicles of model years 2017 through 2025. The program combines the control of smog, soot, and GHG into a single package of standards referred to as the Advanced Clean Cars program (13 CCR §1962.1 and 1962.2). The Advanced Clean Cars requirements include new GHG standards for model year 2017 to 2025 vehicles. The Advanced Clean Cars Program also includes amendments to the low emission vehicle (LEV) amendments (referred to as the LEV III regulations; 13 CCR §1900 et seq.), zero emission vehicle (ZEV) regulations, and the Clean Fuels Outlet Regulation. The LEV III regulations are aimed at reducing criteria pollutant and GHG emissions from light- and medium-duty vehicles. The ZEV regulation requires manufacturers to produce an increasing number of the very cleanest cars available, including battery electric, fuel cell, and plug-in hybrid electric vehicles. The Clean Fuels Outlet regulation is designed to ensure that fuels such as electricity and hydrogen are available to meet the fueling needs of the new advanced technology vehicles as they come to market.¹⁷

Executive Order S-01-07 and the Low Carbon Fuel Standard

California Executive Order S-01-07 established a statewide goal to reduce the carbon intensity of transportation fuels sold in California by at least 10 percent by 2020 from 2005 levels. The Executive Order also mandated the creation of Low Carbon Fuel Standard (LCFS) for transportation fuels. The LCFS requires that the lifecycle GHG emissions for the mix of fuels sold in California decline on average. Each fuel provider may meet the standard by selling fuel with lower carbon content, using previously banked credits from selling fuel that exceeded the LCFS, or purchasing credit from other fuel providers who have earned credits.¹⁸

Renewable Portfolio Standard

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply

¹⁷ California Air Resources Board. Advanced Clean Cars Program Homepage. Available: <https://www.arb.ca.gov/msprog/acc/acc.htm>. Accessed: March 2019.

¹⁸ California Code of Regulations, Section 95480 et seq., Low Carbon Fuel Standard.

from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, the Governor signed Executive Order S-14-08, which expands the State's Renewable (Energy) Portfolio Standard (RPS) to 33 percent renewable power by 2020. In September 2009, the Governor issued Executive Order S-21-0911 requiring CARB, under its AB 32 authority, to adopt regulations to meet a 33 percent RPS target by 2020. The CARB regulations use a phased-in or tiered requirement to increase the amount of electricity from eligible renewable sources over an eight-year period beginning in 2012. CARB adopted the regulations in September 2010.

In March 2011, the Legislature passed Senate Bill XI-2 (SB XI-2), which was signed into law by the Governor the following month. SB XI-2 requires utilities to procure renewable energy products equal to 33 percent of retail sales by December 31, 2020, and also established interim targets: 20 percent by December 31, 2013, and 25 percent by December 31, 2016. Senate Bill SB 350 of 2015 (Chapter 547, Statutes of 2015) increased the renewable portfolio standard to 50 percent by the year 2030, and also established interim targets of 40 percent by December 31, 2024 and 45 percent by December 31, 2027.

3.3.4.4 Regional and Local

Sustainable City Plan City of Los Angeles

In April 2015, the City of Los Angeles developed the Sustainable City pLAN (pLAN) as a roadmap through 2035. The pLAN contains strategies to address current and future climate change impacts and reduce air quality emissions. The pLAN sets aspirations for 13 target areas. Of these, the following are related to proposed Project activities: construction and demolition waste recycling and expansion of recycled water production, treatment, and distribution.¹⁹

Green LA

The City of Los Angeles released its climate action plan, Green LA: An Action Plan to Lead the Nation in Fighting Global Warming, in May 2007.²⁰ The Green LA plan is a voluntary program that sets a goal of reducing the City's GHG emissions to 35 percent below 1990 level by 2030.

ClimateLA is the implementation framework that contains the details of the more than 50 action items that are included in Green LA. The majority of the actions described in the Green LA Plan are not project-specific and include City-wide actions. Some of the measures the City of Los Angeles will take to achieve the 35 percent reduction goal include the following:

- Increasing the amount of renewable energy provided by Los Angeles Department of Water and Power (LADWP);
- Improving the energy efficiency of all City departments and City-owned buildings;

¹⁹ City of Los Angeles. pLAN 2017. Available: <http://plan.lamayor.org/>. Accessed: March 2019.

²⁰ City of Los Angeles. Green LA An Action Plan to Lead the Nation if Fighting Global Warming. May 2007.

- Converting City fleet vehicles, refuse collection trucks, street sweepers, and buses to alternative fuel vehicles;
- Providing incentives and assistance to existing LADWP customers in becoming more energy efficient;
- Changing transportation and land use patterns to reduce dependence on automobiles;
- Decreasing per capita water use through water conservation and recycling;
- Implementing the City’s water and wastewater integrated resources plan that will increase conservation and maximize use of recycled water; and
- Promoting expansion of the “green economy” throughout the City.

3.3.5 Environmental Setting

3.3.5.1 Existing Greenhouse Gas Setting

According to the IPCC, worldwide man-made emissions of GHGs in 2010 were approximately 49,000 million metric tons of CO₂e (MMTCO₂e).²¹ Total U.S. GHG emissions in 2017 were 6,472 MMTCO₂e, or about 13 percent of worldwide GHG emissions.²²

California, due in part to its large size and large population, is a substantial contributor of global GHGs, and is the second largest contributor to GHG emissions in the United States (Texas is first). As mandated by the Global Warming Solutions Act of 2006 (AB 32), CARB is required to compile GHG inventories for the State of California, including establishment of the 1990 Greenhouse Gas Emissions Level. Inventories have been prepared for 2000 through 2016. Based on the 2016 GHG inventory data (i.e., the latest year for which data are available).²³

Table 3.3-2 identifies and quantifies statewide anthropogenic GHG emissions and sinks in 1990 and 2016.^{24,25} Although a large overall contributor to GHG emissions, California had the third lowest CO₂ emissions per capita from fossil fuel combustion in the U.S., due to the success of its energy efficiency and renewable energy programs and commitments that have lowered the State’s GHG emissions rate of growth by more than half of what it would have been otherwise.²⁶

²¹ Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)], *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change – Summary for Policymakers*, 2015, p. 5.

²² U.S. Environmental Protection Agency. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2017*, EPA430-P-19-001. Available: https://www.epa.gov/sites/production/files/2018-01/documents/2018_complete_report.pdf. Accessed: March 2019.

²³ California Air Resources Board. *California Greenhouse Gas Inventory for 2000-2016*. July 2018. Available: <https://www.arb.ca.gov/cc/inventory/data/data.htm>. Accessed: March 2019.

²⁴ The term “anthropogenic,” in this context, refers to GHG emissions and removals that are a direct result of human activities or are the result of natural processes that have been affected by human activities.

²⁵ The term “sink,” in this context, refers to a natural or artificial reservoir that accumulates and stores greenhouse gases for an indefinite period.

²⁶ U.S. Energy Information Administration. *Energy-Related Carbon Dioxide Emissions at the State Level, 2000-2016*. February 2019. Available: <https://www.eia.gov/environment/emissions/state/analysis/>. Accessed: March 2019.

Table 3.3-2: State of California GHG Emissions¹

Category	Total 1990 Emissions (MMTCO ₂ e)	Percent of Total 1990 Emissions	Total 2016 Emissions (MMTCO ₂ e)	Percent of Total 2016 Emissions
Transportation	150.7	35%	169.4	39%
Industrial	103.0	24%	89.6	21%
Electric Power	110.6	26%	68.6	16%
Commercial	14.4	3%	39.4	9%
Residential	29.7	7%		
Agriculture	23.4	5%	33.8	8%
High GWP/Non-Specified ³	1.3	<1%	19.8	5%
Recycling and Waste	-- ²	-- ²	8.8	2%
Net Total	426.6	100%	429.4	100%

Sources:

California Air Resources Board. Staff Report: California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit. November 2007. Available: http://www.arb.ca.gov/cc/inventory/pubs/reports/staff_report_1990_level.pdf. Accessed: March 2019.

California Air Resources Board. California Greenhouse Gas Inventory for 2000-2016 – by Category as Defined in the 2008 Scoping Plan. July 2018. Available: https://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_sum_2000-16.pdf. Accessed: March 2019.

Notes:

1. Numbers may not add due to rounding.
2. Included in other categories for the 1990 emissions inventory.
3. High GWP gases are not specifically called out in the 1990 emissions inventory.
4. Revised methodology under development (not reported for 2014).

Between 2000 and 2016, the population and gross state product of California grew by approximately 15 percent and 41 percent, respectively, while GHG emissions decreased by approximately 10 percent.²⁷ CARB attributes the overall decrease to the success of California’s renewable energy programs and its commitment to clean air and clean energy.

3.3.5.2 Existing GHG Emissions

Existing operations are largely passive and located underground. Emissions associated with maintenance are minimal and were not quantified.

3.3.5.3 Energy

Appendix F states that the environmental setting “may include existing energy supplies and energy use patterns in the region and locality.”

Energy consumption analyzed as part of this chapter includes fuel usage during construction and electricity use during operation. Appendix C4 highlights construction greenhouse gas calculations, methodology and assumptions, which are used to determine fuel usage. Fuel usage associated with construction of the proposed Project is summarized in Table 3.3-5 below.

²⁷ California Air Resources Board. California GHG Inventory, 2018 Edition. Available: <https://www.arb.ca.gov/cc/inventory/data/data.htm>. Accessed: March 2019.

3.3.5.3.1 Electrical Power

Electrical power is provided by LADWP, which supplies 1.5 million meters (business and residential) over a 465 square-mile service area that spans Los Angeles County.²⁸ LADWP performs modeling for electric power demand on a regular basis to manage existing resource portfolios, increase renewable portfolios, and balance infrastructure needs.²⁹

3.3.5.3.2 Energy Conservation

LADWP has programs in place that promote energy efficiency and use of renewable energy sources. In 2017, approximately 30 percent of the energy delivered to LADWP customers came from renewable energy projects, including solar, wind, geothermal, small hydroelectric, and biomass and biowaste generated electricity.

LADWP developed the Power Strategic Long-Term Resources Plan in 2017 to assess strategies for meeting state GHG emission reduction targets. The strategies and actions identified in the plan include increasing energy efficiency through programs and policies such as increasing the use of renewable energy and achieving 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045.

3.3.6 Thresholds of Significance

In accordance with the State CEQA Guidelines (see Section 3.3.4.3), and for the purposes of this analysis, GHG emissions associated with the proposed Project are considered significant if the project results in the following:

- Impact 3.3-1** Generation of GHGs, either directly or indirectly, that may have a significant impact on the environment; or
- Impact 3.3-2** Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Energy usage associated with the proposed Project is considered significant if the project would:

- Impact 3.3-3** Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation.
- Impact 3.3-4** Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

²⁸ Los Angeles Department of Water and Power. Facts & Figures webpage. Available: <https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-power/a-p-factandfigures>.

²⁹ Los Angeles Department of Water and Power. Final Power Strategic Long-Term Resource Plan. 2017. Available: https://www.ladwp.com/ladwp/faces/wcnav_externalld/a-p-doc. Accessed: March 2019.

3.3.7 Project Impacts

3.3.7.1 Impact 3.3-1

Impact 3.3-1: Construction and operation of the proposed Project would not generate GHGs, either directly or indirectly, that may have a significant impact on the environment.

As described in Section 3.3.4, the State CEQA Guidelines Section 15064.4 calls for a lead agency to make a “good-faith effort” to “describe, calculate or estimate” GHG emissions in CEQA environmental documents, and, in assessing significant impacts should consider the extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting, and whether the project emissions would exceed a locally applicable threshold of significance. Section 3.3.7.1, above, describes and quantifies GHG emissions associated with construction and operation of the proposed Project.

3.3.7.1.1 Construction Emissions

Construction emissions were estimated over the proposed Project’s 30-month construction period (i.e., 2021, 2022 and 2023). Construction assumptions are described in the Section 2.5 of Chapter 2, Project Description. Emission factors were derived from the California Air Resources Board’s (CARB) *OFFROAD 2017* model for construction equipment and CARB *EMFAC 2017* model for on-road vehicles. Table 3.3-3 presents GHG construction emissions, amortized over 30 years.

Table 3.3-3: Total Annual GHG Emissions (in metric tons)

Source Category	CO ₂ e (mty)
2021	
Off-road Construction Equipment	1,784.7
On-road Construction Vehicles	1,261.1
Fugitive Emissions	0.0
Total Construction Year 2021	3,046
2022	
Off-road Construction Equipment	2,722.9
On-road Construction Vehicles	2,009.0
Fugitive Emissions	0.0
Total Construction Year 2022	4,732
2023	
Off-road Construction Equipment	1,509.4
On-road Construction Vehicles	952.9
Fugitive Emissions	0.0
Total Construction Year 2023	2,462
Amortized Construction	341
Operational Emissions	384
Total Annual Emissions	725
Significance Threshold	10,000
Significant?	No

Notes:

Construction emissions amortized over 30 years (life of project) 30

3.3.7.1.2 Operational Emissions

Operation of the proposed Project would be automated, self-contained, and located underground. Emissions associated with maintenance activities, consisting of approximately one vehicle per month would be minimal and were not quantified. During operation, electrical pumps, used to deliver wastewater to DCTWRP, would consume electricity and contribute to indirect GHG emissions associated with electricity production at power plants. These indirect emissions were quantified and added to the amortized construction emissions for comparison to the significance threshold. Table 3.3-3 presents GHG operational emissions.

As shown in Table 3.3-3, annual GHG emissions would not exceed SCAQMD’s CEQA significance threshold. Therefore, impacts would be *less than significant*.

3.3.7.1.3 Mitigation Measures

No mitigation is required.

3.3.7.1.4 Significance of Impact After Mitigation

Impacts would be *less than significant*.

3.3.7.2 Impact 3.3-2

Impact 3.3-2: Construction and operation of the proposed Project would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs.

Table 3.3-4 summarizes the various plans, policies, and regulations that are relevant to the proposed Project that serve to reduce GHG emissions.

Table 3.3-4: Consistency with Plans, Policies, and Regulations Adopted to Reduce Greenhouse Gas Emissions

Level	Regulatory Framework	Plan, Policy, or Regulation	Project’s Relationship	Is the Project in Conflict with Plan, Policy, or Regulation?
International	IPCC, UNFCCC, Kyoto Protocol, Paris Agreement	U.S. participation in various organizations and agreements	Not within scope of project or City control.	No
Federal	USEPA Endangerment Findings	Prerequisite for the USEPA to implement GHG emissions standards for vehicles	Not within scope of project or City control.	No
	GHG and Fuel Efficiency Standards	Federal establishment of GHG standards for cars, trucks, medium- and heavy-duty engines, and construction equipment	Not within scope of project or City control.	No
State	Executive Order S-3-05	Establishes statewide GHG reduction targets, for all of California, including by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.	Not within scope of project or City control.	No

Table 3.3-4: Consistency with Plans, Policies, and Regulations Adopted to Reduce Greenhouse Gas Emissions

Level	Regulatory Framework	Plan, Policy, or Regulation	Project's Relationship	Is the Project in Conflict with Plan, Policy, or Regulation?
	Executive Order B-30-15	Establishes statewide mid-term GHG reduction target, for all of California of 40 percent below 1990 levels by 2030.	Not within scope of project or City control.	No
	AB 32, SB 32, Scoping Plan 2008, Scoping Plan Update 2014	AB 32 and SB 32 codify S-3-05 and B-30-15 targets, respectively, and require CARB to develop and enforce regulations. The Scoping Plan and Scoping Plan Update set forth the framework to facilitate the reductions.	Not within scope of project or City control. Notwithstanding, the proposed Project would comply with existing regulations applicable to project activities, and would, by law, comply with future applicable regulatory requirements developed as part of the Scoping Plan and Scoping Plan Update. The proposed Project would therefore not preclude the State's implementation of the AB 32 Scoping Plan or Plan Update.	No
	AB 1493	Requires CARB to adopt regulations for GHG reductions in passenger vehicles and light-duty trucks.	Not within scope of project or City control.	No
	California Advanced Clean Cars Program	Reduces emissions from light- and medium-duty vehicles and requires manufacturers to produce an increasing number of ZEVs.	The City promotes use of alternatively fueled vehicles, including ZEVs, where appropriate.	No
	Executive Order S-01-07 and Low Carbon Fuel Standard	Establishes statewide goal to reduce carbon intensity of transportation fuels sold in California.	Not within scope of project or City control.	No
	Renewable Portfolio Standard	Requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide designated percentages of their supply from renewable sources.	Not within scope of project or City control. However, LADWP would provide electricity to the Project and is required to meet renewable energy standards.	No

Table 3.3-4: Consistency with Plans, Policies, and Regulations Adopted to Reduce Greenhouse Gas Emissions

Level	Regulatory Framework	Plan, Policy, or Regulation	Project's Relationship	Is the Project in Conflict with Plan, Policy, or Regulation?
Local	Sustainable City of Los Angeles (pLAN)	The pLAN sets forth a roadmap to facilitate GHG reductions through 2035. There are 13 target areas addressed by the pLAN. The pLAN contains strategies to address current and future climate change impacts.	The proposed Project assists the City in the expansion of recycled water production, treatment, and distribution, which promotes sustainability.	No
	Green LA	A voluntary program that sets a goal of reducing the City's GHG emissions to 35 percent below 1990 level by 2030.	Implementation of the proposed Project assists in the decreasing of per capita water use through water conservation and recycling. Also, the proposed Project implements the City's water and wastewater integrated resources plan that will increase conservation and maximize use of recycled water	No

As indicated above in Table 3.3-4 implementation of the proposed Project would not conflict with or obstruct implementation of plans, policies, and regulations that are relevant to the proposed Project and that serve to reduce GHG emissions. Therefore, the proposed Project would result in a *less than significant* impact.

3.3.7.2.1 Mitigation Measures

No mitigation is required.

3.3.7.2.2 Significance of Impact After Mitigation

Impacts would be *less than significant*.

3.3.7.3 Impact 3.3-3

Impact 3.3-3: The proposed Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during Project construction or operation.

3.3.7.3.1 Construction

Construction would occur throughout the proposed Project's 30-month construction period (i.e., 2021, 2022 and 2023). Energy use during construction is presented in Table 3.3-5 below.

Transportation Related Fuel

Construction-related energy usage (in the form of fuel consumption) would occur throughout construction of the proposed Project for off-road diesel-powered construction equipment, on-road diesel-powered delivery and haul trucks, and on-road worker vehicles.

Construction of the proposed Project would consume approximately 881,412 gallons of diesel and 144,475 gallons of gasoline (Table 3.3-5) over all construction years. Table 3.3-5 uses the GHG

emissions generated during each year of construction activities as a basis for determining diesel and gasoline fuel consumption.

Table 3.3-5: Fuel Consumption During Construction

Year	Source	CO2 Emissions metric tonnes	Fuel Type -	Fuel Conversion Factor lb CO2 / gallon	Fuel Consumption gallons
2021	Off-road Construction Equipment	1,785	Diesel	22.40	175,651
	On-road Construction Trucks	915	Diesel	22.40	90,007
	On-road Worker Vehicles	347	Gasoline	19.60	38,985
2022	Off-road Construction Equipment	2,723	Diesel	22.40	267,990
	On-road Construction Trucks	1,432	Diesel	22.40	140,948
	On-road Worker Vehicles	577	Gasoline	19.60	64,891
2023	Off-road Construction Equipment	1,509	Diesel	22.40	148,556
	On-road Construction Trucks	592	Diesel	22.40	58,261
	On-road Worker Vehicles	361	Gasoline	19.60	40,599
Total	Total Construction	8,956	Diesel	-	881,412
	Total Construction	1,284	Gasoline	-	144,475

Source: Appendix C5 of this Draft EIR

In addition to fuel consumption, it is anticipated that small amounts of electricity would be consumed associated with lighting and other minor construction needs.

Construction would not result in substantial wasteful or inefficient use of energy, due to the short-term nature of construction activities and the long-term benefits of the project to support local water supplies by increasing the production and use of recycled water.

Therefore, the proposed project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during Project construction, and the impact would be *less than significant*.

3.3.7.3.2 Operations

During the operational phase, the proposed Project would consume energy in the form of electricity to operate the pump stations. As described in Section 2.4.3, a total of six pump stations would be used to divert wastewater to DCTWRP via the new force main. Each station would be outfitted with a single operational pump and one standby pump, with Vineland Pump Station being outfitted with an additional single flush pump. With the added operation of these pumps over the baseline or no project conditions, an increase in long-term electricity demand would result. It is anticipated that,

based on operating parameters, pump electrical demand would total 1,598,125 kilowatt per hour (kW-hr) per year.³⁰

In addition to electrical demand, it is anticipated that small amounts of gasoline or diesel fuel would be consumed in association with vehicle trips for monthly pump inspections and bi-annual maintenance activities.

The record one-hour peak electricity demand on local power supplies was 6,502,000 kilowatts (kW) out of LADWP's maximum instantaneous power capacity of 7,880,000 kW.³¹ Relative to LADWP's maximum annual power capacity of approximately 69,000,000,000 kW-hr, the relatively minor increase in electricity demand generated by the pumps would be insubstantial. Therefore, the proposed Project would not exceed the capacity of electricity transmission facilities and would not result in the construction of new off-site infrastructure that could cause significant environmental impacts.

Further, the proposed Project would result in long-term benefits of supporting local water supplies by increasing the production and use of recycled water to be used in place of imported potable (drinking) water for industrial, landscape and recreational purposes in addition to other beneficial uses. Use of recycled water in place of potable water has energy saving benefits because it reduces the need to import water over long distances (i.e., pumping water over the mountains to the Los Angeles Basin) and/or the need to pump water from deep within an aquifer.

Therefore, the proposed Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during Project operation, and the impact would be *less than significant*.

3.3.7.4 Impact 3.3-4

Impact 3.3-4: The proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The proposed Project's purpose is to maximize wastewater reuse. It would not increase dependence on fossil fuels and would not affect state, regional, or local efforts to increase use of renewable energy and improve energy efficiency. Increasing production and use of recycled water is consistent with objectives identified in the City's local plans to reduce GHG emissions that are also supportive of renewable energy and energy efficiency (pLAN and Green LA). The energy saving benefits of increasing production of recycled water, as described under Impact 3.3-4 above would contribute to the City's overall goals of reducing energy use. Therefore, the proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. As such, this would be a *less than significant* impact for construction and operation.

3.3.7.4.1 Mitigation Measures

No mitigation is required.

³⁰ City of Los Angeles Department of Public Works. East West Valley Interceptor Sewer Concept Report. 2017.

³¹ LADWP, Facts & Figures. Available: <https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-power/a-p-factandfigures>. Accessed: March 2019.

3.3.7.4.2 Significance of Impact After Mitigation

Impacts would be *less than significant*.

3.3.8 Summary of Impact Determinations

Table 3.3-6 summarizes the impact determinations of the proposed Project-related GHG emissions and energy, as described above in the detailed discussion in Section 3.3.7. Identified potential impacts are based on the significance criteria presented in Section 3.3.6, the information and data sources cited throughout Section 3.3, and the professional judgment of the report preparers, as applicable.

Table 3.3-6: Summary Matrix of Potential Impacts and Mitigation Measures Associated with the Proposed Project Related to Greenhouse Gas Emissions and Energy

Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Impact 3.3-1: Construction and operation of the proposed Project would not generate GHGs, either directly or indirectly, that may have a significant impact on the environment.	Less than Significant	No mitigation is required	Less than Significant
Impact 3.3-2: Construction and operation of the proposed Project would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs.	Less than Significant	No mitigation is required	Less than Significant
Impact 3.3-3: The proposed Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during Project construction or operation.	Less than Significant	No mitigation is required	Less than Significant
Impact 3.3-4: The proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less than Significant	No mitigation is required	Less than Significant

3.3.8.1 Mitigation Measures

The proposed Project is not expected to result in significant impacts on GHG, GCC and energy usage and consumption. Therefore, no mitigation measures are required.

3.3.9 Significant Unavoidable Impacts

There would be no significant unavoidable impacts relative to GHG emissions, as well as GCC and energy.

Section 3.4

Hazards and Hazardous Materials

3.4.1 Introduction

This section analyzes the proposed Project's construction impacts associated with hazards and hazardous materials, including the potential for accidental release of hazardous materials into the environment. In addition, the location of the proposed Project is near sites included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, the potential that the proposed Project would create a significant hazard to the public or the environment. Finally, this section analyzes the potential of the proposed Project to emit hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of a school. As part of this analysis, the section describes the general approach and methodology, regulatory framework, environmental setting, and significance criteria used to evaluate the proposed Project's effects related to hazards and hazardous materials.

As discussed in the NOP/IS (Appendix A of this Draft EIR), operation of the proposed Project would be automated and located underground, with only control panel boxes at pump stations located above ground. The Project components would be operated as a closed system, which would not generate hazards or hazardous materials. Therefore, no further evaluation in the EIR of Project operations is required.

No comments specific to hazards and hazardous materials were received during the NOP review process.

3.4.2 General Approach and Methodology

The proposed Project's impacts relative to hazards and hazardous materials were analyzed to address the potential for encountering existing environmental contamination or hazardous materials in the Project area and evaluate these findings with respect to appropriate significance criteria. This section includes an overview of the regulatory context by which these hazardous substances are managed; describes what is known about hazardous materials in the Project area; and evaluates whether the proposed Project could result in potentially significant environmental impacts in connection with these materials. This analysis assumes that the proposed Project would be constructed in compliance with federal, state and local requirements (as detailed in Section 3.4.3 below).

The California Department of Toxic Substances Control (DTSC) EnviroStor and the California State Water Resources Control Board GeoTracker databases were reviewed to determine the likelihood of encountering soil or groundwater contamination from past activities at or near the site during excavation. The EnviroStor database includes the following site types: those listed on the National Priorities List (NPL) (Federal Superfund sites); State Superfund and Military Facilities; Voluntary Cleanup; and School sites. The GeoTracker database includes geographic information and data on underground fuel tanks, fuel pipelines, and public drinking water supplies, and contains information regarding leaking underground fuel tanks. This database also includes information

and data on non-leaking underground fuel tank cleanup programs, including Spills-Leaks-Investigations, Cleanup Program Sites, U.S. Department of Defense Sites, and Land Disposal programs. Based on the results of the review of databases, the likelihood of encountering soil or groundwater contamination from past activities at or near the Project site during excavation is assessed, and the resulting potential to create a significant hazard to the public or the environment is evaluated.

For the purposes of this assessment, hazardous materials are meant to include the regulatory-defined terms of hazardous materials, hazardous wastes, hazardous substances, and dangerous goods; environmental contamination of soil, surface waters, and groundwater; as well the range of similarly regulated substances such as fuel and other petroleum-based products. Other hazards evaluated include those related to the safety of nearby residents and workers.

3.4.3 Regulatory Framework

Following is a summary of regulations/policies applicable to hazards and hazardous materials.

3.4.3.1 Federal

Comprehensive Environmental Response, Compensation & Liability Act (CERCLA)

Congress enacted the CERCLA, commonly known as Superfund, which authorizes the U.S. Environmental Protection Agency (USEPA) to respond to releases, or threatened releases, of hazardous substances that may endanger public health, welfare, or the environment. CERCLA also enables USEPA to force parties responsible for environmental contamination to clean it up or to reimburse the Superfund for response or remediation costs incurred by USEPA. Proper site characterization and site remediation of hazardous materials is also regulated by the CERCLA. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous substances at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. The Superfund Amendments and Reauthorization Act of 1986 revised various sections of CERCLA, extended the taxing authority for the Superfund and created a free-standing law, Superfund Amendments and Reauthorization Act (SARA) Title III, also known as the Emergency Planning and Community Right-to-Know Act.

Emergency Planning and Community Right-to-Know Act (EPCRA)

Also known as Title III of the SARA, the EPCRA was enacted by Congress as the national legislation on community safety. SARA stresses the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites; required Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations; provides new enforcement authorities and settlement tools; increases state involvement in every phase of the Superfund program; increases the focus on human health problems posed by hazardous waste sites; encourages greater citizen participation in making decisions on how sites should be cleaned up; and increases the size of the trust fund to \$8.5 billion. This law was designated to help local communities protect public health, safety, and the environment from chemical hazards. To implement this act, Congress requires each state to appoint a State Emergency Response Commission. These commissions are required to divide their

states into Emergency Planning Districts and to name a Local Emergency Planning Committee for each district. The act provides requirements for emergency release notification, chemical inventory reporting, and toxic release inventories for facilities that handle chemicals.

Resource Conservation and Recovery Act (RCRA)

RCRA (Title 40 CFR) gives the USEPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste by "large-quantity generators" (1,000 kilograms/month or more). Under RCRA regulations, hazardous wastes must be tracked from the time of generation to the point of disposal. At a minimum, each generator of hazardous waste must register and obtain a hazardous waste activity identification number. If hazardous wastes are stored for more than 90 days or treated or disposed at a facility, any treatment, storage, or disposal unit must be permitted under RCRA. Additionally, all hazardous waste transporters are required to be permitted and must have an identification number. RCRA allows individual states to develop their own program for the regulation of hazardous waste, as long as the regulations are as stringent as the RCRA's.

Occupational Safety and Health Act of 1970

The Federal Occupational Safety and Health Administration (OSHA) contains provisions with respect to hazardous materials handling. Federal OSHA requirements, as set forth in Title 29 CFR, are designed to promote worker safety, worker training, and a worker's right-to-know. The State is responsible for administering OSHA regulations.

Title 49 CFR specifies additional requirements and regulations with respect to the transport of hazardous materials. Title 49 CFR requires that every employee who transports hazardous materials receive training to recognize and identify hazardous materials and become familiar with hazardous materials requirements. Drivers are also required to be trained in function and commodity specific requirements. In addition, vehicles transporting certain types or quantities of hazardous materials.

Hazardous Materials Transportation Act

Hazardous materials that could be excavated from construction or activities in the project site may require off-site transportation for disposal and/or treatment. Transportation and disposal of hazardous waste would be subject to the Hazardous Materials Transportation Act of 1975 (Title 49 CFR 171 Subchapter C and Title 13 CCR). It requires that every employee who transports hazardous materials receive training to recognize and identify hazardous materials and become familiar with hazardous materials requirements. Vehicles transporting certain types or quantities of hazardous materials must display placards (warning) signs. Carriers are required to report accidental releases of hazardous materials to the U.S. Department of Transportation at the earliest practical moment. Other incidents that must be reported include deaths, injuries requiring hospitalization, and property damage exceeding \$50,000.

The California Highway Patrol and the Caltrans are the state agencies with primary responsibility for enforcing federal and state regulations related to transportation within California. These agencies respond to hazardous materials transportation emergencies. Together, these agencies

determine container types to be used and grant licenses to hazardous waste haulers for hazardous waste transportation on public roads.

Toxic Substances Control Act

In 1976, the federal Toxic Substances Control Act (15 U.S.C. Sections 2601–2671) established a system of evaluation in order to identify chemicals which may pose hazards. The Toxic Substances Control Act also establishes a process by which public exposure to hazards may be reduced through manufacturing, distribution, use, and disposal restrictions or labeling of products.

3.4.3.2 State

California Department of Toxic Substances Control

At the State level, authority for the statewide administration and enforcement of RCRA is enforced through the California Environmental Protection Agency's (CalEPA) DTSC. While the DTSC has primary state responsibility in regulating the generation, storage and disposal of hazardous materials, DTSC may further delegate enforcement authority to local jurisdictions. In addition, the DTSC is responsible and/or provides oversight for contamination cleanup and administers statewide hazardous waste reduction programs. DTSC operates programs to accomplish the following: (1) deal with the aftermath of improper hazardous waste management by overseeing site cleanups; (2) prevent releases of hazardous waste by ensuring that those who generate, handle, transport, store, and dispose of wastes do so properly; and (3) evaluate soil, water, and air samples taken at sites.

Hazardous Waste Control Law

The CalEPA and DTSC regulate the generation, transportation, treatment, storage, and disposal of hazardous waste. The CalEPA has authorized DTSC to enforce the Hazardous Waste Control Law (California Health & Safety Code [H&SC], Division 20, Chapter 6.5, Article 2), which implements the federal RCRA cradle-to-grave waste management system in California for handling hazardous waste in a manner that protects human health and the environment. It establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management of hazardous waste; establishes permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identifies hazardous wastes that cannot be disposed of in landfills. California hazardous waste regulations can be found in Title 22, Division 4.5, "Environmental Health Standards for the Management of Hazardous Wastes."

California Occupational Safety and Health Act

The California Occupational Safety and Health Act of 1973 (Title 8 CCR) is implemented by the California Division of Occupational Safety and Health (CalOSHA), which has primary responsibility for developing and enforcing standards for safe workplaces and work practices in California. For example, under Title 8 CCR 5194 (Hazard Communication Standard), construction workers must be informed about hazardous substances that may be encountered. Compliance with Injury and Illness Prevention Program requirements (Title 8 CCR 3203) would ensure that workers are properly trained to recognize workplace hazards and to take appropriate steps to reduce potential risks due to such hazards. This would be relevant if previously unidentified contamination or

buried hazards are encountered. If additional investigation or remediation is determined to be necessary, compliance with CalOSHA standards for hazardous waste operations (Title 8 CCR 5192) would be required for those individuals involved in the investigation or cleanup work. A Site Health and Safety Plan must be prepared prior to commencing any work at a contaminated site or involving disturbance of building materials containing hazardous substances, to protect workers from exposure to potential hazards.

California Government Code Section 65962.5(a), Cortese List

The Hazardous Waste and Substance Sites (Cortese) List is a planning document used by the state, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code Section 65962.5 requires that the CalEPA, at least annually, an updated Cortese List. The DTSC is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information for the Cortese List.

Title 23 of the California Code of Regulations, Underground Storage Tank Act

The underground storage tank (UST) monitoring and response program is required under Chapter 6.7 of the California H&SC and Title 23 of the CCR. The program was developed to ensure that the facilities meet regulatory requirements for design, monitoring, maintenance, and emergency response in operating or owning USTs.

3.4.3.3 Local

Los Angeles Methane Seepage Regulations

Section 91.7103 of the Los Angeles Municipal Code (LAMC), also known as the Los Angeles Methane Seepage Regulations, sets forth minimum requirements to control methane for buildings and paved areas that are located in a City-designated methane zone or a methane buffer zone. Requirements for new construction within such zones may include site testing for methane gas, installing a barrier (i.e., a membrane shield) between the building and underlying earth, installing a vent system(s) beneath the barrier and/or within the building, and installing a gas (methane) detection system.

City of Los Angeles Fire Department

At the local level, the City of Los Angeles Fire Department (LAFD) monitors the storage of hazardous materials in the City for compliance with local requirements. Specifically, businesses and facilities which store more than threshold quantities of hazardous materials as defined in Chapter 6.95 of the California Health and Safety Code are required to file an Accidental Risk Prevention Program with the LAFD. This program includes information such as emergency contacts, phone numbers, facility information, chemical inventory, and hazardous materials handling and storage locations. The LAFD also has delegated authority to administer and enforce Federal and State laws and local ordinances for USTs. Plans for the construction/installation, modification, upgrade, and removal of USTs are reviewed by LAFD Inspectors.

Regional Water Quality Control Board

USTs are regulated under Subtitle I of RCRA and its implementing regulations, which establish construction standards for new UST installations, as well as standards for upgrading existing USTs and associated piping. After 1998, all non-conforming tanks were required to be either upgraded or closed.

The storage of hazardous materials in USTs is regulated by CalEPA's State Water Resources Control Board (SWRCB), which has delegated authority to each of the Regional Water Quality Control Boards (RWQCBs) and, typically on the local level, to the local fire department. The State's UST program regulations include, among others, permitting USTs, installation of leak detection systems and/or monitoring of USTs for leakage, UST closure requirements, release reporting/corrective action, and enforcement. The LAFD administers and enforces federal and state laws and local ordinances for USTs at the Project site. Plans for the construction/installation, modification, upgrade, and removal of USTs are reviewed by LAFD Inspectors.

3.4.4 Environmental Setting

The Project site is an existing public right-of-way that is completely paved. The Project area has been developed with mainly residential and commercial uses since 1952. Several businesses that may use and/or transport materials classified as hazardous, such as gas stations, automobile repair shops, and dry cleaner services, are located along the alignment. A number of gas stations are located within the Project alignment (at Lankershim Boulevard, near Coldwater Canyon Avenue, Kester Avenue, and Haskell Avenue). Two dry cleaners are located along the alignment (at Woodman Avenue and at Fulton Avenue). In addition, there are several automobile service centers within the alignment (at Lankershim Boulevard, Tyrone Avenue, Simpson Avenue, Woodman Avenue, and Sepulveda Boulevard). A former landfill was located at the northeast corner of Victory Boulevard and Vineland Avenue. The site is currently occupied by recreational and commercial uses.

The Project area is located within the San Fernando Valley Groundwater Basin (SFB). Groundwater depth is approximately 224 feet below ground surface at the western end of the alignment and approximately 192 feet below ground surface at the eastern end of the alignment.¹ The SFB serves as a major source of groundwater and has a total of 115 groundwater wells. However, there are currently only approximately 30 wells in reliable operation, due in large part to groundwater contamination.² The main area of groundwater contamination is in northeast portion of the San Fernando Valley, generally east of the Project site. The source of this contamination is likely improper storage, handling, and disposal of hazardous chemicals used in the aircraft manufacturing industry, and heavy industrial activities dating back to the 1940s.³ Since the 1980s and the discovery of VOC contamination, federal, state and local agencies have been working to contain and remediate contamination in the SFB. Chlorinated solvents such as trichloroethylene

¹ California Department of Water Resources. Groundwater Information Center Interactive Map Application. Available: https://gis.water.ca.gov/app/gicima/#bookmark_GroundwaterElevation. Accessed March 2019.

² Los Angeles Department of Water and Power. 2018. San Fernando Groundwater Basin Remediation Program Brochure. January.

³ Los Angeles Department of Water and Power. San Fernando Groundwater Basin Fact Sheet. March 2016.

(TCE), tetrachloroethylene (PCE) and carbon tetrachloride account for the majority of this groundwater contamination.

There are several groundwater wells and monitoring wells located to the north of south of the Project alignment, however none are located on Victory Boulevard.

The alignment is not located within a City of Los Angeles Methane Zone (for discussion of the City of Los Angeles Methane Zone, see the analysis of Alternative 2: Oxnard Street Alignment in Chapter 6, Alternatives Analysis)

Hazardous Materials/Wastes Used Onsite and Known/Potential Contamination Areas

The EnviroStor and GeoTracker databases were reviewed to identify potential areas of groundwater and/or soil contamination on, or in the vicinity of, the Project site. Review of EnviroStor database shows that the eastern end of the Project alignment is located over a portion of the San Fernando Valley Superfund NPL Area 1 – North Hollywood. The North Hollywood NPL site covers 9,336 acres in the eastern part of the San Fernando Valley and consists primarily of two large groundwater plumes from multiple sources in the San Fernando Valley. Site contaminant sources include, but are not limited to, the former Bendix Aviation and Allied Signal-Aerospace Company facilities in North Hollywood (successor corporation is now Honeywell International), the former Lockheed Martin Corporation facilities near the Burbank Airport, and many other known sources throughout Area 1. TCE and PCE were widely used in the San Fernando Valley starting in the 1940s for dry cleaning and for degreasing machinery. Disposal was not well-regulated at that time, and releases from a large number of facilities throughout the eastern San Fernando Valley have resulted in the large plume of VOC-contaminated groundwater that starts in the Area 1 Site and extends southeast, down-gradient, through the San Fernando Valley as described in greater detail below.⁴

Groundwater treatment and extraction to address this contamination has been occurring for the past decade. During the last five years, groundwater extraction and treatment has removed mass amounts of VOCs, including PCE and TCE, during the last five years. Between March 2013 and June 2017, approximately one billion gallons of groundwater was treated for VOCs at the North Hollywood Treatment Plants and approximately 305 pounds of TCE and 65 pounds of PCE were removed from the treated water.⁵

The USEPA issued an Explanation of Significant Differences in February 2018, which increases the groundwater extraction rate by adding new extraction wells and expanding the treatment system to accommodate the higher flow from the new wells.⁶ One proposed well is located within 0.25

⁴ USEPA. Five-Year Review for San Fernando Valley (Area 1) Superfund Site Hollywood and Burbank, Los Angeles County, California. September 2018. Available: <https://semspub.epa.gov/work/09/100010778.pdf>. Accessed March 2019.

⁵ USEPA. 2018. Five-Year Review Report for San Fernando Valley (Area 1) Superfund Site North Hollywood and Burbank, Los Angeles County, California. September 2018. Available: <https://semspub.epa.gov/work/09/100010778.pdf>. Accessed March 2019.

⁶ USEPA. Five-Year Review for San Fernando Valley (Area 1) Superfund Site Hollywood and Burbank, Los Angeles County, California. September 2018. Available: <https://semspub.epa.gov/work/09/100010778.pdf>. Accessed March 2019.

mile of the Project alignment.⁷ The USEPA determined that increased groundwater extraction would be required to achieve containment. None of these remedy enhancements have yet been implemented.

An edge of the TCE plume and the 1,4-dioxane groundwater plume underlies the Project alignment between Tujunga and Vineland Avenue. The TCE concentration is between 5 to 49 µg/L and the 1,4-dioxane concentration is between 1 to 2.9 µg/L.⁸ The TCE and 1,4-dioxane underlying the Project alignment were detected in deep groundwater, which is generally considered to be greater than 50 feet below the water table and/or deeper than 360 feet below ground surface.⁹ The USEPA's Five Year Review Report prepared in 2018 identifies the portion of the alignment between Tujunga Avenue and Vineland Avenue as being approximately 0.1 mile south of the PCE groundwater plume.¹⁰ Additionally the western edge of the alignment overlies a PCE groundwater plume to the west. LADWP Groundwater System Improvement Study prepared in 2015 identifies a PCE plume underlying the alignment east of Beck Avenue. The PCE was detected in shallow groundwater, which is described as being generally within 50 feet of the water table¹¹ (which is approximately and/or located above 470 feet below ground surface.¹² The Project alignment is approximately 0.6 mile west of a 1,2,3-Trichloropropane groundwater plume.¹³ detected in shallow groundwater (within 50 feet of the groundwater table or above 470 feet below ground surface).¹⁴ Refer to Appendix E of this EIR for figures showing the existing groundwater plumes in the area of the proposed Project.

In addition, the GeoTracker data management system identified 18 leaking underground storage tank (LUST) cleanup sites within a 0.25-mile radius of the Project alignment. LUST sites include all UST sites that have had an unauthorized release or a hazardous substance that is being or has been cleaned. All of the 18 LUST cleanup cases along the alignment have been completed and closed. A list of LUST sites is shown on Table 3.4-1. Typical contaminants in soil and groundwater from LUST sites include petroleum hydrocarbons such as gasoline, diesel, motor oil, waste oil, VOCs, and

⁷ USEPA. San Fernando Valley Area 1 North Hollywood Operable Unit Proposed Changes to Groundwater Remedy. February 2017. Available: <https://semspub.epa.gov/work/09/1165035.pdf>. Accessed March 2019.

⁸ USEPA. Five-Year Review for San Fernando Valley (Area 1) Superfund Site Hollywood and Burbank, Los Angeles County, California. September 2018. Available: <https://semspub.epa.gov/work/09/100010778.pdf>. Accessed March 2019.

⁹ Los Angeles Department of Water and Power. Groundwater System Improvement Study Remedial Investigation Update Report. Prepared by Brown and Caldwell. February 26, 2015. Available: https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-water/a-w-gwremediation?_adf.ctrl-state=lgk9cs4kv_17&_afLoop=564178047361038. Accessed March 2019.

¹⁰ USEPA. Five-Year Review for San Fernando Valley (Area 1) Superfund Site Hollywood and Burbank, Los Angeles County, California. September 2018. Available: <https://semspub.epa.gov/work/09/100010778.pdf>. Accessed March 2019.

¹¹ The water table is the upper level of which the soil is permanently saturated with water, which, at this location of the Project alignment is approximately 192 feet below ground surface.

¹² Los Angeles Department of Water and Power. Groundwater System Improvement Study Remedial Investigation Update Report. Prepared by Brown and Caldwell. February 26, 2015. Available: https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-water/a-w-gwremediation?_adf.ctrl-state=lgk9cs4kv_17&_afLoop=564178047361038. Accessed March 2019.

¹³ USEPA. Five-Year Review for San Fernando Valley (Area 1) Superfund Site Hollywood and Burbank, Los Angeles County, California. September 2018. Available: <https://semspub.epa.gov/work/09/100010778.pdf>. Accessed March 2019.

¹⁴ Los Angeles Department of Water and Power. Groundwater System Improvement Study Remedial Investigation Update Report. Prepared by Brown and Caldwell. February 26, 2015. Available: https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-water/a-w-gwremediation?_adf.ctrl-state=lgk9cs4kv_17&_afLoop=564178047361038. Accessed March 2019.

metals. There are also two DTSC Cleanup Program sites and one land disposal site located within 0.25 mile of the Project alignment.

Table 3.4-1: Listed Sites within 0.25 mile of Project Alignment

Name	Address	Type	Status
Chevron #20-2034	11000 Victory Boulevard, North Hollywood, CA 92606	LUST	Closed as of 10/29/2014
Chevron #9-202034	11000 Victory Boulevard, North Hollywood, CA 92606	LUST	Closed as of 5/31/1994
Victory-Vineland-North Hollywood-LA By Products	Victory Blvd and Vineland Avenue North Hollywood, CA 91606	Land disposal site	Case closed as of 9/4/2012
Former Fast Fuel Facility	11051 Victory Boulevard, North Hollywood, CA 91606	LUST	Case closed as of 9/30/2011
Royal Auto Center	6552 Lankershim Boulevard, North Hollywood, CA 91606	LUST	Case closed as of 4/30/2013
U-Haul Center	11666 Victory Boulevard, North Hollywood, CA 91606	LUST	Case closed as of 5/5/2003
N & K Auto Center	11680 Victory Boulevard, North Hollywood, CA 91606	LUST	Case closed as of 5/5/2003
Tosco – 76 Station #6273	11705 Victory Boulevard, North Hollywood, CA 91606	LUST	Case closed as of 5/5/2003
East Valley Middle School No.1 (Permanently Closed)	Laurel Canyon Boulevard/Hamlin Street, Los Angeles, CA 91606	DTSC – School Site Cleanup Program	Certified as of 1/26/2004
Louis Lippman Property	12905 Victory Boulevard, North Hollywood, CA 91606	LUST	Case closed as of 9/19/2007
B&K Station	13666 Victory Boulevard, Van Nuys, CA 91401	LUST	Case closed as of 3/30/1999
Shell	13703 Victory Boulevard, Van Nuys, CA 91401	LUST	Case closed as of 11/21/2002
Unocal #2326	14401 Victory Boulevard, Can Nuys, CA 91411	LUST	Case closed as of 7/30/1997
9/1 Valley Police Headquarters	6240 Sylmar Avenue, Van Nuys, CA 91401	LUST	Case closed as of 6/3/1999
Asia Auto Repair	14550 Sylvan Avenue, Van Nuys, CA 91411	LUST	Case closed as of 7/18/2018
Exxon #7-3801	14850 Victory Boulevard, Van Nuys, CA 91411	LUST	Case closed as of 11/16/2000
Arco #6084	14903 Victory Boulevard, Van Nuys, CA 91411	LUST	Case closed as of 7/18/2012
Mobil #18-FGC	6360 Sepulveda Boulevard, Van Nuys, CA 91411	LUST	Case closed as of 3/29/2012
Unocal #2489	15300 Victory Boulevard, Van Nuys, CA 91606	LUST	Case closed as of 1/2/1997
Arco #5201	15711 Victory Boulevard, Van Nuys, CA 91606	LUST	Case closed as of 8/1/1997
Sepulveda Air National Guard	15900 Victory Boulevard, Van Nuys, CA 91406	DTSC Open Base - Military Evaluation, Cleanup Program Sitex	Cases closed as of 2/16/2001 and 6/30/2002

Source: GeoTracker, 2019; EnviroStor, 2019

Notes:

Cleanup Program Sites: includes all "non-federally owned" sites that are regulated under the SWRCB's Site Cleanup Program and/or similar programs conducted by each of the nine RWQCBs. Cleanup Program Sites are also commonly referred to as "Site Cleanup Program sites". Cleanup Program Sites are varied and include but are not limited to pesticide and fertilizer facilities, rail yards, ports, equipment supply facilities, metals facilities, industrial manufacturing and maintenance sites, dry cleaners, bulk transfer facilities, refineries, mine sites, landfills, RCRA/CERCLA cleanups, and some brownfields. Unauthorized releases detected at Cleanup Program Sites are highly variable and include but are not limited to hydrocarbon solvents, pesticides, perchlorate, nitrate, heavy metals, and petroleum constituents, to name a few.

DTSC Open Base: Identifies open military facilities with confirmed or unconfirmed releases and where DTSC is involved in investigation and/or remediation, either in a lead or support capacity. Facilities/sites with confirmed releases are generally considered high-priority and high potential risk. Open Base facilities/sites are further defined as State Response, Federal Superfund, or Military Evaluation.

DTSC – School Site Cleanup Program: Identifies proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. School sites are further defined as "Cleanup" (remedial actions occurred) or "Evaluation" (no remedial action occurred) based on completed activities. All proposed school sites that will receive State funding for acquisition or construction are required to go through a rigorous environmental review and cleanup process under DTSC's oversight.

Land Disposal Sites: Includes sites with solid and/or liquid wastes discharged to land such as landfills, mines, surface impoundments, waste piles, and land treatment facilities. These may be regulated pursuant to the California Code of Regulations (Chapter 15 of Title 23, or Title 27), or regulated pursuant to the California Water Code. Land disposal sites regulated pursuant to the California Water Code include composting facilities.

LUST Cleanup Sites: includes all UST sites that have had an unauthorized release (i.e. leak or spill) of a hazardous substance, usually fuel hydrocarbons, and are being (or have been) cleaned up. In GeoTracker, LUST sites consist almost entirely of fuel-contaminated LUST sites (also known as "Leaking Underground Fuel Tank", or "LUFT" sites) which are regulated pursuant to Title 23 of the California Code of Regulations, Chapter 16, Article 11.

Schools within 0.25 Mile of Project Site

There are 19 public schools and other child educational facilities such as private schools and preschools located within 0.25 mile of the Project site, as shown on Table 3.4-2. One public school, Victory Boulevard Elementary School is located along the alignment.

Table 3.4-2: Schools within 0.25 mile of Project Alignment

Name	Address
Victory Boulevard Elementary School	6315 Radford Ave, North Hollywood
Fair Avenue Elementary School	6501 Fair Ave, North Hollywood
Roy Romer Middle School	6501 Laurel Canyon, 6501 Blvd, North Hollywood
ISANA Palmati Academy	6501 Laurel Canyon Blvd, North Hollywood
Summit View School	6455 Coldwater Canyon Ave, North Hollywood
St. Jane Frances de Chantal School	12950 Hamlin St, North Hollywood
Aarat Charter School	13400 Erwin St, Van Nuys
Laurence School	13639 Victory Blvd, Van Nuys
ABC Little School	6447 Woodman Ave, Van Nuys
Children's Circle Nursery School	6328 Woodman Ave, Van Nuys
Erikson High School	6305 Woodman Ave, Van Nuys
Apple School Early Childhood Educational Center	14123 Victory Blvd, Van Nuys
Van Nuys Christian Preschool	6260 Tyrone Ave, Van Nuys
Van Nuys Elementary School	6464 Sylmar Ave, Van Nuys
Crawford Academy	14530 Sylvan St, Van Nuys
Hrashq Pre-School	14541 Hamlin St, Van Nuys
Children's Community School	14702 Sylvan St, Van Nuys
Will Rogers Continuation High School	14711 Gilmore St, Van Nuys
Sylvan Park Elementary School	6238 Noble Ave, Van Nuys

3.4.5 Thresholds of Significance

The proposed Project would result in significant impacts associated with hazards or hazardous materials impacts if it would:

- Impact 3.4-1** Create 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.
- Impact 3.4-2** Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Impact 3.4-3** Be located on a site which is included on a list of hazardous materials sites compiled pursuant to government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.¹⁵

¹⁵ California Government Code Section 65962.5 – Requires the DTSC to compile and maintain lists of potentially contaminated sites throughout the state.

3.4.6 Project Impacts

3.4.6.1 Impact 3.4-1

Impact 3.4-1: Construction of the proposed Project could create 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.

As discussed in Environmental Settings, the Project alignment is located within 0.25-mile of several sites identified in the GeoTracker and EnviroStor databases. Documented releases of hazardous materials have affected soil and/or groundwater conditions in the Project vicinity, most commonly as a result of the groundwater plumes associated with the North Hollywood NPL site and LUSTs. As described in Section 3.4.4, the eastern end of the Project alignment and the western end of the alignment traverse groundwater plumes. However, the groundwater depth at these locations is well below the depth of construction activities. The maximum excavation depth associated with the proposed Project is expected to be approximately 50 feet below ground surface, which is well above the groundwater level of approximately 224 feet below ground surface at the western end of the alignment and approximately 192 feet below ground surface at the eastern end of the alignment. In addition, excavation associated with the eastern portions of the proposed Project that crosses over the NPL plumes (see Appendix E) would be less than approximately 25 feet below the ground surface, well above the depth of the contamination plumes. Although proposed Project construction could require dewatering of localized perched groundwater (if present), such dewatering activities would not draw from the contamination plume. Therefore, no dewatering of contaminated groundwater is anticipated to be required during construction and no impacts to the contaminated groundwater plumes are expected. Therefore, no risk of exposure to contaminated groundwater would occur that could create a hazard to the public or the environment.

As described in Section 3.4.4 above, there are currently intensive remediation activities occurring to extract and treat the contaminated groundwater. Groundwater wells and monitoring located in the vicinity of the alignment would be left in place and would not be disturbed during construction. Further, groundwater extraction wells used for treatment of groundwater contamination draw water from within the plumes at substantially greater depths than the deepest excavation associated with the proposed Project. As such, the proposed Project would not require dewatering that could adversely affect the plume or treatment effectiveness.

All of the documented Cleanup Program Sites and LUST sites in the Project vicinity (listed previously in Table 3.4-1) have been completed and closed. However, residual soil and groundwater contamination may remain in place even after cases are closed by regulatory agencies. Based on the occurrence of Cleanup Program Sites and LUST sites in close proximity to the proposed Project alignment, it is possible that contamination from some of these sites has migrated in groundwater and affected soil and groundwater conditions along the proposed alignment. Although, this risk is lessened because of the extreme depth of groundwater in this area as described above.

Although it is not expected for workers to encounter contaminated groundwater during construction due to the depth to groundwater, the potential exists for workers to encounter hazardous materials in soil, potentially exposing construction workers and the public to these materials or their chemical vapors or otherwise releasing them into the environment. Depending

on the nature and extent of any contamination encountered, adverse health effects could result if proper precautions were not taken. In the event that contaminated soils (or groundwater if found) are encountered, the soils and/or groundwater would be treated in place, or excavated, transported, and disposed of in accordance with applicable regulatory agencies, which could include the LAFD, Los Angeles County Fire Department, Los Angeles RWQCB, and/or DTSC. Further, worker safety and health are regulated by the federal OSHA and CalOSHA. OSHA and CalOSHA standards establish exposure limits for certain hazardous contaminants. Compliance with Cal/OSHA standards for hazardous waste operations (Title 8 CCR 5192) would be required for those individuals involved in the investigation or cleanup work. Exposure limits define the maximum amount of hazardous chemicals to which an employee may be exposed over specific periods. Employers are also required to provide a written health and safety program, worker training, emergency response training, and medical surveillance. Compliance with regulations would limit both the frequency and severity of potential releases of hazardous materials.

However, given the potential for contaminated soils and/or perched groundwater to exist in the Project vicinity, the construction of the proposed Project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials from adjacent past uses into the environment, resulting in a *potentially significant* impact.

3.4.6.1.1 Mitigation Measure

MM-HW-1:Preparation of Hazardous Materials Management Plan

Prior to site excavation activities at the Project site, a Hazardous Materials Management Plan shall be prepared and include the following:

- Delineation of roles and responsibilities, including those of the Contractor
- Procedures for identification, initial screening, and notification, of contaminated soil and/or groundwater encountered during site excavation;
- Procedures to secure/cordon-off area known or suspected of being contaminated;
- Procedure for assessing the nature and extent of contamination, and the approach to managing the contaminated soil/perched groundwater, including excavation/pumping, handling, storage, transport, and disposition (i.e., treatment/disposal); and
- Site-specific Health and Safety Plan for the safety and protection of construction workers and the general public from exposure to impacted soil, dust, and groundwater during construction activities.

3.4.6.1.2 Significance of Impact After Mitigation

With implementation of mitigation measure MM-HW-1, the impacts of the proposed Project would be reduced to a *less than significant after mitigation*.

3.4.6.2 Impact 3.4-2

Impact 3.4-2: Construction of the proposed Project could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

One public school, Victory Boulevard Elementary School, is immediately adjacent to the Project alignment on Radford Avenue. There are 18 other public schools and other child educational facilities such as private schools and preschools located within 0.25 mile of the Project alignment. Construction activities could result in an accidental release of fuels, oils, lubricants, or other hazardous materials. The proposed Project does not include any process that would emit hazardous emissions or acutely hazardous materials (which are generally associated with activities such as dry cleaners or industrial processes). As discussed in Impact 3.4-1 above, the proposed Project construction has the potential to encounter hazardous materials, and if this happens in close proximity of a school, it could result in potentially significant exposure impacts. Therefore, the construction of the proposed Project could handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school resulting in a *potentially significant* impact.

3.4.6.2.1 Mitigation Measures

Implementation of the mitigation measure MM-HW-1 would help reduce impacts.

3.4.6.2.2 Significance of Impact After Mitigation

With implementation of mitigation measure MM-HW-1, the impacts of the proposed Project would be reduced to a *less than significant after mitigation*.

3.4.6.3 Impact 3.4-3

Impact 3.4-3: The proposed Project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 but would not create a significant hazard to the public or the environment.

As described in Section 3.4.4, the Project site is identified on several lists of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As described under Impact 3.4-1 above, cleanup activities associated with past occurrences of soil and groundwater contamination have taken place and, in the case of the North Hollywood NPL site, are on-going. However, as further discussed under Impact 3.4-1 above, there is the potential that some soil and perched groundwater contamination associated with past activities could remain at concentrations above regulatory screening levels. While contaminated groundwater associated with the NPL site is not expected to be encountered (they are substantially deeper than Project construction depths), in the event that localized contaminated soils are encountered, the soils (and perched groundwater if found) would be treated in place, or excavated, transported, and disposed of in accordance with applicable regulatory agencies (as detailed in Impact 3.4-1 above). Additionally, compliance with worker safety would be protected by adherence to requirements set forth in OSHA and CalOSHA.

Because the proposed Project would not adversely affect ongoing remediation associated with a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would not create a significant hazard to the public or the environment, the impact would be *less than significant*.

3.4.6.3.1 Mitigation Measures

No mitigation is required.

3.4.6.3.2 Significance of Impact After Mitigation

Impacts would be *less than significant*.

3.4.7 Summary of Impact Determinations

Table 3.4-3 summarizes the impact determinations of the proposed Project related to hazards and hazardous materials, as described above in the detailed discussion in Section 3.4.6. Identified potential impacts are based on the significance criteria presented in Section 3.4.5, the information and data sources cited throughout Section 3.4, and the professional judgment of the report preparers, as applicable.

Table 3.4-3: Summary Matrix of Potential Impacts and Mitigation Measures Associated with the Proposed Project Related to Hazards and Hazardous Materials

Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Impact 3.4-1: Construction of the proposed Project could create 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.	Potentially Significant	MM-HW-1	Less than Significant
Impact 3.4-2: Construction of the proposed Project could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Potentially Significant	MM-HW-1	Less than Significant
Impact 3.4-3: The proposed Project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 but would not create a significant hazard to the public or the environment.	Less than Significant	No mitigation is required	Less than Significant

3.4.7.1 Mitigation Measures

MM-HW-1: Preparation of Hazardous Materials Management Plan

Prior to site excavation activities at the Project site, a Hazardous Materials Management Plan shall be prepared and include the following:

- Delineation of roles and responsibilities, including those of the Contractor

- Procedures for identification, initial screening, and notification, of contaminated soil and/or groundwater encountered during site excavation;
- Procedures to secure/cordon-off area known or suspected of being contaminated;
- Procedure for assessing the nature and extent of contamination, and the approach to managing the contaminated soil/perched groundwater, including excavation/pumping, handling, storage, transport, and disposition (i.e., treatment/disposal); and
- Site-specific Health and Safety Plan for the safety and protection of construction workers and the general public from exposure to impacted soil, dust, and groundwater during construction activities.

3.4.8 Significant Unavoidable Impacts

With mitigation, there would be no significant unavoidable impacts relative to hazards and hazardous materials.

Section 3.5

Noise and Vibration

3.5.1 Introduction

This section analyzes the proposed Project's impacts on noise and vibration from construction activities. As part of this analysis, the section describes the general noise and vibration characteristics, analysis approach and methodology, regulatory framework, environmental setting, and significance criteria used to evaluate the proposed Project's noise and vibration impacts.

As discussed in the NOP/IS (Appendix A of this Draft EIR), operation of the proposed Project would be automated and located underground, with only control panel boxes at pump stations located above ground. The Project components are operated as a closed system, which would not generate substantial permanent noise or vibration levels. Therefore, no further evaluation in the EIR of Project operations is required.

No comments specific to noise and/or vibration were received in response to the NOP.

3.5.2 Overview of Noise and Vibration

3.5.2.1 Noise Fundamentals

Noise may be described as unwanted sound and is usually objectionable because it is disturbing or annoying. Sound is defined as any pressure variation in air that the human ear can detect. In general, the objectionable nature of sound can be due to its pitch or its loudness. Pitch is related to the frequency of the vibrations by which sound is produced; in general, intermediate pitched signals sound louder to humans than sounds with a lower or higher pitch. Loudness is the amplitude or intensity of sound waves combined with the reception characteristics of the ear; the higher the amplitude, the louder the sound.

Technical acoustical terms commonly used in this section are defined in Table 3.5-1. Acoustics consists of a sound (i.e., noise) source, a receptor, and the propagation path between the two. The loudness of the noise source and the obstructions or atmospheric (environmental) factors, which affect the propagation path to the receptor, determine the sound level and the characteristics of the noise perceived by the receptor.

Although the decibel (dB) scale is commonly used, the dB scale alone does not adequately characterize how humans perceive noise. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on human sensitivity to those frequencies. The common measure is the A-weighted sound level (dBA), which approximates the response of the average young ear to most ordinary sounds (Table 3.5-2). Peoples' judgments regarding the relative loudness or annoyance of a sound tend to correlate well with the A-scale sound levels of those sounds.

Table 3.5-1: Definitions of Acoustical Terms

Term	Definition
Sound	A vibratory disturbance created by a vibrating object, which when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism such as the human ear or a microphone.
Noise	Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals, where 1 pascal is the pressure from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is more commonly expressed in decibels (see below). Sound pressure level is the quantity that is measured directly by a sound level meter.
Decibel (dB)	A unit describing the amplitude of sound equal to 20 times the logarithm to base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20 micropascals.
Frequency, Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is 20 Hz - 20,000 Hz.
A-Weighted Sound Level (dBA)	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low- and very high-frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level (L_{eq})	The average A-weighted noise level during the measurement period. The hourly L_{eq} used for this report is denoted as dBA $L_{eq}[h]$.
Community Noise Equivalent Level (CNEL)	The average A-weighted noise level during a 24-hour day, which is obtained by adding 5 dB to sound levels in the evening from 7:00 PM to 10:00 PM and 10 dB to sound levels between 10:00 PM and 7:00 AM
Day/Night Noise Level (L_{dn})	The average A-weighted noise level during a 24-hour day, which is obtained by adding 10 dB to sound levels measured at night between 10:00 PM and 7:00 AM
Maximum Sound Level (L_{max})	The maximum A-weighted noise level measured during the measurement period.
Minimum Sound Level (L_{min})	The minimum A-weighted noise level measured during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive Noise	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence, and tonal or informational content as well as the prevailing ambient noise level.

Table 3.5-2: Typical Noise Levels in the Environment

Common Outdoor Noise Source	Noise Level (dBA)	Common Indoor Noise Source
	120 dBA	
Jet fly-over at 300 meters		Rock concert
	110 dBA	
Pile driver at 30 meters	100 dBA	
		Night club with live music
	90 dBA	
Large truck passes by at 15 meters		
	80 dBA	Noisy restaurant
		Garbage disposal at 1 meter
Gas lawn mower at 30 meters	70 dBA	Vacuum cleaner at 3 meters
Commercial/Urban area daytime		Normal speech at 1 meter
Suburban expressway at 90 meters	60 dBA	
Suburban daytime		Active office environment
	50 dBA	
Urban area nighttime		Quiet office environment
	40 dBA	
Suburban nighttime		
Quiet rural areas	30 dBA	Library
		Quiet bedroom at night
Wilderness area	20 dBA	
	10 dBA	Quiet recording studio
Threshold of human hearing	0 dBA	Threshold of human hearing

Because decibels are logarithmic units, sound pressure levels cannot be added or subtracted through ordinary arithmetic. On the dB scale, a doubling of sound energy corresponds to a 3 dB increase, so that when two identical sources are each producing sound of the same loudness, their combined sound level at a given distance would be 3 dB higher than either source under the same conditions. For example, if one excavator produces a sound pressure level of 80 dBA, two excavators would not produce 160 dBA. Rather, they would combine to produce 83 dBA. The cumulative sound level of any number of sources, such as excavators, can be determined using decibel addition.

When sound propagates over a distance, it changes in both level and frequency content. The manner in which noise is reduced with distance depends on factors, such as the geometric spreading from point and/or line sources, ground absorption, atmospheric effects (air temperature, humidity, and turbulence), and shielding by natural or human-made features. Details regarding these factors are in Appendix F of this Draft EIR.

Environmental sounds are commonly described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This equivalent noise level descriptor is called Leq. A common averaging period is hourly, but Leq can describe any series of noise events of arbitrary duration. Sound level meters can accurately measure environmental noise levels to within approximately plus or minus 1 dBA.

Human Responses to Noise

It is widely accepted that a change of 3 dBA in the normal environment is just noticeable to most people; an increase of 3 dBA is perceived as approximately a 25 percent increase in noise level; a change of 5 dBA is readily perceptible; and a change of 10 dBA is perceived as being twice as loud. Accordingly, a doubling of sound energy (e.g., doubling the volume of traffic on a highway), which would result in a 3 dB increase in sound would generally be barely detectable.

A number of studies have linked increases in noise with health effects, including hearing impairment, sleep disturbance, cardiovascular effects, psychophysiological effects, and potential impacts to fetal development.¹ Potential health effects appear to be caused by both short and long-term exposure to very loud noises and long-term exposure to lower levels of sound (chronic exposure). Acute exposure to sound levels greater than 120 dBA (equivalent to a rock concert, Table 3.5-2) can cause mechanical damage to the ear and hearing impairment.²

According to the World Health Organization and the USEPA, Leq = 70 dBA is a safe daily average noise level for the ear.^{3,4} However, even this level may cause disturbance to sleep and concentration and be linked to chronic health impacts such as hypertension and heart disease.⁵

Sensitive Receptors

Some land uses are considered more sensitive to ambient noise (and groundborne vibration) levels than others. People in residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, natural areas, parks and outdoor recreation areas are generally more sensitive to noise than are people at commercial and industrial establishments. Consequently, the noise standards for sensitive land uses are more stringent than for those at less sensitive uses. Notably, schools, parks, and recreational land uses are not considered as sensitive to noise as residential uses and places where people sleep.

3.5.2.2 Vibration Fundamentals

Groundborne vibration is an oscillatory motion of the soil with respect to the equilibrium position and can be quantified in terms of velocity or acceleration. It can be a serious concern for nearby neighbors of activities that cause buildings to shake and rumbling sounds to be heard, but it is

¹ Babisch, Wolfgang, Transportation Noise and Cardiovascular Risk, Federal Environmental Agency, Berlin, Germany. January 2006. <https://www.umweltbundesamt.de/sites/default/files/medien/publikation/long/2997.pdf> (last accessed April 2019).

² Babisch, 2006.

³ Berglund, B., Lindvall, T., & Schwela, D. H. Guidelines for community noise. World Health Organization, Geneva, Switzerland. 1999.

⁴ U.S. Environmental Protection Agency (USEPA), Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety, Prepared by Office of Noise Abatement Control. March 1974. <https://nepis.epa.gov/Exe/ZyPDF.cgi/2000L3LN.PDF?Dockey=2000L3LN.PDF> (last accessed April 2019).

⁵ Babisch, 2006.

unusual for vibration from sources such as buses and trucks on smooth roads to be perceptible, even in locations close to major roads. Most perceptible indoor vibration is caused by sources within buildings, such as the operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are heavy construction equipment and activities (such as blasting and pile driving), steel-wheeled trains, and heavy trucks on rough roads. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. A vibration decibel unit notation (VdB) is commonly used to measure RMS.

Table 3.5-3 summarizes common sources of groundborne vibration velocity levels (measured in VdB) and average human response to vibration that may be anticipated when a person is at rest in quiet surroundings (tolerance to vibration increases considerably during physical activity). The duration of the vibration event has an effect on human response, as does its frequency of occurrence: increases in both result in decreased tolerance. Typical background vibration levels in residential areas are usually 50 VdB or lower, well below the 65 VdB, which is the level of perception for most humans.

Groundborne noise is a secondary phenomenon of groundborne vibration. When a building or structure vibrates, groundborne noise radiates into the interior of the building, producing rattling of windows, doors, stacked dishes, etc. Low-frequency vibration could produce groundborne noise perceived as a low rumble. Groundborne noise is quantified by the A-weighted sound level inside the building. The sound level accompanying vibration is generally 25 to 40 dBA lower than the vibration velocity level in VdB. Groundborne vibration levels of 65 VdB can result in groundborne noise levels up to 40 dBA, which can disturb sleep. Groundborne vibration levels of 85 VdB can result in groundborne noise levels up to 60 dBA, which can be annoying to daytime noise sensitive land uses such as schools.⁶

⁶ Federal Transit Administration (FTA). 2006. Transit Noise and Vibration Impact Assessment, FTA-VA-90-1003-06. May. Available online at: http://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/revguidance.pdf (last accessed April 2019).

Table 3.5-3: Typical Levels of Groundborne Vibration

Human or Structural Response	Vibration Velocity Level (VdB)	Typical Sources (50 feet from source)
Limit for minor cosmetic damage to fragile buildings	100	Blasting, pile driving, vibratory compaction equipment
	95	Bulldozers, and other heavily tracked construction equipment
Difficulty with tasks such as reading a video or computer screen	90	Commuter rail, upper range
Residential annoyance, infrequent events	80	Rapid transit, upper range
Residential annoyance, occasional events	76	Commuter rail, typical
Residential annoyance, frequent events	72	Bus or truck over bump or on rough roads
	70	Rapid transit, typical
Limit for vibration sensitive equipment	60	Bus or truck, typical
	50	Typical background vibration

Source: USDOT Federal Transit Administration, 2006.

Note: This table is meant for understanding response by typical sources of vibration. It is not a means of assessing vibration impacts.

3.5.3 General Approach and Methodology

This section presents the general approach and methodology for evaluating noise (including traffic noise) and vibration during construction.

3.5.3.1 Construction Noise

To evaluate noise from construction activities, the methodology outlined by the FHWA Roadway Construction Noise Model (RCNM) was used. The RCNM methodology considers the type and number of construction equipment used, individual equipment noise emissions, and time-usage factors for each phase of construction. Sound levels produced are acoustically summed to compute the construction noise levels. Distances from construction locations to sensitive receptors were measured on a map of the area and input to the RCNM.

Noise levels generated by construction equipment vary greatly depending on factors such as weather, the type, model, and condition of equipment, the amount of time that the equipment operates, and the activity performed. The dominant source of noise from most construction equipment is the engine, although in a few cases, such as impact pavement-breaking, noise generated by the impact process dominates. Table 3.5-4 shows the maximum noise levels for typical construction equipment at a reference distance of 50 feet. These reference sound levels are representative of the noise levels that would occur during the noisiest construction activities.

Overall average site construction noise levels vary with the numbers and types of equipment operating onsite at a moment and the proximity of the equipment to noise-sensitive receptors. Calculated hourly average noise levels, therefore, are estimates based on a typical complement of

construction equipment that would be expected to be on-site to complete the various proposed Project components.

Table 3.5-4: Construction Equipment Maximum Noise Emission Levels

Project Construction Equipment	RCNM Construction Equipment	L _{max} @ 50 ft
Drill Rig/Auger	Auger Drill Rig	84.4
Soil Compactor	Compactor (ground)	83.2
Compressor w/ Power tools	Compressor (air)	77.7
Compressor		
Concrete Truck	Concrete Mixer Truck	78.8
Concrete Trips		
Concrete Pump	Concrete Pump Truck	81.4
Slurry Pumps		
Concrete Saw	Concrete Saw	89.6
Service Crane	Crane	80.6
Large Crane		
Haul Trips (net export, staging, shoring)	Dump Truck	76.5
Gravel Trips		
Haul Trips (daily)-soil		
Excavator	Excavator	80.7
Water Truck	Flat Bed Truck	74.3
Supply Trips (materials, asphalt, misc, base, for concrete structure, access structures, other)		
Loader	Front End Loader	79.1
Generator – Vent. Fans	Generator	80.6
Generator w/ Power tools		
Tunnel Boring Machine	Horizontal Boring, Hydraulic Jack	82.0
Hydraulic Jack System		
Pavement Breaker	Jackhammer	88.9
Forklift	Man Lift	74.7
Asphalt Paver	Paver	77.2
Pumping Equipment	Pumps	80.9
Roller	Roller	80.0
Slurry Mixing/Separation	Slurry Plant	78.0
Sweeper	Vacuum Street Sweeper	81.6

Source: EWVIS Construction Assumptions - Equipment List (Appendix B of this Draft EIR), FHWA Construction Noise Model

Notes:

- Usage factor provided by EWVIS Construction Assumptions - Equipment List precedes the RCNM Acoustical Usage Factor Default
- Refer to Appendix F for the Usage Factors.

3.5.3.2 Construction Vibration

Vibration impacts generated by construction from the proposed Project have been evaluated using the Federal Transit Administration (FTA)'s Transit Noise and Vibration Impact Assessment Manual. The FTA's recommended procedures for estimating vibration impact from construction activities is as follows:

Vibration Damage Assessment

- Select the equipment and associated vibration source levels at a reference distance of 25 feet from Table 3.5-5.
- Make the propagation adjustment according to the following formula (this formula is based on point sources with normal propagation conditions):

$$PPV_{\text{equip}} = PPV_{\text{ref}} \times (25/D)^{1.5}$$

where: PPV_{equip} is the peak particle velocity in inches per second of the equipment adjusted for distance
 PPV_{ref} is the reference vibration level in inches per second at 25 feet from Table 3.5-5
 D is the distance from the equipment to the receiver in feet.

Vibration Annoyance Assessment

Annoyance or interference with vibration-sensitive activities was determined by estimating the vibration level, L_v in VdB, at any distance D in feet, from the following equation and applying the vibration impact criteria of 78 VdB for residential daytime.

$$L_v(D) = L_v(25 \text{ feet}) - 30 \times \log(D/25)$$

Vibration from construction equipment spreads through the ground and diminish in amplitude with distance from the source. Vibration levels in PPV in inches per second and RMS velocity level in VdB were evaluated at reference distances of 15, 25, 50, 100, and 200 feet from the source.

Table 3.5-5: Vibration Velocities for Typical Construction Equipment

Typical Construction Equipment		PPV at 25 ft, in/sec	Approximate L _v at 25 ft
Hydromill (slurry wall)	In soil	0.008	66
	In rock	0.017	73
Hoe Ram/Breaker		0.089	87
Large Bulldozer		0.089	87
Caisson Drilling/Auger		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

Source: FTA, Transit Noise and Vibration Impact Assessment, 2006.

Note:

- -in/sec = inches per second
- RMS velocity in decibels (VdB) re 1 micro-inch/second.
- A crest factor of 4 (representing a PPV-rms difference of 12 VdB) was used to calculate the approximate rms vibration velocity levels from the PPV values.

3.5.3.3 Roadway Traffic

The CNEL generated by existing and future traffic on the roadways that serve the proposed Project site has been estimated using the Federal Highway Administration (FHWA) traffic noise prediction model (TNM) and forecasted traffic data (associated with the traffic analysis, Appendix G of this Draft EIR). Ambient noise levels (existing and future projected) associated with proposed Project construction are expressed in CNEL.

The distances to noise contours presented in Appendix F (shown in the FHWA Traffic Noise Calculator spreadsheets) are representative of “hard site” conditions without any barrier attenuation. Soft-site and hard-site conditions are parameters in the FHWA Highway Noise Model to account for how sound drops off as it radiates away from the roadway. For hard-site conditions, the reduction in sound over distance is solely due to the spreading of the sound energy over larger and larger area. As sound radiates from a source its energy is dispersed over a larger and larger area resulting in less energy at any one point the further it is from the source. This is the minimum rate that sound drops off over distance.

3.5.4 Regulatory Framework

The following section presents the federal, state, regional, and local regulations, plans, and standards that are applicable to the proposed Project relative to noise and vibration.

3.5.4.1 Federal

Federal Noise Control Act

The USEPA Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. After its inception, the USEPA Office of Noise Abatement and Control issued the Federal Noise Control Act of 1972 (42 U.S.C. 4901 et seq.), establishing programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. In 1981, USEPA administrators determined that subjective issues such as noise would be better addressed at more local levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to state and local governments. However, noise control guidelines and regulations contained in the USEPA rulings in prior years remain in place for enforcement by designated federal agencies where relevant.

Federal Highway Administration Standards

The standards in 23 CFR, Part 772, sets procedures for the abatement of highway traffic noise and construction noise. Title 23 is implemented by the FHWA. The purpose of this regulation is to provide procedures for noise studies and noise abatement measures to help protect the public health and welfare, to supply noise abatement criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways.

Federal Transit Administration Standards

Vibration impacts generated by construction from the proposed Project have been evaluated using the FTA’s Transit Noise and Vibration Impact Assessment Manual. The FTA’s manual includes standards and recommended procedures for estimating vibration impact from construction activities.

3.5.4.2 State

California Noise Control Act of 1973

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973 (Act), find that excessive noise is a serious hazard to the public health and welfare, and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. The Act also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

California Environmental Quality Act

Under CEQA, lead agencies are directed to assess conformance to local or other agency noise standards; measure and identify the potentially significant exposure of people to (or generation of) excessive ground-borne vibration or noise levels; and measure and identify potentially significant permanent or temporary increases in ambient noise levels. Implementation of CEQA ensures that during the decision-making stage of development, decision-makers and the public will be informed of any potentially excessive noise levels and available mitigation measures to reduce them to acceptable levels.

California Department of Transportation (Caltrans)

Because the local municipalities do not have regulatory standards for vibration sources, potential structural damage and human annoyance associated with vibration from construction activities were evaluated later in this section based on Caltrans vibration limits. A vibration level of 0.20 peak particle velocity inches per second was used to evaluate impacts on nearby receptors, since this level represents the threshold at which temporary vibrations typically become annoying and at which there is a risk of architectural damage to normal dwellings (e.g., plaster cracks).

3.5.4.3 Local

City of Los Angeles General Plan Noise Element

The City of Los Angeles General Plan Noise Element establishes noise-level standards within the City. It addresses noise mitigation regulations, strategies, and programs, and set forth management goals, objectives, and policies to reduce noise impacts on local neighborhoods. The City's comprehensive noise ordinance (LAMC Section 111 et seq.) establishes sound measurement and criteria, minimum ambient noise levels for different land use zoning classifications, sound emission levels for specific uses (radios, television sets, vehicle repairs and amplified equipment, etc.), hours of operation for certain uses (construction activity, rubbish collection, etc.), standards for determining noise deemed a disturbance of the peace, and legal remedies for violations. In addition, Section 41.40 prohibits exterior demolition and construction activities that generate noise between the hours of 9:00 PM and 7:00 AM Monday through Friday, and between 6:00 PM and 8:00 AM on Saturday. Demolition and construction are prohibited on Sundays and all federal holidays unless written permission is given from the Board of Police Commissioners through its Executive Director.

Additionally, the City of Los Angeles General Plan Noise Element states that all construction equipment must have silencers and mufflers on intake and exhaust openings.

City of Los Angeles Municipal Code

Section 41.40 of the LAMC establishes when construction work is prohibited during nighttime and early morning hours. The municipal code section states the following:

(a) No person shall between the hours of 9 PM and 7 AM of the following day perform any construction or repair work of any kind upon or any excavating for, any building or structure, where any of the foregoing entails the use of any power-driven drill, driven machine, excavator, or any other machine, tool, device, or equipment which makes loud noises to the disturbance of persons occupying sleeping quarters in any dwelling, hotel, or apartment or other place of residence. In addition, the operation, repair or servicing of construction equipment and the jobsite delivering of construction materials in such areas shall be prohibited during the hours herein specified. Any person who knowingly and willfully violates the foregoing provision shall be deemed guilty of a misdemeanor punishable as elsewhere provided in this code.

(b) The provisions of Subsection (a) shall not apply to any person who performs the construction, repair or excavation work involved pursuant to the express written permission of the Board of Police Commissioners through its Executive Director. The Executive Director, on behalf of the Board, may grant this permission, upon application in writing, where the work proposed to be done is in the public interest, or where hardship or injustice, or unreasonable delay would result from its interruption during the hours mentioned above, or where the building or structure involved is devoted or intended to be devoted to a use immediately related to public defense. The provisions of this section shall not in any event apply to construction, repair or excavation work done within any district zoned for manufacturing or industrial uses under the provisions of Chapter I of this Code, nor to emergency work necessitated by any flood, fire or other catastrophe.

The code section also provides certain provisions for exceptions and exemptions. Chapter 11 of the municipal code sets forth noise regulations, including regulations applicable to construction noise impacts, within 500 feet of a residence. Section 112.05 establishes maximum noise levels for powered equipment or powered hand tools. This section states:

Between the hours of 7 AM and 10 PM in any residential zone of the City or within 500 feet thereof, no person shall operate or cause to be operated any powered equipment or powered hand tool that produces a maximum noise level exceeding the following noise limits at a distance of 50 feet there from (a) 75 dBA for construction, industrial and agricultural machinery including crawler tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, motor graders, paving machines, off-highway trucks, ditchers, trenchers, compactors, scrapers, wagons, pavement breakers, depressors, and pneumatic or other powered equipment; (b) 75 dBA for powered equipment of 20 horsepower or less intended for infrequent use in residential areas including chain saws, log chippers, and powered hand tools; and (c) 65 dBA for powered equipment intended for repetitive use in residential areas including lawn mowers, backpack mowers, small lawn and garden tools, and riding tractors.

The noise limits for particular equipment listed above in (a), (b) and (c) shall be

deemed to be superseded and replaced by noise limits for such equipment from and after their establishment by final regulations adopted by the federal Environmental Protection Agency and published in the Federal Register.

Said noise limitations shall not apply where compliance therewith is technically infeasible. The burden of proving that compliance is technically infeasible shall be upon the person or persons charged with a violation of this section. Technical infeasibility shall mean that said noise limitations cannot be complied with despite the use of mufflers, shields, sound barriers, and/or other noise reduction device and techniques during the operation of the equipment.

Section 112.04 of the municipal code addresses issues related to “powered equipment intended for repetitive use in residential areas and other machinery, equipment, and devices.” That section establishes criteria for stationary noise-source intrusion on neighboring lands. The applicable standard threshold under this section is a 5 dBA increase at any sensitive receptor.

The City has not adopted any standard, guideline or threshold relating to ground vibration.

3.5.5 Environmental Setting

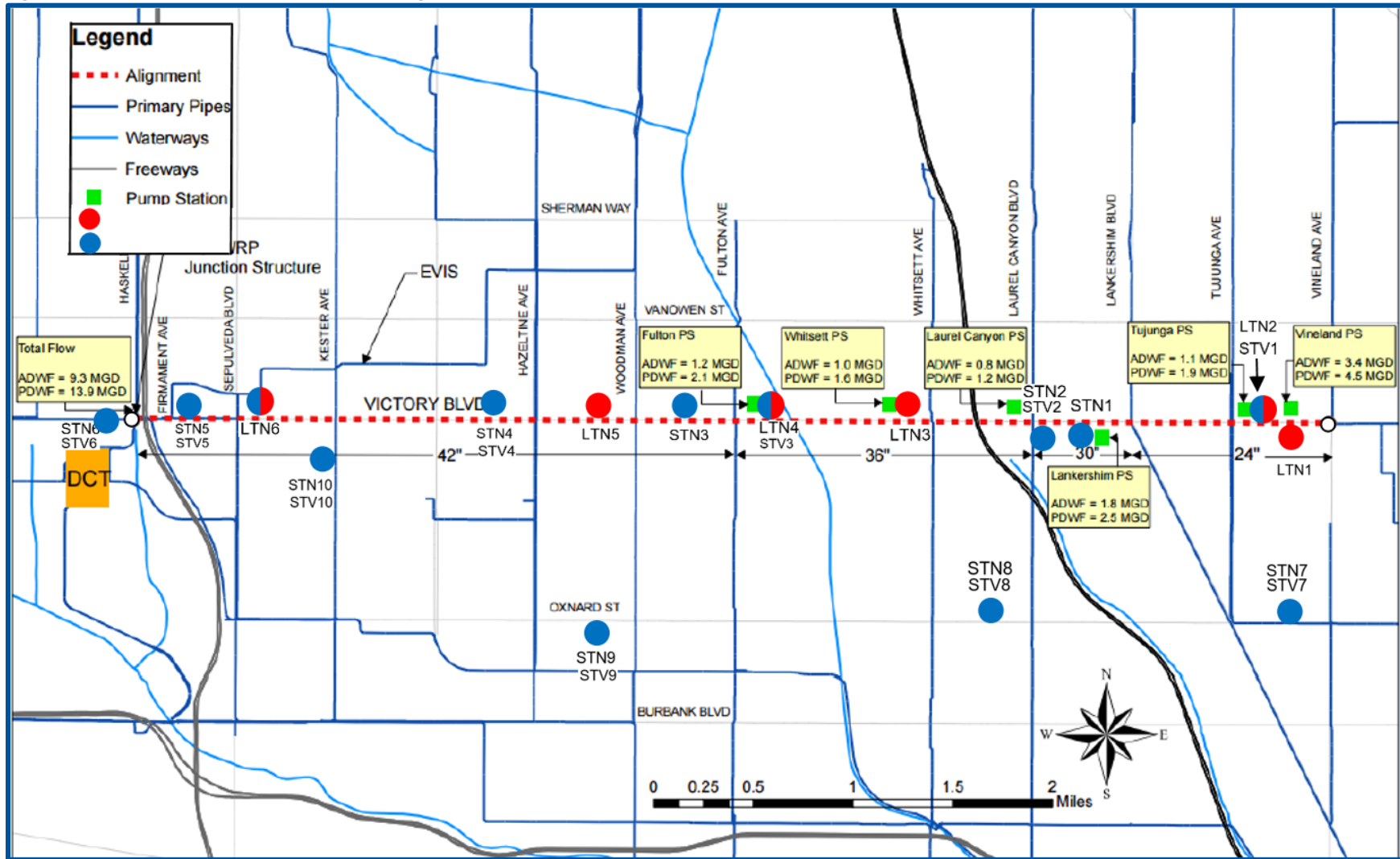
3.5.5.1 Existing Baseline – Noise and Vibration Environment

The proposed Project involves construction within a portion of Victory Boulevard, approximately six miles between Vineland Avenue on the east and Haskell Avenue on the west, which is a major highway in the San Fernando Valley. Adjacent to the Project alignment are commercial, residential (mostly multi-family apartments, as well as single-family homes), recreational uses (Victory Vineland Recreation Center is located on the eastern end of the alignment, while the northeast corner of the Sepulveda Basin Recreation Center is located on the western end). Other uses along the alignment include Victory Boulevard Elementary School, the Salvation Army, and several churches. Noise-sensitive receptors considered in this Draft EIR include single-family and multi-family residences, schools, open-space parks, and churches.

Noise was monitored February 2019 to document existing noise levels at selected sensitive receptors and other points throughout the study area (Figure 3.5-1). Appendix F of this Draft EIR includes additional details regarding the existing/baseline noise and vibration monitoring associated with the proposed Project. Six (6) long-term noise (LTN) and ten (10) short-term noise (STN) measurements were conducted at representative noise-sensitive receptor locations in the Project area. The 24-hour LTN noise levels were monitored during the daytime, evening, and nighttime at consecutive hourly intervals. The ten (10) STN (10 to 20-minute) noise measurements were conducted at three intervals during the morning (AM), midday (MD), and late afternoon (PM) representative of the possible daytime construction hours (9:00 AM to 3:30 PM). The results of the long-term noise measurements are summarized in Table 3.5-6, and the results of the short-term noise level measurements are summarized in Table 3.5-7.

Ten (10) short-term vibration (STV) measurements were also conducted at vibration-sensitive receptors. The ten (10) STV measurements were conducted at three intervals during the AM, MD, and PM representative of the possible daytime construction hours (9:00 AM to 3:30 PM). These monitoring locations are representative of vibration sensitive locations in the study area. The results of the short-term vibration measurements are summarized in Table 3.5-8 and Table 3.5-9 for PPV and RMS, respectively.

Figure 3.5-1. Noise and Vibration Monitoring Locations



Note: As shown in the figure, existing noise and vibration measurements were also taken along the Alternative 2: Oxnard Alignment, which is analyzed in Chapter 6, Alternatives Analysis of this Draft EIR.

Table 3.5-6: Summary of Long-Term Noise Monitoring

Receptor	Location	Date	Lmax, dBA	Lmin, dBA	Daytime (9AM - 4PM) Hourly Leq Range, dBA	24-Hourly Leq Range, dBA	CNEL, dB	Noise Sources
LTN1	6372 Vineland Pl, North Hollywood, CA 91606	2/8/2019	93.0	43.2	70.8 - 71.9	59.8 - 73.0	74.2	Vehicular traffic
LTN2	11341 Victory Blvd, North Hollywood, CA 91606	2/8/2019	103.3	41.9	70.4 - 75.1	59.1 - 75.1	73.8	Vehicular traffic
LTN3	12535 Victory Blvd, North Hollywood, CA 91606	2/8/2019	98.5	45.3	74.6 - 76.3	66.0 - 77.0	78.9	Vehicular traffic
LTN4	13109 Victory Blvd, Valley Glen, CA 91401	2/8/2019	99.4	39.4	71.5 - 74.1	62.5 - 74.1	76.5	Vehicular traffic
LTN5	13915 Victory Blvd, Van Nuys, CA 91401	2/8/2019	91.0	35.1	66.5 - 68.4	56.5 - 68.4	70.7	Vehicular traffic
LTN6	15157 Victory Blvd, Van Nuys, CA 91411	2/8/2019	99.6	44.0	67.9 - 72.6	61.0 - 72.6	73.3	Vehicular traffic

Table 3.5-7: Summary of Short-Term Noise Monitoring

Receptor	Location	Date	Time	Lmax, dBA	Lmin, dBA	Leq, dBA	Noise Sources
STN1	6345 Simpson Avenue, North Hollywood, CA 91606	2/8/2019	AM 9:06 - 9:26 AM	71.4	51.8	58.3	Vehicular traffic, mechanical equipment, wildlife
			MD 12:15 - 12:46 PM	70.8	46.5	57.1	Vehicular traffic, aircraft, mechanical equipment, water hose
			PM 3:12 - 3:41 PM	74.9	51.7	58.2	Vehicular traffic, mechanical equipment, community noise, wind
STN2	6346 Agnes Ave, North Hollywood, CA 91606	2/8/2019	AM 9:26 - 9:46 AM	71.2	49.1	61.2	Vehicular traffic, community noise, helicopter
			MD 12:23 - 12:43 PM	75.5	51.0	60.3	Vehicular traffic, community noise, aircraft, wildlife
			PM 3:18 - 3:38 PM	73.7	55.7	62.5	Vehicular traffic, community noise, aircraft, wildlife
STN3	13517 Victory Blvd, Van Nuys, CA 91401	2/8/2019	AM 10:01 - 10:36 AM	85.6	53.4	74.1	Vehicular traffic, community noise
			MD 1:05 - 1:39 PM	94.8	55.7	75.3	Vehicular traffic, siren, community noise
			PM 3:57 - 4:30 PM	86.3	57.0	72.1	Vehicular traffic, bus stop, community noise
STN4	6425 Tyrone Ave, Van Nuys, CA 91401	2/8/2019	AM 10:09 - 10:29 AM	93.3	56.2	74.5	Vehicular traffic, community noise
			MD 1:14 - 1:34 PM	88.9	56.1	73.6	Vehicular traffic, community noise
			PM 4:05 - 4:25 PM	88.7	56.8	74.0	Vehicular traffic, community noise
STN5	15411 Victory Blvd, Van Nuys, CA 91406	2/8/2019	AM 11:07 - 11:30 AM	87.0	56.8	76.1	Vehicular traffic, community noise
			MD 2:05 - 2:25 PM	85.1	59.7	76.8	Vehicular traffic, community noise, helicopter, aircraft
			PM 5:04 - 5:24 PM	91.5	63.0	78.0	Vehicular traffic, community noise, weed wacker
STN6	6403 Dempsey Ave, Van Nuys, CA 91406	2/8/2019	AM 10:54 - 11:24 AM	90.5	59.5	73.9	Vehicular traffic, community noise, commercial plaza noise
			MD 1:57 - 2:30 PM	97.7	60.5	76.1	Vehicular traffic, community noise
			PM 4:47 - 5:25 PM	95.1	61.5	76.4	Vehicular traffic, community noise, aircraft

Table 3.5-8: Summary of Short-Term Vibration Monitoring - PPV

Receptor	Location	Date	Time		PPV Max, in/sec	PPV Min, in/sec	Vibration Sources
STV1	11341 Victory Blvd, North Hollywood, CA 91606	2/11/2019	AM	9:06 - 9:26 AM	0.029	0.007	Vehicular traffic
		2/12/2019	MD	12:43 - 12:53 PM	0.007	0.003	Vehicular traffic
			PM	4:25 - 4:35 PM	0.011	0.005	Vehicular traffic, community activity
STV2	6346 Agnes Ave, North Hollywood, CA 91606	2/8/2019	AM	9:26 - 9:46 AM	0.011	0.003	Vehicular traffic, community activity
			MD	12:23 - 12:43 PM	0.011	0.003	Vehicular traffic, community activity
			PM	3:18 - 3:38 PM	0.013	0.003	Vehicular traffic, community activity
STV3	13109 Victory Blvd, Valley Glen, CA 91401	2/25/2019	AM	10:25 - 10:35 AM	0.005	0.002	Vehicular traffic, community activity
		2/12/2019	MD	11:50 - 12:18 PM	0.009	0.003	Vehicular traffic, community activity
			PM	4:01 - 4:10 PM	0.009	0.004	Vehicular traffic, bus stop, community activity
STV4	6425 Tyrone Ave, Van Nuys, CA 91401	2/8/2019	AM	10:09 - 10:29 AM	0.020	0.003	Vehicular traffic, community activity
			MD	1:14 - 1:34 PM	0.017	0.002	Vehicular traffic, community activity
			PM	4:05 - 4:25 PM	0.018	0.003	Vehicular traffic, community activity
STV5	15157 Victory Blvd, Van Nuys, CA 91411	2/25/2019	AM	10:56 - 11:02 AM	0.006	0.003	Vehicular traffic, community activity
		2/12/2019	MD	11:58 - 12:12 PM	0.014	0.004	Vehicular traffic, community activity
			PM	3:34 - 3:45 PM	0.009	0.004	Vehicular traffic, community activity
STV6	6403 Dempsey Ave, Van Nuys, CA 91406	2/8/2019	AM	10:54 - 11:24 AM	0.035	0.005	Vehicular traffic, community activity, commercial plaza activity
			MD	1:57 - 2:30 PM	0.039	0.004	Vehicular traffic, community activity
			PM	4:47 - 5:25 PM	0.033	0.004	Vehicular traffic, community activity

Table 3.5-9: Summary of Short-Term Vibration Monitoring - RMS

Receptor	Location	Date	Time		RMS, VdB	RMS Max, VdB	RMS Min, VdB	Vibration Sources
STV1	11341 Victory Blvd, North Hollywood, CA 91606	2/11/2019	AM	9:06 - 9:26 AM	81.9	89.3	77.1	Vehicular traffic
		2/12/2019	MD	12:43 - 12:53 PM	72.2	76.8	69.2	Vehicular traffic
			PM	4:25 - 4:35 PM	76.3	80.5	73.4	Vehicular traffic, community activity
STV2	6346 Agnes Ave, North Hollywood, CA 91606	2/8/2019	AM	9:26 - 9:46 AM	74.4	80.9	70.8	Vehicular traffic, community activity
			MD	12:23 - 12:43 PM	71.6	80.6	68.9	Vehicular traffic, community activity
			PM	3:18 - 3:38 PM	71.9	82.1	69.2	Vehicular traffic, community activity
STV3	13109 Victory Blvd, Valley Glen, CA 91401	2/25/2019	AM	10:25 - 10:35 AM	70.1	74.0	67.1	Vehicular traffic, community activity
		2/12/2019	MD	11:50 - 12:18 PM	72.1	78.6	69.3	Vehicular traffic, community activity
			PM	4:01 - 4:10 PM	76.6	79.5	72.3	Vehicular traffic, bus stop, community activity
STV4	6425 Tyrone Ave, Van Nuys, CA 91401	2/8/2019	AM	10:09 - 10:29 AM	72.8	86.0	70.0	Vehicular traffic, community activity
			MD	1:14 - 1:34 PM	70.6	84.5	67.9	Vehicular traffic, community activity
			PM	4:05 - 4:25 PM	72.7	85.1	69.0	Vehicular traffic, community activity
STV5	15157 Victory Blvd, Van Nuys, CA 91411	2/25/2019	AM	10:56 - 11:02 AM	72.0	75.3	68.6	Vehicular traffic, community activity
		2/12/2019	MD	11:58 - 12:12 PM	79.6	83.2	71.4	Vehicular traffic, community activity
			PM	3:34 - 3:45 PM	77.1	79.3	72.4	Vehicular traffic, community activity
STV6	6403 Dempsey Ave, Van Nuys, CA 91406	2/8/2019	AM	10:54 - 11:24 AM	81.7	90.9	74.7	Vehicular traffic, community activity, commercial plaza activity
			MD	1:57 - 2:30 PM	81.2	91.7	70.9	Vehicular traffic, community activity
			PM	4:47 - 5:25 PM	83.2	90.3	71.6	Vehicular traffic, community activity

For the purposes of noise impact analysis, the area of influence includes those sensitive receptors closest to the Project area along Victory Boulevard. The proposed Project would be comprised of six stretches (described from east to west) as follows:

- Stretch 1 – Vineland to Tujunga
- Stretch 2 – Tujunga to Lankershim
- Stretch 3 – Lankershim to Laurel Canyon
- Stretch 4 – Laurel Canyon to Whitsett
- Stretch 5 – Whitsett to Fulton
- Stretch 6 – Fulton to Haskell.

Stretch 1 – Vineland to Tujunga

The proposed force main, connecting sewers, diversions/junctions, Vineland and Tujunga pump stations construction are along Stretch 1. Long-term noise monitors (LTN1 and LTN2) and short-term vibration monitor (STV1) are representative of the noise and vibration at sensitive locations along Stretch 1 nearest to the construction areas. During the existing noise survey representative of the construction hours (9:00 AM to 3:30 PM), long-term noise monitor (LTN1) experienced an hourly Leq range between 70.8 and 71.9 dBA. The peak hour Leq of 71.9 dBA occurred from 8:00 AM to 9:00 AM. Between 9:00 AM and 3:30 PM, LTN2 experienced an hourly Leq range between 70.4 and 75.1 dBA. The peak hour Leq of 75.1 dBA occurred from 6:00 PM to 7:00 PM. During the existing vibration survey representative of the construction hours (9:00 AM to 3:30 PM), short-term vibration monitor (STV1) experienced a PPV between 0.003 and 0.029 inches per second and an RMS between 69.2 and 89.3 VdB. The major contributing noise and vibration sources along Stretch 1 are vehicular traffic and community activity.

Stretch 2 – Tujunga to Lankershim

There would be proposed force main, connecting sewers, and diversions/junction's construction along Stretch 2; however, there are no proposed pump stations along this stretch. Although there are pump stations just east of Tujunga Avenue and west of Lankershim Boulevard, they are included in the adjoining stretches. No noise and vibration monitoring were conducted along Stretch 2. Therefore, long-term noise monitor (LTN2) and short-term vibration monitor (STV1) are representative of the noise and vibration at sensitive locations along Stretch 2 that are nearest to the construction areas. Between 9:00 AM and 3:30 PM, LTN2 experienced an hourly Leq range between 70.4 and 75.1 dBA. The peak hour Leq of 75.1 dBA occurred from 6:00 PM to 7:00 PM. During the existing vibration survey representative of the construction hours (9:00 AM to 3:30 PM), short-term vibration monitor (STV1) experienced a PPV between 0.003 and 0.029 inches per second and an RMS between 69.2 and 89.3 VdB. The major contributing noise and vibration sources along Stretch 2 are vehicular traffic and community activity.

Stretch 3 – Lankershim to Laurel Canyon

The proposed force main, connecting sewers, diversions/junctions, and Lankershim pump station construction are along Stretch 3. The proposed Laurel Canyon pump station is just west of Stretch 3. There are no nearby residences with line-of-sight to the proposed Lankershim or construction route. Short-term noise monitors (STN1 and STN2) and short-term vibration monitor (STV2) are representative of the nearest noise and vibration at sensitive locations to the future pump station and diversion structure along Stretch 3. Refer to the previous section for a discussion of the background noise and vibration at those locations. During the existing noise survey representative of the construction hours (9:00 AM to 3:30 PM), short-term noise monitor (STN1) experienced a Leq ranging between 57.1 and 58.2 dBA. STN2 experienced a Leq ranging between 60.3 and 62.5 dBA. During the existing vibration survey representative of the construction hours (9:00 AM to 3:30 PM), short-term vibration monitor (STV2) experienced a PPV between 0.003 and 0.013 inches per second and an RMS between 68.9 and 82.1 VdB. There are also noise and vibration sensitive receptors approximately 35 feet from the force main construction area. The ambient background at these receptors are similar to the noise and vibration experienced at LTN2 and STV1. The major contributing noise and vibration sources along Stretch 3 are vehicular traffic and community activity.

Stretch 4 – Laurel Canyon to Whitsett

The proposed force main, connecting sewers, diversions/junctions, microtunneling, and Laurel Canyon pump station construction are along Stretch 4. There are no first-row residences with line-of-sight to the proposed construction areas. No noise and vibration monitoring were conducted along Stretch 2. Therefore, short-term noise monitor (STN2) and short-term vibration monitor (STV2) are representative of the noise and vibration at the nearest second row sensitive locations from the construction areas. STN2 experienced a Leq ranging between 60.3 and 62.5 dBA. During the existing vibration survey representative of the construction hours (9:00 AM to 3:30 PM), short-term vibration monitor (STV2) experienced a PPV between 0.003 and 0.013 inches per second and an RMS between 68.9 and 82.1 VdB. The major contributing noise and vibration sources along Stretch 4 are vehicular traffic and community activity.

Stretch 5 – Whitsett to Fulton

The proposed force main, connecting sewers, diversions/junctions, microtunneling, Whitsett and Fulton pump stations construction are along Stretch 5. Long-term noise monitors (LTN3 and LTN4) and short-term vibration monitor (STV3) are representative of the noise and vibration at sensitive locations along Stretch 5 nearest to the construction areas. During the existing noise survey representative of the construction hours (9:00 AM to 3:30 PM), long-term noise monitor (LTN3) experienced an hourly Leq range between 74.6 and 76.3 dBA. The peak hour Leq of 76.3 dBA occurred from 7:00 AM to 8:00 AM. Between 9:00 AM and 3:30 PM, LTN4 experienced an hourly Leq range between 71.5 and 74.1 dBA. The peak hour Leq of 74.1 dBA occurred from 7:00 AM to 9:00 AM and 2:00 PM to 3:00 PM. During the existing vibration survey representative of the construction hours (9:00 AM to 3:30 PM), short-term vibration monitor (STV3) experienced a PPV between 0.002 and 0.009 inches per second and an RMS between 67.1 and 79.5 VdB. The major contributing noise and vibration sources along Stretch 5 are vehicular traffic and community activity.

Stretch 6 – Fulton to Haskell

There would be proposed force main, connecting sewers, microtunneling, and diversions/junction construction along Stretch 6; however, there are no proposed pump stations along this stretch. Long-term noise monitors (LTN5 and LTN6), short-term noise monitors (STN3, STN4, STN5, and STN6), and short-term vibration monitors (STV4, STV5, and STV6) are representative of the noise and vibration at sensitive locations along Stretch 6 nearest to the construction areas. During the existing noise survey representative of the construction hours (9:00 AM to 3:30 PM), long-term noise monitor (LTN5) experienced an hourly Leq range between 66.5 and 68.4 dBA. The peak hour Leq of 68.4 dBA occurred from 3:00 PM to 4:00 PM. Between 9:00 AM and 3:30 PM, LTN6 experienced an hourly Leq range between 67.9 and 72.6 dBA. The peak hour Leq of 72.6 dBA occurred from 9:00 AM to 10:00 AM. During the short-term noise survey representative of the construction hours of 9:00 AM to 3:30 PM, short-term noise monitor STN3 experienced a Leq ranging between 72.1 and 75.3 dBA. Between 9:00 AM and 3:30 PM, the Leq noise level ranged from 73.6 and 74.5 dBA at STN4. At STN5, the measured Leq ranged from 76.1 and 78.0 dBA. At STN6, the measured Leq ranged from 73.9 and 76.4 dBA.

During the existing vibration measurements representative of the construction hours (9:00 AM to 3:30 PM), short-term vibration monitor STV3 experienced a PPV between 0.002 and 0.009 inches per second and an RMS between 67.1 and 79.5 VdB. STV4 experienced a PPV between 0.002 and 0.020 inches per second and an RMS between 67.9 and 86.0 VdB. STV5 experienced a measured PPV between 0.003 and 0.014 inches per second and an RMS between 68.6 and 83.2 VdB. STV6 experienced a measured PPV between 0.004 and 0.039 inches per second and an RMS between 70.9 and 91.7 VdB. The major contributing noise and vibration sources along Stretch 6 are vehicular traffic and community activity.

3.5.6 Thresholds of Significance

The *L.A. CEQA Thresholds Guide*⁷ is used to evaluate the potential for a project to result in significant impacts. The guide includes impact thresholds to address noise impacts on sensitive receptors, including the residential and noise sensitive areas adjacent to the Project.

Accordingly, a project would have a significant impact on noise levels from construction if:

- Construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA or more at a sensitive noise use.
- Construction could result in daytime construction activities lasting more than 10 days in a three-month period that would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use.
- Construction activities could result in noise levels that would exceed the ambient noise level by 5 dBA at noise-sensitive receptors between the hours of 9:00 PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or at any time on Sunday.

⁷ City of Los Angeles, 2006. *L.A. CEQA Thresholds Guide*.

CEQA does not define how a project would have a significant impact on vibration levels from construction. However, in lieu of such standards, the FTA guidelines are used.⁸ Accordingly, a project would have a significant impact on vibration from construction if:

- Construction vibration would exceed 0.2 PPV in inches per second at vibration sensitive buildings (wood-framed buildings).
- Construction vibration would exceed 0.12 PPV in inches per second at extremely vibration sensitive buildings (historical buildings).
- Construction vibration would exceed the threshold for human annoyance of 78 VdB at residential receptors during the daytime.⁹

Based on the above guidance, the proposed Project would result in significant impacts associated with noise and vibration if it would result in:

Impact 3.5-1 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.

Impact 3.5-2 Generation of excessive groundborne vibration or groundborne noise levels.

3.5.7 Project Impacts

3.5.7.1 Impact 3.5-1

Impact 3.5-1: Construction of the proposed Project would generate a substantial temporary 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.

Construction of the proposed Project involves construction over approximately a 30-month duration (2.5 years) from April 2021 through November 2023. In general, construction would occur between the hours of 9:00 AM to 3:30 PM, Monday through Friday, and between 8:00 AM and 6:00 PM on Saturday. If a peak hour waiver is obtained, construction would occur in the morning and evening peak weekday hours. Generally, the Project construction would not operate between the hours of 9:00 PM and 7:00 AM. Although nighttime construction is not anticipated under normal circumstances, nighttime construction may be necessary when diverting or connection to wastewater pipes (due to reduced flows at night) or to reduce impacts on traffic or adjacent uses. Should nighttime construction be required, written permission would be obtained from the Board of Police Commissioners through its Executive Director.

Construction of the proposed Project may generate noise and vibration levels in excess of applicable federal, state and/or local noise standards. The EIR evaluates whether construction of the proposed Project would result in: (1) exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards

⁸ FTA, 2006.

⁹ FTA, 2006 (Figure 6-2).

of other agencies; (2) exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels; (3) a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the proposed Project; and/or (4) a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the proposed Project.

Construction activities would result in short-term temporary noise increases at areas nearby receptor locations.

Stretch 1 – Vineland to Tujunga

The Vineland diversion structure would be located within the intersection of Vineland Avenue and Victory Boulevard and the nearest structure (strip mall on the northwest corner) to the potential work zone is over 75 feet. The Vineland connecting sewer alignment would be installed in approximately the middle of the westbound fast lane in Victory Boulevard, and the work zone would likely occupy the fast and middle westbound lanes in Victory Boulevard, leaving a westbound travel lane adjacent to the curb. The nearest structure to the connecting sewer work zone is the strip mall approximately 25 feet away.

The Tujunga diversion structure would be located within the intersection of Tujunga Avenue and Victory Boulevard and the nearest structure (commercial building on the northeast corner) to the potential work zone is approximately 70 feet. The Tujunga connecting sewer alignment would be installed from the diversion structure to the Tujunga pump station adjacent to the commercial building, and thus the work zones for both the connecting sewer and Tujunga pump station would be within 20 feet of the commercial building and an apartment building, which is further to the east.

Construction of the force main would result in a Leq ranging from 82.8 and 97.3 dBA and a Lmax ranging from 82.1 and 92.7 dBA at the nearest noise sensitive receptors (represented by LTN1 and LTN2). Construction of the pump stations would result in a Leq ranging from 79.9 to 106.1 dBA and a Lmax ranging from 75.7 and 103.6 dBA. Construction of the diversion structures would result in a Leq ranging from 68.1 and 83.1 dBA and a Lmax ranging from 64.1 and 73.1 dBA. Connecting the sewers would result in a Leq ranging from 77.3 and 107.6 dBA and a Lmax ranging from 75.7 and 75.7 dBA. These noise levels would occur during the heaviest periods of activity and for only short durations. During the remainder of the time, lower noise levels would occur from individual equipment noise level represented in Table 3.5-2.

Stretch 2 –Tujunga to Lankershim

There are no proposed pump stations along Stretch 2. However, construction of the proposed force main would result in a Leq ranging from 82.8 and 95.7 dBA and a Lmax ranging from 82.1 and 91.1 dBA at the nearest noise sensitive receptors (represented by LTN2). These noise levels would occur during the heaviest periods of activity and for only short durations. During the remainder of the time, lower noise levels would occur from individual equipment noise level represented in Table 3.5-2.

Stretch 3 –Tujunga to Lankershim

The Lankershim diversion structure would be located within the intersection of Colfax Avenue, Lankershim Boulevard, and Victory Boulevard and the nearest structure (medical building at the southwest corner of Victory Boulevard and Colfax Avenue) to the potential work zone is approximately 20 feet. The Lankershim connecting sewer alignment would be installed beneath the southern sidewalk in Victory Boulevard from the diversion structure westward to the Lankershim pump station adjacent to a medical building and two commercial buildings, and thus the work zones for both the connecting sewer and Lankershim pump station would be within 20 feet of these buildings. The medical building (a kidney dialysis center) is new construction and the two commercial structures are being used as an auto repair facility. Additionally, the proposed Laurel Canyon pump station is near Stretch 3 and its construction can affect receptors along Stretch 3. There are no nearby residences with line-of-sight to the proposed Lankershim and Laurel Canyon pump stations or construction route; however, short-term noise monitors (STN1 and STN2) are representative of the nearest noise sensitive locations to these construction areas. Construction of the force main would result in a Leq range of 50.8 to 63.9 dBA at STN1 and STN2, respectively. Construction of the force main would result in a Lmax range of 50.1 to 59.3 dBA at STN1 and STN2, respectively. At ST1 and STN2, construction of the proposed pump stations would result in a Leq ranging from 44.2 and 60.9 dBA and a Lmax ranging from 40.0 and 58.3 dBA. Construction of the diversion structures would result in a Leq ranging from 46.8 and 56.1 dBA and a Lmax ranging from 42.8 and 54.3 dBA. Connecting the sewers would result in a Leq ranging from 41.5 and 62.3 dBA and a Lmax ranging from 40.0 and 58.3 dBA.

However, at noise sensitive receptors along Stretch 3 located adjacent to the force main construction route, construction of the force main would result in a Leq ranging from 84.4 and 97.3 dBA and a Lmax ranging from 83.7 and 92.7 dBA.

These noise levels would occur during the heaviest periods of activity and for only short durations. During the remainder of the time, lower noise levels would occur from individual equipment noise level represented in Table 3.5-2.

Stretch 4 – Laurel Canyon to Whitsett

The Laurel Canyon diversion structure would be located within Laurel Canyon Boulevard adjacent to the northeast corner of Victory Boulevard. The commercial structure at the northeast corner would be located within 20 feet of the diversion structure work zone. The Laurel Canyon connecting sewer alignment would be installed beneath the northern sidewalk in Victory Boulevard from the diversion structure westward to the Laurel Canyon pump station adjacent to a parking lot, and thus the work zones for both the connecting sewer and Laurel Canyon pump station would not be within 20 feet of a structure. There are no nearby residences on Stretch 4 with line of sight to the proposed Laurel Canyon pump station. Short-term noise monitor (STN2), on Stretch 3, is the nearest noise sensitive receptor. Construction of the proposed force main would result in a Leq ranging from 50.8 and 63.7 dBA and a Lmax ranging from 50.1 and 59.1 dBA at the nearest noise sensitive receptor (STN2). Construction of the proposed pump stations would result in a Leq ranging from 44.2 and 51.5 dBA and a Lmax ranging from 40.0 and 49.0 dBA. Construction

of the diversion structures would result in a Leq ranging from 49.4 and 56.1 dBA and a Lmax ranging from 45.3 and 54.3 dBA. Connecting the sewers would result in a Leq ranging from 41.5 and 53.0 dBA and a Lmax ranging from 40.0 and 49.0 dBA.

Microtunneling for SR-170 (located just east of Whitsett Avenue in Stretch 4) can also result in a Leq ranging from 77.0 and 82.0 dBA and a Lmax ranging from 69.1 and 76.7 dBA. Two pits would be constructed on either side of SR-170 (one each within the loop ramps north of Victory Boulevard). There are no structures near the pit locations or freeway ramps.

These noise levels would occur during the heaviest periods of activity and for only short durations. During the remainder of the time, lower noise levels would occur from individual equipment noise level represented in Table 3.5-2.

Stretch 5 – Whitsett to Fulton

The Whitsett diversion structure would be located within the intersection of Whitsett Avenue and Victory Boulevard. The nearest structure (strip mall on the northwest corner of the intersection) to the diversion structure works zone is over 60 feet away. The Whitsett connecting sewer alignment would be installed beneath the northern-most westbound travel lane in Victory Boulevard from the diversion structure westward to the Whitsett pump station, which would be located in the median just west of Babcock Avenue. The work zone for the connecting sewer would be located within 20 feet of a commercial structure (part of the strip mall) along the north side of Victory Boulevard just east of Babcock Avenue. The nearest structure to the Whitsett pump station work zone would be approximately 40 feet away.

The Fulton diversion structure would be located within Fulton Avenue at Victory Boulevard. The nearest structure (strip mall on the northwest corner of the intersection) to the diversion structure works zone is over 40 feet away. The Fulton connecting sewer alignment would be installed beneath the northern sidewalk along Victory Boulevard from the diversion structure eastward to the Fulton pump station, which would be located just west of Atoll Avenue. The work zone for the connecting sewer and pump station would be located within 20 feet of two apartment complexes along the north side of Victory Boulevard just west of Atoll Avenue.

Long-term noise monitors (LTN3 and LTN4) are representative of the noise sensitive locations along Stretch 5. Construction of the proposed force main would result in a Leq ranging from 77.7 and 95.1 dBA and a Lmax ranging from 77.0 and 90.5 dBA at the nearest noise sensitive receptors. Construction of the proposed pump stations would result in a Leq ranging from 87.2 and 102.6 dBA and a Lmax ranging from 83.0 and 100.1 dBA. Construction of the diversion structures would result in a Leq ranging from 66.8 and 74.5 dBA and a Lmax ranging from 62.8 and 72.7 dBA. Connecting the sewers would result in a Leq ranging from 84.6 and 104.0 dBA and a Lmax ranging from 83.0 and 100.1 dBA.

Microtunneling for the Tujunga Wash can also result in a Leq ranging from 88.3 and 91.5 dBA and a Lmax ranging from 80.4 and 88.0 dBA. Two pits would be constructed on or close to the centerline of Victory Boulevard on either side of Tujunga Wash. The nearest structures to the pit work area east of Tujunga Wash is the commercial structure along the south side of Victory Boulevard (west of Morse Avenue) and is over 30 feet from the pit work zone. The nearest structures to the pit work

area west of Tujunga Wash is the residential structure along the south side of Victory Boulevard (west of Ethel Avenue) and is approximately 40 feet from the pit work zone.

These noise levels would occur during the heaviest periods of activity and for only short durations. During the remainder of the time, lower noise levels would occur from individual equipment noise level represented in Table 3.5-2.

Stretch 6 – Fulton to Haskell

There are no proposed pump stations along Stretch 6. Long-term noise monitors (LTN5 and LTN6) and short-term noise monitors (STN3, STN4, STN5, and STN6) are representative of the noise and sensitive locations along Stretch 6. Construction of the proposed force main would result in a Leq ranging from 69.6 and 97.8 dBA and a Lmax ranging from 68.9 and 94.0 dBA at the nearest noise sensitive receptors.

Microtunneling for Kester Avenue can also result in a Leq ranging from 80.5 and 83.6 dBA and a Lmax ranging from 72.6 and 80.2 dBA. Two pits would be constructed on or close to the centerline of Victory Boulevard on either side of Kester Avenue. The nearest structures to the pit work area east of Kester Avenue is the commercial structure along the north side of Victory Boulevard (northeast corner of Kester Avenue at Victory Boulevard) and is over 30 feet from the pit work zone. The nearest structure to the pit work area west of Kester Avenue is the gas station canopy along the north side of Victory Boulevard and is over 30 feet from the pit work zone.

Microtunneling for Sepulveda can also result in a Leq ranging from 77.9 and 81.0 dBA and a Lmax ranging from 70.0 and 77.6 dBA. Should microtunneling be used to install the force main under Sepulveda Boulevard, two pits would be constructed on either side of Sepulveda Boulevard. The pits would be located in approximately the middle of Victory Boulevard. The nearest structures to the pits are commercial structures on the northeast corner, southeast corner and southwest corner of Victory Boulevard at Sepulveda Boulevard. These structures would be located at least 30 feet from the work zone.

Microtunneling for the 405 Freeway can also result in a Leq ranging from 91.8 and 95.0 dBA and a Lmax ranging from 83.9 and 91.5 dBA. Should microtunneling be used to install the force main under I-405, two pits would be constructed on either side of I-405, and the pit west of I-405 may be combined with the EVIS junction structure pit. The pit east of I-405 would be located in approximately the middle of Victory Boulevard. The nearest structures to the pit are residences on either side of Victory Boulevard just east of the northbound I-405 on-ramp and are located at least 30 feet from the work zone.

Construction of the junction to EVIS could result in a Leq ranging from 72.9 and 81.3 and a Lmax ranging from 68.9 and 77.9 dBA. The EVIS junction structure would be located in Victory Boulevard at Haskell Avenue. The nearest structure to the EVIS junction structure is a gas station north of Victory Boulevard and west of Haskell Avenue, over 80 feet away.

These noise levels would occur during the heaviest periods of activity and for only short durations. During the remainder of the time, lower noise levels would occur from individual equipment noise level represented in Table 3.5-2. Table 3.5-10 summarizes the peak hourly construction L_{max} at noise sensitive locations from the heaviest construction phases of activity. Table 3.5-11 summarizes the peak hourly construction Leq at noise sensitive locations from different construction phases. Table 3.5-12 summarizes the peak hourly construction L_{max} and Leq at reference distances of 15, 25, 50, 100, and 200 feet.

For the analysis of impacts under CEQA, predicted construction noise levels were compared to baseline noise levels. As shown in Table 3.5-13, daytime peak-hour construction noise levels (Leq) from the proposed Project would raise existing ambient noise by more than 5 dB above ambient noise levels at all the noise sensitive receptor locations. Although temporary and short-term, impacts would be ***potentially significant***. It should be noted that construction would not result in permanent noise levels that exceed the significance thresholds.

Construction Traffic Noise

Future traffic noise levels presented in this analysis are based on traffic volumes provided by the Traffic Analysis. The TNM software was used to calculate the noise contour distances for Future and Future with Project Construction conditions. The off-site roadway modeling represents a conservative analysis that does not consider topography or attenuation provided by existing structures.

Due to the voluntary rerouting of traffic along Victory Boulevard to other parallel streets during construction, traffic along Victory Boulevard would potentially decrease. Therefore, the predicted future traffic noise level from construction would not increase over future traffic noise levels without the Project. The results of this analysis for the CNEL at 50 feet from the roadway centerline are shown below in Table 3.5-14.

Table 3.5-10: Peak Hourly Construction Noise, Lmax

Stage	Stretch 1		Stretch 2	Stretch 3			Stretch 4	Stretch 5		Stretch 6					
	LTN1	LTN2	LTN2	STN1	STN2	Nearest NSR ¹	STN2	LTN3	LTN4	STN3	LTN5	STN4	LTN6	STN5	STN6
1 Force Main															
1.1 Excavation and Shoring	92.7	91.1	91.1	59.3	59.1	92.7	59.1	86.0	90.5	92.9	93.2	94.0	92.9	92.5	77.9
1.2 Bedding	83.7	82.1	82.1	50.3	50.1	83.7	50.1	77.0	81.5	83.9	84.2	85.0	83.9	83.5	68.9
1.3 Pipe Laying	83.7	82.1	82.1	50.3	50.1	83.7	50.1	77.0	81.5	83.9	84.2	85.0	83.9	83.5	68.9
1.4 Testing	84.0	82.4	82.4	50.6	50.4	84.0	50.4	77.3	81.8	84.2	84.5	85.3	84.2	83.8	69.2
1.5 Restoration	86.3	84.7	84.7	52.9	52.7	86.3	52.7	79.6	84.1	86.5	86.8	87.6	86.5	86.1	71.5
2 Pump Stations (Each)															
2.1 Excavation and Shoring	84.7	103.6		58.3	49.0		49.0	92.0	100.1						
2.2 Formwork and Casting	76.5	95.4		50.1	40.8		40.8	83.8	91.9						
2.3 Equipment Installation	75.7	94.6		49.3	40.0		40.0	83.0	91.1						
2.4 Restoration	78.3	97.2		51.9	42.6		42.6	85.6	93.7						
3 Diversion Structures (Each)															
3.1 Excavation and Shoring	73.1	81.3		51.8	54.3		54.3	72.7	71.8						
3.2 Formwork and Casting	64.9	73.1		43.6	46.1		46.1	64.5	63.6						
3.3 Equipment Installation	64.1	72.3		42.8	45.3		45.3	63.7	62.8						
3.4 Restoration	66.7	74.9		45.4	47.9		47.9	66.3	65.4						
4 Junction to EVIS															
4.1 Excavation and Shoring															77.9
4.2 Formwork and Casting															69.7
4.3 Equipment Installation															68.9
4.4 Restoration															71.5
5 Connecting Sewers (Each)															
5.1 Excavation and Shoring	84.7	103.6		58.3	49.0		49.0	92.0	100.1						
5.2 Bedding	75.7	94.6		49.3	40.0		40.0	83.0	91.1						
5.3 Pipe Laying	75.7	94.6		49.3	40.0		40.0	83.0	91.1						
5.4 Restoration	78.3	97.2		51.9	42.6		42.6	85.6	93.7						
6 Microtunneling (Each)	SR-170	Tujunga	Kester	Sepulveda	405 Fwy										
6.1 Excavation and Shoring	76.7	88.0	80.2	77.6	91.5										
6.2 Pipe Installation	69.1	80.4	72.6	70.0	83.9										
6.3 Restoration	70.3	81.6	73.8	71.2	85.1										

Note: ¹Nearest Noise Sensitive Receptor to the Force Main Construction.

Table 3.5-11: Peak Hourly Construction Noise, Leq

Stage	Stretch 1		Stretch 2	Stretch 3			Stretch 4	Stretch 5		Stretch 6					
	LTN1	LTN2	LTN2	STN1	STN2	Nearest NSR ¹	STN2	LTN3	LTN4	STN3	LTN5	STN4	LTN6	STN5	STN6
1 Force Main															
1.1 Excavation and Shoring	97.3	95.7	95.7	63.9	63.7	97.3	63.7	90.6	95.1	97.6	97.8	98.6	97.6	97.1	82.5
1.2 Bedding	84.4	82.8	82.8	51.0	50.8	84.4	50.8	77.7	82.2	84.7	84.9	85.7	84.7	84.2	69.6
1.3 Pipe Laying	88.3	86.8	86.8	55.0	54.7	88.3	54.7	81.6	86.2	88.6	88.8	89.7	88.6	88.1	73.5
1.4 Testing	85.6	84.0	84.0	52.3	52.0	85.6	52.0	78.9	83.4	85.9	86.1	87.0	85.9	85.4	70.8
1.5 Restoration	92.7	91.1	91.1	59.3	59.0	92.7	59.0	85.9	90.5	92.9	93.2	94.0	92.9	92.4	77.8
2 Pump Stations (Each)															
2.1 Excavation and Shoring	87.3	106.1		60.9	51.5		51.5	94.6	102.6						
2.2 Formwork and Casting	82.9	101.8		56.5	47.2		47.2	90.2	98.3						
2.3 Equipment Installation	79.9	98.8		53.5	44.2		44.2	87.2	95.3						
2.4 Restoration	83.9	102.8		57.6	48.2		48.2	91.2	99.3						
3 Diversion Structures (Each)															
3.1 Excavation and Shoring	74.9	83.1		53.6	56.1		56.1	74.5	73.6						
3.2 Formwork and Casting	68.1	76.3		46.8	49.4		49.4	67.7	66.8						
3.3 Equipment Installation	68.1	76.4		46.8	49.4		49.4	67.8	66.8						
3.4 Restoration	72.2	80.4		50.9	53.4		53.4	71.8	70.9						
4 Junction to EVIS															
4.1 Excavation and Shoring															81.3
4.2 Formwork and Casting															77.8
4.3 Equipment Installation															72.9
4.4 Restoration															79.8
5 Connecting Sewers (Each)															
5.1 Excavation and Shoring	88.7	107.6		62.3	53.0		53.0	96.0	104.0						
5.2 Bedding	77.3	96.1		50.9	41.5		41.5	84.6	92.6						
5.3 Pipe Laying	80.2	99.1		53.8	44.5		44.5	87.5	95.6						
5.4 Restoration	85.1	104.0		58.7	49.4		49.4	92.4	100.5						
6 Microtunneling (Each)	SR-170	Tujunga	Kester	Sepulveda	405 Fwy										
6.1 Excavation and Shoring	80.2	91.5	83.6	81.0	95.0										
6.2 Pipe Installation	77.0	88.3	80.5	77.9	91.8										
6.3 Restoration	78.1	89.4	81.6	79.0	92.9										

Note: ¹Nearest Noise Sensitive Receptor to the Force Main Construction.

Table 3.5-12: Peak Hourly Construction Noise at Reference Distances, Lmax and Leq

Stage		Lmax, dBA					Leq, dBA				
		15 ft	25 ft	50 ft	100 ft	200 ft	15 ft	25 ft	50 ft	100 ft	200 ft
1	Force Main										
1.1	Excavation and Shoring	100.1	95.6	89.6	83.6	77.6	104.7	100.2	94.2	88.2	82.2
1.2	Bedding	91.1	86.6	80.6	74.6	68.6	91.8	87.3	81.3	75.3	69.3
1.3	Pipe Laying	91.1	86.6	80.6	74.6	68.6	95.7	91.3	85.2	79.2	73.2
1.4	Testing	91.4	86.9	80.9	74.9	68.9	93.0	88.5	82.5	76.5	70.5
1.5	Restoration	93.7	89.2	83.2	77.2	71.2	100.0	95.6	89.6	83.5	77.5
2	Pump Stations (Each)										
2.1	Excavation and Shoring	100.1	95.6	89.6	83.6	77.6	102.6	98.2	92.2	86.1	80.1
2.2	Formwork and Casting	91.9	87.4	81.4	75.4	69.4	98.3	93.8	87.8	81.8	75.8
2.3	Equipment Installation	91.1	86.6	80.6	74.6	68.6	95.3	90.8	84.8	78.8	72.8
2.4	Restoration	93.7	89.2	83.2	77.2	71.2	99.3	94.8	88.8	82.8	76.8
3	Diversion Structures (Each)										
3.1	Excavation and Shoring	100.1	95.6	89.6	83.6	77.6	101.9	97.4	91.4	85.4	79.4
3.2	Formwork and Casting	91.9	87.4	81.4	75.4	69.4	95.1	90.6	84.6	78.6	72.6
3.3	Equipment Installation	91.1	86.6	80.6	74.6	68.6	95.1	90.7	84.7	78.6	72.6
3.4	Restoration	93.7	89.2	83.2	77.2	71.2	99.2	94.7	88.7	82.7	76.7
4	Junction to EVIS										
4.1	Excavation and Shoring	100.1	95.6	89.6	83.6	77.6	103.5	99.1	93.1	87.0	81.0
4.2	Formwork and Casting	91.9	87.4	81.4	75.4	69.4	100.0	95.6	89.6	83.5	77.5
4.3	Equipment Installation	91.1	86.6	80.6	74.6	68.6	95.0	90.6	84.6	78.6	72.6
4.4	Restoration	93.7	89.2	83.2	77.2	71.2	102.0	97.5	91.5	85.5	79.5
5	Connecting Sewers (Each)										
5.1	Excavation and Shoring	100.1	95.6	89.6	83.6	77.6	104.0	99.6	93.6	87.6	81.5
5.2	Bedding	91.1	86.6	80.6	74.6	68.6	92.6	88.2	82.2	76.1	70.1
5.3	Pipe Laying	91.1	86.6	80.6	74.6	68.6	95.6	91.1	85.1	79.1	73.1
5.4	Restoration	93.7	89.2	83.2	77.2	71.2	100.5	96.0	90.0	84.0	78.0
6	Microtunneling (Each)										
6.1	Excavation and Shoring	100.1	95.6	89.6	83.6	77.6	103.5	99.1	93.1	87.1	81.0
6.2	Pipe Installation	92.5	88.0	82.0	76.0	70.0	100.4	95.9	89.9	83.9	77.9
6.3	Restoration	93.7	89.2	83.2	77.2	71.2	101.5	97.0	91.0	85.0	79.0

Table 3.5-13: Peak Hourly Construction Noise, Leq

Stretch	Representative Receptor	Location	Existing Daytime Ambient Range, dBA	Peak Activity Hourly Construction Noise Level, dBA	Existing Ambient Plus Construction Range, dBA	Maximum Incremental Increase, dB	Significance Impact Assessment
Stretch 1	LTN1	6372 Vineland Pl, North Hollywood, CA 91606	70.8 – 71.9	97.3	97.3 – 97.3	26.5	Yes
	LTN2	11341 Victory Blvd, North Hollywood, CA 91606	70.4 – 75.1	107.6	107.6 – 107.6	37.2	Yes
Stretch 2	Nearest NSR/similar to LTN2 ¹	-	70.4 – 75.1	95.7	95.7 – 95.7	25.3	Yes
Stretch 3	STN1	6345 Simpson Avenue, North Hollywood, CA 91606	57.1 – 58.3	63.9	64.7 – 65.0	7.7	Yes
	STN2	6346 Agnes Ave, North Hollywood, CA 91606	60.3 – 62.5	63.7	65.3 – 66.2	5.0	Yes
	Nearest NSR/similar to LTN2 ¹	-	70.4 – 75.1	97.3	97.3 – 97.3	26.9	Yes
Stretch 4	STN2	6346 Agnes Ave, North Hollywood, CA 91606	60.3 – 62.5	83.7	83.7 – 83.7	23.4	Yes
Stretch 5	LTN3	12535 Victory Blvd, North Hollywood, CA 91606	74.6 – 76.3	96.0	96.0 – 96.0	21.4	Yes
	LTN4	6425 Tyrone Ave, Van Nuys, CA 91401	73.6 – 74.5	104.0	104.0 – 104.0	30.4	Yes
Stretch 6	STN3	13517 Victory Blvd, Van Nuys, CA 91401	72.1 – 75.3	97.6	97.6 – 97.6	25.5	Yes
	LTN5	13915 Victory Blvd, Van Nuys, CA 91401	66.5 – 68.4	97.8	97.8 – 97.8	31.3	Yes
	STN4	6425 Tyrone Ave, Van Nuys, CA 91401	73.6 – 74.5	98.6	98.7 – 98.7	25.1	Yes
	LTN6	15157 Victory Blvd, Van Nuys, CA 91411	67.9 – 72.6	97.6	97.6 – 97.6	29.7	Yes
	STN5	15411 Victory Blvd, Van Nuys, CA 91406	76.1 – 78.0	97.1	97.1 – 97.1	21.0	Yes
	STN6	6403 Dempsey Ave, Van Nuys, CA 91406	73.9 – 76.4	82.5	83.0 – 83.4	9.1	Yes

Note: ¹Nearest Noise Sensitive Receptor to the Force Main Construction (Approximately 35 feet from the force main construction area). The ambient background at these receptors are similar to the noise experienced at LTN2.

Table 3.5-14: Construction Traffic Noise, CNEL

Roadway	Future Condition without the Project Construction	Future Conditions with Project Construction		
	CNEL @ 50 ft, dBA	CNEL @ 50 ft, dBA	Incremental Contribution, dB	Impact Assessment
Victory Boulevard, between Haskell Avenue and Sepulveda Boulevard	76.3	75.4	-0.9	Less than significant
Victory Boulevard, between Kester Avenue and Van Nuys Boulevard	74.2	73.3	-0.9	Less than significant
Victory Boulevard, between Hazeltine Avenue and Woodman Avenue	75.4	74.4	-1.0	Less than significant
Victory Boulevard, between Fulton Avenue and Coldwater Canyon Avenue	74.7	74.2	-0.5	Less than significant
Victory Boulevard, between Whitsett Avenue and Laurel Canyon Boulevard	76.2	75.3	-0.9	Less than significant
Victory Boulevard, between Lankershim Boulevard/Colfax Avenue and Tujunga Avenue	73.6	72.4	-1.2	Less than significant

3.5.7.1.1 Mitigation Measures

To reduce the noise produced by construction of the proposed Project, mitigation measure MM-NV-1 would be implemented.

MM-NV-1: Construction Noise Mitigation. Prepare and Implement a Construction Noise Control and Mitigation Plan to Reduce Construction Noise and Vibration at Noise-Sensitive Land Uses.

The project sponsor shall develop a noise control plan to reduce construction noise and vibration noise levels such that the ambient noise level is not exceeded by 5 dBA, as determined by a qualified acoustical consultant. The plan shall require:

Construction contractors shall specify noise-reducing construction practices that will be employed to reduce noise from construction activities. The measures specified by the project sponsor shall be reviewed and approved by the City prior to the issuance of building permits. Measures that can be used to limit noise include, but are not limited to those below.

- a) **Construction Hours.** Limit construction to the hours of 7:00 AM to 9:00 PM on weekdays, between 8:00 AM and 6:00 PM on Saturdays, and prohibit construction equipment noise any time on Sundays and holidays. Construction personnel shall not be permitted on the project site (including laydown and storage areas), and material or equipment deliveries and collections shall not be permitted during the prohibited hours.
- b) **Construction Equipment.** All construction equipment powered by internal combustion engines shall be properly muffled and maintained. (Poor maintenance of equipment may cause excessive noise levels.) Require that all construction equipment powered by gasoline or diesel engines have sound control devices that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation.
- c) **Idling Prohibitions.** Unnecessary idling (i.e. more than 2 minutes) of internal combustion engines near noise-sensitive areas shall be prohibited.

- d) **Stationary Equipment.** All stationary noise-generating construction equipment, such as air compressors and portable power generators, shall be located as far as is practical from existing noise sensitive land uses; they shall be muffled and enclosed within temporary enclosures and shielded by barriers, to the extent feasible.
- e) **Use Quiet Equipment.** Contractors shall utilize the quietest equipment available, and all internal combustion powered equipment shall be equipped with properly operating mufflers and kept in tune to avoid backfires. In addition, if exposed, engines shall be fitted with protective shrouds to reduce motor noise.
- f) **Use Electrical Power When Feasible.** If ample local grid power is available, electricity shall be obtained from the local power grid to avoid the use of portable generators.
- g) **Temporary Noise Barriers.** Erect temporary noise attenuation barriers adjacent to stationary construction equipment directly between the equipment and sensitive receptors, where necessary and feasible. Construction equipment that is to be stationary for extended periods (e.g., compressors, generators, etc.) shall be shielded, if appropriate, by erecting temporary noise attenuation barriers. The need for and feasibility of noise attenuation barriers shall be evaluated on a case-by-case basis considering the distance to noise-sensitive receptors, the available space at the construction location, and taking account of safety and operational considerations.
- h) **Noise enclosures.** Use noise-reducing enclosures around noise-generating equipment that has the potential to disturb nearby off-site land uses or where otherwise necessary to comply with City Code noise limits for receiving zones.
- i) **Ensure that equipment and trucks used for project construction utilize the best available noise control techniques** (e.g., improved mufflers, equipment redesign, intake silencers, ducts, engine enclosures, acoustically attenuating shields or shrouds) wherever feasible.
- j) **Noise producing signals.** The use of noise producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.
- k) **Impact tools.** Impact tools (e.g. pavement breakers) used for project construction shall be hydraulically or electrically powered (where feasible) to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. Quieter procedures shall be used, such as drills rather than impact equipment, where feasible.
- l) **All construction equipment used on the proposed project that is regulated for noise by a local, state, or federal agency shall comply with such regulation while in the course of project activity and use on-site.**
- m) **Construction employees shall be trained in the proper operation and use of the equipment. (Careless or improper operation or inappropriate use of equipment can increase noise levels. Poor loading, unloading, excavation, and hauling techniques are examples of how a lack of adequate guidance and training may lead to increased noise levels.)**
- n) **Construction equipment shall be stored on the project site or designated laydown areas while in use, to the extent feasible. This will eliminate noise associated with repeated transportation of the equipment to and from the site.**
- o) **Monitor the effectiveness of noise attenuation measures by taking noise measurements.**

- p) Prior to the issuance of the building permit, along with submission of construction documents, the project sponsor shall submit to the Planning Department and Department of Building Inspection a list of measures for controlling noise and respond to and tracking complaints pertaining to construction noise. These measures shall include:
- a. Identification of measures that will be implemented to control construction noise.
 - b. Identification of locations where it is infeasible to limit noise to be in compliance with applicable City Standards.
 - c. A procedure and phone numbers for notifying the Department of Building Inspection, the Department of Health, or the Police Department of complaints.
 - d. Designation of a disturbance coordinator for responding to noise complaints, with his/her name and telephone complaint number to be clearly posted at the construction site and shall be answered at all times during construction.
 - e. A plan for notification of neighboring residences and non-residential building managers within 300 feet of the project construction area at least 30 days in advance of extreme noise-generating activities (defined as activities that generate noise levels of 9- dBA or greater) about the estimated duration of activity and the associated control measures that will be implemented to reduce noise levels.

3.5.7.1.2 Significance of Impact After Mitigation

While physical barriers and procedural controls are likely to reduce construction noise, functional constraints on their implementation, and uncertainties as to their effectiveness or availability, may limit the actual extent of mitigation. Accordingly, the noise attenuation and control measures in MM-NV-1 would likely not reduce construction noise to below significant thresholds in every case or at every receptor location. In addition, even with those measures, the construction noise would be audible and may be perceived as intrusive or annoying by some individuals. As a result, residual impacts of construction are considered *significant and unavoidable*, although, given the limited duration of construction activities, those impacts would be temporary.

3.5.7.2 Impact 3.5-2

Impact 3.5-2: Construction of the proposed Project would result in the generation of excessive groundborne vibration or groundborne noise levels.

Construction activities are known to generate excessive ground-borne vibration. Construction activities related to implementation of the proposed Project would have the potential to temporarily generate vibration resulting in a short-term effect on nearby vibration-sensitive land uses. The threshold for vibration-induced architectural damage is 0.2 PPV in inches per second for typical wood-framed buildings. The threshold for vibration-induced architectural damage is 0.12 PPV in inches per second for extremely vibration sensitive building (fragile historical buildings). The potential impact of vibration during construction on known or unknown historic resources is detailed in Section 3.2, Cultural Resources and Tribal Cultural Resources of this Draft EIR. The threshold for human annoyance at residential receptors during the daytime is 78 VdB.

Construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. Construction can generate varying degrees of ground vibration, depending on the construction procedures, the equipment used, and the proximity to vibration-sensitive uses. The effect on buildings near a construction site varies depending on the type and depth of the source, soil type, ground strata, and receptor building construction. The generation of vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight damage at the highest levels. Vibration is typically noticed nearby when objects in a building generate noise from rattling windows or picture frames. It is typically not perceptible outdoors and, therefore, impacts are normally based on the distance to the nearest building.¹⁰ Table 3.5-15 shows the vibration levels in PPV in inches per second and RMS velocity level in VdB from typical construction equipment at different reference distances.

Construction vibration is not expected to exceed the threshold for vibration-induced architectural damage of 0.2 PPV at the majority of vibration sensitive receptors. However, receptor STV1 is located approximately 10 feet from the construction zone and could experience instances where the PPV from a breaker, large bulldozer, auger drill, and loaded trucks exceed the PPV threshold of 0.2 inches per second. Table 3.5-16 summarizes the construction vibration PPV in inches per second at vibration sensitive locations. Construction within close proximity (less than 15 feet) to existing vibration sensitive structures (wood framed buildings) could exceed the PPV threshold of 0.2 inches per second and potentially result in architectural building damage. Construction within 21 feet of buildings extremely susceptible to vibration damage (historical buildings) could exceed the PPV threshold of 0.12 inches per second and potentially result in architectural building damage. Therefore, due to construction within 21 feet of potentially sensitive buildings, impacts from vibration are considered ***potentially significant***.

Vibration sensitive receptors along a majority of the construction alignment from Vineland to the I-405 freeway, Stretch 1 through a portion of Stretch 6, represented by STV1, STV3, STV4, and STV5, would experience perceptible vibration that exceeds the human annoyance threshold of 78 VdB during portions of the construction. Additionally, construction vibration is not expected to exceed the threshold for human annoyance of 78 VdB at vibration sensitive receptor STV2; however, STV2 does not represent the nearest vibration sensitive receptor to the force main. The nearest vibration sensitive receptor to the force main construction along Stretch 2 would experience perceptible vibration in exceedance of 78 VdB. Construction vibration is not expected to exceed the threshold for human annoyance of 78 VdB at vibration sensitive receptor STV6. Table 3.5-17 summarizes the construction vibration in VdB at locations sensitive to vibration annoyance. Due to construction occurring within close proximity to sensitive receptors, human annoyance impacts from construction activities are considered ***potentially significant***.

¹⁰ FTA, 2006

Table 3.5-15: Vibration Velocities for Typical Construction Equipment

Equipment		PPV Velocity, in/sec					RMS Velocity Level, VdB ¹				
		15 ft	25 ft	50 ft	100 ft	200 ft	15 ft	25 ft	50 ft	100 ft	200 ft
Hydromill (slurry wall)	In soil	0.017	0.008	0.003	0.001	0.000	73	66	57	48	39
	In rock	0.037	0.017	0.006	0.002	0.001	79	73	64	55	45
Hoe Ram/Breaker		0.191	0.089	0.031	0.011	0.004	94	87	78	69	60
Large Bulldozer		0.191	0.089	0.031	0.011	0.004	94	87	78	69	60
Caisson Drilling/Auger		0.191	0.089	0.031	0.011	0.004	94	87	78	69	60
Loaded Trucks		0.164	0.076	0.027	0.010	0.003	92	86	77	68	58
Jackhammer		0.075	0.035	0.012	0.004	0.002	85	79	70	61	52
Small Bulldozer		0.006	0.003	0.001	0.000	0.000	64	58	48	39	30

Note: ¹RMS velocity in decibels (VdB) re 1 micro-inch/second.

²A crest factor of 4 (representing a PPV-rms difference of 12 VdB) was used to calculate the approximate rms vibration velocity levels from the PPV values. Source: FTA, 2006.

Table 3.5-16: PPV Vibration Velocities for Construction Equipment at Vibration Sensitive Receptors

Equipment		PPV Velocity, in/sec at Vibration Sensitive Receptors						
		Stretch 1	Stretch 2	Stretch 3 & 4	Stretch 5	Stretch 6		
		STV1	Nearest VSR ¹	STV2	STV3	STV4	STV5	STV6
Hydromill (slurry wall)	In soil	0.032	0.005	0.000	0.017	0.006	0.005	0.000
	In rock	0.067	0.010	0.001	0.037	0.013	0.011	0.001
Hoe Ram/Breaker		0.352	0.054	0.005	0.191	0.068	0.056	0.004
Large Bulldozer		0.352	0.054	0.005	0.191	0.068	0.056	0.004
Caisson Drilling/Auger		0.352	0.054	0.005	0.191	0.068	0.056	0.004
Loaded Trucks		0.300	0.046	0.004	0.164	0.058	0.048	0.004
Jackhammer		0.138	0.021	0.002	0.075	0.027	0.022	0.002
Small Bulldozer		0.012	0.002	0.000	0.006	0.002	0.002	0.000

Source: FTA, 2006. Note: ¹Nearest Vibration Sensitive Receptor (VSR) to the Force Main Construction

Table 3.5-17: RMS Vibration Velocities for Construction Equipment at Vibration Sensitive Receptors

Equipment		RMS Velocity Level, VdB ¹ at Vibration Sensitive Receptors						
		Stretch 1	Stretch 2	Stretch 3 & 4	Stretch 5	Stretch 6		
		STV1	Nearest VSR ³	STV2	STV3	STV4	STV5	STV6
Hydromill (slurry wall)	In soil	78	62	41	73	64	62	39
	In rock	85	68	48	79	70	69	46
Hoe Ram/Breaker		99	83	62	94	85	83	60
Large Bulldozer		99	83	62	94	85	83	60
Caisson Drilling/Auger		99	83	62	94	85	83	60
Loaded Trucks		98	81	61	92	83	82	59
Jackhammer		91	74	54	85	76	75	52
Small Bulldozer		69	53	33	64	55	53	31

Note: ¹RMS velocity in decibels (VdB) re 1 micro-inch/second.

²A crest factor of 4 (representing a PPV-RMS difference of 12 VdB) was used to calculate the approximate RMS vibration velocity levels from the PPV values.

³Nearest Vibration Sensitive Receptor (VSR) to the force main construction

Source: FTA, 2006.

3.5.7.2.1 Mitigation Measures

Implementation of the procedural mitigation measures of MM-NV-1 would help reduce impacts from groundborne vibration. In addition, the following mitigation measure is proposed:

MM-NV-2: Vibration During Construction. To limit the potential impacts of vibration on structures within 21 feet of the nearest edge of the construction work zone (when measured from the closest work zone boundary), and to limit vibration annoyances to receptors along the alignment, the City (or its Contractor) shall implement vibration reduction measures during construction including, but are not limited to:

- Prohibition of certain types of impact equipment (e.x., pile driver);
- Requirement for lighter tracked or wheeled equipment; and
- Phasing operations to avoid simultaneous vibration sources.

Prior to construction of project components with work zones located within 21 feet of structure(s), the City (or its Contractor) shall retain a Professional Structural Engineer with experience in structural vibration analysis to perform the following tasks:

- Review the project plans to determine the potential construction impact zone and conduct pre- and post-construction surveys of the structures located within 21 feet of the work zone to document the pre- and post-construction conditions of all structures surveyed; and
- Prepare and submit a report to the City's Project Manager that includes, but not be limited to, the description of pre-and post-construction conditions of all structures surveyed.

In the event of vibration-caused damage, the Structural Engineer shall recommend necessary repairs based on the pre- and post-construction conditions (as documented in the Structural Engineers report). If the damaged structure(s) are potentially historic, mitigation measure MM-CR-1 shall apply. The Contractor shall be responsible to remedy vibration-caused damage as a result of construction of the project to pre-construction conditions as documented in the Structural Engineers report. The City shall confirm that the Contractor has completed all remedies associated with vibration impacts prior to close of the construction contract.

3.5.7.2.2 Significance of Impact After Mitigation

While the noise mitigation measure MM-NV-1 would be expected to reduce construction vibration, there are uncertainties as to extent of MM-NV-1's vibration reduction effectiveness. Mitigation measure MM-NV-2 would likely not reduce construction vibration annoyance to below human annoyance significant thresholds in every case or at every sensitive receptor location. Therefore, after mitigation, human annoyance impacts are **significant and unavoidable**. Although, given the limited duration of construction activities, those impacts would be temporary. Implementation of mitigation measure MM-NV-2, which would provide a means to repair any vibration-caused damage to pre-construction conditions should construction result in such impacts, would reduce

impacts of construction on structures and the impact is considered *less than significant after mitigation*.

3.5.8 Summary of Impact Determinations

Table 3.5-18 summarizes the impact determinations of the proposed Project related to noise and vibration, as described above in the detailed discussion in Section 3.5.6. Identified potential impacts are based on the significance criteria presented in Section 3.5.5, the information and data sources cited throughout Section 3.5, and the professional judgment of the report preparers, as applicable.

Table 3.5-18: Summary Matrix of Potential Impacts and Mitigation Measures Associated with the Proposed Project Related to Noise and Vibration

Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Impact 3.5-1: Construction of the proposed Project would generate a substantial temporary 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.	Potentially Significant	MM-NV-1	Significant and Unavoidable
Impact 3.5-2: Construction of the proposed Project would result in the generation of excessive groundborne vibration or groundborne noise levels.	Potentially Significant	MM-NV-1 and MM-NV-2	Significant and Unavoidable – Human Annoyance Less than Significant - Structures

3.5.8.1 Mitigation Measures

MM-NV-1: Construction Noise Mitigation. Prepare and Implement a Construction Noise Control and Mitigation Plan to Reduce Construction Noise at Noise-Sensitive Land Uses.

The project sponsor shall develop a noise control plan to reduce construction noise and vibration noise levels such that the ambient noise level is not exceeded by 5 dBA, as determined by a qualified acoustical consultant. The plan shall require:

Construction contractors shall specify noise-reducing construction practices that will be employed to reduce noise from construction activities. The measures specified by the project sponsor shall be reviewed and approved by the City prior to the issuance of building permits. Measures that can be used to limit noise include, but are not limited to those below.

- a) **Construction Hours.** Limit construction to the hours of 7:00 AM to 9:00 PM on weekdays, between 8:00 AM and 6:00 PM on Saturdays, and prohibit construction equipment noise anytime on Sundays and holidays. Construction personnel shall not be permitted on the project site (including laydown and storage areas), and material or equipment deliveries and collections shall not be permitted during the prohibited hours.

- b) **Construction Equipment.** All construction equipment powered by internal combustion engines shall be property muffled and maintained. (Poor maintenance of equipment may cause excessive noise levels.) Require that all construction equipment powered by gasoline or diesel engines have sound control device that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation.
- c) **Idling Prohibitions.** Unnecessary idling (i.e. more than 2 minutes) of internal combustion engines near noise-sensitive areas shall be prohibited.
- d) **Stationary Equipment.** All stationary noise-generating construction equipment, such as air compressors and portable power generators, shall be located as far as is practical from existing noise sensitive land uses; they shall be muffled and enclosed within temporary enclosures and shielded by barriers, to the extent feasible.
- e) **Use Quiet Equipment.** Contractors shall utilize the quietest equipment available, and all internal combustion powered equipment shall be equipped with property operating mufflers and kept in tune to avoid backfires. In addition, if exposed, engines shall be fitted with protective shrouds to reduce motor noise.
- f) **Use Electrical Power when feasible.** If ample local grid power is available, electricity shall be obtained from the local power grid to avoid the use of portable generators.
- g) **Temporary Noise Barriers.** Erect temporary noise attenuation barriers adjacent to stationary construction equipment directly between the equipment and sensitive receptors, where necessary and feasible. Construction equipment that is to be stationary for extended periods (e.g., compressors, generators, etc.) shall be shielded, if appropriate, by erecting temporary noise attenuation barriers. The need for and feasibility of noise attenuation barriers shall be evaluated on a case-by-case basis considering the distance to noise-sensitive receptors, the available space at the construction location, and taking account of safety and operational considerations. If used, the barriers shall be installed directly between the equipment and the nearest noise-sensitive use to the construction site.
- h) **Noise enclosures.** Use noise-reducing enclosures around noise-generating equipment that has the potential to disturb nearby off-site land uses or where otherwise necessary to comply with City Code noise limits for receiving zones.
- i) **Ensure that equipment and trucks used for project construction utilize the best available noise control techniques** (e.g., improved mufflers, equipment redesign, intake silencers, ducts, engine enclosures, acoustically attenuating shields or shrouds) wherever feasible.
- j) **Noise producing signals.** The use of noise producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.
- k) **Impact tools.** Impact tools (e.g. pavement breakers) used for project construction shall be hydraulically or electrically powered (where feasible) to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the

compressed air exhaust shall be used. Quieter procedures shall be used, such as drills rather than impact equipment, where feasible.

- l) All construction equipment used on the proposed project that is regulated for noise by a local, state, or federal agency shall comply with such regulation while in the course of project activity and use on-site.
- m) Construction employees shall be trained in the proper operation and use of the equipment. (Careless or improper operation or inappropriate use of equipment can increase noise levels. Poor loading, unloading, excavation, and hauling techniques are examples of how a lack of adequate guidance and training may lead to increased noise levels.)
- n) Construction equipment shall be stored on the project site or designated laydown areas while in use, to the extent feasible. This will eliminate noise associated with repeated transportation of the equipment to and from the site.
- o) Monitor the effectiveness of noise attenuation measures by taking noise measurements.
- p) Prior to the issuance of the building permit, along with submission of construction documents, the project sponsor shall submit to the Planning Department and Department of Building Inspection a list of measures for controlling noise and respond to and tracking complaints pertaining to construction noise. These measures shall include:
 - a. Identification of measures that will be implemented to control construction noise.
 - b. Identification of locations where it is infeasible to limit noise to be in compliance with applicable City Standards.
 - c. A procedure and phone numbers for notifying the Department of Building Inspection, the Department of Health, or the Police Department of complaints.
 - d. Designation of a disturbance coordinator for responding to noise complaints, with his/her name and telephone complaint number to be clearly posted at the construction site and shall be answered at all times during construction.
 - e. A plan for notification of neighboring residences and non-residential building managers within 300 feet of the project construction area at least 30 days in advance of extreme noise-generating activities (defined as activities that generate noise levels of 9- dBA or greater) about the estimated duration of activity and the associated control measures that will be implemented to reduce noise levels.

MM-NV-2: Vibration During Construction. To limit the potential impacts of vibration on structures within 21 feet of the nearest edge of the construction work zone (when measured from the closest work zone boundary), and to limit vibration annoyances to receptors along the alignment, the City (or its Contractor) shall implement vibration reduction measures during construction including, but are not limited to:

- Prohibition of certain types of impact equipment (e.x., pile driver);
- Requirement for lighter tracked or wheeled equipment; and
- Phasing operations to avoid simultaneous vibration sources.

Prior to construction of project components with work zones located within 21 feet of structure(s), the City (or its Contractor) shall retain a Professional Structural Engineer with experience in structural vibration analysis to perform the following tasks:

- Review the project plans to determine the potential construction impact zone and conduct pre- and post-construction surveys of the structures located within 21 feet of the work zone to document the pre- and post-construction conditions of all structures surveyed; and
- Prepare and submit a report to the City's Project Manager that includes, but not be limited to, the description of pre-and post-construction conditions of all structures surveyed.

In the event of vibration-caused damage, the Structural Engineer shall recommend necessary repairs based on the pre- and post-construction conditions (as documented in the Structural Engineers report). If the damaged structure(s) are potentially historic, mitigation measure MM-CR-1 shall apply. The Contractor shall be responsible to remedy vibration-caused damage as a result of construction of the project to pre-construction conditions as documented in the Structural Engineers report. The City shall confirm that the Contractor has completed all remedies associated with vibration impacts prior to close of the construction contract.

3.5.9 Significant Unavoidable Impacts

While implementation of mitigation and control measures are likely to reduce construction noise and vibration, functional constraints on their implementation, and uncertainties as to their effectiveness or availability, may limit the actual extent of mitigation. Accordingly, the noise attenuation and control measures in MM-NV-1 would likely not reduce construction noise to below significant thresholds in every case or at every receptor location. For potential vibration during construction within 21 feet of adjacent structures, to limit the potential impacts of vibration on structures, mitigation measure MM-NV-2 would be implemented to reduce impacts. In addition, even with those measures, the noise and limited groundborne vibration associated with construction may be perceived as intrusive or annoying by some individuals. As a result, residual impacts of construction are considered **significant and unavoidable**, although, given the limited duration of construction activities, those impacts would be temporary.

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Section 3.6

Transportation and Traffic

3.6.1 Introduction

This section analyzes the proposed Project's impacts on transportation and traffic during construction. As part of this analysis, the section describes the general approach and methodology, regulatory framework, environmental setting, and significance criteria used to evaluate the proposed Project's transportation and traffic effects.

As discussed in the NOP/IS (Appendix A of this Draft EIR), operation of the proposed Project would be automated and located underground, with only control panel boxes at pump stations located aboveground. The Project components are operated as a closed system, which would generate nominal vehicle trips for maintenance activities (see Section 2.6, Project Operations in Chapter 2, Project Description). Therefore, no further evaluation in the EIR of Project operations is required.

Transportation and traffic-related comments received in response to the NOP were provided by the following agency:

- Caltrans
 - The project alignment crosses underneath SR-170 and I-405. Caltrans recommends the EIR please include a detailed Traffic Impact Study for SR-170 and 1-405, and the ramps affected by this project.
 - Please submit all construction designs underneath the freeways and Caltrans' Right of Way for Caltrans' review/approval.
 - Please inform Caltrans of any freeway or ramp closures that are to be expected during the construction period. Any closures/impacts to State facilities will require review/approval from Caltrans.
 - Caltrans seeks to promote safe, accessible multimodal transportation. Methods to reduce pedestrian and bicyclist exposure to vehicles improve safety by lessening the time that the user is in the likely path of a motor vehicle. Caltrans recommends the project to consider the use of methods such as, but not limited to, pedestrian and bicyclist warning signage, flashing beacons, crosswalks, signage and striping, be used to indicate to motorists that they should expect to see and yield to pedestrians and bicyclists. Visual indication from signage can be reinforced by road design features such as lane widths, landscaping, street furniture, and other design elements.
 - As a reminder, any transportation of heavy construction equipment and/or materials which requires use of oversized-transport vehicles on State highways will need a Caltrans transportation permit. We recommend large size truck trips be limited to off-peak commute periods.

To provide a technical basis for this impact analysis, a traffic impact study of the proposed Project was prepared (May 2019) and is attached to this EIR as Appendix G. The results of the traffic impact study are summarized in Section 3.6.4, Environmental Setting and Section 3.6.6, Project Impacts.

3.6.2 General Approach and Methodology

3.6.2.1.1 Study Area

For the traffic impact analysis, the following 14 locations along the project route on Victory Boulevard were defined as study intersections. Existing intersection traffic volumes were collected on Wednesday, January 30, 2019.

1. Haskell Avenue & Victory Boulevard
2. I-405 Northbound ramps & Victory Boulevard
3. Sepulveda Boulevard & Victory Boulevard
4. Kester Avenue & Victory Boulevard
5. Van Nuys Boulevard & Victory Boulevard
6. Hazeltine Avenue & Victory Boulevard
7. Woodman Avenue & Victory Boulevard
8. Fulton Avenue & Victory Boulevard
9. Coldwater Canyon Avenue & Victory Boulevard
10. Whitsett Avenue & Victory Boulevard
11. Laurel Canyon Boulevard & Victory Boulevard
12. Lankershim Boulevard/Colfax Avenue & Victory Boulevard
13. Tujunga Avenue & Victory Boulevard
14. Vineland Avenue & Victory Boulevard

In addition, the following six roadway segments were included in the study area:

- A. Victory Boulevard, between Haskell Avenue and Sepulveda Boulevard
- B. Victory Boulevard, between Kester Avenue and Van Nuys Boulevard
- C. Victory Boulevard, between Hazeltine Avenue and Woodman Avenue
- D. Victory Boulevard, between Fulton Avenue and Coldwater Canyon Avenue
- E. Victory Boulevard, between Whitsett Avenue and Laurel Canyon Boulevard

F. Victory Boulevard, between Lankershim Boulevard/Colfax Avenue and Tujunga Avenue

3.6.2.1.2 Ambient Growth

To forecast baseline traffic volumes for the analysis year of 2022 (peak construction activity is projected for late 2022), peak-hour traffic count volumes and average daily traffic (ADT) volumes from the existing conditions scenario were increased by an annual growth rate of 2 percent. The application of this annual growth rate is consistent with sub-regional traffic growth data defined by the County of Los Angeles Congestion Management Program (CMP) document.

3.6.2.1.3 Study Intersection Analysis

In order to analyze potential impacts to the study intersections, Project-generated trips are calculated then distributed and assigned to the study area roadway network. The trip generation calculations are based directly on Project construction truck trip and daily employee vehicle trip estimates. The analysis uses a passenger car equivalency factor for truck trips of 2.5 vehicle trips per truck, which is generally defined by analysis within the SCAG Regional Heavy-Duty Truck Model.

The trip generation totals are determined based on the most intense period of construction activity for the Project, which would occur during the 19th month of construction (late 2022). During this period, work would be performed on three pump stations and connecting sewers (at Laurel Canyon Boulevard, Whitsett Avenue and Fulton Avenue), two microtunnel locations (at the I-405 freeway and at Kester Avenue), the junction to the existing EVIS and the force main sewer.

The Project Construction Scenario conservatively presumes that construction activity would occur during peak hours through issuance of a waiver from the mayoral directive prohibiting such activity at these times. The analysis also assumes that 25 percent of the future traffic on Victory Boulevard would divert to alternate routes due to restricted capacity and related travel delays from construction. These reduced volumes, along with the Project construction traffic and approach lane configurations, are used to analyze intersection performance.

3.6.2.1.4 Determination of Impacts

The City of Los Angeles Department of Transportation (LADOT) has designated the Circular 212 Planning/Critical Movement Analysis methodology as the desired tool for analysis of level of service (LOS) at signalized intersections in the city of Los Angeles. The concept of roadway level of service under the Circular 212 method is calculated as the volume of vehicles that pass through the facility divided by the capacity of that facility. A facility is “at capacity” (volume-to-capacity of 1.00 or greater) when extreme congestion occurs. This volume/capacity ratio value is a function of hourly volumes, signal phasing, and approach lane configuration on each leg of the intersection.

LOS values range from LOS A to LOS F. LOS A indicates excellent operating conditions with little delay to motorists, whereas LOS F represents congested conditions with excessive vehicle delay. LOS E is typically defined as the operating “capacity” of a roadway.

In addition, LADOT has established specific thresholds for Project-related increases in the V/C ratio of signalized study intersections. For the purposes of this analysis, project increases are

defined by comparing the Project Construction Scenario with the Future without Project Scenario. The following increases in peak-hour V/C ratios are considered significant impacts:

Level of Service	Final V/C*	Project Related v/c increase
C	0.701 – 0.800	Equal to or greater than 0.040
D	0.801 – 0.900	Equal to or greater than 0.020
E and F	0.901 or more	Equal to or greater than 0.010

Note: Final V/C is the V/C ratio at an intersection, considering impacts from the proposed Project, ambient growth, trips from area/cumulative projects, but without proposed traffic impact mitigations.

Roadway segment impacts were determined where study intersection LOS values depreciated to E or F due to Project construction (i.e. between the Future without Project and Project Construction Scenarios).

Significant traffic impacts are identified if project-related traffic and conditions would cause service levels to deteriorate beyond a threshold limit specified by the overseeing agency. Impacts can also be significant if an intersection is already operating below an acceptable level of service and project related traffic would worsen conditions within the specified threshold range. As defined by the LADOT traffic study guidelines, significant impacts of a proposed Project on a facility must be mitigated to a level of insignificance, where feasible.

3.6.3 Regulatory Framework

The following section presents the state, regional, and local regulations, plans, and standards that are applicable to proposed Project relative to transportation and traffic.

3.6.3.1 State

Congestion Management Program

The CMP is a State-mandated program enacted by the State legislature and was last updated in 2010. The program is intended to address the impact of local growth, such as local land use decisions, on the regional transportation system. Statutory requirements of the CMP include monitoring LOS on the CMP Highway and Roadway network, measuring frequency and routing of public transit, implementing the Transportation Demand Management and Land Use Analysis Program, and helping local jurisdictions meet their responsibilities under the CMP. Metro is the local CMP agency.

Southern California Association of Governments 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy

In April 2016, the SCAG adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS). The 2016 RTP/SCS presents a long-term vision for the region's transportation system through the year 2040, and identifies mobility, accessibility, sustainability, and high quality of life as the principles most critical to the future of the region. Furthermore, the RTP/SCS forecasts long-term transportation demands and identifies policies, actions, and funding sources to accommodate these demands. The RTP/SCS consists of the construction of new transportation facilities, transportation systems management strategies,

transportation demand management and land use strategies. SCAG also prepares the Regional Transportation Improvement Program that lists all the regional funded/programmed improvements within the next seven years.

3.6.3.2 Regional

Los Angeles County Congestion Management Program

As mentioned above, Metro, the local CMP agency, has established a Countywide approach to implement the statutory requirements of the CMP. This approach includes designating a highway network that includes all State highways and principal arterials within the County and monitoring traffic conditions on the designated transportation network; performance measures to evaluate current and future system performance; promotion of alternative transportation methods; analysis of the impact of land use decisions on the transportation network; and mitigation to reduce impacts on the network. If LOS standards deteriorate, then local jurisdictions must prepare a deficiency plan to be in conformance with the Countywide plan. The CMP requires land use development EIRs to evaluate traffic and public transit impact analyses for select regional facilities based on the quantity of project traffic expected to use those facilities.

The proposed Project does not conflict with the CMP because it does not create any substantive long-term added trips or physical constraints that would increase congestion over a long-term period. The proposed Project is not a land use development project.

3.6.3.3 Local

Mobility Plan 2035 and 2010 Bicycle Plan

The Mobility Plan 2035, which was adopted by the City of Los Angeles City Council on January 20, 2016, is a comprehensive update of the City's Transportation Element and incorporates "complete streets" principles. Government Code Sections 65302(b)(2)(A) and (B) require a circulation element (i.e., Mobility Plan) to provide for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways. "All users" by definition in the statute is "bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, and seniors."¹ This requirement was established as part of Assembly Bill 1358, which is referred to as the California Complete Streets Act, as well as Caltrans Deputy Directive DD-64-R1, Complete Streets: Integrating the Transportation System.

The Mobility Plan 2035 includes goals that define the City's five main priorities: 1) Safety First; 2) World Class Infrastructure; 3) Access for All Angelenos; 4) Collaboration, Communication and Informed Choices; and 5) Clean Environmental & Healthy Communities. The Plan serves to meet the goal in the Regional Transportation Plan to decrease the vehicle miles traveled per capita by 5 percent every five years, to 20 percent by 2035 and to meet a nine percent per capita GHG reduction by 2020, and a 16 percent per capita GHG reduction by 2035. The Mobility Plan 2035 identifies Transit Enhanced Network, a Neighborhood Enhanced Network to support pedestrian activity, and

¹ City of Los Angeles. Mobility Plan 2035 - An Element of the General Plan. September 2016. Available: <https://planning.lacity.org/documents/policy/mobilityplnmemo.pdf>. Accessed March 2019.

an expanded Bicycle Enhanced Network. Among other provisions the Mobility Plan 2035 includes roadway designations pursuant to updated policies and current transportation needs in the City.

The 2010 Bicycle Plan, which is part of the Mobility Plan 2035, guides the development of a Citywide bicycle transportation system and establishes standards for development of these facilities, as well as criteria for prioritization of development of designated routes. With a stated policy to reduce automobile trips and GHG emissions by making five percent of all daily trips and three percent of commute trips bicycle trips by 2020, the 2010 Bicycle Plan establishes a Backbone Bikeway Network and Neighborhood Bikeway Network linking Regional Centers to promote bicycle usage.

Los Angeles Department of Transportation's Transportation Impact Study Guidelines

LADOT's Transportation Impact Study Guidelines requires that a Traffic Study be prepared if the following operational criteria are met:

- A project is likely to add 500 or more daily operational trips; and
- A project is likely to add 43 or more a.m. or p.m. peak hour operational trips.

Based on the operational characteristics (i.e., minimal maintenance activities) associated with the proposed Project, preparation of a Traffic Study is not required.

3.6.3.4 Environmental Setting

This section describes existing transportation and traffic in the Project area.

Existing Roadway System

The proposed Project alignment along Victory Boulevard has two full-time travel lanes in each direction. On-street parking is permitted along most of the alignment but is prohibited between 7 a.m. and 9 a.m. and 4 p.m. and 7 p.m., creating a third travel lane in each direction during the a.m. and p.m. peak hours.

Existing Intersection Level of Service

As shown in Table 3.6-1, most of the study intersections are currently operating at adequate LOS during both a.m. and p.m. peak hours. The intersection of Woodman Avenue and Victory Boulevard operates at LOS E during the AM Peak Period.

Table 3.6-1: Intersection Performance – Existing Conditions

Study Intersections		AM Peak		PM Peak	
		V/C	LOS	V/C	LOS
1	Haskell Avenue & Victory Boulevard	0.840	D	0.765	C
2	I-405 Northbound ramps & Victory Boulevard	0.536	A	0.675	B
3	Sepulveda Boulevard & Victory Boulevard	0.889	D	0.779	C
4	Kester Avenue & Victory Boulevard	0.829	D	0.763	C
5	Van Nuys Boulevard & Victory Boulevard	0.880	D	0.775	C
6	Hazeltine Avenue & Victory Boulevard	0.775	C	0.744	C
7	Woodman Avenue & Victory Boulevard	0.915	E	0.863	D
8	Fulton Avenue & Victory Boulevard	0.812	D	0.785	C
9	Coldwater Canyon Avenue & Victory Boulevard	0.852	D	0.874	D
10	Whitsett Avenue & Victory Boulevard	0.771	C	0.806	D
11	Laurel Canyon Boulevard & Victory Boulevard	0.897	D	0.792	C
12	Lankershim Boulevard/Colfax Avenue & Victory Boulevard	0.829	D	0.719	C
13	Tujunga Avenue & Victory Boulevard	0.717	C	0.685	B
14	Vineland Avenue & Victory Boulevard	0.675	B	0.656	B

V/C = volume-to-capacity ratio; LOS = level of service

Existing Roadway Segment Volumes

As shown in Table 3.6-2, the highest daily vehicle volume occurs on Victory Boulevard between Haskell Avenue and Sepulveda Boulevard, at 65,224 bi-directional vehicles. Both this segment and the segment between Whitsett Avenue and Laurel Canyon Boulevard operate at LOS F. The other four intersections operate at LOS D or above.

Table 3.6-2: Segment Performance – Existing Conditions

Roadway Segment		No. of Lanes	Weekday		
			ADT	V/C	LOS
A	Victory Boulevard, between Haskell Avenue and Sepulveda Boulevard	5	65,224	1.304	F
B	Victory Boulevard, between Kester Avenue and Van Nuys Boulevard	6	50,219	0.837	D
C	Victory Boulevard, between Hazeltine Avenue and Woodman Avenue	6	45,732	0.762	C
D	Victory Boulevard, between Fulton Avenue and Coldwater Canyon Avenue	6	38,398	0.640	B
E	Victory Boulevard, between Whitsett Avenue and Laurel Canyon Boulevard	6	61,000	1.017	F
F	Victory Boulevard, between Lankershim Boulevard/Colfax Avenue and Tujunga Avenue	5	39,353	0.787	C

¹ Observed Truck percentage: 2.5 percent

Existing Transit Service

The roadway network in the vicinity of the proposed Project site is served by public bus lines operated by Metro. Table 3.6-3 provides a description of the public transit lines that operate within the study area.

Table 3.6-3: Existing Transit Service Summary

Agency	Line	From	To	Via	Peak Frequency
Metro	152	Woodland Hills	North Hollywood	Fallbrook Avenue, Roscoe Boulevard, Vineland Avenue	8 minutes
Metro	158	Chatsworth	Sherman Oaks	Devonshire Street, Arleta Avenue, Woodman Avenue	20 minutes
Metro	162	West Hills	North Hollywood	Sherman Way, Lankershim Boulevard	20 minutes
Metro	164	West Hills	Downtown Burbank	Victory Boulevard	10 minutes
Metro	167	Chatsworth	Studio City	Plummer Street, Woodman Avenue, Roscoe Boulevard, Coldwater Canyon Avenue	40 minutes
Metro	224	Universal City	North Hollywood	Lankershim Boulevard, San Fernando Road	10 minutes
Metro	230	Studio City	Sylmar	Laurel Canyon Boulevard	12 minutes
Metro	233	Sherman Oaks	Lake View Terrace	Van Nuys Boulevard	15 minutes
Metro	234	West Los Angeles	Sylmar	Sepulveda Boulevard	17 minutes
Metro	237	Hollywood	Mission Hills	Cahuenga Boulevard, Vineland Avenue, Chandler Boulevard, Burbank Boulevard, Van Nuys Boulevard, Victory Boulevard, Woodley Avenue	45 minutes
Metro	656	Hollywood	Panorama City	Cahuenga Boulevard, Lankershim Boulevard, Sherman Way, Van Nuys Boulevard	60 minutes
Metro	734	West Los Angeles	Sylmar	Sepulveda Boulevard	15 minutes
Metro	744	Northridge	Pacoima	Reseda Boulevard, Ventura Boulevard, Van Nuys Boulevard	20 minutes
Metro	788	West Los Angeles	Arleta	I-405, Victory Boulevard, Sepulveda Boulevard, Oxnard Street, Van Nuys Boulevard	15 minutes
LADOT Dash	Panorama City/Van Nuys	Panorama City	Van Nuys Civic Center	Van Nuys Blvd, Hazeltine Avenue, Victory Boulevard, Kester Avenue, Sepulveda Boulevard	15 minutes
LADOT Dash	Van Nuys/Studio City	Studio City	Van Nuys Civic Center	Whitsett Avenue, Burbank Boulevard, Fulton Avenue, Victory Boulevard, Hazeltine Avenue, Moorpark Street	28 minutes

Existing Pedestrian and Bicycle Circulation

The existing Victory Boulevard roadway generally has sidewalks on both sides of the street and adjacent to intersections, either as sidewalks next to parkways or sidewalks that extend from the curb to property lines. Pedestrian crossing points at signalized intersections with pedestrian phases and striped crosswalks are provided.

Victory Boulevard does not have existing striped or signed bicycle facilities, but there are existing bicycle facilities on north-south roadways that cross Victory Boulevard within the Project corridor:

- Class II striped bicycle lanes on Woodman Avenue
- Class II striped bicycle lanes (to north) and a Class III signed bicycle route (to south) on Laurel Canyon Boulevard

- Class II striped bicycle lanes on Lankershim Boulevard

3.6.4 Thresholds of Significance

The proposed Project would result in significant impacts associated with transportation and traffic if it would:²

Impact 3.6-1 Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

Impact 3.6-2 Result in inadequate emergency access?

Impact 3.6-3 Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

3.6.5 Project Impacts

3.6.5.1 Impact 3.6-1

Impact 3.6-1: Construction of the proposed Project would conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

Construction of the Project would result in short-term increases in vehicle trips by construction workers and construction vehicles on Project corridor. These trips would include construction workers commuting to and from the Project site, haul truck trips associated with the transfer and disposal of excavation materials, and material and equipment deliveries. Temporary lane closures along streets as required for construction would be coordinated with the other City of Los Angeles entities such as the Bureau of Engineering (LABOE) and LADOT, and in conformance with the California Joint Utility Traffic Control Committee Work Area Protection and Traffic Control Manual.

Future 2022 without Project

Table 3.6-4 provides LOS values under Future without Project Scenario. In the absence of Project construction, the level of service would deteriorate to LOS E at 5 of the 14 study intersections during the AM Peak period and at 2 of the 14 study intersections (Woodman Avenue and Coldwater Canyon Avenue) during the PM peak period.

² Although the NOP/IS (Appendix A of this Draft EIR) indicated that the EIR would address potential for the proposed Project to conflict with an applicable CMP, as discussed in Section 3.6.3.2, the proposed Project is not a land use development project and therefore it does not conflict with the CMP.

Table 3.6-4: Future without-Project (2022) Study Intersection Level of Service

Study Intersections		AM Peak		PM Peak	
		V/C	LOS	V/C	LOS
1	Haskell Avenue & Victory Boulevard	0.898	D	0.819	D
2	I-405 Northbound ramps & Victory Boulevard	0.576	A	0.722	C
3	Sepulveda Boulevard & Victory Boulevard	0.950	E	0.832	D
4	Kester Avenue & Victory Boulevard	0.886	D	0.815	D
5	Van Nuys Boulevard & Victory Boulevard	0.941	E	0.829	D
6	Hazeltine Avenue & Victory Boulevard	0.829	D	0.796	C
7	Woodman Avenue & Victory Boulevard	0.978	E	0.923	E
8	Fulton Avenue & Victory Boulevard	0.867	D	0.839	D
9	Coldwater Canyon Avenue & Victory Boulevard	0.911	E	0.933	E
10	Whitsett Avenue & Victory Boulevard	0.825	D	0.862	D
11	Laurel Canyon Boulevard & Victory Boulevard	0.958	E	0.848	D
12	Lankershim Boulevard/Colfax Avenue & Victory Boulevard	0.885	D	0.770	C
13	Tujunga Avenue & Victory Boulevard	0.767	C	0.733	C
14	Vineland Avenue & Victory Boulevard	0.723	C	0.702	C

Table 3.6-5 provides the study roadway segment LOS values with Future without Project traffic volumes. LOS values increase along the segments between Hazeltine Avenue and Woodman Avenue and Lankershim Boulevard/Colfax Avenue and Tujunga Avenue, but remain above LOS E. The segments between Haskell Avenue and Sepulveda Boulevard and Whitsett Avenue and Laurel Canyon Boulevard operate at LOS F.

Table 3.6-5: Future without Project (2022) Study Roadway Segment Level of Service

Roadway Segment		No. of Lanes	Weekday		
			ADT	V/C	LOS
A	Victory Boulevard, between Haskell Avenue and Sepulveda Boulevard	5	69,216	1.384	F
B	Victory Boulevard, between Kester Avenue and Van Nuys Boulevard	6	53,293	0.888	D
C	Victory Boulevard, between Hazeltine Avenue and Woodman Avenue	6	48,531	0.809	D
D	Victory Boulevard, between Fulton Avenue and Coldwater Canyon Avenue	6	40,748	0.679	B
E	Victory Boulevard, between Whitsett Avenue and Laurel Canyon Boulevard	6	64,734	1.079	F
F	Victory Boulevard, between Lankershim Boulevard/Colfax Avenue and Tujunga Avenue	5	41,761	0.835	D

Project Trip Generation

During the most intense period of construction activity, the Project would generate 3,186 daily construction vehicle trips, including 571 trips in the AM Peak Hour (403 entering and 168 exiting) and 571 trips in the PM peak hour (168 entering and 403 exiting). See Table 3.6-6 for categorization of trips generated by Project components.

Table 3.6-6: Project Trip Generation

Project Segment			Weekday Total	AM Peak			PM Peak			
				Total	In	Out	Total	In	Out	
Pump Station	Trucks	Laurel Canyon Whitsett Fulton	165	21	11	10	21	10	11	
			165	21	11	10	21	10	11	
			165	21	11	10	21	10	11	
	Field Personnel	Laurel Canyon Whitsett Fulton	44	22	22	0	22	0	22	
			44	22	22	0	22	0	22	
			44	22	22	0	22	0	22	
Junction to EVIS	Trucks		275	34	17	17	34	17	17	
	Field Personnel		24	12	12	0	12	0	12	
Connecting Sewers	Trucks	Laurel Canyon Whitsett Fulton	300	38	19	19	38	19	19	
			300	38	19	19	38	19	19	
			300	38	19	19	38	19	19	
	Field Personnel	Laurel Canyon Whitsett Fulton	84	42	42	0	42	0	42	
			84	42	42	0	42	0	42	
			84	42	42	0	42	0	42	
Microtunnel	Trucks	Kester Avenue 405	215	27	14	13	27	13	14	
			215	27	14	13	27	13	14	
	Field Personnel	Kester Avenue 405	24	12	12	0	12	0	12	
			24	12	12	0	12	0	12	
Force Main Sewer	Trucks	Woodman Sepulveda	315	39	20	19	39	19	20	
			315	39	20	19	39	19	20	
	Field Personnel	Woodman Sepulveda	114	57	57	0	57	0	57	
			114	57	57	0	57	0	57	
Total			810	3,186	571	403	168	571	168	403

Note: trip generation reflect passenger car equivalents based on 2.5 passenger cars per truck.

Project Construction

Most of the study intersections would operate at LOS F (see Table 3.6-7). The intersection of the I-405 Northbound ramps and Victory Boulevard would operate at LOS B during the AM peak period and LOS C during the PM peak period. The intersection of Kester Avenue and Victory Boulevard (where non-disruptive microtunneling techniques would be utilized) would operate at LOS B during both the AM and PM peak periods. Finally, the intersection of Tujunga Avenue and Victory Boulevard would operate at LOS E during the AM Peak Period and LOS D during the PM Peak Period.

Table 3.6-7: Intersection Performance

Study Intersections		AM Peak		PM Peak	
		V/C	LOS	V/C	LOS
1	Haskell Avenue & Victory Boulevard	2.011	F	1.821	F
2	I-405 Northbound ramps & Victory Boulevard	0.639	B	0.714	C
3	Sepulveda Boulevard & Victory Boulevard	1.925	F	1.565	F
4	Kester Avenue & Victory Boulevard	0.667	B	0.619	B
5	Van Nuys Boulevard & Victory Boulevard	1.950	F	1.869	F
6	Hazeltine Avenue & Victory Boulevard	1.141	F	1.026	F
7	Woodman Avenue & Victory Boulevard	1.899	F	1.906	F
8	Fulton Avenue & Victory Boulevard	1.099	F	1.129	F
9	Coldwater Canyon Avenue & Victory Boulevard	1.645	F	1.724	F
10	Whitsett Avenue & Victory Boulevard	1.448	F	1.211	F
11	Laurel Canyon Boulevard & Victory Boulevard	1.749	F	1.418	F
12	Lankershim Boulevard/Colfax Avenue & Victory Boulevard	1.582	F	1.360	F
13	Tujunga Avenue & Victory Boulevard	0.913	E	0.829	D
14	Vineland Avenue & Victory Boulevard	1.417	F	1.335	F

Significant impacts would occur at 12 of the 14 study intersections during the most intense Project construction period (see Table 3.6-8 for comparison of existing conditions, future without Project conditions, and Project conditions). LOS values would depreciate to D, E or F with V/C increases of 0.09 or higher at every intersection except the I-405 Northbound Ramps and Victory Boulevard and Kester Avenue and Victory Boulevard. At the latter intersection, reduced baseline volumes and the use of microtunneling or jack and bore construction methods (removing the need for lane closures) may actually cause LOS values to improve compared to the Existing and Future without Project scenarios.

The primary reason for the LOS deterioration at the study intersections under Project conditions is the temporary reduction in roadway lane capacity to accommodate construction work areas and zones, when they are active. In order to provide a conservative and worst-case analysis, the effect of all potential construction work areas during the most intense period of construction was analyzed in one period.

Table 3.6-8: Determination of Project Intersections Impacts

	Study Intersections	Peak	Existing Conditions		Future 2022 No Project		Future 2022 with Project Construction		Change in V/C	Significant Impact?
		Hour	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS		
1	Haskell Avenue & Victory Boulevard	AM	0.840	D	0.898	D	2.011	F	1.113	Yes
		PM	0.765	C	0.819	D	1.821	F	1.002	Yes
2	I-405 Northbound ramps & Victory Boulevard	AM	0.536	A	0.576	A	0.639	B	0.063	No
		PM	0.675	B	0.722	C	0.714	C	-0.008	No
3	Sepulveda Boulevard & Victory Boulevard	AM	0.889	D	0.950	E	1.925	F	0.975	Yes
		PM	0.779	C	0.832	D	1.565	F	0.733	Yes
4	Kester Avenue & Victory Boulevard	AM	0.829	D	0.886	D	0.667	B	-0.219	No
		PM	0.763	C	0.815	D	0.619	B	-0.196	No
5	Van Nuys Boulevard & Victory Boulevard	AM	0.880	D	0.941	E	1.950	F	1.009	Yes
		PM	0.775	C	0.829	D	1.869	F	1.040	Yes
6	Hazeltine Avenue & Victory Boulevard	AM	0.775	C	0.829	D	1.141	F	0.312	Yes
		PM	0.744	C	0.796	C	1.026	F	0.230	Yes
7	Woodman Avenue & Victory Boulevard	AM	0.915	E	0.978	E	1.899	F	0.921	Yes
		PM	0.863	D	0.923	E	1.906	F	0.983	Yes
8	Fulton Avenue & Victory Boulevard	AM	0.812	D	0.867	D	1.099	F	0.232	Yes
		PM	0.785	C	0.839	D	1.129	F	0.290	Yes
9	Coldwater Canyon Avenue & Victory Boulevard	AM	0.852	D	0.911	E	1.645	F	0.734	Yes
		PM	0.874	D	0.933	E	1.724	F	0.791	Yes
10	Whitsett Avenue & Victory Boulevard	AM	0.771	C	0.825	D	1.448	F	0.623	Yes
		PM	0.806	D	0.862	D	1.211	F	0.349	Yes
11	Laurel Canyon Boulevard & Victory Boulevard	AM	0.897	D	0.958	E	1.749	F	0.791	Yes
		PM	0.792	C	0.848	D	1.418	F	0.570	Yes
12	Lankershim Boulevard/Colfax Avenue & Victory Boulevard	AM	0.829	D	0.885	D	1.582	F	0.697	Yes
		PM	0.719	C	0.770	C	1.360	F	0.590	Yes
13	Tujunga Avenue & Victory Boulevard	AM	0.717	C	0.767	C	0.913	E	0.146	Yes
		PM	0.685	B	0.733	C	0.829	D	0.096	Yes
14	Vineland Avenue & Victory Boulevard	AM	0.675	B	0.723	C	1.417	F	0.694	Yes
		PM	0.656	B	0.702	C	1.335	F	0.633	Yes

V/C = volume-to-capacity ratio, representing a volume-to-capacity calculation.

In addition, five out of the six roadway segments would operate at LOS F under Project construction period conditions (see Table 3.6-9). Segment D (Victory Boulevard between Fulton Avenue and Coldwater Canyon Avenue) would operate at LOS C.

Table 3.6-9: Roadway Segment Performance

	Roadway Segment	No. of Lanes	Weekday			Construction Trips
			ADT	V/C	LOS	
A	Victory Boulevard, between Haskell Avenue and Sepulveda Boulevard	2	52,182	2.609	F	270
B	Victory Boulevard, between Kester Avenue and Van Nuys Boulevard	2	40,303	2.015	F	333
C	Victory Boulevard, between Hazeltine Avenue and Woodman Avenue	2	36,613	1.831	F	215
D	Victory Boulevard, between Fulton Avenue and Coldwater Canyon Avenue	4	31,072	0.777	C	511
E	Victory Boulevard, between Whitsett Avenue and Laurel Canyon Boulevard	2	48,954	2.448	F	403
F	Victory Boulevard, between Lankershim Boulevard/Colfax Avenue and Tujunga Avenue	2	31,321	1.566	F	0

Significant impacts would occur at five out of the six study roadway segments during project construction (see Table 3.6-10 for comparison of existing conditions, future without Project conditions, and Project conditions). Compared to the Future without Project scenario, level of service values would decrease to LOS F from LOS D or higher at three of the six segments. Two segments of Victory Boulevard (between Haskell Avenue and Sepulveda Boulevard and Whitsett Avenue and Laurel Canyon Boulevard) would continue to operate at LOS F with higher V/C ratios. Operating at LOS C during the construction period, the segment between Fulton Avenue and Coldwater Canyon Avenue would avoid significant impacts. The primary reason for the LOS deterioration along the study segments under Project conditions is the temporary reduction in street capacity through the closure of travel lanes to accommodate construction work areas.

Table 3.6-10: Project Roadway Segments Impacts

Roadway Segment	Day of Week	Existing (2018)			Future (2022) No Project			Future (2022) with Project Construction			Significant Impact	
		ADTV/C	LOS		ADTV/C	LOS		ADTV/C	LOS			
A	Victory Boulevard, between Haskell Avenue and Sepulveda Boulevard	Week day	65,224	1.304	F	69,216	1.384	F	52,158	2.608	F	Yes
B	Victory Boulevard, between Kester Avenue and Van Nuys Boulevard	Week day	50,219	0.837	D	53,293	0.888	D	40,235	2.012	F	Yes
C	Victory Boulevard, between Hazeltine Avenue and Woodman Avenue	Week day	45,732	0.762	C	48,531	0.809	D	36,555	1.828	F	Yes
D	Victory Boulevard, between Fulton Avenue and Coldwater Canyon Avenue	Week day	38,398	0.640	B	40,748	0.679	B	30,950	0.774	C	No
E	Victory Boulevard, between Whitsett Avenue and Laurel Canyon Boulevard	Week day	61,000	1.017	F	64,734	1.079	F	48,862	2.443	F	Yes
F	Victory Boulevard, between Lankershim Boulevard/Colfax Avenue and Tujunga Avenue	Week day	39,353	0.787	C	41,761	0.835	D	31,321	1.566	F	Yes

The entire construction period would last 30 months with construction impacts throughout the six miles varying per location and proposed Project components (see Section 2.5 of Chapter 2, Project Description, and Appendix B, for the detailed construction assumptions associated with various Project components). Although the impacts would be temporary, impacts would be **potentially significant**, as trenching and establishment of work zones and areas within the streets would require closure of some travel lanes that cannot be avoided.

As described above, it is anticipated that due to Project construction activities a portion of the traffic along Victory Boulevard would voluntarily reroute to other streets within the Project area. Due to the varied nature of construction (i.e., moving construction area associated with force main and site-specific construction at or near intersections identified for pump stations, diversions, connecting sewers, and the EVIS junction structure), the rerouting of traffic would also vary throughout the 30 months of Project construction. There is a potential that rerouted traffic would reduce the LOS on other streets in the Project area such that although temporary could be significant. Therefore, the impact of Project construction on other streets in the Project area could be **potentially significant**.

At the SR-170 interchange, freeway access is provided by loop ramps and right-on/right-off access connections to Victory Boulevard. Project construction in this area would use jacking operations to tunnel under the freeway interchange. In addition, open-cut construction would be needed to connect the force main to the microtunnel pits within the two loop ramps north of Victory Boulevard (shown in Figure 2-1 in Chapter 2, Project Description). Some closures of SR-170 access ramps are necessary, but these closures would take place during night hours and peak and mid-day traffic would not be affected. Any potential closures associated with SR-170 or I-405 would require the submission of all applicable construction designs associated with construction within Caltrans right-of-way for Caltrans' review/approval. In addition, the Contractor(s) are required to inform Caltrans of any freeway or ramp closures that are anticipated during the construction period. Any closures/impacts to State facilities would require review/approval from Caltrans. Compliance with all Caltrans permit requirements is mandatory. Therefore, the proposed Project impacts to freeways are *less than significant*.

3.6.5.1.1 Mitigation Measures

MM-TR-1: Construction Traffic Management Plan. Prior to the start of construction, the City (or Contractor[s]) shall prepare a construction traffic management plan and submit it to the Los Angeles Department of Transportation (LADOT) for review and approval. The construction traffic management plan shall include street closure information, a detour plan, haul routes, and a staging plan. Furthermore, it shall include, but not limited to, the following measures:

- Temporary pedestrian, bicycle, and vehicular traffic controls (including but not limited to detours) during all construction activities along the Project corridor. These controls shall include flag people trained in pedestrian safety and bicycle safety.
- Temporary traffic control during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways.
- Require the Contractor(s) to coordinate construction activities with emergency service providers (i.e., Los Angeles Fire and Police Departments, as well as other emergency service providers) and maintain a supply of steel plates or access ramps on-site or nearby in order to provide access (local or emergency) to adjacent properties as needed.
- Coordination with Los Angeles County Metropolitan Transportation Authority and LADOT to address the relocation of the bus stops.
- Safety precautions for pedestrian and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate.
- Advance, bilingual notification of adjacent property owners and occupants of upcoming construction activities, including durations and daily hours of operation.
- Identification of a construction manager and provision of a telephone number for any inquiries or complaints from residents regarding construction activities. The

telephone number shall be posted at the site readily visible to any interested party during site preparation and construction.

- Other applicable requirements per the latest edition of the City of Los Angeles Department of Public Works Brown Book and Standard Specifications for Public Works Construction ('Green Book').

3.6.5.1.2 Significance of Impact After Mitigation

Even with the implementation of mitigation measure MM-TR-1, Project impacts to local roadways would remain *significant and unavoidable*.

3.6.5.2 Impact 3.6-2

Impact 3.6-2: Construction of the proposed Project could result in inadequate emergency access.

Although local and emergency access to adjacent properties would be maintained as much as is possible, during Project construction temporarily lane closures could potentially interfere with the provision of emergency services (i.e., LAFD, Los Angeles Police Department, and other emergency service providers). The proposed Project could temporarily increase response times for emergency vehicles along the Project corridor due to travel time delays.

Some properties adjacent to construction areas, especially for those properties adjacent to construction activities that would take place within the curb lane and/or sidewalk areas of the roadway, would have restricted access. Access to these properties would be addressed through the project construction traffic management plan (mitigation measure MM-TR-1), which would be part of the final construction drawings package. Temporary access and noticing of properties would be addressed through that plan. Where feasible, temporary access provisions would include plating of work areas when not active, to provide vehicle ingress and egress over construction areas. When access would need to be blocked, advance noticing of the affected properties would include dates and times of these closures.

Per the City of Los Angeles Department of Public Works Brown Book (Subsection 7-10.2.2), a street with local traffic that crosses a street in which work is being done may be closed to traffic, provided the adjacent cross streets are kept open. The Contractor(s) shall notify the Police and Fire Departments whenever such a street is to be closed to traffic. For a closure of long duration, a single notification by phone to each department the last working day before the closure is required. A similar notification shall then be made at the time the street is again opened to traffic. If the closure is of short duration or different sections of the street are to be closed at different times, the Contractor(s) shall notify the Police and Fire Departments on a daily basis. The notification shall give information regarding the conditions expected to prevail on the next working day. In addition, the City would follow basic standards and recommendations for the safe movement of traffic upon highways and streets in accordance with Section 21400 of the California Vehicle Code (CVC). These recommendations include provisions for safe access of police, fire, and other rescue vehicles. In addition, the selected contractor would obtain roadway encroachment permits and would submit traffic management plans to LABOE and LADOT for review and approval to safeguard that adequate and safe access would remain available within and near the Project corridor. Appropriate construction traffic control measure (e.g., detour signage, delineators, etc.) would also be

implemented. Further, the drivers of emergency vehicles normally have a variety of options for avoiding traffic, such as using sirens to clear a path of travel or driving in the lanes of opposing traffic, pursuant to CVC Section 21806. Since travel lanes would be maintained in each direction throughout the construction period, emergency access in the vicinity of the Project corridor would remain unobstructed.

Although existing standards and recommendations are in place to reduce impacts to emergency access during construction, Project impacts related to emergency access could be ***potentially significant***.

3.6.5.2.1 Mitigation Measures

Mitigation measure MM-TR-1 presented above includes a measure to require the contractor(s) to coordinate construction activities with emergency service providers (i.e., Los Angeles Fire and Police Departments, as well as other emergency service providers) and maintain supplies and equipment nearby in order to provide access (local or emergency) to adjacent properties, which would reduce the potential impact of the proposed Project on emergency access.

3.6.5.2.2 Significance of Impact After Mitigation

With implementation of mitigation measure MM-TR-1, the impacts of the proposed Project would be reduced to a ***less than significant after mitigation***.

3.6.5.3 Impact 3.6-3

Impact 3.6-3: Construction of the proposed Project could conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Temporary transit stop closure impacts would occur during Project construction where partial roadway closures and/or sidewalk closures would overlap with bus stop locations along the bus lines described in Table 3.6-3 above. As part of the construction traffic management plan, temporary bus stop closures would be necessary where closures affect bus stop locations and/or pedestrian access routes. Temporary bus stop closures with advance noticing would be necessary in those cases, and temporary replacement bus stops would be provided where feasible. These temporary changes to the roadway could decrease the performance or safety of public transit such that the impact could be ***potentially significant***.

In addition, temporary detours may be required for the north-south bicycle facilities that cross Victory Boulevard on Woodman Avenue, Laurel Canyon Boulevard, and Lankershim Boulevard to safeguard bicyclist safety during Project construction. When Project trenching activities or other construction activities occur that may close up to half of the width of the north-south roadway intersections, the resulting number and width of approach lanes of the north-south roadways could impede travel by bicycle. Although Project construction would not conflict with adopted policies regarding bicycle facilities, the proposed Project could decrease the performance or safety related to bicycle facilities such that the impact could be ***potentially significant***.

Partial intersection closures during construction trenching activities would require temporary closures of north-south crosswalks on one side of each intersection. Subsection 7-10.1.3 of the City of Los Angeles Department of Public Works Brown Book details how, if required by the

construction, the Contractor may close crosswalks at intersections having four crosswalks (i.e., one crosswalk at a time may be closed). If construction requires closure of two or more crosswalks at an intersection, the Contractor(s) shall obtain LADOT approval before implementation of the closure. LADOT approval is required before closing of any crosswalk at intersections having fewer than four crosswalks. If a crosswalk is closed, temporary pedestrian detours would need to be provided. Such detours would also be required when construction takes place for some Project elements/components within the sidewalk area, and pedestrian detours would need to be provided along the opposite side of the roadway. Temporary pedestrian detour route would be designed to provide adequate sight distance and pedestrian movement controls to protect pedestrian safety. Project impacts related to pedestrian facilities could be ***potentially significant***.

3.6.5.3.1 Mitigation Measures

Mitigation measure MM-TR-1 presented above includes a measure to require the contractor(s) to coordinate with Metro and LADOT to address the relocation of the bus stops, as well as require safety precautions for pedestrian and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate.

3.6.5.3.2 Significance of Impact After Mitigation

With implementation of mitigation measure MM-TR-1, the impacts of the proposed Project would be reduced to a ***less than significant after mitigation***.

3.6.6 Summary of Impact Determinations

Table 3.6-11 summarizes the impact determinations of the proposed Project related to transportation and traffic, as described above in the detailed discussion in Section 3.6.6. Identified potential impacts are based on the significance criteria presented in Section 3.6.5, the information and data sources cited throughout Section 3.6, and the professional judgment of the report preparers, as applicable.

Table 3.6-11: Summary Matrix of Potential Impacts and Mitigation Measures Associated with the Proposed Project Related to Transportation and Traffic

Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Impact 3.6-1: Construction of the proposed Project would conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.	Potentially Significant	MM-TRA-1	Significant and Unavoidable
Impact 3.6-2: Construction of the proposed Project could result in inadequate emergency access.	Potentially Significant	MM-TR-1	Less than Significant
Impact 3.6-3: Construction of the proposed Project could conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	Potentially Significant	MM-TR-1	Less than Significant

3.6.6.1 Mitigation Measures

MM-TR-1: Construction Traffic Management Plan. Prior to the start of construction, the City (or Contractor[s]) shall prepare a construction traffic management plan and submit it to the Los Angeles Department of Transportation (LADOT) for review and approval. The construction traffic management plan shall include street closure information, a detour plan, haul routes, and a staging plan. Furthermore, it shall include, but not limited to, the following measures:

- Temporary pedestrian, bicycle, and vehicular traffic controls (including but not limited to detours) during all construction activities along the Project corridor. These controls shall include flag people trained in pedestrian safety and bicycle safety.
- Temporary traffic control during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways.
- Require the Contractor(s) to coordinate construction activities with emergency service providers (i.e., Los Angeles Fire and Police Departments, as well as other emergency service providers) and maintain a supply of steel plates or access ramps on-site or nearby in order to provide access (local or emergency) to adjacent properties as needed.

- Coordination with Los Angeles County Metropolitan Transportation Authority and LADOT to address the relocation of the bus stops.
- Safety precautions for pedestrian and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate.
- Advance, bilingual notification of adjacent property owners and occupants of upcoming construction activities, including durations and daily hours of operation.
- Identification of a construction manager and provision of a telephone number for any inquiries or complaints from residents regarding construction activities. The telephone number shall be posted at the site readily visible to any interested party during site preparation and construction.
- Other applicable requirements per the latest edition of the City of Los Angeles Department of Public Works Brown Book and Standard Specifications for Public Works Construction ('Green Book').

3.6.7 Significant Unavoidable Impacts

The construction of the proposed Project is expected to result in significant traffic impacts on 12 intersection and five roadway segments under the Future 2022 with Project Construction scenario. In addition, there is a potential that rerouted traffic would reduce the LOS on other streets in the Project area such that although temporary could be significant. Even with implementation of mitigation measure MM-TR-1, the impact of Project construction on Project impacted streets and intersections would be ***significant and unavoidable***. There is a potential that rerouted traffic would reduce the LOS on other streets in the Project area such that although temporary could be significant. Therefore, the impact of Project construction on other streets in the Project area could be ***significant and unavoidable***.

Chapter 4

CEQA-Plus Evaluation

To implement the proposed Project, the City of Los Angeles may seek a loan from the USEPA's Water Infrastructure Finance and Innovation Act (WIFIA) and/or the Clean Water State Revolving Fund (SRF) Program. Therefore, to comply with these program's federal regulations, a "CEQA-Plus" evaluation is being completed for the proposed Project during the CEQA process. The federal cross-cutters that are not applicable (due to location of the proposed Project) are as follows:

- Archaeological & Historic Preservation Act¹
- Coastal Barriers Resources Act
- Coastal Zone Management Act
- Farmland Protection Policy Act
- Fish & Wildlife Conservation Act
- Magnuson-Stevens Fishery Conservation & Management Act
- Protection of Wetlands
- Rivers & Harbors Act
- Wild & Scenic Rivers Act
- Safe Drinking Water Act, Sole Source Aquifer Protection

Following are the CEQA-Plus authorities applicable to the proposed Project:

4.1 Clean Air Act

Is the project subject to a State Implementation Plan conformity determination?

YES. USEPA's General Conformity rule requires that the actions taken by federal agencies do not interfere with a state's plans to attain and maintain national ambient air quality standards (NAAQS). Under the General Conformity rule, federal agencies must work with state and local governments in nonattainment or maintenance areas to ensure that federal actions conform to the air quality plans established in the applicable state implementation plan (SIP).

The conformity determination process is intended to demonstrate that a proposed Federal action will not: (1) cause or contribute to new violations of a NAAQS; (2) interfere with provisions in the

¹ Although construction of the proposed Project could cause a substantial adverse change in the significance of an unknown archaeological resource (as discussed under Section 4.4 National Historic Preservation Act), the proposed Project would not cause the irreparable loss or damage to a significant archaeological or historic resource or data through alteration of the terrain resulting from dam or reservoir construction (i.e., flooding, building of access roads, or construction of a reservoir) and require compliance under the Archaeological & Historic Preservation Act.

applicable SIP for maintenance of any NAAQS; (3) increase the frequency or severity of existing violations of any NAAQS; or (4) delay the timely attainment of any NAAQS.

The General Conformity Rule establishes an applicability test for determining which Federal actions are subject to the conformity requirement. Specifically, if a proposed action results in emissions increases which are less than the *de minimis* levels for pollutants or precursors for which the area is designated as maintenance or nonattainment, then a conformity determination is not required. However, if a proposed action results in emission increases that exceed the *de minimis* level for pollutants or precursors for which the area is designated as maintenance or nonattainment, then the Federal agency must make a positive conformity determination before the project can proceed. The conformity determination must demonstrate that the emissions from the proposed Project are accounted for in the most recently approved SIP.

The SCAB is designated as extreme non-attainment for ozone and serious non-attainment for PM_{2.5}, and federal projects with PM_{2.5} and ozone precursors (NO_x and VOC) emissions must show emissions below the *de minimis* levels or demonstrate conformity. Conformity *de minimis* levels are presented in Table 4.1 and apply to all direct and indirect emissions generated during construction and operation of the proposed action.

For projects that exceed the *de minimis levels*, SCAQMD developed a process designed to streamline and facilitate conformity determinations. To this end, the SCAQMD established a NO_x and VOC general conformity budget in the USEPA-approved Final 2012 AQMP.²

Table 4-1: General Conformity De Minimis Levels for the SCAB

Pollutant	Designation	SCAB NAAQS Attainment Status De Minimis Level (tons/year)
Ozone (precursors VOC or NO _x)	Extreme Nonattainment	10
CO	Serious Maintenance	100
PM ₁₀	Nonattainment	100
PM _{2.5}	Serious Nonattainment	100
SO ₂ or NO ₂	Maintenance	100
Lead	Partial Nonattainment	25

SCAB = South Coast Air Basin; NAAQS = National Ambient Air Quality Standards; VOC = volatile organic compounds; NO_x = nitrogen oxides; CO = carbon monoxide; PM₁₀ = particulate matter less than 10 microns in size; PM_{2.5} = particulate matter less than 2.5 microns in size; SO₂ = sulfur dioxide; NO₂ = nitrogen dioxide.

4.1.1 General Conformity Assessment

The proposed Project's total direct and indirect annual construction emissions were calculated and are discussed in Section 3.1, Air Quality of this Draft EIR, and presented in Table 3.1-8. Because the proposed Project components are operated as a closed system, operational components would be minimal, and no further evaluation is required.

² USEPA is currently reviewing SCAQMD's 2016 AQMP, which includes a revised conformity set aside budget of 2 tons per day (tpd) of NO_x (instead of one tpd under the approved 2012 AQMP). Once approved, the 2016 AQMP budget is assumed to include the proposed Project's NO_x budget request as it would apply to the Project's construction year.

Table 4.2 compares mitigated construction emissions to the *de minimis* levels and shows that proposed Project emissions would exceed the *de minimis* levels for NO_x (as an ozone precursor) in each construction year. Mitigation measures are identified in Section 3.1.

Table 4-2: Total Annual Project Emissions with Mitigation, Compared to *De Minimis* Level

Source Category	PM ₁₀ total (ton/yr)	PM _{2.5} total (ton/yr)	NO _x (ton/yr)	SO _x (ton/yr)	CO (ton/yr)	VOC (ton/yr)
2021						
Off-road Construction Equipment	0	0	9	0	1	1
On-road Construction Vehicles	1	0	4	0	1	0
Fugitive Emissions	1	0	0	0	0	0
Total Construction Year 2021	2	1	13	0	2	1
Conformity Determination						
<i>De minimis</i> Level	100	100	10	100	100	10
Significant?	No	No	Yes	No	No	No
2022						
Off-road Construction Equipment	1	1	13	0	1	1
On-road Construction Vehicles	1	1	6	0	1	0
Fugitive Emissions	2	0	0	0	0	0
Total Construction Year 2022	4	1	19	0	2	1
Conformity Determination						
<i>De minimis</i> Level	100	100	10	100	100	10
Significant?	No	No	Yes	No	No	No
2023						
Off-road Construction Equipment	0	0	7	0	1	0
On-road Construction Vehicles	1	0	3	0	0	0
Fugitive Emissions	1	0	0	0	0	0
Total Construction Year 2023	2	1	10	0	1	1
Conformity Determination						
<i>De minimis</i> Level	100	100	10	100	100	10
Significant?	No	No	Yes	No	No	No

As noted above, the proposed Project's criteria air pollutant emissions would exceed the applicable *de minimis* level for NO_x and the proposed Project is subject to general conformity requirements.

In association with the public review of this Draft EIR, the City of Los Angeles is requesting that the SCAQMD determine that NO_x emissions for all three construction years (2021 through 2023) are included in the General Conformity Budget identified in the USEPA-approved 2012 AQMP.³

³ If approved before Project construction, the 2016 AQMP conformity set aside budget may be applied.

4.2 Federal Endangered Species Act, Section 7

Does the project involve any direct effects from construction activities, or indirect effects such as growth inducement that may affect federally listed threatened or endangered species that are known, or have a potential, to occur on-site, in the surrounding area, or in the service area?

NO. The biological assessment (the December 2018 biological reconnaissance report included in the NOP/IS, which is included in Appendix A of this Draft EIR) found no wildlife or habitat suitable for sensitive wildlife species (including federally listed threatened or endangered species). Construction activities would be restricted to existing roadways and developed/disturbed areas. Therefore, the proposed Project would not impact (directly or indirectly) a federally listed threatened or endangered species due to the lack of suitable habitat.

4.3 Migratory Bird Treaty Act

Will the project impact protected migratory birds that are known or have a potential to occur on the project site, or the surrounding area?

NO. Similar to the Federal Endangered Species Act, the December 2018 biological reconnaissance report included in the NOP/IS found that the proposed Project would not impact (directly or indirectly) MBTA species due to the lack of suitable habitat. The NOP/IS (released for public review on January 25, 2019 with public review ending February 25, 2019), which determined no impact on biological resources, was sent to the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) for review (Table 4-3).

Table 4-3: NOP and IS Public Release Distribution.

Department	Attention	Location	Date Sent
USFWS	Field Supervisor	Carlsbad, CA	24 January 2019
CDFW, Region 5	Ed Pert, Regional Manager	San Diego, CA	24 January 2019

About two weeks following the distribution of the NOP/IS as part of the public review, informal inquiries were made with both USFWS and CDFW with the staff that would be responsible for review and comments on the NOP/IS.

On 8 February 2019, MBC (the biological consultant who prepared the biological reconnaissance report and NOP/IS biological analysis) discussed the proposed Project with Jonathan Snyder, USFWS Division Chief for Los Angeles and Orange Counties. Mr. Snyder stated that he was not concerned about impacts to biological resources from the temporary street construction work. He was primarily concerned about the potential for reduction of surface flow of treated water to the Los Angeles River, which might support downstream habitat. Currently the wastewater that would be diverted as part of the proposed Project is treated at the Hyperion Treatment Plant and discharged offshore, so no loss of water which supports stream habitat would occur due to implementation of the proposed Project. MBC sent another copy of the NOP/IS (via email) directly to Mr. Snyder for his records and encouraged him to contact MBC directly if he had additional questions and to comment on the NOP/IS, if appropriate. Mr. Snyder stated he would

provide a comment letter if he had further concerns regarding the Project. He said that if USFWS did not have concerns they would not comment. No comment letter on the NOP/IS was received from USFWS.

On 11 February 2019, MBC left a voice mail message with Victoria Tang, Senior Environmental Scientist (Supervisory) at CDFW. The initial contact was followed by an email that included the NOP/IS directly to Ms. Tang and encouraged her to contact MBC directly with questions and to provide a comment letter, if appropriate. On 12 February, Ms. Tang and Mr. Andrew Valand responded by email that they had received the NOP/IS, which Mr. Valand was reviewing, but on initial review it was pointed out that proposed Project's crossing of the Tujunga Wash might require a Streambed Alteration Notification. MBC confirmed with them that the crossing would utilize tunneling to avoid impacts to the streambed and surface waters. No further questions and no comment letter on the NOP/IS were received from CDFW.

4.4 National Historic Preservation Act, Section 106

Identify the area of potential effect (APE), including construction, staging areas, and depth of any excavation. (Note that the APE is three-dimensional and includes all areas that may be affected by the project, including the surface area and extending belowground to the depth of any project excavations.)

To establish the historic resources inventory for the property, an archaeological and paleontological survey and a records search were conducted with respect to the APE (see Appendix D of this Draft EIR), which extends from the middle of the street curb to curb, along Victory Boulevard and extending belowground to the depth of proposed Project construction (as shown in Figure 3.2-1 in Section 3.2, Cultural Resources and Tribal Cultural Resources of this Draft EIR). Six (6) proposed pump stations and accompanying diversion structures along Victory Boulevard would be installed on the pedestrian sidewalk that parallels the street. APE boundaries for these components lie within the direct path of installation and excavation. Refer to Section 2.4, Project Characteristics, in Chapter 2, Project Description of this Draft EIR for details on the Project components, and Appendix B, Detailed Construction Assumptions, regarding the anticipated depth of construction. In addition, to address potential vibration impacts on unknown historic resources, any construction within 21 feet of adjacent structures was considered part of the APE.

The cultural resources report prepared for the proposed Project (Appendix D of this Draft EIR) was prepared in accordance with Section 106 requirements of the National Historic Preservation Act, which requires the report identifying the APE, complete a current records search (no more than one year old and half a mile radius) and detail the survey methods and findings, and perform Native American consultation (initiated at planning phase of project to all local tribes and individuals identified by Native American Heritage Commission). This Draft EIR will also be sent to the State Historic Preservation Officer for review during the 45-day public review period. The analysis in Section 3.2 of this Draft EIR takes into account the effects of the proposed Project on known and unknown historic properties, archaeological, and/or tribal cultural resources in accordance with Section 106.

4.5 Floodplain Management - Executive Order Number 11988

Is any portion of the project site located within a 100-year floodplain as depicted on a floodplain map or otherwise designated by FEMA?

NO. Per FEMA floodplain maps (as discussed in Checklist Item 3.9, Hydrology and Water Quality in the NOP/IS), the Project site is not located within a designated 100-year flood hazard area or any other flood hazard zone. The Project site is located within the City of Los Angeles designated potential inundation zone associated with potential event of a dam failure.

4.6 Environmental Justice Executive Order

Does the project involve an activity that is likely to be of particular interest to or have particular impact upon minority, low-income, or indigenous populations?

YES. This Draft EIR addresses environmental justice in accordance with Executive Order 12898 and utilizes guidance from the Council on Environmental Quality (CEQ).

4.7 Applicable Regulations and Guidance

Following is a summary of regulations/policies applicable to environmental justice.

4.7.1 Federal

Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

In 1994, in response to growing concern that minority and/or low-income populations bear a disproportionate amount of adverse health and environmental effects, President Clinton issued Executive Order 12898 on environmental justice formally focusing federal agency attention on this issue. The Executive Order contains a general directive that states, “each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.”

The Executive Order authorized the creation of an Interagency Working Group (IWG) on Environmental Justice, overseen by USEPA, to implement the Executive Order’s requirements. The IWG includes representatives from a number of executive agencies and offices and has developed guidance for terms contained in the Executive Order.

USEPA defines “environmental justice” as follows:

The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

USEPA defines “fair treatment” as follows:

No group of people, including a racial, ethnic, or a socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

USEPA defines “meaningful involvement” as follows:

- 1) *Potentially affected community residents have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health;*
- 2) *The public’s contribution can influence the regulatory agency’s decision;*
- 3) *The concerns of all participants involved will be considered in the decision making process; and*
- 4) *The decision-makers seek out and facilitate the involvement of those potentially affected.*

Finally, USEPA defines “disproportionately high and adverse effect” (or “impact”) as follows:

An adverse effect or impact that: (1) is predominantly borne by any segment of the population, including, for example, a minority population and/or a low-income population; or (2) will be suffered by a minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect or impact that will be suffered by a non-minority population and/or non-low-income population.

In the Presidential Memorandum to departments and agencies that accompanies Executive Order 12898, the President cites the importance of NEPA in identifying and addressing environmental justice concerns. The memorandum states, “each federal agency shall analyze the environmental effects, including human health, economic and social effects, of federal actions, including effects on minority communities and low-income communities, when such analysis is required by NEPA.” The memorandum emphasizes the importance of the NEPA public participation process, directing that “each federal agency shall provide opportunities for community input in the NEPA process.” Agencies are directed to identify potential impacts and mitigations in consultation with affected communities and ensure the accessibility of meetings, crucial documents, and notices.

Council on Environmental Quality: Environmental Justice—Guidance under the National Environmental Policy Act

USEPA has lead responsibility for implementation of Executive Order 12898. The chair of the IWG on Environmental Justice, CEQ, has oversight of the federal government’s compliance with this Executive Order and NEPA. CEQ, in consultation with USEPA and other agencies, has prepared guidance to assist federal agencies in NEPA compliance in its *Environmental Justice Guidance under the National Environmental Policy Act* (1997). This guidance provides an overview of Executive Order 12898, summarizes its relationship to NEPA, recommends methods for the integration of environmental justice into NEPA compliance, and incorporates as an appendix the IWG’s definitions of key terms and concepts contained in the Executive Order.

Agencies are permitted to supplement CEQ’s guidance with their own, more specific guidance tailored to their programs or activities or departments, to the extent permitted by law.

Neither the Executive Order nor CEQ proscribe a specific format for environmental justice assessments in the context of NEPA documents. However, CEQ identifies the following six general

principles intended to guide the integration of environmental justice assessment into NEPA compliance, and which are applicable to the proposed Project and its alternatives:⁴

1. Agencies should consider the composition of the affected area, to determine whether minority populations, low-income populations, or Indian tribes are present in the area affected by the proposed action and, if so, whether there may be disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, or Indian tribes.
2. Agencies should consider relevant public health data and industry data concerning the potential for multiple or cumulative exposure to human health or environmental hazards in the affected population and historical patterns of exposure to environmental hazards, to the extent such information is reasonably available. For example, data may suggest there are disproportionately high and adverse human health or environmental effects on a minority population, low-income population, or Indian tribe from the agency action. Agencies should consider these multiple, or cumulative effects, even if certain effects are not within the control or subject to the discretion of the agency proposing the action.
3. Agencies should recognize the interrelated cultural, social, occupational, historical, or economic factors that may amplify the natural and physical environmental effects of the agency's proposed action. These factors should include the physical sensitivity of the community or population to particular impacts; the effect of any disruption on the community structure associated with the proposed action; and the nature and degree of impact on the physical and social structure of the community.
4. Agencies should develop effective public participation strategies. Agencies should, as appropriate, acknowledge and seek to overcome linguistic, cultural, institutional, geographic, and other barriers to meaningful participation, and should incorporate active outreach to affected groups.
5. Agencies should assure meaningful community representation in the process. Agencies should be aware of the diverse constituencies within any particular community when they seek community representation and should endeavor to have complete representation of the community as a whole. Agencies also should be aware that community participation must occur as early as possible if it is to be meaningful.
6. Agencies should seek tribal representation in the process in a manner that is consistent with the government-to-government relationship between the United States and tribal governments, the federal government's trust responsibility to federally recognized tribes, and any treaty rights.

Appendix A of the Guidance provides clarification of key terms that are helpful in evaluating effects of low income and minority populations, as follows:

⁴ Council on Environmental Quality (CEQ). 1997. Environmental Justice; Guidance under the National Environmental Policy Act. Executive Office of the President, Washington, DC. December 10, 1997 (released July 1998).

- Low-income population: Low-income populations in an affected area should be identified with the annual statistical poverty thresholds from the Bureau of the Census' Current Population Reports, Series P-60 on Income and Poverty. In identifying low-income populations, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect.
- Minority: Individual(s) who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic.
- Minority population: Minority populations should be identified where either:
 - (a) the minority population of the affected area exceeds 50 percent or
 - (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

In identifying minority communities, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a geographically dispersed/transient set of individuals (such as migrant workers or Native American), where either type of group experiences common conditions of environmental exposure or effect. The selection of the appropriate unit of geographic analysis may be a governing body's jurisdiction, a neighborhood, census tract, or other similar unit that is to be chosen so as to not artificially dilute or inflate the affected minority population. A minority population also exists if there is more than one minority group present and the minority percentage, as calculated by aggregating all minority persons, meets one of the above-stated thresholds.

The guidance CEQ states that the identification of a disproportionately high and adverse human health or environmental effect on a low-income or minority population does not preclude a proposed agency action from going forward or compel a finding that a proposed action is environmentally unacceptable.⁵ Instead, the identification of such effects is expected to encourage agency consideration of alternatives, mitigation measures, and preferences expressed by the affected community or population.

Promising Practices for EJ Methodologies in NEPA Reviews - Report of the Federal Interagency Working Group on Environmental Justice & NEPA Committee

The Promising Practices for EJ Methodologies in NEPA Reviews, developed by the Federal IWG on Environmental Justice and NEPA Committee in March 2016, provides several methodologies for

⁵ CEQ, 1997.

performing an environmental justice evaluation. In identifying minority populations, the report describes the following options:

- A) the No Threshold analysis (50 percent or greater of the affected group is minority); or
- B) both the Fifty Percent analysis and the Meaningfully Greater analyses (minority populations are greater than a threshold level above that of the reference population; usually 10 or 20 percent) in concert.

The report described the following approaches to identify low-income populations, as follows:

- A) the Alternative Criteria analysis (applying an appropriate US Census Poverty threshold percentage); or
- B) the Low-Income Threshold Criteria analysis (comparing the percent poverty of the geographic unit against an appropriate larger reference population).

In addition, the report acknowledges that a disproportionately high and adverse impact to minority populations and low-income populations can occur at different levels of NEPA review, and that in some circumstances, an agency may determine that impacts are disproportionately high and adverse, but not significant within the meaning of NEPA.

4.7.2 State

California Government Code Sections 65041–65049; Public Resources Code Sections 71110–71116

Environmental justice is defined by California state law as “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.”

California PRC Section 71113 states that the mission of the CalEPA) includes ensuring that it conducts any activities that substantially affect human health or the environment in a manner that ensures the fair treatment of people of all races, cultures, and income levels, including minority populations and low-income populations of the state.

As part of its mission, CalEPA was required to develop a model environmental justice mission statement for its boards, departments, and offices. CalEPA was tasked to develop a Working Group on Environmental Justice to assist it in identifying any policy gaps or obstacles impeding the achievement of environmental justice. An advisory committee including representatives of numerous state agencies was established to assist the Working Group pursuant to the development of a CalEPA intra-agency strategy for addressing environmental justice. California PRC Sections 71110–71116 charge CalEPA with the following responsibilities:

- Conduct programs, policies, and activities that substantially affect human health or the environment in a manner that ensures the fair treatment of people of all races, cultures, and income levels, including minority populations and low-income populations of the state.
- Promote enforcement of all health and environmental statutes within CalEPA’s jurisdiction in a manner that ensures the fair treatment of people of all races, cultures, and income levels, including minority populations and low-income populations of the state.

- Ensure greater public participation in the agency’s development, adoption, and implementation of environmental regulations and policies.
- Improve research and data collection for programs within the agency relating to the health and environment of minority populations and low-income populations of the state.
- Coordinate efforts and share information with USEPA.
- Identify differential patterns of consumption of natural resources among people of different socio-economic classifications for programs within the agency.
- Consult with and review any information received from the IWG pursuant to developing an agency-wide strategy for CalEPA.
- Develop a model environmental justice mission statement for CalEPA’s boards, departments, and offices.
- Consult with, review, and evaluate any information received from the IWG pursuant to the development of its model environmental justice mission statement.
- Develop an agency-wide strategy to identify and address any gaps in existing programs, policies, or activities that may impede the achievement of environmental justice.

California Government Code Sections 65040–65040.12 identify the Governor’s Office of Planning and Research (OPR) as the comprehensive state agency responsible for long-range planning and development. Among its responsibilities, OPR is tasked with serving as the coordinating agency in state government for environmental justice issues. Specifically, OPR is required to consult with CalEPA, State Resources Agency, the Working Group on Environmental Justice, and other state agencies as appropriate, and share information with CEQ, USEPA, and other federal agencies as appropriate to ensure consistency.

CalEPA released its final Intra-Agency Environmental Justice Strategy in August 2004. The document sets forth the agency’s broad vision for integrating environmental justice into the programs, policies, and activities of its departments. It contains a series of goals, including the integration of environmental justice into the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.

4.7.3 Local

City of Los Angeles General Plan

The City of Los Angeles General Plan has adopted environmental justice policies as outlined in the Framework Element and the Transportation Element. These policies are summarized below.

The Framework Element is a “strategy for long-term growth which sets a citywide context to guide the update of the community plan and citywide elements”.⁶The Framework Element includes a policy to ensure “the fair treatment of people of all races, cultures, incomes, and education levels with respect to the development, implementation, and enforcement of

⁶ City of Los Angeles. 1996. *Framework Element of the City of Los Angeles General Plan*. Adopted December 11, 1996, re-adopted August 8, 2001.

environmental laws, regulations, and policies, including affirmative efforts to inform and involve environmental groups, especially environmental justice groups, in early planning stages through notification and two-way communication.”

The Transportation Element includes a policy to ensure “the fair and equitable treatment of people of all races, cultures, incomes, and education levels with respect to the development and implementation of citywide transportation policies and programs, including affirmative efforts to inform and involve environmental groups, especially environmental justice groups, in the planning and monitoring process through notification and two-way communication”.⁷

The City of Los Angeles also has committed to a Compact for Environmental Justice, which was adopted by the City of Los Angeles Environmental Affairs Department as the City’s foundation for a sustainable urban environment. Statements relevant to the proposed Project include the following:

- All people in Los Angeles are entitled to equal access to public open space and recreation, clean water, and uncontaminated neighborhoods.
- All planning and regulatory processes must involve residents and community representatives in decision making from start to finish.

South Coast Air Quality Management District: Environmental Justice Program

In 1997, SCAQMD adopted a set of guiding principles on environmental justice, addressing the rights of area citizens to clean air, the expectation of government safeguards for public health, and access to scientific findings concerning public health. Subsequent follow-up plans and initiatives led to the SCAQMD Board’s approval in 2003–2004 of an *Environmental Justice Workplan* (Workplan). SCAQMD intends to update its Workplan as needed to reflect ongoing and new initiatives.

SCAQMD’s environmental justice program is intended to “ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities.” Environmental justice is defined by SCAQMD as “equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location from the health effects of air pollution.”

4.8 Environmental Setting

The Project site is located in the San Fernando Valley northeast of the Sepulveda Basin Recreational Area near the San Diego Freeway/ I-405 and extends east through the North Hollywood area. The proposed Project alignment is along Victory Boulevard between Vineland Avenue on the east and Haskell Avenue on the west within the City of Los Angeles North Hollywood – Valley Village Community Plan Area and the Van Nuys-North Sherman Oaks Community Plan Area. For this assessment, the area of potential effect was determined in accordance with CEQ’s guidance for identifying the “affected community,” which requires

⁷ City of Los Angeles. 1999. *Transportation Element of the City of Los Angeles General Plan*. Adopted September 8, 1999.

consideration of the nature of likely project impacts and identification of a corresponding unit of geographic analysis. The affected community is considered to encompass parts of the communities of North Hollywood – Valley Village and Van Nuys-North Sherman Oaks. The City of Los Angeles and the County of Los Angeles form part of the reference community. The area of potential effect for purposes of environmental justice corresponds to the areas affected by the specific environmental issues analyzed in this Draft EIR. Areas of potential effect differ somewhat for each environmental issue and are described for each resource section in Chapter 3 and within Chapter 5, Cumulative Impacts Analysis of this Draft EIR. The reference community is used to determine whether a disproportionately high and adverse human health or environmental impact could be borne disproportionately by low-income and/or minority populations in the affected community when compared to the general population in and around the proposed Project.

Minority and Low-Income Populations

Environmental justice guidance from CEQ defines *minority persons* as “individuals who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black (not of Hispanic origin); or Hispanic”.⁸ Hispanic and Latino refer to ethnicities, whereas American Indian, Alaskan Native, Asian, Pacific Islander, and Black/African-American (as well as White or European-American) refer to racial categories. For census purposes, individuals classify themselves into racial categories as well as ethnic categories, where ethnic categories include Hispanic/Latino and non-Hispanic/Latino. The 2010 Census (which is the most current census for which complete data is available) allowed individuals to choose more than one race. For this analysis, consistent with guidance from CEQ as well as USEPA, *minority* refers to people who are Hispanic/Latino of any race, as well as those who are non-Hispanic/Latino of a race other than White or European-American.⁹

The same CEQ environmental justice guidance suggests low-income populations be identified using the national poverty thresholds from the Census Bureau.¹⁰ The USEPA prepared a Programmatic Environmental Assessment (PEA) for the WIFIA program, and that PEA included an environmental justice evaluation that used the poverty level at the threshold of low-income populations. For consistency with the PEA, this evaluation also uses the poverty level as the threshold of low-income populations.

To establish context for this environmental justice analysis, race, ethnicity (i.e., minority), and income characteristics of the population residing in the vicinity of the proposed Project alignment were reviewed. Table 4-4 presents minority, and low-income populations from the 2010 Census and the City of Los Angeles’ Planning Department (Planning Department) for the communities of North Hollywood – Valley Village and Van Nuys-North Sherman Oaks, Los Angeles County, the City of Los Angeles, and California. Los Angeles City is used as the comparison population because it is considered representative of the general population that could be affected by the proposed Project. Further, the service area for wastewater collection and treatment, as well as for potable

⁸ CEQ, 1997.

⁹ CEQ, 1997.

¹⁰ CEQ, 1997.

water supplies is generally the City of Los Angeles, although the City does provide wastewater collection and treatment services to some areas that border the City.

Table 4-4: Minority and Low-Income Characteristics in Reference Areas (2010 Census)

Jurisdiction or Census Tract	Total Population ¹	Percent Minority Population	Percent Low-Income Population
California ¹	38,982,847	62.1%	15.1
Los Angeles County ¹	10,105,722	73.5	17.0
Los Angeles City ²	3,792,621	71.3	20.4
North Hollywood – Valley Village Community ^{3,4}	139,122	59.9	17.2
Van Nuys-North Sherman Oaks Community ^{3,5}	162,632	63.9	22.2

¹ U.S. Census Bureau; 2013-2017 American Community Survey 5-Year Estimate, Table DP05 for minority percentage and Table S1701 for low income percentage. Low-income population percentage based on sampled population, which is slightly less than the total population.

² U.S. Census Bureau; Total population 2010 Census Redistricting Data Summary File, Table P2 for minority population; 2013-2017 American Community Survey 5-Year Estimates; Table S1701 for Low Income population.

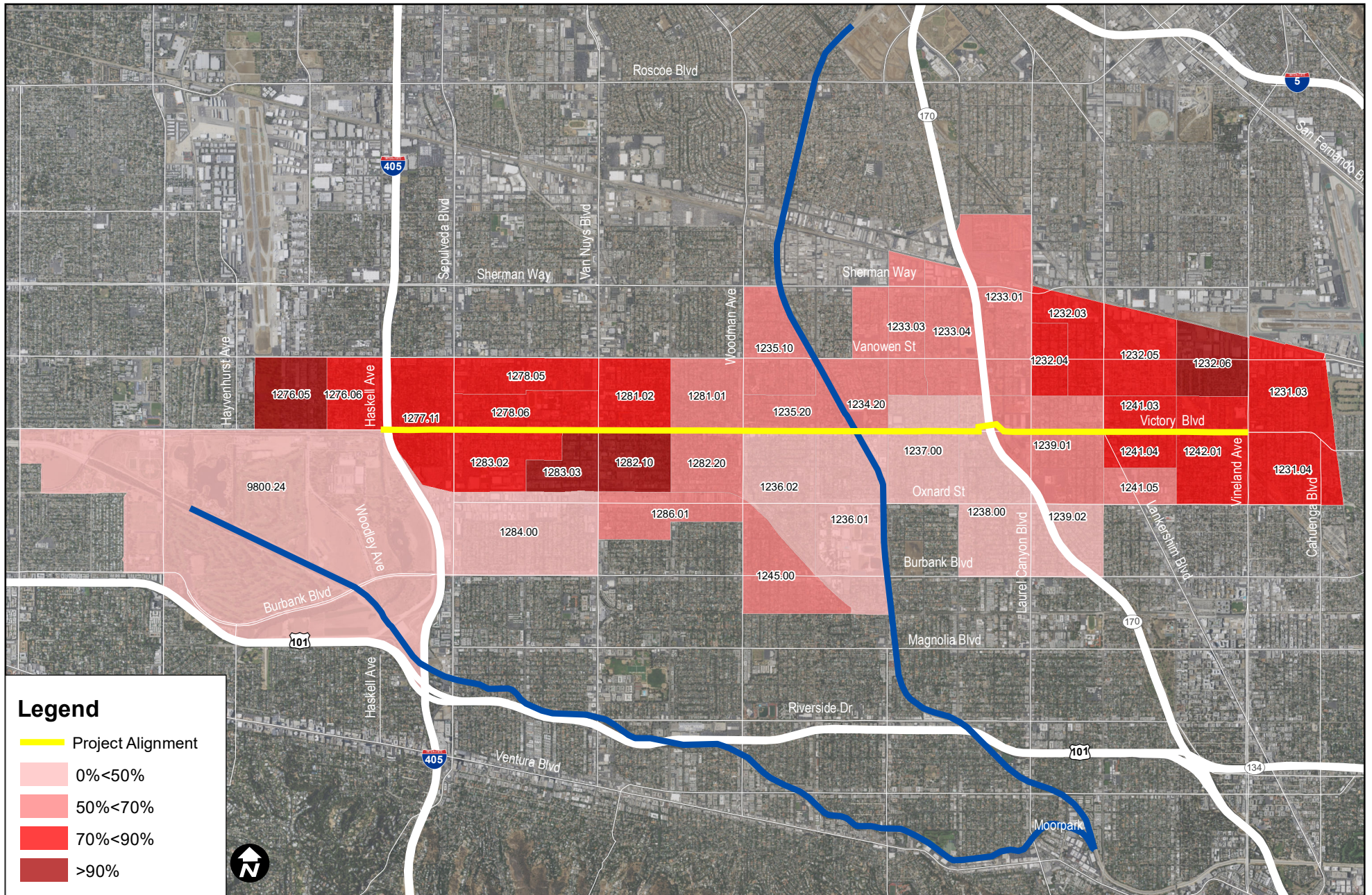
³ Community Plan Area (CPA), as designated by the City of Los Angeles.

⁴ City of Los Angeles, Department. of Planning; North Hollywood - Valley Village Community Plan Area - Demographic Profile (2014).

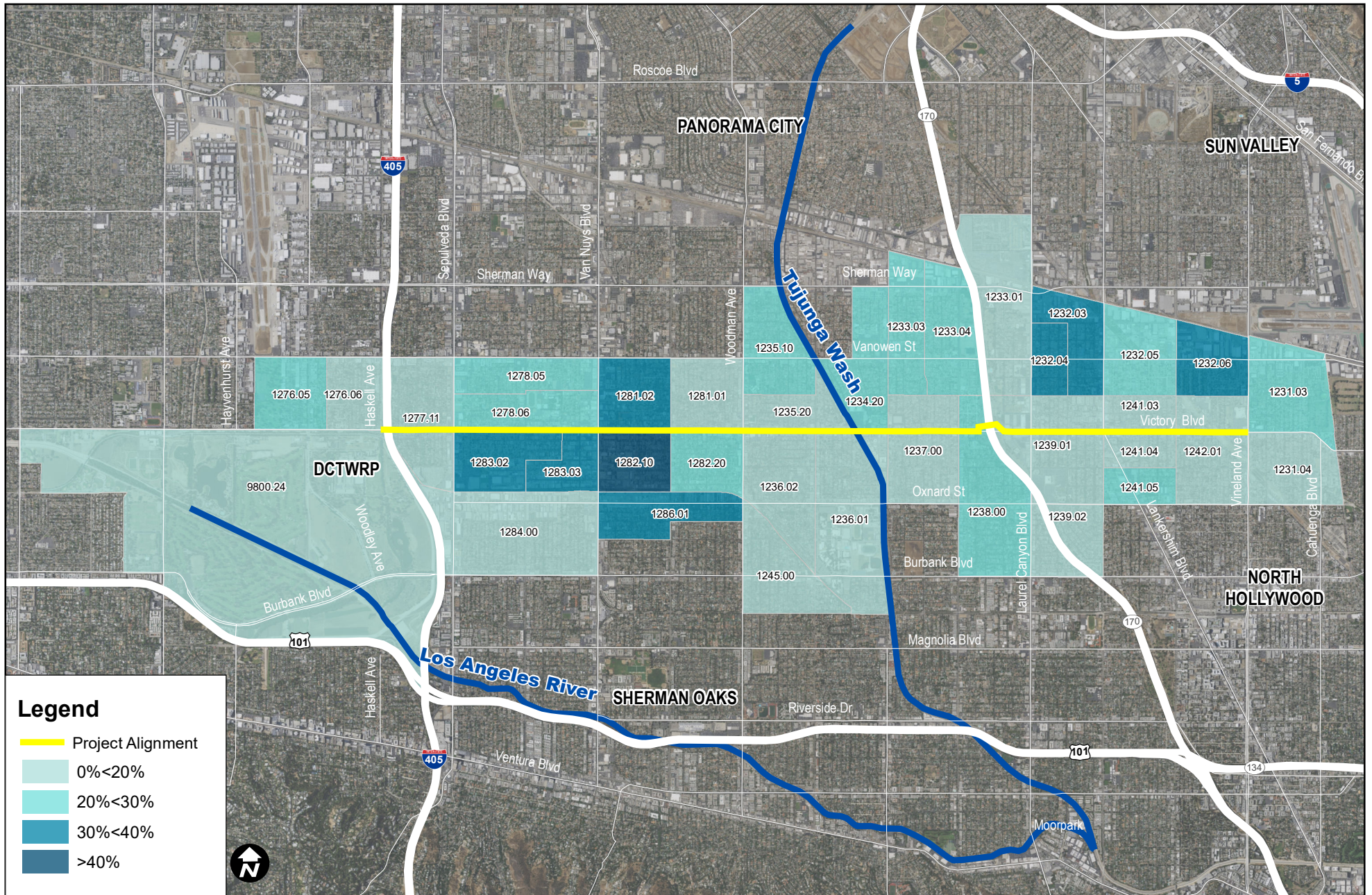
⁵ City of Los Angeles, Department of Planning; Van Nuys - North Sherman Oaks Community Plan Area - Demographic Profile. (2014).

Table 4-4 shows that within North Hollywood – Valley Village Community Plan area as defined by the Planning Department, minorities constitute 59.9 percent of the population and low-income persons constitute 17.2 percent of the population. Within Van Nuys-North Sherman Oaks Community Plan area as defined by the Planning Department, minorities comprise 63.9 percent of the population and 22.2 percent of the population is low-income. Thus, both community plan areas constitute a “minority population concentration” under CEQ guidance because the guidance indicates such a concentration exists if the percent minority exceeds 50 percent. In addition, Van Nuys-North Sherman Oaks community constitutes a low-income concentration because its percentage is greater than the reference population (the City of Los Angeles).

Table 4-5 below identifies the 37 census tracts within a half mile of the proposed Project and identifies the percentage of minority and low-income populations within each census tract. These census tracts constitute the geographic unit of analysis for purposes of this analysis, as most construction impacts would attenuate beyond this grouping. As a group, 67.5 percent of the population is comprised of minorities and 22.8 are below the poverty rate, making this grouping both a minority and low-income population (these populations are defined above under Applicable Regulations and Guidance). Figure 4-1 shows the percentage of minority residents in 37 census tracts surrounding the proposed Project, and Figure 4-2 shows the percentage of low-income residents in the same area.



Source: U.S. Census Bureau, 2013-2017



Source: U.S. Census Bureau, 2013-2017

Table 4-5: Minority and Low-Income Characteristics in Reference Areas (2010 Census)

Census Tract	Total Population	Percent Minority Population	Percent Low-Income Population
123103	4025	73.8%	20.7%
123104	4748	82.5%	19.3%
123203	3834	89.2%	33.1%
123204	3262	83.1%	35.8%
123205	2547	83.1%	20.1%
123206	2798	90.1%	33.0%
123301	4221	69.4%	17.4%
123303	2978	60.5%	26.4%
123304	4341	50.5%	25.7%
123420	4505	68.8%	21.8%
123510	4876	61.3%	20.9%
123520	2693	54.0%	12.4%
123601	4986	45.0%	14.4%
123602	3471	39.6%	12.4%
123700	4199	28.6%	12.8%
123800	5836	43.3%	21.2%
123901	4250	61.4%	19.0%
123902	2638	46.3%	13.1%
124103	2090	81.7%	14.2%
124104	2633	76.8%	17.5%
124105	2645	69.7%	26.5%
124201	3056	70.0%	18.0%
124500	2942	51.1%	9.3%
127605	4465	92.3%	26.5%
127606	3482	75.8%	16.0%
127711	3563	72.2%	16.1%
127805	3875	83.0%	20.9%
127806	3047	70.8%	26.9%
128101	3600	59.5%	19.4%
128102	5012	83.0%	32.5%
128210	5209	91.5%	48.9%
128220	3123	58.1%	21.8%
128302	4718	80.1%	30.0%
128303	3780	90.1%	39.1%
128400	4066	47.8%	8.8%
128601	4490	58.6%	30.8%
980024	258	42.6%	3.5%
TOTAL	136262	67.5%	22.8%

4.9 Methodology and Assessment

4.9.1 Methodology

The following methodology and assessment addresses the potential for the proposed Project to have disproportionately high and adverse human health and environmental effects on low-

income and/or minority populations. It is provided in compliance with federal *Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, and CEQ's *Environmental Justice Guidance under the National Environmental Policy Act*. (CEQ Guidance)¹¹ The evaluation of whether or not a project could disproportionately result in high and adverse impacts on minority and/or low-income populations is a requirement under NEPA, but not under CEQA, and is not typically included in EIRs. However, such an evaluation is included in this EIR because the City may seek funding from WIFIA and/or SRF, and both of these programs require an environmental justice evaluation.

In addition, evaluations of disproportionate impacts to minority and low-income populations are usually based on significant and unavoidable adverse impacts, as determined under NEPA (project impacts relative to impacts that *would* occur in the absence of a Federal Action). However, since the impact determination in this EIR are based on methodologies under CEQA (project impacts relative to existing conditions), the determination of whether or not proposed Project impacts could potentially disproportionately affect minority or low-income populations is also based on impacts (significant and unavoidable) under CEQA, as determined in the environmental resource areas analyzed in Chapter 3 of this Draft EIR. Thus, the environmental justice evaluation may not be comparable to one prepared as part of a NEPA document.

The methodology for conducting the environmental justice analysis to comply with CEQA-plus requirements (of the WIFIA and SRF) includes reviewing impact conclusions under CEQA for each of the resource areas in Chapter 3 of this Draft EIR along with the cumulative analysis in Chapter 5. If the Draft EIR identifies potentially significant impacts or a cumulatively considerable contribution to a cumulatively significant impact *after* mitigation, an evaluation would be conducted to determine if the impacts would result in disproportionately high and adverse effects on minority populations or low-income populations.

The *L.A. CEQA Thresholds Guide*¹² does not identify significance thresholds for environmental justice or for disproportionately high and adverse effects on minority and/or low-income populations. In the absence of local thresholds and because of the CEQA-Plus requirements of the SRF and WIFIA programs, federal guidance provided by CEQ is utilized as the basis for determining whether the proposed Project would result in environmental justice effects. CEQ has oversight of the federal government's compliance with Executive Order 12898 and NEPA and has published the CEQ Guidance. The CEQ guidance identifies three factors to be considered to the extent practicable when determining whether environmental effects are disproportionately high and adverse:

- Whether there is or would be an impact on the natural or physical environment that significantly and adversely affects a minority population, low-income population, or Indian tribe. Such effects may include ecological, cultural, human health, economic, or social impacts on minority communities, low-income communities, or Indian tribes when those impacts are interrelated to impacts on the natural or physical environment;

¹¹ CEQ, 1997.

¹² City of Los Angeles. 2006. *L.A. CEQA Thresholds Guide*.

- Whether the environmental effects are significant, and are or may have an adverse impact on minority populations, low-income populations, or Indian tribes that appreciably exceeds or is likely to appreciably exceed those on the general population or other appropriate comparison group; and
- Whether the environmental effects occur or would occur in a minority population, low-income population, or Indian tribe affected by cumulative or multiple adverse exposures from environmental hazards.

Findings for proposed Project-level CEQA impacts and the contribution of the proposed Project to cumulative impacts are reviewed to determine which impacts were significant or represent cumulatively considerable contributions to cumulatively significant impacts and would therefore require environmental justice analysis.

For impacts found to be less than significant, less than cumulatively considerable, or classified as “No Impact” (and therefore also not cumulatively considerable), further evaluation of the potential for disproportionately high and adverse effects on minority and/or low-income populations would not be needed because impacts that would not be significant would not have the potential to result in such disproportionate effects.

Under CEQA, findings of significant impacts or cumulatively considerable contributions to cumulatively significant impacts were reviewed to determine whether those impacts could cause substantial effects on human populations (i.e., the public), as opposed to primarily affecting the natural or physical environment and/or resulting in limited public exposure. Significant impacts on the natural or physical environment that do not result in substantial effects on human populations would not result in disproportionately high and adverse effects on minority and/or low-income populations. However, for disclosure purposes, these significant impacts are summarized in order to facilitate public involvement and review by potentially affected minority and/or low-income populations in the vicinity of the proposed Project.

For significant impacts that would affect the public (per CEQA), feasible mitigation measures are applied to determine whether adverse effects would still be significant after mitigation measures are implemented. If the impact would be less than significant after mitigation - or in the case of a cumulative contribution, if the contribution would be less than cumulatively considerable after mitigation - then the impact was documented for disclosure purposes in Chapters 3 and 5 of this Draft EIR, but detailed analysis to determine if the impact or contribution would occur disproportionately on low-income and/or minority populations was not undertaken, as less than significant impacts are not considered to be high and adverse.

If the impact, after mitigation, would be potentially significant and unavoidable or the contribution to cumulative impacts would be cumulatively considerable and unavoidable, then the impact is further evaluated to determine whether it would result in disproportionately high and adverse human health or environmental effects on minority and/or low-income populations. If the specific location of the impact is identified, the population demographics of the affected area is estimated using data from the most recently completed (2010) Census. In cases where the boundaries of the impacted area are not known, conclusions are drawn based on available information. In cases where data limitations would not allow a full evaluation, this fact is identified.

In cases where the minority and low-income characteristics of populations in the impacted area could be estimated, the impact area characteristics were compared to data for the general population (i.e., Los Angeles City). If the minority population in the adversely affected area is greater than 50 percent or if either the minority percentage or the low-income percentage of the population in the adversely affected area is meaningfully greater than that of the general population of the reference area, disproportionate effects on minority or low-income populations could occur. “Meaningfully greater” is not defined in CEQ or USEPA guidance. For this analysis, “meaningfully greater” simply means “greater,” which provides a conservative analysis. In addition, disproportionate effects could also occur in cases where impacts are predominantly borne by minority or low-income populations.

The proposed Project’s benefits are also considered to determine whether adverse effects would still be appreciably more severe or of greater magnitude after these other elements are considered. In addition, if significant unavoidable impacts or contributions to cumulatively significant impacts are determined to be disproportionate, the identified mitigation measures are reviewed to determine whether they would be effective in avoiding or reducing the impacts on minority and/or low-income populations. If necessary, additional feasible mitigation measures are considered.

The discussion also addresses public comments concerning environmental justice. That discussion is followed by the analysis of environmental justice and cumulative effects for the proposed Project.

Public Comment Regarding Proposed Project Effects

Public comments received on the NOP as part of the public involvement process for the Draft EIR did not identify concerns related to environmental justice.

4.9.2 Evaluation of Disproportionately High and Adverse Effects on Minority and/or Low-Income Populations

Individual impacts associated with the proposed Project are described for each specific resource in Chapter 3 of this Draft EIR, and proposed Project contributions to cumulative impacts are presented in Chapter 5, Cumulative Analysis of this Draft EIR. This section provides a summary of CEQA impacts (Note: impacts under CEQA do not always translate to a NEPA impact) that could represent disproportionately high and adverse effects on minority and low-income populations. As discussed in Section 4.6.2 above, the geographic unit of analysis for identifying disproportionate impacts to minority and low-income populations is the area within a half mile of the Project alignment.

Air Quality

The significance criteria for evaluating Air Quality impacts are described in Sections 3.1, and 5.3.1 of this Draft EIR, and the evaluation below is based on potentially significant unavoidable impacts after mitigation under CEQA.

Impact 3.1-2: Unmitigated peak day proposed Project emissions from construction would exceed the SCAQMD daily emission threshold for NO_x in all construction years. With implementation of mitigation measure MM-AQ-1, impacts would be reduced but remain potentially significant for NO_x in all construction years.

Construction emissions were also found to exceed SCAQMD's LST Thresholds for PM₁₀, PM_{2.5}, and NO₂ prior to mitigation in all three construction years. The LST thresholds are used, in lieu of dispersion modeling, to determine if a project would cause or contribute to an exceedance of the NAAQS or CAAQS. With mitigation measure MM AQ-1, impacts would be reduced but not eliminated, and the LST thresholds would still be exceeded for PM₁₀ and PM_{2.5} in all construction years, and for NO₂ in construction years 1 and 2. Further, as discussed in Section 5.6.1, proposed Project construction would potentially make a cumulatively considerable contribution to a significant cumulative impact to air quality after mitigation related to exceedance of the SCAQMD's regional NO_x emission threshold, as well as the LST thresholds for PM₁₀, PM_{2.5}, and NO₂ emissions. Because residential areas closest to the Project site and construction locations are predominantly minority (Figure 4-1) and have a higher concentration of low-income population relative to Los Angeles City (Figure 4-2), exceedance of the NO_x threshold and the LST thresholds for PM₁₀, PM_{2.5}, and NO₂ after mitigation could potentially constitute a disproportionately high and adverse effect on minority and low-income populations. It should be noted that the City of Los Angeles is requesting that the SCAQMD determine that NO_x emissions for all three construction years (2021 through 2023) are included in the General Conformity Budget identified in the USEPA-approved 2012 AQMP. USEPA is currently reviewing SCAQMD's 2016 AQMP, which includes a revised conformity set aside budget of 2 tons per day (tpd) of NO_x (instead of one tpd under the approved 2012 AQMP). Once approved, the 2016 AQMP budget is assumed to include the proposed Project's NO_x budget request as it would apply to the Project's construction year.

Cultural Resources and Tribal Cultural Resources

The significance criteria for evaluating potential impacts to Cultural Resources and Tribal Cultural Resources are described in Sections 3.2.5, and 5.3.2 of this Draft EIR, and the evaluation below is based on potentially significant unavoidable impacts after mitigation under CEQA.

Impact 3.2-2: Excavations required for the proposed Project could occur in previously undisturbed soils that may contain archaeological resources. The proposed Project therefore has the potential to uncover or damage previously unknown archaeological resources that could result in a substantial adverse change in the significance of archaeological resources, which is considered to be a potentially significant impact. Although mitigation would be implemented (MM-CR-2 and MM-CR-3), potential impacts to archaeological resources would remain significant and unavoidable. However, while impacts to encountered archaeological resources could be potentially significant, the impacts are to the resource itself and the information gathered from that resource and would not represent an impact that adversely affects a human population. Thus, although the Project site is located in an area with minority and low-income populations, potentially significant impacts to archaeological resources (if encountered) would not disproportionately affect a minority or low-income population.

Impact 3.2-3: Deep excavations required for certain Project components could occur in previously undisturbed older Quaternary Alluvium that could contain significant fossil vertebrate specimens. Deeper excavations for the proposed Project therefore have the potential to uncover or damage paleontological resources, which is considered to be a potentially significant impact. Although mitigation would be implemented (MM-CR-2 and MM-CR-4), impacts to paleontological resources would remain potentially significant and unavoidable. However, while impacts to encountered paleontological resources could be significant, the impacts are to the resource itself and the information gathered from that resource and would not represent an impact that

adversely affects a human population. Thus, although the project site is located in an area with minority and low-income populations, potentially significant impacts to paleontological resources (if encountered) would not disproportionately affect a minority or low-income population.

Impact 3.2-4: As discussed in Section 3.2, no known tribal cultural resources were identified along the Project alignment, however, based on information provided by the Kitz Nation apart part of the consultation process required under AB 52, there is a potential for the proposed Project to impact sensitive Native American resources. As a consequence, construction of the proposed Project could cause a substantial adverse change in the significance of a tribal cultural resource, as either a site, feature, place, or 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, which would be a potentially significant impact. Although mitigation would be implemented (MM-CR-5), impacts to tribal cultural resources would remain potentially significant and unavoidable. In addition, as described in Section 5.3.2, the proposed Project could make a cumulatively considerable contribution to a potentially significant cumulative impact to tribal cultural resources with cultural value to a California Native American tribe, after mitigation. Potential loss, damage, or change to tribal resources is of particular concern to Native American populations, which constitute an ethnic minority; therefore, the proposed Project's impacts could potentially represent a disproportionately high and adverse effect on minority populations.

Noise and Vibration

The significance criteria for evaluating potential Noise and Vibration impacts are described in Sections 3.5.6 and 5.3.5 of this Draft EIR, and the evaluation below is based on significant unavoidable impacts after mitigation under CEQA.

Impact 3.5-1: Construction of the proposed Project would generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of the City's Noise Impact thresholds prior to mitigation. Construction noise would be generated from force main construction along Victory Boulevard, as well as construction of diversion structures, connecting sewers, pump stations and the junction structure at the downstream end of the force main. The construction noise levels at sensitive receptor locations along Victory Boulevard and in the vicinity of the construction locations would exceed the ambient noise levels by 5 dBA, and thus would be potentially significant, albeit temporary. Although mitigation measure MM-NV-1 would require noise attenuation and control measures during construction, MM-NV-1 would likely not reduce construction noise to below significant thresholds in every case or at every receptor location. In addition, as described in Section 5.3.5, construction of the proposed Project would still potentially result in a cumulative considerable contribution to a significant cumulative noise impact after mitigation. Thus, temporary noise impacts on sensitive receptors would remain potentially significant with mitigation during construction.

Because residential areas closest to the Project site and construction locations are predominantly minority (Figure 4-1) and have a higher concentration of low-income population relative to Los Angeles City (Figure 4-2), the temporary construction noise impacts on sensitive receptors after mitigation would potentially constitute a disproportionately high and adverse noise effect on minority and low-income populations.

Impact 3.5-2: Construction of the proposed Project would result in the generation of groundborne vibrations (and groundborne noise) that could exceed the threshold for vibration-induced architectural damage or human annoyance at some receptors if construction occurs in close proximity to structures or receptors. As discussed in Section 3.5.6.2, construction within close proximity (less than 15 feet) to existing vibration sensitive structures (wood framed buildings) could exceed the PPV threshold of 0.2 inches per second and result in architectural building damage. Construction within 21 feet of buildings extremely susceptible to vibration damage (historical buildings) could exceed the PPV threshold of 0.12 inches per second and result in building damage. In addition, sensitive receptors within approximately 50 feet of construction activities (see Table 3.5-17) could experience vibration-related annoyance (78 VdB). Although procedural controls in mitigation measure MM-NV-2 could help reduce vibration-related impacts to nearby structures or receptors, they would likely not reduce construction vibration to below significant thresholds in every case or at every receptor location. Mitigation measure MM-NV-2 would provide a means to reduce vibration and to repair any vibration damage, should construction, should construction result in such impacts. In addition, as described in Section 5.3.5, construction of the proposed Project could still make a cumulative considerable contribution to a significant cumulative vibration impact after mitigation. Thus, temporary vibration-related impacts on nearby structures or sensitive receptors would remain potentially significant with mitigation during construction.

Because residential areas closest to the Project site and construction locations are predominantly minority (Figure 4-1) and have a higher concentration of low-income population relative to Los Angeles City (Figure 4-2), the temporary construction-related vibration impacts on sensitive receptors after mitigation would potentially constitute a disproportionately high and adverse noise effect on minority and low-income populations.

Transportation and Traffic

The significance criteria for evaluating potential Transportation and Traffic impacts are described in Sections 3.6.5 and 5.3.6 of this Draft EIR, and the evaluation below is based on potentially significant unavoidable impacts after mitigation under CEQA.

Impact 3.6-1: Construction of the proposed Project would occur within Victory Boulevard and would result in a temporary reduction in travel lanes. This reduction in traffic capacity would result in operating levels of service that are considered potentially significant, albeit temporary. As shown in Table 3.6-8 in Section 3.6 of this Draft EIR, the construction of the proposed Project would result in temporary but potentially significant impacts at 12 study intersections along the alignment. In addition, as shown in Table 3.6-9 in Section 3.6, construction of the proposed Project would result in temporary but potentially significant impacts along five studied roadway segments along the alignment. As discussed in Section 3.6, the reduction in traffic capacity along Victory Boulevard and cross streets where accessory structures would be constructed would also likely result in some traffic diversions, which would increase traffic on parallel streets. In addition, as described in Section 5.3.6, construction of the proposed Project would potentially result in a temporary but cumulative considerable contribution to a significant cumulative traffic impact after mitigation. Thus, because residential areas closest to the proposed project site and construction locations are predominantly minority (Figure 4-1) and have a higher concentration of low-income population relative to Los Angeles City (Figure 4-2), and because these populations would likely utilize Victory Boulevard and cross streets during construction, the temporary

construction-related traffic impacts after mitigation (MM-TR-1) would potentially constitute a disproportionately high and adverse noise effect on minority and low-income populations.

Beneficial Impacts

Under Executive Order 12898, offsetting benefits should also be considered by decision-makers when a project would result in disproportionately high and adverse effects. The proposed Project would create economic benefits in the form of jobs and income and increased recycled water generation and usage, which would lessen the need to import water. If contaminated soils are encountered during construction, site remediation would result in beneficial environmental impacts related to the removal of subsurface contamination that could continue to taint subsurface soils and/or groundwater.

Project-Level versus Program Level Considerations

As discussed above, USEPA prepared a PEA for the WIFIA program, which evaluated the Program's likely environmental effects across the nation. The proposed Project would divert approximately 10 MGD of wastewater from the North Hollywood area in the intermediate term (through 2035), convey that flow to the DCTWRP where it would be recycled and used to offset potable water sources. The City currently handles approximately 400 MGD of wastewater, and thus; flows to be diverted to the proposed Project represent approximately 2.5 percent of the system flows. The City also has approximately 6,700 miles of sewers within its system (sewers are located in virtually every street within the City), and these sewer provide wastewater conveyance services to almost every residence and occupied structure within the City. Similarly, water lines are located within virtually every street within the City and provide water throughout the City.

The proposed Project represents a small portion of the City's overall wastewater conveyance system, and would improve sustainability and reliability of the wastewater conveyance system, as well as the drinking water system. Although the proposed Project's construction impacts would result in high and adverse impacts on minority and low-income populations when viewed at a project-level under CEQA, this may not be the case at a program-level and/or project-level under NEPA. The City continuously maintains, repairs, rehabilitates, and improves its wastewater conveyance system, and although temporary construction impacts of the proposed Project would largely be localized and occur along a narrow band around the alignment, other wastewater conveyance system projects will occur throughout the City that would each result in localized project-level impacts that may or may not result disproportionately affect minority or low income populations, depending on the demographic make-up of the affected areas. Thus, as wastewater conveyance improvement projects are implemented throughout the City over time, all population types would experience associated localized impacts. Many of these future wastewater conveyance system projects would seek funding assistance through the WIFIA and/or SRF programs, and although each project could locally result in a disproportionate CEQA impacts to minority and low income populations related to the demographic make-up of each affected area, the WIFIA and SRF programs would be comprised of a series or sum of localized impacts across the City as a whole. Thus, from a programmatic perspective, impacts of the WIFIA or SRF programs would occur across the City as a whole. If the City were considered both the geographic unit of analysis and the reference or comparison population when evaluating programmatic effects of the federal funding programs, then neither minority nor low income populations would be disproportionately affected at a programmatic level.

In addition, there are differences in the way that impacts under CEQA and NEPA are determined. Under CEQA, impacts are determined based on a comparison to existing conditions, whereas under NEPA, impacts are determined based on a comparison to No Federal Action. In the case of City of Los Angeles, its wastewater conveyance system is maintained, repaired and improved continuously to protect health and safety and to facilitate sustainability. Wastewater conveyance system improvements are programmed and funded through its Wastewater Capital Improvements Program (WCIP), with supplemental outside funding provide where available. Project programming via the WCIP can play a key role in how the impact baseline is determined under NEPA, which can lead to different conclusions regarding impacts to minority and low income populations than if a CEQA baseline is used. For example, since the City of Los Angeles programs improvements to its wastewater conveyance system to protect health and safety and increase sustainability via the WCIP, a lack of federal supplemental funding via the SRF or WIFIA does not mean that a given wastewater conveyance system project would not be implemented; rather, it means that the Project would likely move forward without federal funding. In such cases, non-approval of federal funding would mean that the local project would still move forward, and thus the No Federal Action would be the implementation of the local wastewater conveyance project without federal funding. This in turn would mean that there would be no incremental impact under NEPA because the No Federal Action Alternative would be equal to the Action Alternative where federal funding is provided. This would lead to a finding of no high and adverse impact to minority or low income populations under NEPA, whereas using the CEQA impact determinations might lead to an opposite determination. Thus, it is important to acknowledge these potential differences in a project-level environmental justice evaluation that is based on CEQA impact determinations when considering NEPA compliance and federal funding actions.

4.10 Public Outreach

The purpose of this Draft EIR is to inform agencies and the public of significant environmental effects associated with the proposed Project, to describe and evaluate reasonable alternatives to the proposed Project, and to propose mitigation measures that would avoid or reduce the potentially significant effects of the proposed Project and its alternatives.

The City has made an effort to provide public outreach beyond what is minimally required by environmental or agency guidelines. A NOP of a Draft EIR and IS was published in the Los Angeles Times on January 24, 2019 (see Appendix A), which commenced the public review period. In addition, the NOP/IS and/or a Notice of Availability was sent to interested parties on record and relevant public agencies and made available through posting on the City's website. In addition, a public scoping meeting was held on February 13, 2019 in the Project vicinity at the Valley Plaza Library Meeting Room (12311 Vanowen Street) from 6:00 p.m. to 7:30 p.m.

The City subsequently provided information on the proposed Project and environmental review process to Council Districts 2 and 6 staff and is proposing to provide briefings to local neighborhood councils during the public review of the Draft EIR.

4.10.1 Spanish Translation

With a large Hispanic population within the Project area, meeting notifications are provided in Spanish as well as in English. A Spanish interpreter was available at the NOP scoping meeting and will be provided at the public meeting associated with the public review of this Draft EIR.

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Chapter 5

Cumulative Impacts Analysis

5.1 Introduction

This section analyzes the proposed Project's cumulative impacts. Cumulative impacts are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."¹ The analysis of cumulative impacts need not be as in-depth as what is performed relative to the proposed Project, but instead is to "be guided by the standards of practicality and reasonableness."²

Furthermore, according to State CEQA Guidelines Section 15130(a)(1):

As defined in Section 15355, a "cumulative impact" consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.

In addition, as stated in the State CEQA Guidelines, Section 15064(i)(5):

The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable. As the cumulative impacts are the anticipated impacts of the proposed Project along with reasonably foreseeable growth, State CEQA Guidelines Section 15130(b)(1) states that the identification of reasonably foreseeable growth may be based on either:

- A list of past, present, and probable future projects producing related or cumulative impacts; or
- A summary of projections contained in an adopted local, regional, or statewide plan, or related planning document designed to evaluate regional or area-wide conditions.

The following cumulative impact analysis focuses on whether the impacts of the proposed Project are cumulatively considerable within the context of impacts caused by other past, present, or future projects. The cumulative impact scenario considers other projects proposed within the area defined for each resource that would have the potential to result in a significant cumulative impact. Only those Project impacts determined to be less than significant, less than significant with mitigation, or significant and unavoidable are analyzed for cumulative impacts.

The list of related-projects is provided in Table 5-1 in Section 5.2 below. The cumulative regions of influence are documented in Section 5.3 below.

¹ State CEQA Guidelines, Title 14, California Code of Regulations, Section 15355, "Cumulative Impacts."

² State CEQA Guidelines, Title 14, California Code of Regulations, Section 15130(b), "Discussion of Cumulative Impacts."

5.2 Projects Considered in the Cumulative Analysis

A total of 38 closely related past, present or reasonably foreseeable probable future projects (approved or proposed) were identified within the general vicinity of the proposed Project that could contribute to cumulative impacts. The list of the cumulative projects is provided in Table 5-1 compiled from sources that include City of Los Angeles Capital Improvements Programs Reports and review of LADWP, Metro, Los Angeles County and other local jurisdiction websites. The locations of these projects are shown in Figure 5-1. This list does not preclude the existence of other private utility projects that may be considered or proposed in the Project area.

As discussed in Section 5.3 below, a projection approach was used that encompassed a larger cumulative geographic scope and, for these resources, a larger set of past, present, and reasonably foreseeable future projects was included for analysis of cumulative impacts.

Table 5-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Expected Construction
City of Los Angeles Capital Improvements Programs (Council Districts 2 and 6)			
1	Secondary Sewer Renewal Program (SSRP) E14 Lankershim Bl & Erwin St	SSRP E14 Lankershim Bl & Erwin St will repair 28,951 reach-feet (5.48 reach-miles) of secondary sewer reaches and some structure improvements. The project is bounded by Golden State Freeway to the north; Tujunga Avenue to the east; Collins Street to the south; and Whitsett Avenue to the west.	3/1/2021 to 4/30/2022
2	Burbank Blvd - Lankershim Blvd to Cleon Ave	This project will widen approximately 0.6 mile of Burbank Boulevard by 12 feet on both sides between Lankershim Boulevard and Cleon Avenue to a modified Boulevard II Standards with curb extensions. Improvements include construction of concrete curb, gutter and sidewalk; AC pavement; storm drain, and sanitary sewer facilities, street trees, street lighting, traffic signals, cross walks and drywells as green street elements.	12/20/2019 to 12/20/2021
3	Magnolia Blvd (North) - Cahuenga Blvd to Vineland Ave	This project will widen the north half of Magnolia Boulevard between Cahuenga Boulevard and Vineland Avenue. The roadway will be widened to accommodate from the existing one lane of traffic in eastbound and two lanes of traffic in westbound to two lanes of traffic in each direction and maintain a center turn lane and a parking lane in each direction. This will require the sidewalk width to be reduced to 8 feet on the north side. Improvements include construction of concrete curb, gutter, and sidewalk; AC pavement; storm drain and sanitary sewer facilities; relocation of utilities; street trees; street lighting and traffic signals. No Right of Way will be acquired.	11/24/2019 to 8/17/2020
4	CD2 Navigation Center	Design and construct a new modular Homeless Service and Day Labor facility at DWP site along Sherman Way. The facility will provide storage, mobile hygiene facility, job training, Day Labor Facility and related offices. The site is beneath existing DWP high voltage power transmission lines along Sherman Way between Radford and Hinds Avenue.	11/2/2019 to 5/1/2021

Table 5-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Expected Construction
5	10801 W. Chandler Blvd – North Hollywood Sewer Maintenance Yard Facility	The project consists of the demolition of approximately 10,000 square feet of existing garage and office facilities at the project site (Yard). In addition, approximately 35,630 square feet of the existing asphalt surface will be removed, re-graded and re-surfaced for the new development. A new building of approximately 8,500 square feet will replace the existing structures and consolidate the facility needs (office space, locker rooms, restrooms, storages and common areas) at the Yard. The new site layout will maximize the operational space inside the Yard and feature a more efficient parking layout and vehicular circulation appropriate for the larger trucks that dispatch from this location. The site is about 45,630 square feet. The Project will be the second of five yards to receive these improvements. The project scope also includes carport structures over some of the parking spaces, photo-voltaic panels over the building's roof and carports, bio-swale areas, outdoor lighting and irrigation.	04/01/2019 to 12/30/2020
6	Whitsett Fields Park Synthetic Turf Improvements Phase II	The project scope consists of converting existing grass soccer fields at the Whitsett Fields Park into synthetic turf, add a park entrance and parking area along Whitsett Avenue, construct a small office/restroom building, and related landscape and hardscape. The synthetic turf improvements convert 1 full size, and 2 small size soccer fields.	06/17/2019 to 10/14/2020
7	Van Nuys Fire Station No. 39	Additional Standard Fire Station from LAFD drop down stations. The new Fire Station 39 replaces the existing fire station located at 14415 Sylvan Street. The old station was built in 1939 and is approximately 14000 square feet (SF) on a 0.32-acre lot. The new two-story fire station will be a state of the art 18,533 SF building on approximately 1.19-acre lot. The new station will have four heavy apparatus bays and three light apparatus bays. The building will be designed for Silver certification by the LEED (Leadership in Energy and Environmental Design) program for sustainable design.	6/12/2017 to 6/23/2019
8	SSRP E30 Vanowen St & Noble Ave	The SSRP E30 Vanowen St & Noble Av project will repair approximately 4.04 miles (21,309 reach feet) of sewer pipes. The project is located in northwest Los Angeles in proximity of Van Nuys and Panorama City bounded by Marson St. to the north; Van Nuys Blvd. to the east; Califa St. to the south; and Sepulveda Blvd. to the west.	9/2/2020 to 10/31/2021
9	Donald C. Tillman Water Reclamation Plant (DCTWRP)- Backup Power	This project will provide emergency backup power so that the DCTWRP will not violate its National Pollutant Discharge Elimination System permit in case the existing power feeders are lost. Also, the project scope includes removing the existing emergency backup generator and underground tank.	3/30/2020 to 10/1/2021
10	DCTWRP- Chemical Lines Upgrade	This project relocates chemical lines above ground at DCTWRP.	6/17/2017 to 6/30/2019
11	DCTWRP- Influent and Effluent Flow Monitoring Infrastructure	Four new maintenance vaults for flow metering equipment. Instrumentation power and signal integration for the four new maintenance vaults and one existing maintenance vault. Flow metering equipment to be provided under separate contract.	1/1/2020 to 12/28/2020
12	DCTWRP- Administration Bldg. HVAC Replacement	The HVAC system in Admin Building at DCTWRP has reached its service life expectancy and requires replacement. The existing HVAC system currently requires excessive maintenance and is prone to shutdowns and leakage. This project will provide for the replacement of HVAC system in DCTWRP Admin Building.	6/6/2019 to 3/7/2021
13	DCTWRP- Administration Building Windows and Lighting Improvements	Replace inefficient and leaking windows with new weather tight windows Replace inefficient light system with power efficient LED lighting system.	11/27/2022 to 11/26/2023

Table 5-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Expected Construction
14	DCTWRP- AVORS & EVIS Gates Replacement	Remove and replace six (6) gates located at Additional Valley Outfall Relief Sewer (AVORS) and EVIS. The replacement shall include all parts associated to the gates including stems, stem wall brackets, mounting pedestals, drive nuts, and actuators. Plug each inlet in order to prevent flow of influent from coming in when the gates are being replaced.	1/2/2020 to 12/29/2020
15	DCTWRP- Advanced Water Purification Facility (AWPF) Primary Equalization Basin	Project will construct 6.75 million gallons primary flow equalization storage for the AWPF Integration with existing structures consist of extension of existing channels, gallery, Integration with existing systems and utilities and controls.	4/1/2020 to 9/30/2021
16	DCTWRP- Berm Improvements	This project will extend the elevation of the existing perimeter berm and floodwall system for purposes of meeting the terms and conditions of the land lease agreement between the City and the US Army Corps of Engineers.	1/1/2020 to 7/1/2021
17	DCTWRP- Blower Air Cleanup System	The work to be performed under this contract includes constructing a complete biological system which includes reinforced concrete Biotrickling Filter with three layers of sole sourced media, degreasers, mist eliminator, foul air blowers, recirculation pump, foul air ducting, piping, civil, structural, electrical, and controls.	3/30/2017 to 4/30/2019
18	DCTWRP- Channel 1 Air Spargers Improvements	Install new spargers, install new air return line from channel 1, purchase and install new bulkhead in channel 1.	7/4/2022 to 10/31/2023
19	DCTWRP- Chlorine Contact Tanks HPE System Improvements	Replace High Pressure Effluent (HPE) lines and risers in Chlorine Contact Tanks area.	2/13/2018 to 9/30/2019
20	DCTWRP- Electrical Power System Modifications	The DCT electrical power distribution system has been in service for 20 years. The main substation switchgear, MSB-1 & MSB-2, are no longer manufactured, spare parts are difficult to acquire and this has become a reliability issue. This project will replace all existing switchgear that is 20 years old and will reconfigure the current "loop system" to a more reliable configuration utilizing double-ended type power distribution system. The double-ended type distribution system provides the use of duplicate feeder that will allow switching flexibility to downstream electrical equipment.	4/27/2017 to 7/9/2019
21	DCTWRP- Japanese Garden Americans with Disabilities Act (ADA) Compliance	The scope of this project is to make the Japanese Garden at DCTWRP entirely ADA compliant. There are three areas that require upgrades: <ul style="list-style-type: none"> ▪ ADA Wheelchair compliant restroom addition ▪ ADA Fording bridge modification ▪ ADA Transition bridge modification 	1/5/2020 to 12/29/2020
22	DCTWRP- Lab Building Winch	Install a winch or davit for lifting loads onto the roof of Lab building for periodic maintenance.	2/7/2019 to 2/6/2020
23	DCTWRP- Main Switchgear Air Conditioning System	Install a new air conditioning system in the existing electrical building at DCTWRP.	12/23/2016 to 7/2/2019
24	DCTWRP- Maintenance and Warehouse Facility Replacement	This project is to move the current maintenance facilities at DCT in order to make room for the new Advanced Wastewater Treatment Facility project which is go into operation 2020.	7/2/2020 to 1/1/2023
25	DCTWRP- Phase I Secondary Clarifiers Improvements	Phase 1. <ul style="list-style-type: none"> ▪ Structural repairs and improvements ▪ Install new fiberglass baffle plates to improve settling (like LAG) ▪ Replace sludge and scum collection system ▪ Replace sludge pumps, valves, flow meters, and controls ▪ Scum to AVORS by-pass system 	12/31/2022 to 12/29/2024

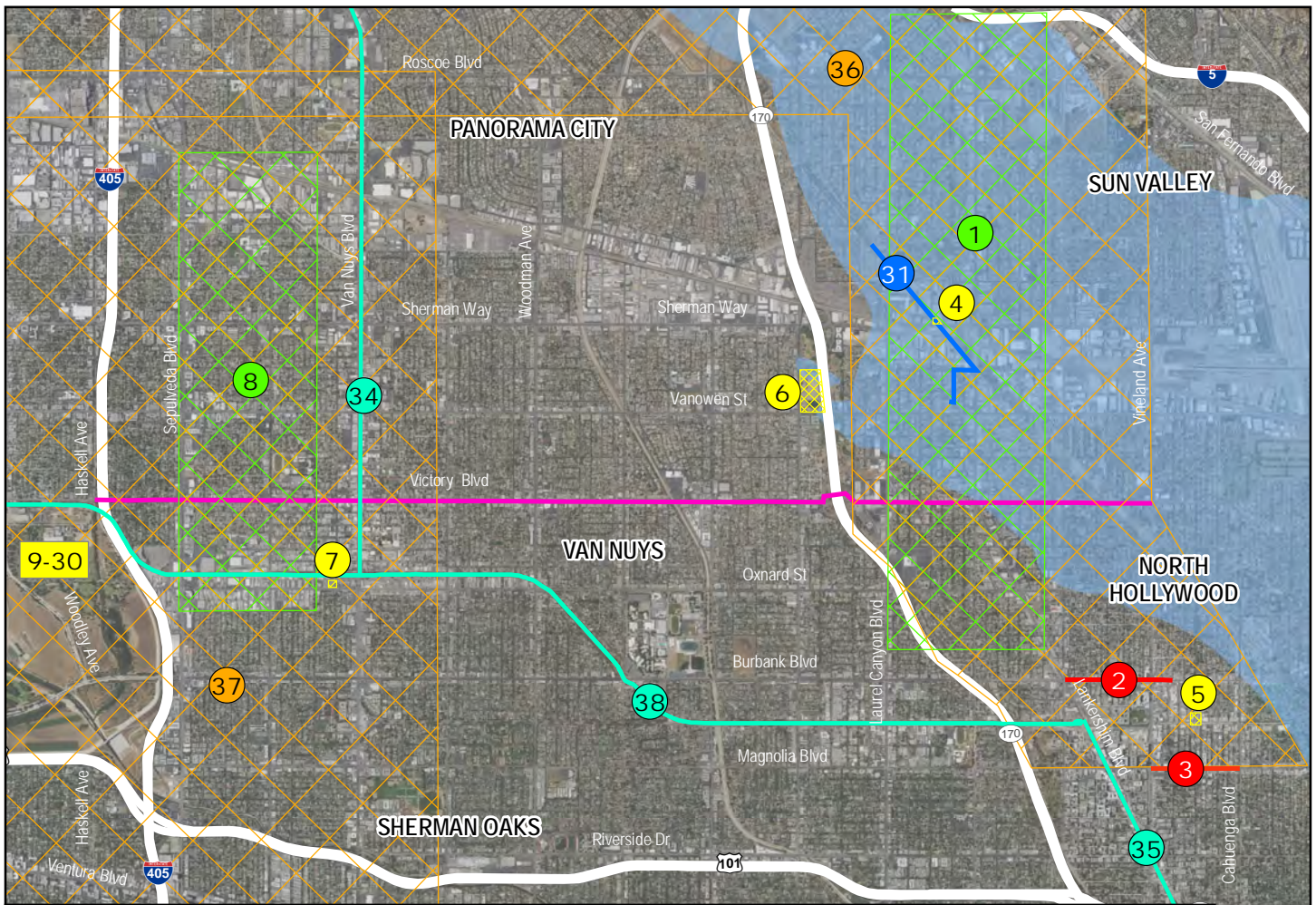
Table 5-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Expected Construction
26	DCTWRP- Primary Tank HPE Piping Replacement	Replace existing copper piping at DCTWRP Primary Tanks. Pipes are being used for 120 psi HPE water for spraying/wash down of primary tanks. Pipe runs are in the headspace underneath the tank covers.	2/13/2018 to 12/15/2019
27	DCTWRP- RAS Ph 1 & Ph 2 Tie-in	The RAS system in Gallery 2 needs a short pipe extension (diameter to match existing RAS pipe diameter), with two manual valves at each end of the new spool piece, that will connect the Phase 1 RAS header pipe to the Phase 2 RAS header system. <ul style="list-style-type: none"> ▪ Install 2 isolation valves ▪ Install a connection pipe to connect RAS Phase 1 and RAS Phase 2 pipeline. ▪ Removed and relocate existing conflicting utilities ▪ Install pipe supports for new alignment. 	12/13/2017 to 6/30/2019 (currently on hold)
28	DCTWRP- Screw Pumps Inlet Gates	Removing eight screw pump inlet sluice gates and actuators located at the lower level of the Headworks Building, making necessary repairs to the concrete and liner of the channel, and installing eight cover plates with Type A Stainless Steel. All existing electrical and instrumentation conduits, wires and connections will be reused and existing control logic will be maintained.	1/1/2020 to 12/28/2020
29	DCTWRP- Sodium Hypochlorite Mixing Chambers Improvements	This project will repair the concrete slab at Phase 2 of the sodium hypochlorite mixing chambers and demo and replace the concrete slab at Phase 1.	8/7/2018 to 6/30/2019
30	DCTWRP- Underground HPE/LPE Valves	The scope of this project is to replace thirty 30 valves along the HPE and Low-Pressure Effluent (LPE) system at DCTWRP. There are thirteen (13) valves on the HPE system and seventeen (17) valves on the LPE system that will be replaced, including replacing inoperable and frozen valves, and improving valve accessibility for operation and future maintenance.	5/1/2019 to 4/29/2020
Los Angeles Department of Water and Power (LADWP)			
31	North Hollywood Groundwater Treatment Action	LADWP proposes to implement a response action to address a regional plume of certain hazardous substances in groundwater that has migrated and continues to migrate to the Rinaldi-Toluca Well Field (Proposed North Hollywood Central Groundwater Treatment Action). LADWP's response action would include implementing a pumping plan to draw the contaminant plumes toward remediation wells and away from other production wells.	3/2019 to 9/2022
32	San Fernando Basin (SFB) Remediation Program	LADWP is undertaking the SFB Remediation Program to respond to the historical releases of hazardous substances and restore and protect the full use of the SFB as a source of water, one of the largest contaminated groundwater areas in the United States.	Ongoing
City of Los Angeles (LASAN and LADWP)			
33	One Water LA 2040 Plan	In 2018, the City of Los Angeles completed the final draft of the One Water LA 2040 Plan. The Plan is a roadmap, connecting plans, ideas, and people to arrive at better and fiscally-responsible water planning solutions. The Plan identifies projects, programs and policies that will yield sustainable, long-term water supplies for Los Angeles and will provide greater resiliency to drought conditions and climate change. The Plan takes a holistic and collaborative approach to consider all of the City's water resources from surface water, groundwater, potable water, wastewater, recycled water, dry weather runoff, and stormwater as "One Water." Also, the Plan identifies multi-departmental and multi-agency integration opportunities to manage water in a more efficient, cost effective, and sustainable manner. The Plan represents the City's continued and improved commitment to proactively manage all its water resources and implement innovative solutions, driven by the Sustainable City pLAN. The Plan will help guide strategic decisions for integrated water projects, programs, and policies within the City.	Ongoing and throughout the City

Table 5-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Expected Construction
Metro			
34	East San Fernando Valley Transit Corridor Project	In June 2018, Metro’s Board of Directors chose Light Rail Transit (LRT) as the preferred alternative for the East San Fernando Valley Transit Corridor Project. Once opened, this LRT Project will extend north from the Van Nuys Metro Orange Line station, to the Sylmar/San Fernando Metrolink Station, a total of 9.2 miles. Once in place, light rail trains similar to the Metro Gold and Expo lines, will operate in the median of Van Nuys Blvd for 6.7 miles to San Fernando Road. From San Fernando Road, the trains will transition onto the existing rail road right-of-way that’s adjacent to San Fernando Road, which it will share with Metrolink for 2.5 miles to the Sylmar/San Fernando Metrolink Station. The portion within the area of the proposed Project is Van Nuys Bl from about Oxnard to San Fernando Road and north in San Fernando Road.	Groundbreaking is scheduled to begin in 2022 and conclude in 2027.
35	North Hollywood to Pasadena Transit Corridor	Goal is to provide a premium transit service more competitive with auto travel to attract choice riders by improving transit access to activity/employment centers, enhancing connectivity to Metro and regional rail services. Improving passenger comfort and convenience and supporting community plans and Transit Oriented Development goals. Preliminary streets potentially impacted by this project within the proposed Project area include Olive St, Burbank Bl, and Riverside Dr east of Lankershim Bl.	Projected opening date between 2022 and 2024
36	North San Fernando Valley Transit Corridor	The North San Fernando Valley (SFV) Bus Rapid Transit (BRT) project will provide a premium east-west transit service to link key activity centers and improve access to jobs, education, essential services and the regional transit system. The new service seeks to provide a convenient, more attractive service that includes more frequent and reliable bus service and improved travel times. The study area includes the communities of Chatsworth, Northridge, North Hills, Panorama City, Sun Valley, Pacoima, Sylmar, North Hollywood and the City of San Fernando, with potential connections to Metrolink at the Chatsworth and Sylmar/San Fernando Stations, to Metro Orange/Red Lines at North Hollywood Station, to the East San Fernando Valley Transit Corridor Project on Van Nuys Bl, and to other regional transit lines. The portion of the alignment alternatives within the proposed Project area are associated with Sepulveda Bl.	The North SFV BRT Project is projected to open between fiscal years 2023 and 2025.
37	Sepulveda Transit Corridor Project (Valley – Westside Transit Corridor)	Metro is conducting a Feasibility Study to identify and evaluate a range of high-capacity rail transit alternatives between the San Fernando Valley and the Los Angeles International Airport, including connections to existing and planned Metro bus and rail lines, including the Orange, Purple and Expo Lines. A number of alignments and station locations will be considered for the various rail alternatives. The study is expected to conclude in Summer/Fall 2019. Its findings will be the basis for future environmental analysis and project refinement. The portion within the area of the proposed Project is the Valley-Westside Transit Corridor	Under Metro’s 28 by 2028 initiative, the Valley-Westside portion of the project is identified as a candidate for potentially accelerated completion by the 2028 Olympic and Paralympic Games in Los Angeles.
38	Orange Line BRT Improvements Project	The Orange Line BRT Improvements Project includes project elements to: <ul style="list-style-type: none"> ▪ Enhance safety at BRT crossings ▪ Improve BRT travel times As part of the project, there are proposed potential grade separations along existing Orange Line bus routes. Currently, there are proposed grade separations along Oxnard Bl between Van Nuys and Sepulveda Blds.	2018 to 2025

Sources: City of Los Angeles, Council Districts 2 and 6 Capital Improvement Programs Report of Projects in Design or Construction (as of March 5, 2019); LADWP 2019; City of Los Angeles 2018; and, Metro 2019



Legend

— Proposed Project Alignment

Type of Project

— Street Widening

— Remediation Well Connector

— Transit

Study Area for Transit Projects

Area of Sewer Rehabilitation

Municipal Facility

Wastewater Treatment

32 San Fernando Basin Remediation

No.	Name of Project	
1	SSRP E14 Lankershim Bl & Erwin St	20 - DCTWRP- Electrical Power System Mods
2	Burbank Blvd - Lankershim Blvd to Cleon Ave	21 - DCTWRP- Japanese Garden ADA Compliance
3	Magnolia Blvd (North) - Cahuenga Blvd to Vineland Ave	22 - DCTWRP- Lab Building Winch
4	CD2 Navigation Center	23 - DCTWRP- Main Switchgear Air Conditioning System
5	10801 W. Chandler Blvd - North Hollywood Sewer Maintenance Yard	24 - DCTWRP- Maintenance and Warehouse Facility Replacement
6	Whitsett Fields Park Synthetic Turf Improvements Phase II	25 - DCTWRP- Phase I Secondary Clarifiers Improvements
7	Van Nuys Fire Station No. 39	26 - DCTWRP- Primary Tank HPE Piping Replacement
8	SSRP E30 Vanowen St & Noble Ave	27 - DCTWRP- RAS Ph 1 & Ph 2 Tie-in
9	DCTWRP- Backup Power	28 - DCTWRP- Screw Pumps Inlet Gates
10	DCTWRP- Chemical Lines Upgrade	29 - DCTWRP- Sodium Hypochlorite Mixing Chambers Improvements
11	DCTWRP- Influent and Effluent Flow Monitoring Infrastructure	30 - DCTWRP- Underground HPE/LPE Valves
12	DCTWRP- Admin. Bldg. HVAC Replacement	31 - North Hollywood Groundwater Treatment Action
13	DCTWRP- Admin. Bldg. Windows and Lighting Improvements	32 - San Fernando Basin Remediation Program
14	DCTWRP- AVORS & EVIS Gates Replacement	33 - One Water LA 2040 Plan (Not shown because multiple locations throughout the City)
15	DCTWRP- Advanced Water Purification Facility	34 - East San Fernando Valley Transit Corridor
16	DCTWRP- Berm Improvements	35 - North Hollywood to Pasadena Transit Corridor
17	DCTWRP- Blower Air Cleanup System	36 - North San Fernando Valley Transit Corridor
18	DCTWRP- Channel 1 Air Spargers Improvements	37 - Sepulveda Transit Corridor Project
19	DCTWRP- Chlorine Contact Tanks HPE System Improvements	38 - Orange Line BRT Improvement Project

Source: City of Los Angeles 2019; LADWP 2019; Metro 2019

5.3 Cumulative Impacts

The cumulative impacts study area (i.e., geographic scope) varies by environmental topic, depending upon the geographic area where the impacts of those projects could combine with those of the proposed Project. Some cumulative impacts study areas for environmental topics are larger or smaller than others (e.g., the cumulative impacts study area for noise and vibration resources includes those areas in closer proximity to the Project area, whereas the cumulative impacts study area for air quality is the larger regional air basin). The cumulative impacts study area for the local projects used for each environmental topic is identified within each environmental issue analysis presented in this chapter.

The proposed Project would be constructed over approximately 30-months (2.5 years), and the soonest construction could start is April 2021. The evaluations below consider other related-projects (in the vicinity of the proposed Project) that could be constructed concurrently. Operation of the proposed Project would not result in significant impacts and would not make cumulatively considerable contributions to significant cumulative impacts.

5.3.1 Air Quality

Cumulative Impact AQ-1: The proposed Project would not conflict with or obstruct implementation of the applicable air quality plan - Less than Cumulatively Considerable.

Several large related-projects could occur concurrently in the San Fernando Valley (see Table 5-1), and these include, but are not limited to, SSRP E14 Lankershim Boulevard & Erwin Street (#1), SSRP E30 Vanowen Street & Noble Avenue (#8), numerous DCTWRP projects (#'s 9, 12, 13, 15, 16, 18, 24, and 25), North Hollywood Groundwater Treatment Action (#31), San Fernando Basin (SFB) Remediation Program (#32), One Water LA 2040 Plan (#33), and the Metro projects (#'s 34 - 38). These related-projects are intended to improve sustainability within the San Fernando Valley and the City of Los Angeles as a whole. In some instances, such as the Metro projects, implemented of could reduce generation of transportation related emissions through increased transit capacity that offsets vehicular emissions. Other related-projects such as the wastewater conveyance improvements, DCTWRP projects, One Water LA 2040 Plan, and LADWP groundwater remediation projects are projects that improve the environment or increase sustainability. These related-projects are necessary to accommodate growth in the City, consistent with City and regional growth projections that underlie the AQMP and SIP. Because of this, the related-projects would not cumulatively conflict with or obstruct implementation of the AQMP or SIP.

As detailed in Section 3.1.7.1, AQMP and SIP attainment strategies include mobile source control measures and clean fuel projects that are enforced at the state and federal levels on engine manufacturers, engine operators, and petroleum refiners and retailers. Proposed Project construction activities would comply with applicable control measures and therefore would not make a cumulatively considerable contribution to a significant cumulative impact (conflict or obstruction with the AQMP or SIP).

Cumulative Impact AQ-2: The proposed Project would violate an air quality standard or contribute substantially to an existing or projected air quality violation - Cumulatively Considerable.

Several large related-projects in the vicinity of the proposed Project could be constructed concurrently (see Table 5-1), and these include, but are not limited to, SSRP E14 Lankershim Boulevard & Erwin Street (#1), SSRP E30 Vanowen Street & Noble Avenue (#8), numerous DCTWRP projects (#'s 9, 12, 13, 15, 16, 18, 24, and 25), North Hollywood Groundwater Treatment Action (#31), SFB Remediation Program (#32), One Water LA 2040 Plan (#33), and the Metro projects (#'s 34 - 38). Construction of these related-projects are likely to generate criteria pollutants that exceed the SCAQMD's significance thresholds, and thus, the related-projects would result in a significant cumulative impact to air quality during construction.

As detailed in Section 3.1.7.2, proposed Project construction activities, prior to mitigation, would generate regional NO_x emissions in excess of the SCAQMD daily thresholds for construction. Construction activities would also generate localized PM₁₀, PM_{2.5}, and NO₂ emissions in excess of the SCAQMD LST thresholds. Therefore, construction of the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact to air quality.

With implementation of mitigation measure MM-AQ-1, construction emission would be reduced; however, emissions would still exceed the SCAQMD's regional NO_x emission threshold, as well as the LST thresholds for PM₁₀, PM_{2.5}, and NO₂ emissions. Proposed Project construction would therefore make a cumulatively considerable contribution to a significant cumulative impact to air quality after mitigation.

Cumulative Impact AQ-3: The proposed Project would not expose sensitive receptors to substantial pollutant concentrations - Less than Cumulatively Considerable.

Several large related-projects in the vicinity of the proposed Project could be constructed concurrently (see Table 5-1), and these include, but are not limited to, SSRP E14 Lankershim Boulevard & Erwin Street (#1), SSRP E30 Vanowen Street & Noble Avenue (#8), numerous DCTWRP projects (#'s 9, 12, 13, 15, 16, 18, 24, and 25), North Hollywood Groundwater Treatment Action (#31), SFB Remediation Program (#32), One Water LA 2040 Plan (#33), and the Metro projects (#'s 34 - 38). Construction of these related-projects would generate diesel particulate matter, which is a toxic air contaminant. Assessment of health risk is typically based on a 30-year exposure period. Because the related-projects would have limited construction duration and would be spread out over a wide geographic area, their construction is not expected to result in a significant cumulative impact related to exposure of sensitive receptors to substantial pollutant concentrations.

Proposed Project construction activities would occur over a period of approximately 30 months and would be spread out over a six-mile alignment. Because construction emissions disperse, emissions at any given location are unlikely to impact receptors at other locations beyond the project area. Furthermore, construction activities in any single location would be transitory and short-term and would not approach the typical 30-year exposure period used for health risk assessments. Because exposure to diesel exhaust would be limited at any given location, Project

construction is not expected to make a cumulatively considerable contribution to a significant cumulative impact from exposure of sensitive receptors to substantial pollutant concentrations.

Cumulative Impact AQ-4: The proposed Project would not result in other emissions such as those leading to odors adversely affecting a substantial number of people - Less than Cumulatively Considerable.

Several large related-projects in the vicinity of the proposed Project could be constructed concurrently (see Table 5-1), and these include, but are not limited to, SSRP E14 Lankershim Boulevard & Erwin Street (#1), SSRP E30 Vanowen Street & Noble Avenue (#8), numerous DCTWRP projects (#'s 9, 12, 13, 15, 16, 18, 24, and 25), North Hollywood Groundwater Treatment Action (#31), SFB Remediation Program (#32), One Water LA 2040 Plan (#33), and the Metro projects (#'s 34 - 38). Construction of these related-projects would generate emissions. In addition, some of the related-projects are transit projects that would generate emissions; however, vehicle and equipment emissions are common throughout the City, and are not considered to result in significant cumulative odor impact. In addition, some wastewater projects such as the SSRP projects would be implemented to improve the wastewater collection system and would have the effect of improving the integrity of the conveyance system. Further, several of the DCTWRP projects (#9 and #17) would have improve the operational reliability of DCTWRP and specifically add odor-reducing elements, resulting in improved odor conditions. Therefore, the related-projects are not expected to result in significant cumulative odor impacts.

As detailed in Section 3.1.7.4, neither construction nor operation of the proposed Project would expose a substantial number of people to odors, and as such, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative odor impact.

5.3.2 Cultural and Tribal Cultural Resources

Cumulative Impact CR-1: Construction of the proposed Project could cause a substantial adverse change in the significance of an historical resource as defined by State CEQA Guidelines Section 15064.5(a) - Less than Cumulatively Considerable.

Several large related-projects would be located in the vicinity of the proposed Project, including, but not limited to, Burbank Boulevard - Lankershim Boulevard to Cleon Avenue (#2), Magnolia Boulevard (North) - Cahuenga Boulevard to Vineland Ave. (#3), and the Metro projects (#'s 34 - 38). These projects have the potential to result in adverse impacts to historic structures than might be located along their respective alignments because they could widen the streets or construct new features in or along the right-of-ways. However, because the related-projects are not located on the same alignments, they do not have the potential to adversely affect the same historic structures. Consequently, the related-projects would not result in additive or cumulative impacts to historic structures.

As detailed in Section 3.2.6.1, the proposed Project would not result in direct impacts to historic structures, as none are located in the APE. Further, the Project alignment would be in the center of Victory Boulevard, and the associated construction work zones would be located more than 21 feet from the structures on either side of Victory Boulevard, which is the distance that vibrations from construction can damage historic structures. However, if during the design process, the proposed Project alignment needs to be shifted to avoid substructures, the construction work zones would

also shift and could be located closer to 21 feet from structures. Should nearby structures be historic, there is the potential for those structures to be indirectly and adversely affected by construction-related vibrations, which would be considered a potentially significant Project impact. However, with mitigation (mitigation measures MM-NV-2 and MM-CR-1), potential impacts to historic structures from Project construction would reduce impacts to a less than significant level. Therefore, the proposed Project would not make a cumulative considerable contribution to a significant cumulative impact on historic resources.

Cumulative Impact CR-2: Construction of the proposed Project could cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 - Less than Cumulatively Considerable.

Several large related-projects would be located in the vicinity of the proposed Project, including, but not limited to, Burbank Boulevard - Lankershim Boulevard to Cleon Avenue (#2), Magnolia Boulevard (North) - Cahuenga Boulevard to Vineland Avenue (#3), and the Metro projects (#'s 34 - 38). These projects have the potential to result in adverse impacts to unknown archaeological resources that might be located along their respective alignments because they could require excavation into subsurface soils in or along the right-of-ways. However, because the related-projects are not located on the same alignments, they do not have the potential to adversely affect the same archaeological resources. Consequently, the related-projects would not result in additive or cumulative impacts to archaeological resources.

As detailed in Section 3.2.6.2, construction of the proposed Project has the potential to encounter unknown archaeological resources, which would be considered to be significant. Mitigation measures MM-CR-2 and MM-CR-3 would be implemented; however, potentially significant impacts to archaeological resources from the Project excavation would remain. Although a significant Project impact on archaeological resources may remain after mitigation, it is unlikely that a related-project would affect the same resource as the proposed Project, and as a consequence, the proposed Project is not expected to make a cumulatively considerable contribution to a significant cumulative impact to archaeological resources.

Cumulative Impact CR-3: Construction of the proposed Project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature - Less than Cumulatively Considerable.

Several large related-projects would be located in the vicinity of the proposed Project, including, but not limited to, Burbank Boulevard - Lankershim Boulevard to Cleon Avenue (#2), Magnolia Boulevard (North) - Cahuenga Boulevard to Vineland Avenue (#3), and the Metro projects (#'s 34 - 38). These projects have the potential to result in adverse impacts to unknown paleontological resources that might be located along their respective alignments because they could require excavation into subsurface soils in or along the right-of-ways. However, because the related-projects are not located on the same alignments, they do not have the potential to adversely affect the same paleontological resources. Consequently, the related-projects would not result in additive or cumulative impacts to paleontological resources.

As detailed in Section 3.2.6.3, construction of the proposed Project has the potential to encounter unknown paleontological resources at deep excavation locations that can extend down into older

Quaternary Alluvium (Tujunga Wash microtunnel, Kester Avenue microtunnel, and EVIS junction), would be considered to be significant. Mitigation measures MM-CR-2 and MM-CR-4 would be implemented; however, potentially significant impacts to paleontological resources from the Project excavation would remain. Although a significant Project impact on paleontological resources may remain after mitigation, it is unlikely that a related-project would affect the same resource as the proposed Project, and as a consequence, the proposed Project is not expected to make a cumulatively considerable contribution to a significant cumulative impact to paleontological resources.

Cumulative Impact CR-4: Construction of the proposed Project could cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, or 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 – Cumulatively Considerable.

All of the related-projects would require excavation within the San Fernando Valley and could be located near historic waterways and areas of past Native American activities (including village sites, trade routes, etc.). As discussed in Section 3.2.6.4, the Gabrieleño Band of Mission Indians – Kizh Nation identified the potential for a Project impact on tribal cultural resources in the Project area. As the other related-projects could also affect such resources, construction of the related-projects could result significant impacts to tribal cultural resources.

As detailed in Section 3.2.6.4, construction of the proposed Project has the potential to cause a substantial adverse change in the significance of a tribal cultural resource, as either a site, feature, place, or 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, which would be a significant impact, even after implementation of mitigation measure MM-CR-5. As a consequence, the proposed Project could make a cumulatively considerable contribution to a significant cumulative impact to tribal cultural resources with cultural value to a California Native American tribe.

5.3.3 Greenhouse Gases and Energy

The GHG impacts addressed in Section 3.3 of this Draft EIR are treated as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. In its notice of proposed amendments to the State CEQA Guidelines pertaining to GHG, the CNRA noted that the impacts of GHG emissions should be considered in the context of a cumulative impact, rather than a project impact. The public notice states:

While the Proposed Amendments do not foreclose the possibility that a single project may result in greenhouse gas emissions with a direct impact on the environment, the evidence before [CNRA] indicates that in most cases, the impact will be cumulative. Therefore, the Proposed Amendments emphasize that the analysis of greenhouse gas emissions should

*center on whether a project's incremental contribution of greenhouse gas emissions is cumulatively considerable.*³

It is the accumulation of GHGs in the atmosphere that may result in global climate change. Climate change impacts are cumulative in nature, and thus no typical single project would result in emissions of such a magnitude that it, in and of itself, would be significant on a project basis. A typical single project's GHG emissions will be small relative to total global or even statewide GHG emissions. Thus, the analysis of significance of potential impacts from GHG emissions related to a single project is already representative of the long-term impacts on a cumulative basis.

Cumulative Impact GHGE-1: Construction and operation of the proposed Project would not generate GHGs, either directly or indirectly, that may have a significant impact on the environment - Less than Cumulatively Considerable.

As discussed above, GHG impacts are treated as exclusively cumulative impacts with respect to climate change. The cumulative global emissions of GHGs that contribute to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth, and GHG emissions are considered cumulatively significant. The assessment of significance in Section 3.3 is based on a determination of whether the GHG emissions from the proposed Project represent a cumulatively considerable contribution to global climate change impacts. As indicated in Section 3.3.7.1, implementation of the proposed Project would not exceed the SCAQMD significance threshold for GHG emissions, and therefore, would not result in a significant impact related to GHG emissions. As a result, the proposed Project would not make a cumulatively considerable contribution to a significant cumulatively impact relative to GHG emissions.

Cumulative Impact GHGE-2: Construction and operation of the proposed Project would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs - Less than Cumulatively Considerable.

Several large related-projects could occur concurrently in the San Fernando Valley (see Table 5-1), and these include, but are not limited to, SSRP E14 Lankershim Boulevard & Erwin Street (#1), SSRP E30 Vanowen Street & Noble Avenue (#8), numerous DCTWRP projects (#'s 9, 12, 13, 15, 16, 18, 24, and 25), North Hollywood Groundwater Treatment Action (#31), SFB Remediation Program (#32), One Water LA 2040 Plan (#33), and the Metro projects (#'s 34 - 38). These related-projects are intended to improve sustainability within the San Fernando Valley and the City as a whole. In some instances, such as the Metro projects, implemented or could reduce generation of transportation related emissions through increased transit capacity that offsets vehicular emissions. Other related-projects such as the wastewater conveyance improvements, DCTWRP projects, One Water LA 2040 Plan, and LADWP groundwater remediation projects are projects that improve the environment or increase sustainability. These related-projects are necessary to accommodate growth in the City, consistent with City and regional population projections. Because of this, the related-projects would not cumulatively conflict with or obstruct implementation of

³ California Natural Resources Agency. Notice of Public Hearings and Notice of Proposed Amendment of Regulations Implementing the California Environmental Quality Act. 2009.

applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs.

As indicated in Section 3.3.7.2, implementation of the proposed Project would not conflict with or obstruct implementation of plans, policies, and regulations that are relevant to the proposed Project and that serve to reduce GHG emissions. As a consequence, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact relative to plans, policies, or regulations that reduce the emissions of GHGs.

Cumulative Impact GHGE-3: The proposed Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during Project construction or operation - Less than Cumulatively Considerable.

Several large related-projects could occur concurrently in the San Fernando Valley (see Table 5-1), and these include, but are not limited to, SSRP E14 Lankershim Boulevard & Erwin Street (#1), SSRP E30 Vanowen Street & Noble Avenue (#8), numerous DCTWRP projects (#'s 9, 12, 13, 15, 16, 18, 24, and 25), North Hollywood Groundwater Treatment Action (#31), SFB Remediation Program (#32), One Water LA 2040 Plan (#33), and the Metro projects (#'s 34 - 38). These related-projects are intended to improve sustainability within the San Fernando Valley and the City as a whole. In some instances, such as the Metro projects, implemented or could reduce consumption of energy through increased transit use that offsets vehicular energy consumption. Other related-projects such as the DCTWRP projects, One Water LA 2040 Plan, and LADWP groundwater remediation projects that would facilitate local water resources, which would further offset the need for water imports. Because of this, the related-projects would not result in significant impacts related to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources.

As detailed in Section 3.3.7.3, Project construction would not result in substantial wasteful or inefficient use of energy, due to the short-term nature of construction activities and the long-term benefits of the Project to support local water supplies by helping to increase the production of recycled water. In addition, operation of the proposed Project would not exceed the capacity of electricity transmission facilities and would not result in the construction of new off-site infrastructure that could cause significant environmental impacts. Because of these factors, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to the wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources.

Cumulative Impact GHGE-4: The proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency - Less than Cumulatively Considerable.

As discussed under Cumulative Impact GHGE-3 above, the related-projects would not result in significant impacts related to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, and therefore would not conflict with plans that improve energy efficiency.

As detailed in Section 3.3.7.4, the proposed Project would not affect state, regional, or local efforts to increase use of renewable energy and improve energy efficiency. To the contrary, the proposed

Project would help increase production of recycled water, which is consistent with objectives identified in the City's local plans to reduce GHG emissions that are also supportive of renewable energy and energy efficiency. As a consequence, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact relative to plans that improve energy efficiency.

5.3.4 Hazards and Hazardous Materials

Cumulative Impact HW-1: Construction of the proposed Project could create 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 - Less than Cumulatively Considerable.

Several large related-projects would be located in the vicinity of the proposed Project, including, but not limited to, the LADWP groundwater remediation projects (#31 and #32), and the Metro projects (#'s 34 - 38). The groundwater remediation projects utilize groundwater extraction wells to pump contaminated groundwater from the plume and treat the water prior to subsequent use or discharge. These related-projects are intended to clean up existing contamination from past industrial uses, which is considered a benefit relative to existing conditions. The Metro projects have the potential to encounter hazardous wastes or contaminated soil and perched groundwater that may be present along their alignments (related to past uses such as gas stations, auto repair facilities and/or industrial uses), and therefore have the potential to encounter hazardous materials in soil, potentially exposing construction workers and the public to these materials or otherwise releasing them into the environment. However, the presence of contaminated soil or perched groundwater along any related-project alignment that can be encountered during construction is likely localized based on adjacent past uses. Although Metro projects #35 and #38 have alignments that cross Victory Boulevard (Van Nuys Boulevard and Sepulveda Boulevard, respectively), if they do encounter contaminated soil at these locations, impacts would be impacts specific to that related-project and not be additive. As a consequence, the related-projects would not result in significant cumulative impacts related to the potential to encounter hazardous materials or contamination during construction.

As detailed in Section 3.4.6.1, construction of the proposed Project has the potential to encounter unknown contaminated soil or perched groundwater, and potentially creating a significant hazard to the public or the environment through subsurface contamination. However, mitigation measure MM-HW-1 would be implemented to properly and safely manage contamination, should it be encountered. In addition, the proposed Project would not adversely affect ongoing contaminated groundwater remediation efforts by LADWP, as described in Section 3.4.6.1. As a consequence, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

Cumulative Impact HW-2: Construction of the proposed Project could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school – Less than Cumulatively Considerable.

Only one related-project, the Secondary Sewer Renewal Program (SSRP) E14 Lankershim Boulevard & Erwin Street (#1) would be located in the vicinity of a school along the Project alignment. This sewer repair program would repair and rehabilitate various sewers throughout a

large geographic area that encompasses a part of Victory Boulevard. In order for cumulative impacts related to hazardous material exposure to occur to the Victory Boulevard Elementary School which is both along the force main alignment and in the SSRP area, repairs under the SSRP would have to occur at the same time as the proposed project, be in the vicinity of the proposed Project, and both projects would have to encounter hazardous materials. Due to the low probability for these activities to happen, there is a low potential for significant cumulative impacts to schools related to the release of hazardous emissions or handling of acutely hazardous substances.

As described in Section 3.4.6.2, the construction of the proposed Project has the potential to encounter hazardous materials, and if this happens in close proximity of a school, it could result in significant exposure impacts. However, mitigation measure MM-HW-1 would be implemented during construction to properly and safely manage and transport contamination to a certified facility, should it be encountered. As a consequence, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to the handling of hazardous materials within one-quarter mile of a school.

Cumulative Impact HW-3: The proposed Project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and could create a significant hazard to the public or the environment - Less than Cumulatively Considerable.

Several related-projects involve improvements over an existing National Priority Site in the east part of the San Fernando Valley. Related-projects #31 and #32 extract and treat portions of the contaminated groundwater in the eastern San Fernando Valley that is a designated hazardous materials site (NPL). The groundwater is approximately 200 feet below the ground surface, and some contamination constituents that are heavier than water are located substantially deeper. The groundwater remediation related-project utilizes groundwater extraction wells to pump contaminate groundwater to capture the plume and treat the water prior to subsequent use or discharge. The related-projects that would be placed at the surface over the contamination plume are not expected to require excavations that extend to the groundwater, nor would they likely install substructures that could impede groundwater extraction. As a consequence, the related-projects would not result in significant cumulative impacts.

As detailed in Section 3.4.6.3, the eastern extent of the project alignment would overlie the NPL site; however, contaminated groundwater associated with the NPL site is not expected to be encountered during Project construction because the contamination is substantially deeper than Project excavation depths. The proposed Project would therefore not adversely affect the ongoing remediation efforts by various parties. As a consequence, the proposed Project is not expected to make a cumulatively considerable contribution to a significant cumulative impact related to a designated hazardous materials site.

5.3.5 Noise and Vibration

Cumulative Impact NV-1: Construction of the proposed Project would generate 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 – Cumulatively Considerable.

Noise attenuates with distance, and the sources of noise must be fairly close to common receptors for cumulative effects to occur. Several related-projects that would be constructed in the in the same timeframe and vicinity as the proposed Project include the SSRP E30 Vanowen Street & Noble Avenue (#8), the DCTWRP projects (#9 - #30), and two Metro projects (#34 and #37). These related-projects include facilities or alignments that could be constructed in near proximity to proposed Project elements such that the combined noise levels are higher than those of the individual projects. As such, the related-projects could result in a significant cumulative noise impact from close proximity of concurrent construction activities.

As detailed in Section 3.5-1, construction of the force main in Victory Boulevard would result in temporary elevated noise levels during construction. Related-project #1 would repair various sewer lines within a large geographical area that encompasses Victory Boulevard between Lankershim Boulevard and Laurel Canyon Boulevard. Related-project #8 would repair various sewer lines within a large geographical area that encompasses Victory Boulevard between Van Nuys Boulevard and Sepulveda Boulevard. If sewer repair work under these related-projects occurs close to Victory Boulevard when the force main or component (diversion structure, connecting sewer, and/or pump station) is also being constructed, there could be additive noise level increases relative to ambient levels at nearby noise sensitive receptors. Similarly, if force main construction within Victory Boulevard in the Vicinity of Van Buys Boulevard occurs at the same time as construction of the East San Fernando Valley Transit Corridor Project in Van Nuys Boulevard in the vicinity of Victory Boulevard, or if force main construction within Victory Boulevard in the vicinity of Sepulveda Boulevard occurs at the same time as construction of the Sepulveda Transit Corridor Project in Sepulveda Boulevard in the vicinity of Victory Boulevard, then there could be additive noise level increases relative to ambient levels at nearby noise sensitive receptors. In addition, there is a potential for construction of the related-projects at DCTWRP to occur concurrently with construction of the EVIS junction structure, which could result in elevated noise levels at sensitive receptors in the vicinity. The increases in noise levels from concurrent construction on sensitive receptors could exceed the noise significance thresholds detailed in Section 3.5.1 and result in significant cumulative impacts. Although the proposed Project would include mitigation measure MM-NV-1 to reduce construction noise impacts, construction of the proposed Project would still make a cumulative considerable contribution to a significant cumulative noise impact.

Cumulative Impact NV-2: Construction of the proposed Project would result in the generation of excessive groundborne vibration or groundborne noise levels - Cumulatively Considerable.

Vibrations attenuate with distance (see Table 3.5-17 in Section 3.5) and sources of construction-related vibrations generally must be very proximate for vibration impact threshold effects to occur. As shown in Table 3.5-17, several related-projects that would be constructed in the in the same timeframe and immediate vicinity as the proposed Project include the SSRP E30 Vanowen Street &

Noble Avenue (#8), and two Metro projects (#34 and #37). These related-projects include facilities or alignments that could be constructed in close proximity to proposed Project elements such that the combined vibration levels are higher than those of the individual projects. As such, the related-projects could result in a significant cumulative vibration impacts due to close proximity of concurrent construction activities.

As detailed in Section 3.5-1, construction of the force main in Victory Boulevard would result in increased vibration levels during construction, in particular pavement breaking, drilling, and truck loading. Related-project #1 would repair various sewer lines within a large geographical area that encompasses Victory Boulevard between Lankershim Boulevard and Laurel Canyon Boulevard. Related-project #8 would repair various sewer lines within a large geographical area that encompasses Victory Boulevard between Van Nuys Boulevard and Sepulveda Boulevard. If sewer repair work under these related-projects occurs very close to Victory Boulevard when the force main or component (diversion structure, connecting sewer, and/or pump station) is also being constructed, there could be cumulative vibration level increases at nearby receptors or structures very close to concurrent construction. Similarly, if force main construction within Victory Boulevard in the vicinity of Van Buys Boulevard occurs at the same time as construction of the East San Fernando Valley Transit Corridor Project in Van Nuys Boulevard in the vicinity of Victory Boulevard, or if force main construction within Victory Boulevard in the vicinity of Sepulveda Boulevard occurs at the same time as construction of the Sepulveda Transit Corridor Project in Sepulveda Boulevard in the vicinity of Victory Boulevard, then there could be cumulative vibration level increases relative to ambient levels at nearby sensitive receptors or structures. The increases in vibration levels from concurrent and proximate construction on nearby receptors or structures could exceed the vibration significance thresholds (for annoyance and/or architectural damage) detailed in Section 3.5.1 and result in significant cumulative impacts. Mitigation measure MM-NV-2 is not anticipated to reduce construction vibration annoyance to below human annoyance significant thresholds in every case or at every sensitive receptor location. Therefore, after mitigation, the proposed Project would result in human annoyance impacts are significant and unavoidable. Therefore, construction of the proposed Project with nearby related-projects could make a cumulative considerable contribution to a significant cumulative human annoyance vibration impact.

Implementation of mitigation measure MM-NV-2, which would provide a means to repair any vibration-caused damage to pre-construction conditions should construction result in such impacts, would reduce impacts of construction of the proposed Project on structures and the impact is considered less than significant with mitigation. Therefore, construction of the proposed Project is not expected to make a cumulative considerable contribution to a significant cumulative vibration impact to structures.

5.3.6 Traffic and Circulation

Cumulative Impact TRA-1: Construction of the proposed Project would conflict with an applicable policy establishing measures of effectiveness for the performance of the circulation system – Cumulatively Considerable.

The SSRP related-projects (#1 and #8), various One Water Plan infrastructure elements (#33), and Metro projects (#'s 34 - 38) would likely require construction within the streets in the Project area

that would overlap with Project construction. These related-projects can result in temporary reductions in transportation system capacity, which can in turn can cause levels of service to temporarily fall below acceptable levels. As a consequence, construction of the related-projects can result in significant temporary cumulative impacts to the transportation system.

Construction of the proposed Project would overlap with construction of the related-projects, which would result in reduced capacity along Victory Boulevard segments and intersections. In addition, several related-projects have alignments that could cross Victory Boulevard (#34 and #37) and could require in-street construction at or near Van Nuys Boulevard and Sepulveda Boulevard, which could contribute to reduce levels of service. As detailed in Section 3.6.6.1, these reduced levels of service at intersections and segments would exceed the allowable reduction in LOS, and therefore would be significant, even after implementation of mitigation measure MM-TRA-1. In addition, some drivers are likely to voluntarily divert to other streets as alternative travel routes to Victory Boulevard during construction. Therefore, there is a potential that rerouted traffic associated with the combined related-projects and proposed Project would reduce the LOS on other streets in the Project area such that although temporary could be significant. As a consequence, construction of the proposed Project would make a temporary but cumulative considerable contribution to a significant cumulative traffic impact.

Cumulative Impact TRA-2: Construction of the proposed Project would not result in inadequate emergency access – Less than Cumulative Considerable.

The sewer repairs under SSRP projects #1 and #8 could occur in the vicinity of Project elements in Victory Boulevard. In addition, related-projects #34 and #37 cross Victory Boulevard and would likely have components in the vicinity of Project elements. Although these and other Related Projects could be under construction concurrently, they are not expected to result in a significant cumulative impact because each related-project would require a Traffic Management Plan that specify control measures for vehicular, pedestrian, and bicycle flow and access, and each plan would be reviewed and approved by LADOT. The proposed Project would result in reduced number of travel lanes in Victory Boulevard and cross streets where diversion structures would be installed and would also require construction of connecting sewers beneath sidewalks, which would adversely affect emergency access. However, mitigation measure MM-TR-1 would require preparation of a Traffic Management Plan that includes control measures for vehicular flow, and requires coordination with emergency service providers (i.e., Los Angeles Fire and Police Departments, as well as other emergency service providers). The mitigation measure also requires the contractor to maintain a supply of steel plates or access ramps on-site or nearby in order to provide access (local or emergency) to adjacent properties as needed. This mitigation would reduce impacts of construction of the proposed Project on emergency access to a less than significant level. Therefore, construction of the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to emergency access.

Cumulative Impact TRA-3: Construction of the proposed Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The sewer repairs under SSRP projects #1 and #8 could occur in the vicinity of Project elements in Victory Boulevard. In addition, Related Projects #34 and #37 cross Victory Boulevard and would

likely have components in the vicinity of Project elements. Although these and other Related Projects could be under construction concurrently, they are not expected to result in a significant cumulative impact to transit stops, bicycle lanes, or sidewalks because each related-project would require a Traffic Management Plan that specify control measures for vehicular, pedestrian, and bicycle flow and access. Further, each plan would be reviewed and approved by LADOT, and any bus stop relocations would have to be coordinated with and approved by Metro.

Construction of the proposed Project would result in some temporary transit stop relocations where partial roadway closures, sidewalk closures, or work areas would overlap with bus stop locations, as discussed in Section 3.6.6.4. Mitigation measure MM-TR-1 requires a project-specific Traffic Management Plan that includes coordination with Metro and LADOT to address the relocation of the bus stops. MM-TR-1 would mitigate potential impacts to transit stops to a less than significant level. Therefore, construction of the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to transit stops.

During installation of the force main and/or connecting sewers and diversion structures in Victory Boulevard at Woodman Avenue, Laurel Canyon Boulevard, and Lankershim Boulevard (these north-south streets contain bike lanes), construction has the potential to result in bike lane disruptions, as discussed in Section 3.6.6.4. Mitigation measure MM-TR-1 requires a project-specific Traffic Management Plan that includes temporary bicycle traffic controls (including but not limited to detours) and flag people trained in bicycle safety, which would mitigate potential impacts to transit stops to a less than significant level. Therefore, construction of the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to bike lanes.

Similarly, construction of Project elements has would result in partial intersection closures from excavation activities and would require temporary closures of north-south crosswalks on one side of each intersection, as well as sidewalks where connecting sewers and pump stations would be constructed, as discussed in Section 3.6.6.4. Mitigation measure MM-TR-1 requires a project-specific Traffic Management Plan that includes temporary pedestrian traffic controls (including but not limited to detours), safety measures, and flag people trained in pedestrian safety, which would mitigate potential impacts to pedestrian travel to a less than significant level. Therefore, construction of the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to pedestrian access.

Chapter 6

Alternatives Analysis

6.1 Introduction

Section 15126.6 of the State CEQA Guidelines require that an EIR include a discussion of a reasonable range of project alternatives that would “*feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.*” Within that context, this chapter discusses alternatives to the proposed project.

Key provisions of the State CEQA Guidelines on alternatives (Section 15126.6[a] through [f]) are excerpted below to explain the foundation and legal requirements for the alternative’s analysis in the EIR.

“An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible.” (15126.6[a])

“...the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.” (15126.6[b])

“The specific alternative of ‘no project’ shall also be evaluated along with its impact.” (15126.6[e][1])
“The ‘no project’ analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the ‘no project’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” (15126.6[e][2])

“The range of alternatives required in an EIR is governed by a ‘rule of reason’ that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making.” (15126.6[f])

“Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries,...and whether the proponent can reasonably

acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)." (15126.6[f][1])

For alternative locations, "[o]nly locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR." (15126.6[f][2][A])

"If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR. For example, in some cases there may be no feasible alternative locations for a geothermal plant or mining project which must be in close proximity to natural resources at a given location." (15126.6[f][2][B])

"An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative." (15126.6[f][3])

The following sections discuss the significant impacts of the proposed Project as identified in Chapter 3, Environmental Analysis, the objectives of the proposed Project, alternatives considered but rejected, and alternatives carried forward for further consideration in this EIR, and environmental impacts of such alternatives, including discussion as to whether such alternatives would avoid or substantially lessen any of the significant environmental impacts associated with the proposed Project. Also included in this chapter is identification of the environmentally superior alternative.

6.2 Significant Impacts of the Proposed Project

The alternatives in this chapter have been selected to evaluate means for avoiding or substantially lessening the significant impacts of the proposed Project identified in Chapter 3, Environmental Analysis, with a focus on impacts that would be significant and unavoidable. As summarized in Chapter 7, Other CEQA Considerations, the proposed Project would result in significant impacts after implementation of mitigation measures to the following resource areas:

- **Air Quality**
 - **Construction** – Construction of the proposed Project would result in significant impacts for regional NO_x emissions in all construction years, as well as localized NO₂, PM₁₀, and PM_{2.5} emissions for construction years 2021 and 2022 and localized PM₁₀, and PM_{2.5} for construction year 2023 after implementation of mitigation measure MM-AQ-1, which would serve to reduce air pollutant emission, but not to a less than significant level. Emissions are primarily attributable to combustion exhaust from construction equipment. There are no other feasible means to mitigate the emissions. As such, the proposed Project would violate an air quality standard or contribute substantially to an existing or projected air quality violation; therefore, construction of the proposed Project would result in *significant and unavoidable* impacts.
- **Cultural Resources and Tribal Cultural Resources**
 - **Construction** – Construction of the proposed Project has the potential to encounter unknown archaeological resources, which would be considered to be significant. Mitigation measures MM-CR-2 and MM-CR-3 would be implemented; however,

potentially **significant and unavoidable** impacts to archaeological resources from the Project excavation would remain. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.

- Construction of the proposed Project has the potential to encounter unknown paleontological resources at deep excavation locations that can extend down into older Quaternary Alluvium (Tujunga Wash microtunnel, Kester Avenue microtunnel, and EVIS junction), would be considered to be significant. Mitigation measures MM-CR-2 and MM-CR-4 would be implemented; however, potentially **significant and unavoidable** impacts to paleontological resources from the Project excavation would remain. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.
 - The Gabrieleño Band of Mission Indians – Kizh Nation identified the potential for a Project impact on tribal cultural resources in the Project area. Construction of the proposed Project has the potential to cause a substantial adverse change in the significance of a tribal cultural resource, as either a site, feature, place, or 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, which would be a potentially **significant and unavoidable** impact, even after implementation of mitigation measure MM-CR-5. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.
- **Noise and Vibration**
 - **Construction** – Construction of the force main and related Project elements in Victory Boulevard would result in temporary elevated noise levels during construction. Even with implementation of mitigation measure MM-NV-1, construction noise impacts would be **significant and unavoidable**. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.
 - Construction of the force main and related Project elements in Victory Boulevard would result in increased vibration levels during construction, in particular pavement breaking, drilling, and truck loading. The increases in vibration levels on nearby sensitive receptors or structures could exceed the vibration significance thresholds (for annoyance and/or architectural damage). Mitigation measure MM-MV-2 would reduce potential vibration impacts to structures to a less than significant level; however, construction vibrations could still exceed the significance threshold for vibration annoyance at some sensitive receptors after mitigation, which is considered **significant and unavoidable**. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.
 - **Transportation and Traffic**
 - **Construction:** Construction of the proposed Project would reduce the level of service at study intersections and segments beyond LOS thresholds, and therefore would make a temporary but **significant and unavoidable** impact even after implementation of

mitigation measure MM-TRA-1. In addition, some drivers are likely to divert to parallel roadways as alternative travel routes to Victory Boulevard to the reduced capacity during construction. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.

6.3 Project Objectives

The primary purpose of the proposed Project is to increase the production and use of recycled water in the City to help address concerns over the long-term reliability of imported water. The proposed Project would address the following Project objective:

- Divert and convey wastewater from the eastern portions of the San Fernando Valley to the DCTWRP, where it would be used to generate recycled water.
- Maximize recycled water production.

Diverted wastewater that is recycled at DCTWRP would be distributed through the existing recycled water distribution system that extends from DCTWRP. The City produces recycled water to be used in place of potable (drinking) water for industrial, landscape and recreational purposes in addition to other beneficial uses, including groundwater replenishment.

6.4 Alternatives Considered but Rejected

6.4.1 Alternative Alignments

Five interceptor alignments were initially considered to divert wastewater west from the existing sewer lines along major streets from Vineland Avenue to DCTWRP. After the City held a preliminary alignment evaluation workshop where the five interceptor alignments were reviewed with LASAN staff, a sixth alternative was added that connects to the Valley Outfall Relief Sewer (VORS), approximately 8.5 miles to the southeast of the DCTWRP that would require a pump station and force main. The initial alternatives were:

1. Vanowen Avenue Interceptor
2. Victory Boulevard Interceptor
3. Oxnard Street Interceptor
4. Burbank Boulevard Interceptor
5. Magnolia Boulevard Interceptor
6. Cahuenga Boulevard/Valley Spring Lane Pump Station

As evaluated, the five interceptor sewers were approximately six (6) miles long and the Cahuenga Boulevard/Valley Spring Lane Pump Station was approximately 8.5 miles long (see Appendix I for a figure of the interceptor alignments initially considered). The existing ground elevation at DCTWRP is approximately 726 feet and the ground elevation at Vineland Avenue where the gravity interceptors begin is about 672 feet. Therefore, as the interceptors are routed west, the

ground elevation increases. Due to these elevation differences, pumping stations are required for all the alternatives considered.

Screening Criteria: The following screening criteria and point values were used to rank the initial five interceptor alternatives and the pump station/force main alternative to determine the three most viable alignments for further evaluation:

- a) Residential Impacts
- b) Business Impacts
- c) Traffic Impacts
- d) Environmental Impacts
- e) Right of way
- f) Existing Utilities

Residential Impacts - This criterion includes impacts to residents, emergency services (hospitals, fire, and police stations) and schools (primary, secondary, and colleges) located within the study area that would occur as part of construction and ongoing operation and maintenance of the facilities. Site visits were conducted along the alignment alternatives, and aerial photographs were reviewed to determine if significant impacts would occur.

Business Impacts - This criterion includes impacts to retail, professional, and commercial businesses located along each alignment. Large multi-floor office buildings and regional shopping malls have high traffic volumes that would potentially be impacted by construction depending on the construction method used. Entrances to parking lots for small local businesses could potentially be impacted as well. Construction that would affect street parking for businesses that do not have parking lots for customers was also considered. Depending on the type of construction method used, some of these impacts could be reduced if trenchless technologies are implemented.

Traffic Impacts - This criterion includes disruption to traffic patterns and flow volumes along each alignment alternative. A majority of each alignment is located within multi-lane streets and will require crossing under the I-405 and SR-170 Freeways. Trenchless construction methods, such as microtunneling or jack and bore, could be considered to reduce traffic control needed during construction.

Environmental Impacts - This criterion includes disruption of vegetation and/or sensitive/endangered species, noise pollution, light pollution, air pollution, water contamination, both surface and groundwater; and construction through open land or parks. Since the construction would occur in a highly developed area, and within roads, environmental impacts should be minor.

Right-of-Way - All proposed alignment alternatives will be constructed within existing street rights of ways or public property. This criterion examined the width of available street right of way along each alignment, considered possible locations for lift stations, construction work areas, and laydown areas. The width of each public street was examined and reviewed to determine if the

proposed pipeline construction work could be accomplished without closing the street or reducing the number of available traffic lanes to less than one lane going in each direction while providing one lane in each direction.

Existing Utilities - DigAlert was contacted to identify existing utilities located along each alignment. Our review indicated that thirty-one agencies own utilities along the alignments. The following agencies were contacted and reviewed as-built drawings to determine impact of each utility for construction of the alignments:

- LADWP
- Metropolitan Water District of Southern California
- Metro
- Southern California (SC) Gas Company
- Shell Oil, Tesoro
- ExxonMobil

A full list of the utilities identified through DigAlert is provided in the EWVIS Planning Study, prepared for LASAN.¹

Viable Alignments: Site visits were performed to determine what impacts could occur along each alternative alignment. Aerials were also reviewed to confirm site visit findings and determine other impacts that cannot be seen from street view. Each of the six initial alternatives was scored in Table 6-1 based on the screening criteria described above. The screening factors were ranked based on how important each one is as a means of choosing the project alignment. For each alternative alignment, the factors were scored to indicate whether the factor would have a negative or positive impact and to what degree. (1 = strong negative impact, 3= marginal negative impact, 6 = marginal positive impact, 9 = strong positive impact). The higher score indicates the lowest negative impact to the alignment and was considered as the more preferred alignment.

¹ Arcadis. 2015. East West Valley Interceptor Sewer (EWVIS) Planning Study. Prepared for the City of Los Angeles, Los Angeles Department of Public Works – LA Sanitation. December.

Table 6-1: EWVIS Alignment Scoring and Ranking

Alignment	Residential Impacts	Business Impacts	Traffic Impacts	Environ. Impacts	Right-of-Way	Existing Utilities	Comments	Total Score	Rank
Vanowen Street	1	3	3	3	3	1	Valley Hospital; LADWP GW Treatment Center	13	4
Victory Boulevard	6	3	3	6	9	9	Large power lines; 1 school; Busy commercial street	36	1
Oxnard Street	6	6	3	6	6	3	Electrical Substation; Valley College; Chevron Terminal	30	2
Burbank Boulevard	3	1	3	6	3	3	1 school; Radio Tower; Valley College; Overpass @ Sepulveda	19	6
Magnolia Boulevard	1	1	3	3	3	1	5 schools; Metro Red Line	12	5
Cahuenga Boulevard/Valley Spring Lane Pump Station	1	6	3	3	6	6	1 school; Radio Tower; Valley College; Overpass @ Sepulveda	25	3

Source: Arcadis 2015

As shown in Table 6-1 above, the highest ranked alignment was Victory Boulevard (the proposed Project) with the second highest being Oxnard Street (Alternative 2 described below). The remaining four alternatives were withdrawn from further consideration based on their relative rankings.

6.4.2 Extended Construction Alternative

An alternative with an extended construction duration was considered that would lessen air quality impacts by reducing the amount of time the proposed Project could be under construction on any given day. In order to reduce construction-related air pollutant emissions to a less than significant level (i.e., reduce the proposed Project's approximately 490 pounds per day of peak daily (worst case in year 2022) construction-related NO_x emissions, shown in Table 3.1-6 in Section 3.1, Air Quality, to less than the significance threshold of 100 pounds per day), the phasing of the proposed Project would be greatly extended from the currently proposed 30 months (2.5 years) to over 120 months (10+ years) by reducing the daily construction activity levels by a factor of over 4 (i.e., reduce the typical 8-hour daily construction work shifts to less than 2-hour daily work shifts, which is not reasonable). The extended phasing and construction approach was initially considered with regard to short-term air quality impacts associated with the proposed Project. While this alternative would reduce daily emissions, it would increase the overall duration of air pollutant emissions, as well as increase other significant impacts such as traffic-related delays. Additionally, this alternative would have substantially increased costs and would delay

achievement of the project objectives and benefits. Therefore, this alternative was determined to be infeasible and was not carried forward for full evaluation.

6.5 Alternatives Carried Forward for Further Consideration

6.5.1 Alternative 1: No Project

The No Project Alternative is required by CEQA and represents what would reasonably be expected to occur in the foreseeable future if the proposed Project were not approved. Under this alternative, no new force main sewer and associated pump stations would be constructed, and no additional wastewater flows from the North Hollywood area would be diverted to the DCTWRP. Under the No Project Alternative, additional recycled water would not be produced that could help address concerns over the long-term reliability of imported water. The No Project Alternative would not meet any of the project objectives.

6.5.2 Alternative 2: Oxnard Alignment

Under Alternative 2: Oxnard Alignment, the approximately 6.5-mile long force main sewer would convey wastewater diverted from the North Hollywood area to the DCTWRP in an alignment along Oxnard Street between Vineland Avenue and Kester Avenue, in Kester Avenue between Oxnard Street and Victory Boulevard, and in Victory Boulevard from Kester Avenue to the EVIS at Haskell Avenue. As with the proposed Project, the force main would be ductile iron pipe with inside diameters that range from 24-inches to 42-inches in diameter. Under Alternative 2, six pump stations would be required, but would be located along Oxnard Street at the same cross streets as the proposed Project. Similarly, diversion structures under Alternative 2 would be located along Oxnard Street at the same cross streets as the proposed Project. The connection of EWVIS to the EVIS under Alternative 1 would be the same as the proposed Project. Alternative 2 would satisfy all of the project objectives.

6.5.3 Alternative 3: Two-Phased Construction

Under Alternative 3: Two-Phased Construction, although the proposed Project would be built as proposed, the construction would occur in two phases to reduce impacts along the Project area. All the elements of the proposed Project would be implemented; however, the construction of the approximately 6-mile long force main sewer and four of the proposed six pump stations/diversions, applicable connecting sewers, and the EVIS junction/connection would be built first. The second phase, consisting of the remaining two pump stations/diversions/connecting sewers would add approximately 12 months (one year) to the construction schedule (total of approximately 42 months or 3.5 years) and would commence immediately following Phase 1. Alternative 3 would satisfy all of the project objectives, although due to the phasing the objectives would not be maximized as quickly as with the proposed Project. Following is the Alternative 3 project components by phase:

Phase 1

- Six (6)-mile force main sewer
- Vineland Avenue (eastern terminus) – pump station/diversion and connecting sewer
- Lankershim Boulevard – pump station/diversion and connecting sewer

- Whitsett Avenue – pump station/diversion and connecting sewer
- Fulton Avenue – pump station/diversion and connecting sewer
- EVIS Junction

Phase 2

- Tujunga Avenue – pump station/diversion and connecting sewer
- Laurel Canyon Boulevard – pump station/diversion and connecting sewer

The proposed Project (which are also Alternative 3 components) are described in detail in Section 2.4.2 in Chapter 2, Project Description. As noted above, the elements detailed in the construction schedule associated with the proposed Project would be similar for Alternative 3; however, the overlap of construction of the components would be as described above and there would be an increase in construction by one year.

6.6 Alternatives Impacts Analysis

As with the proposed Project, and as discussed in the NOP/IS (Appendix A of this Draft EIR), operation of the build alternatives would be automated and located underground, with only control panel boxes at pump stations located above ground. Therefore, unless noted otherwise, no further evaluation in the EIR of operations is required.

Refer to Table 6-1 for a side by side comparison of the alternatives by environmental resource area.

6.6.1 Alternative 1: No Project Alternative

6.6.1.1 Air Quality

The No Project Alternative would avoid the construction-related air pollutant emissions associated with the proposed Project. The No Project Alternative would also not conflict or obstruct with implementation of an air quality plan, nor would it violate or contribute to a violation an air quality standard or expose sensitive receptors to substantial pollutant concentrations, and it would not result in other emissions (i.e., odors) that could adversely affect a substantial number of people.

6.6.1.2 Cultural Resources and Tribal Cultural Resources

Under the No Project Alternative, there would be no construction activities; therefore, there would be no potential indirect vibration impacts that would result in a substantial adverse change in the significance of an unknown historical resource. Because the No Project Alternative would not involve excavation, the No Project Alternative would avoid the potential for unknown archaeological, paleontological, and/or tribal cultural resources to be encountered.

6.6.1.3 Greenhouse Gases and Energy

The No Project Alternative would avoid the construction-related GHG emissions associated with the proposed Project. Therefore, the No Project Alternative would not generate GHGs, either directly or indirectly, that may have a significant impact on the environment and would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs.

In addition, the No Project Alternative would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

6.6.1.4 Hazards and Hazardous Materials

Under the No Project Alternative, existing groundwater and soils located at the Project site would not be disturbed, and hence, no new risks/hazards would occur. Therefore, the No Project Alternative would not create 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, nor would it emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Although the proposed Project would extend over a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, there would be no potential for the No Project Alternative to create a significant hazard to the public or the environment as no construction activities would occur under this alternative.

6.6.1.5 Noise and Vibration

The No Project Alternative would avoid the construction-related noise associated with the proposed Project. Therefore, the No Project Alternative would not generate a substantial temporary 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, and would not result in the generation of excessive groundborne vibration or groundborne noise levels.

6.6.1.6 Transportation and Traffic

As detailed in Section 3.6.5 in Section 3.6, Transportation and Traffic, Table 3.6-4 provides LOS values under Future 2022 without Project Scenario. In the absence of Project construction, the level of service would deteriorate to LOS E at 5 of the 14 study intersections during the AM Peak period and at 2 of the 14 study intersections (Woodman Avenue and Coldwater Canyon Avenue) during the PM peak period. However, the No Project Alternative would avoid significant construction-related traffic and circulation impacts of the proposed Project and would therefore not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. This alternative would avoid the construction-related impacts on emergency access related to temporary lane closures. Furthermore, the No Project Alternative would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

6.6.2 Alternative 2: Oxnard Alignment

6.6.2.1 Air Quality

Although 0.5-mile longer, under Alternative 2, construction emission impacts would be similar as the proposed Project, as equipment and phases would be the similar or the same. Construction of the additional 0.5-mile force main sewer would likely occur with the same work segments as the

proposed Project. Therefore, as with the proposed Project, Alternative 2 would not conflict with or obstruct implementation of the applicable air quality plan, would not expose sensitive receptors to substantial pollutant concentrations, is not anticipated to result in a CO hotspot, and would not result in other emissions such as those leading to odors adversely affecting a substantial number of people. Similar to the proposed Project, these impacts associated with Alternative 2 would be ***less than significant***.

As with the proposed Project, Alternative 2 would result in significant impacts for regional NO_x emissions in all construction years, as well as localized NO₂, PM₁₀, and PM_{2.5} emissions for construction years 2021 and 2022 and localized PM₁₀, and PM_{2.5} for construction year 2023 after implementation of mitigation measure MM-AQ-1, which would serve to reduce air pollutant emission, but not to a less than significant level. Emissions are primarily attributable to combustion exhaust from construction equipment. As such, similar to the proposed Project, Alternative 2 would violate, even after implementation of mitigation measure MM-AQ-1, an air quality standard or contribute substantially to an existing or projected air quality violation by exceeding the applicable significance thresholds; therefore, construction of Alternative 2 would result in ***significant and unavoidable*** impacts.

6.6.2.2 Cultural Resources and Tribal Cultural Resources

The Oxnard Alignment was within the Project area detailed in the cultural report prepared for the proposed Project (Appendix D of this Draft EIR). One NRHP resource was found near the eastern terminus of Alternative 2 - the Great Wall of Los Angeles mural. This resource is located approximately 50 feet west of Coldwater Canyon Avenue and south of Oxnard Street, and construction associated with Alternative 2 is not expected to directly impact the mural because it is outside of the Oxnard Street right-of-way, which would confine the work area for this alternative. As with the proposed Project, under Alternative 2, direct impacts to potentially historic structures would be ***less than significant***. If the force main alignment shifts from the center to other areas within the Oxnard Street right-of-way during the design process, implementation of mitigation (MM-NV-2 and MM-CR-1) would be required, and the residual indirect impacts of vibration on potentially historic structures would be ***less than significant after mitigation***.

As with the proposed Project, construction of Alternative 2 has the potential to encounter unknown archaeological resources, which would be considered to be significant. Mitigation measures MM-CR-2 and MM-CR-3 would be implemented; however, potentially ***significant and unavoidable*** impacts to archaeological resources from the excavation would remain.

As with the proposed Project, construction of Alternative 2 has the potential to encounter unknown paleontological resources at deep excavation locations that can extend down into older Quaternary Alluvium (Tujunga Wash microtunnel, Kester Avenue microtunnel, and EVIS junction), would be considered to be significant. Mitigation measures MM-CR-2 and MM-CR-4 would be implemented; however, potentially ***significant and unavoidable*** impacts to paleontological resources from the excavation would remain.

The Gabrieleño Band of Mission Indians – Kizh Nation identified the potential for an impact on tribal cultural resources in the Project area. Similar to the proposed Project, construction of Alternative 2 has the potential to cause a substantial adverse change in the significance of a tribal

cultural resource, as either a site, feature, place, or 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, which would be a potentially **significant and unavoidable** impact, even after implementation of mitigation measure MM-CR-5.

6.6.2.3 Greenhouse Gases and Energy

Annual GHG emissions related to construction under Alternative 2 would be slightly greater than the proposed Project due to the slightly longer force main alignment but would be of the same order of magnitude. As shown in Table 3.3- 3 in Section 3.3, Greenhouse Gases and Energy, GHG construction emissions, amortized over 30 years. In addition, as with the proposed Project, operation of Alternative 2 would be automated, self-contained, and located underground. Emissions associated with maintenance activities, consisting of approximately one vehicle per month would be minimal and were not quantified. During operation, electrical pumps, used to deliver wastewater to DCTWRP, would consume electricity and contribute to indirect GHG emissions associated with electricity production at power plants. As shown in Table 3.3-3, annual GHG emissions associated with the proposed Project would not exceed SCAQMD's CEQA significance threshold for GHGs, which would be the case under Alternative 2. Therefore, impacts would be **less than significant**.

Similar to the proposed Project, implementation of Alternative 2 would not conflict with or obstruct implementation of plans, policies, and regulations that are relevant to the Project and that serve to reduce GHG emissions. Therefore, as with the proposed Project, Alternative 2 would result in a **less than significant** impact.

It is anticipated that construction of Alternative 2 would be similar to the proposed Project (construction would occur throughout the 30-month construction period from 2021 to 2023); however, the force main under Alternative 2 is slightly longer than under the proposed Project. Therefore, construction of Alternative 2 would consume a slightly higher amount of fuel (Table 3.3-5 in Section 3.2) over all construction years, but the amount would be relatively minor and of the same order of magnitude as the proposed Project. As with the proposed Project, construction of Alternative 2 would not result in substantial wasteful or inefficient use of energy, due to the short-term nature of construction activities and the long-term benefits of the project to support local water supplies by increasing the production and use of recycled water. Therefore, as with the proposed Project, Alternative 2 would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during Project construction and operation, and the impact would be **less than significant**.

6.6.2.4 Hazards and Hazardous Materials

The Oxnard Alignment would avoid the groundwater plumes associated with the North Hollywood NPL site (see Appendix E of this Draft EIR for plume locations). As with the proposed Project, construction associated with Alternative 2 could require dewatering of localized perched groundwater (if present); however, such dewatering activities would not draw affected the contamination plume. Therefore, no risk of exposure to contaminated groundwater would occur and the potential to create a hazard to the public or the environment is **less than significant**.

However, given the potential for contaminated soils to exist in the Project vicinity, similar to the proposed Project, the construction of Alternative 2 could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials from adjacent past uses into the environment. With implementation of mitigation measure MM-HW-1, similar to the proposed Project, impacts would be ***less than significant after mitigation***.

The proposed Project alignment is adjacent to one public school. Alternative 2 has two public high schools (Laurel and Ulysses S Grant High Schools) and the Los Angeles Valley College immediately adjacent to the alignment. As with the proposed Project, there are other public schools and other child educational facilities such as private schools and preschools located within 0.25 mile of the alignment. Construction activities could result in an accidental release of fuels, oils, lubricants, or other hazardous materials. The Project does not include any process that would emit hazardous emissions or acutely hazardous materials (which are generally associated with activities such as dry cleaners or industrial processes). As discussed in Section 3.4.6 in Section 3.6, Hazards and Hazardous Materials, construction has the potential to encounter hazardous materials, and if this happens in close proximity of a school, it could result in potentially significant exposure impacts. Therefore, as with the proposed Project, the construction of Alternative 2 could handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school resulting in a potentially significant impact. With implementation of MM-HW-1, as with the proposed Project, impacts would be ***less than significant after mitigation***.

As noted above, the Oxnard Alignment would not occur within the North Hollywood NPL site and would therefore not adversely affect ongoing remediation associated with a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would not create a significant hazard to the public or the environment, the impact would be ***less than significant***.

6.6.2.5 Noise and Vibration

The overall construction intensity and construction duration of Alternative 2 would be similar to that of the proposed Project, and the area of development for Alternative 2 is similar to the proposed Project alignment, with similar noise-sensitive receptors nearby (refer to Appendix I of this Draft EIR for existing noise and vibration measurements associated with the Oxnard Alignment). However, Oxnard Street and Kester Avenue are both narrower than Victory Boulevard², and therefore, noise levels at sensitive receptors along Oxnard Street and Kester Avenue would be slightly higher than at sensitive receptors along Victory Boulevard. The type of construction equipment to be used, and the type construction activities to occur would be similar between Alternative 2 and the proposed Project. As indicated in Section 3.5.7 in Section 3.5, Noise and Vibration, implementation of the proposed Project would result in ***significant and unavoidable*** construction noise impacts even with implementation of mitigation measure MM-NV-1, which would also be the case for Alternative 2.

² Victory Boulevard is approximately 100 feet wide, whereas Oxnard is approximately 80 feet wide and Kester Avenue is approximately between 75 feet and 85 feet wide.

Similar to the proposed Project, construction vibration associated with Alternative 2 is not expected to exceed the threshold for vibration-induced architectural damage of 0.2 PPV at the majority of vibration sensitive receptors. However, vibration within close proximity (less than 15 feet) to existing vibration sensitive structures (wood framed buildings) could exceed the PPV threshold of 0.2 inches per second and potentially result in architectural building damage; therefore, due to construction within 21 feet of potentially sensitive buildings, impacts from vibration are considered potentially significant. In addition, similar to the proposed Project, vibration sensitive receptors are along a majority of the construction alignment and would experience perceptible vibration during construction. As with the proposed Project, construction occurring within close proximity to sensitive receptors, human annoyance impacts from construction activities are considered potentially significant. As with the proposed Project, implementation of the procedural mitigation measures of MM-NV-1 would help reduce impacts from groundborne vibration and MM-NV-2 would be implemented specifically to reduce for impacts from vibration. Mitigation measure MM-NV-2 would likely not reduce construction vibration annoyance to below human annoyance significant thresholds in every case or at every sensitive receptor location. Therefore, after mitigation, human annoyance impacts are **significant and unavoidable**. Although, given the limited duration of construction activities, those impacts would be temporary. Implementation of mitigation measure MM-NV-2, which would provide a means to repair any vibration-caused damage to pre-construction conditions should construction result in such impacts, would reduce impacts of construction on structures and the impact is considered **less than significant after mitigation**.

6.6.2.6 Transportation and Traffic

As with the proposed Project, construction of Alternative 2 would result in short-term increases in vehicle trips by construction workers and construction vehicles on Project corridor. These trips would include construction workers commuting to and from the Project site, haul truck trips associated with the transfer and disposal of excavation materials, and material and equipment deliveries. Temporary lane closures along streets as required for construction would be coordinated with the other City of Los Angeles entities such as the LABOE and LADOT, and in conformance with the California Joint Utility Traffic Control Committee Work Area Protection and Traffic Control Manual.

As with the proposed Project, most of the intersections potentially affected by the construction of Alternative 2 are expected to have their LOS negatively impacted. The primary reason for the LOS deterioration along the study segments is the temporary reduction in street capacity through the closure of travel lanes to accommodate construction work areas (which would be similar to the proposed Project). The entire construction period would last 30 months with construction impacts throughout the 6.5 miles varying per location and proposed components. As with the proposed Project, although the impacts associated with construction of Alternative 2 would be temporary, impacts would be potentially significant, as trenching and establishment of work zones and areas within the streets would require closure of some travel lanes that cannot be avoided. In addition, as described in Section 3.6.5, it is anticipated that due to Project construction activities a portion of the traffic along Oxnard Street and Kester Avenue would voluntarily reroute to other streets within the Project area (similar to what would occur under the proposed Project). Due to the varied nature of construction (i.e., moving construction area associated with force main and site-specific construction at or near intersections identified for pump stations, diversions, connecting

sewers, and the EVIS junction structure), the rerouting of traffic would also vary throughout the 30 months of Project construction. There is a potential that rerouted traffic would reduce the LOS on other streets in the Project area such that although temporary could be significant. Therefore, the impact of Project construction on other streets in the Project area could be potentially significant. Even with the implementation of mitigation measure MM-TR-1, Project impacts to local roadways under Alternative 2 would remain **significant and unavoidable**.

Potential impacts to SR 170 under Alternative 2 would be less than under the Proposed Project because there are no SR-170 ramps to Oxnard boulevard, while I-405 impacts under Alternative 2 would be that same as under Alternative 2 because they share the same alignment in this area. Similar to the proposed Project, with Caltrans' review/approval and compliance with all Caltrans permit requirements, Alternative 2 impacts to freeways are **less than significant**.

Although local and emergency access to adjacent properties would be maintained as much as is possible, during Project construction temporarily lane closures could potentially interfere with the provision of emergency services (i.e., LAFD, Los Angeles Police Department, and other emergency service providers). As with the proposed Project, Alternative 2 could temporarily increase response times for emergency vehicles along the Project corridor due to travel time delays. Some properties adjacent to construction areas, especially for those properties adjacent to construction activities that would take place within the curb lane and/or sidewalk areas of the roadway, would have restricted access. Access to these properties would be addressed through the project construction traffic management plan (mitigation measure MM-TR-1), which would be part of the final construction drawings package. Temporary access and noticing of properties would be addressed through that plan. Where feasible, temporary access provisions would include plating of work areas when not active, to provide vehicle ingress and egress over construction areas. When access would need to be blocked, advance noticing of the affected properties would include dates and times of these closures. Similar to the proposed Project, compliance with the City of Los Angeles Department of Public Works Brown Book (Subsection 7-10.2.2) and roadway encroachment permits, and approved traffic management plans would safeguard maintaining adequate and safe access availability within and near the Project corridor. Appropriate construction traffic control measure (e.g., detour signage, delineators, etc.) would also be implemented. Further, the drivers of emergency vehicles normally have a variety of options for avoiding traffic, such as using sirens to clear a path of travel or driving in the lanes of opposing traffic, pursuant to CVC Section 21806. Since travel lanes would be maintained in each direction throughout the construction period, emergency access in the vicinity of the Project corridor would remain unobstructed. Although existing standards and recommendations are in place to reduce impacts to emergency access during construction, Project impacts related to emergency access could be potentially significant. Mitigation measure MM-TR-1 includes a measure to require the contractor(s) to coordinate construction activities with emergency service providers (i.e., Los Angeles Fire and Police Departments, as well as other emergency service providers) and maintain supplies and equipment nearby in order to provide access (local or emergency) to adjacent properties, which would reduce the potential impact of the proposed Project on emergency access. As with the proposed Project, with implementation of mitigation measure MM-TR-1, the impacts of Alternative 2 on emergency access would be reduced to a **less than significant after mitigation**.

Similar to the proposed Project, temporary transit stop closure impacts would occur during Project construction where partial roadway closures and/or sidewalk closures would overlap with bus stop locations along the bus lines. As part of the construction traffic management plan, temporary bus stop closures would be necessary where closures affect bus stop locations and/or pedestrian access routes. Temporary bus stop closures with advance noticing would be necessary in those cases, and temporary replacement bus stops would be provided where feasible. These temporary changes to the roadway could decrease the performance or safety of public transit such that the impact could be potentially significant. In addition, temporary detours may be required for the north-south bicycle facilities that cross Oxnard Street on Van Nuys Boulevard, the Orange Line, Woodman Avenue, Laurel Canyon Boulevard, and Lankershim Boulevard to safeguard bicyclist safety during Project construction. When Project trenching activities or other construction activities occur that may close up to half of the width of the cross-street roadway intersections, the resulting number and width of approach lanes of the cross-street roadways could impede travel by bicycle. Although Project construction would not conflict with adopted policies regarding bicycle facilities, as with the proposed Project, Alternative 2 could decrease the performance or safety related to bicycle facilities such that the impact could be potentially significant. In addition, partial intersection closures during construction trenching activities would require temporary closures of north-south crosswalks on one side of each intersection. Subsection 7-10.1.3 of the City of Los Angeles Department of Public Works Brown Book details how, if required by the construction, the Contractor may close crosswalks at intersections having four crosswalks (i.e., one crosswalk at a time may be closed). Similar to under the proposed Project, if construction requires closure of two or more crosswalks at an intersection, the Contractor(s) shall obtain LADOT approval before implementation of the closure. LADOT approval is required before closing of any crosswalk at intersections having fewer than four crosswalks. If a crosswalk is closed, temporary pedestrian detours would need to be provided. Such detours would also be required when construction takes place for some Project elements/components within the sidewalk area, and pedestrian detours would need to be provided along the opposite side of the roadway. Temporary pedestrian detour route would be designed to provide adequate sight distance and pedestrian movement controls to protect pedestrian safety. Project impacts related to pedestrian facilities could be potentially significant. Mitigation measure MM-TR-1 includes a measure to require the contractor(s) to coordinate with Metro and LADOT to address the relocation of the bus stops, as well as require safety precautions for pedestrian and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate. As with the proposed Project, with implementation of mitigation measure MM-TR-1, the impacts of the proposed Project on bus routes, bicyclist and pedestrians would be reduced to a ***less than significant after mitigation.***

6.6.3 Alternative 3: Two-Phased Construction

6.6.3.1 Air Quality

Implementation of Alternative 3 would divert the same amount of wastewater from the North Hollywood area to DCTWRP and would have the same Project components as in the currently proposed Project but would be phased to delay construction of the two lower volume diversions and pump stations, which would lessen daily construction emissions. As with the proposed Project, construction of Alternative 3 would not conflict with or obstruct implementation of the applicable air quality plan, would not expose sensitive receptors to substantial pollutant

concentrations, is not anticipated to result in a CO hotspot, and would not result in other emissions such as those leading to odors adversely affecting a substantial number of people. Similar to the proposed Project, these impacts associated with Alternative 3 would be less than significant.

Based on the comparative differences in construction intensity, the totals of construction emissions from Alternative 3 compared to the proposed Project would be approximately:

For NO_x, 10-20 percent less than that associated with the proposed Project, depending on the construction year, which would still exceed the peak daily threshold and remain **significant and unavoidable** after implementation of mitigation measure MM-AQ-1 (see Appendix I).

For PM₁₀, PM_{2.5}, SO_x, CO, and VOC, peak daily emissions would be **less than significant**, similar to the proposed Project. Localized NO₂, PM₁₀, and PM_{2.5} emissions for construction years 2021 and 2022 and localized PM₁₀, and PM_{2.5} for construction years 2023 and 2024 would be **significant and unavoidable** after implementation of mitigation measure MM-AQ-1 (see Appendix I).

Emissions are primarily attributable to combustion exhaust from construction equipment. As such, similar to the proposed Project, Alternative 3 would violate, even after implementation of mitigation measure MM-AQ-1, an air quality standard or contribute substantially to an existing or projected air quality violation; therefore, construction of Alternative 3 would result in **significant and unavoidable** impacts.

6.6.3.2 Cultural Resources and Tribal Cultural Resources

Implementation of Alternative 3 would provide for the same nature and area potentially affected by construction as in the currently proposed Project, with the only difference being in the phasing. As such, construction of Alternative 3 would implement the same mitigation measures and result in the same impacts to cultural and tribal cultural resources as under the proposed Project (i.e., **less than significant after mitigation** for indirect vibration and **significant and unavoidable** even with mitigation for unknown archaeological, paleontological and tribal cultural resources), as described in Section 3.2 for the proposed Project.

6.6.3.3 Greenhouse Gases and Energy

Implementation of Alternative 3 would extend the construction period to approximately 42 months but would have the same construction and operations as the proposed Project, with the only difference being in the phasing. As such, construction of Alternative 3 would have the same GHG and energy impacts as under the proposed Project (i.e., **less than significant**), as described in Section 3.3 for the proposed Project.

6.6.3.4 Hazards and Hazardous Materials

Implementation of Alternative 3 would provide for the same nature and area potentially affected by construction as in the currently proposed Project, with the only difference being in the phasing. As such, construction of Alternative 3 would implement the same mitigation and result in the same impacts to hazards and hazardous materials as under the proposed Project (i.e., **less than significant** and **less than significant after mitigation**) as described in Section 3.4 for the proposed Project.

6.6.3.5 Noise and Vibration

Implementation of Alternative 3 would provide for the same nature and area potentially affected by construction as in the currently proposed Project, with the only difference being in the phasing. As such, construction of Alternative 3 would implement the same mitigation measures and result in the same impacts to noise and vibration as under the proposed Project (i.e., **less than significant after mitigation** for indirect vibration and **significant and unavoidable** even with mitigation for noise associated with human annoyance), as described in Section 3.5 for the proposed Project.

6.6.3.6 Transportation and Traffic

Implementation of Alternative 3 would provide for the same nature and area potentially affected by construction as in the currently proposed Project, with the only difference being in the phasing. The phasing could mean slightly fewer intersection impacts at one time compared to those of proposed Project. As impacts would be similar, construction of Alternative 3 would implement the same mitigation measures and result in the same (but possibly less intense) impacts to transportation and traffic (including emergency access, transit, bicyclist and pedestrian impacts) as under the proposed Project (i.e., **less than significant after mitigation** for emergency access, transit, bicyclist and pedestrian impacts and **significant and unavoidable** even with mitigation for traffic circulation), as described in Section 3.6 for the proposed Project.

As such, implementation of Alternative 3 would not avoid or substantially reduce the significant construction traffic impacts of the proposed project.

6.7 Summary Comparison of Alternatives

Based on the detailed description provided above of the potential impacts associated with each alternative, a comparative summary of the environmental impacts under each alternative with the environmental impacts associated with the proposed Project is provided in Table 6-2. Pursuant to Section 15126.6(c) of the State CEQA Guidelines, the analysis below addresses the ability of the alternatives to “avoid or substantially lessen one or more of the significant effects” of the proposed Project.

Table 6-2: Comparison of Impacts Associated with the Alternatives and Impacts of the Proposed Project

Impact by Resource Area	Proposed Project Impact ¹	Alternative 1: No Project	Alternative 2: Oxnard Alignment ¹	Alternative 3: Two-Phased Construction ¹
Air Quality				
Impact 1: Conflict/obstruct with implementation of an air quality plan?	Less than Significant	No Impact	Less than Significant	Less than Significant
Impact 2: Violate or contribute to a violation an air quality standard?	Significant and Unavoidable for localized NO ₂ , PM ₁₀ , and PM _{2.5} emissions for construction years 2021 and 2022 and localized PM ₁₀ , and PM _{2.5} for construction year 2023 even with mitigation. The air quality impact in	No Impact	Significant and Unavoidable (emissions comparable to those of proposed Project)	Significant and Unavoidable (emissions less but comparable to those of proposed Project)

Table 6-2: Comparison of Impacts Associated with the Alternatives and Impacts of the Proposed Project

Impact by Resource Area	Proposed Project Impact ¹	Alternative 1: No Project	Alternative 2: Oxnard Alignment ¹	Alternative 3: Two-Phased Construction ¹
	2023 for localized NO ₂ construction impacts would be reduced to less than significant with mitigation.			
Impact 3: Expose sensitive receptors to substantial pollutant concentrations?	Less than Significant	No Impact	Less than Significant	Less than Significant
Impact 4: Result in other emissions (i.e., odors) that would adversely affect a substantial number of people?	Less than Significant	No Impact	Less than Significant	Less than Significant
Cultural Resources and Tribal Cultural Resources				
Impact 1: Cause substantial adverse change in the significance of an unknown historical resource?	Less than Significant Impact with mitigation (indirect vibration)	No Impact	Less than Significant Impact with mitigation (indirect vibration)	Less than Significant Impact with mitigation (indirect vibration)
Impact 2: Cause substantial adverse change in the significance of an unknown archaeological resource?	Significant and Unavoidable with mitigation	No Impact	Significant and Unavoidable with mitigation	Significant and Unavoidable with mitigation
Impact 3: Directly or indirectly destroy and an unknown or unique paleontological resource or unique geologic feature?	Significant and Unavoidable with mitigation	No Impact	Significant and Unavoidable with mitigation	Significant and Unavoidable with mitigation
Impact 4: Cause a substantial adverse change in the significance of an unknown tribal cultural resource?	Significant and Unavoidable with mitigation	No Impact	Significant and Unavoidable with mitigation	Significant and Unavoidable with mitigation
Greenhouse Gases and Energy				
Impact 1: Generate GHGs (directly or indirectly) that may cause a significant impact on the environment?	Less than Significant	No Impact	Less than Significant	Less than Significant
Impact 2: Conflict with applicable plans, policies or regulations adopted to reduce GHGs?	Less than Significant	No Impact	Less than Significant	Less than Significant
Impact 3: Potential significant impact due to wasteful,	Less than Significant	No Impact	Less than Significant	Less than Significant

Table 6-2: Comparison of Impacts Associated with the Alternatives and Impacts of the Proposed Project

Impact by Resource Area	Proposed Project Impact ¹	Alternative 1: No Project	Alternative 2: Oxnard Alignment ¹	Alternative 3: Two-Phased Construction ¹
inefficient, etc. use of energy resources?				
Impact 4: Conflict of obstruct a state or local plan for renewable energy or energy efficiency?	Less than Significant	No Impact	Less than Significant	Less than Significant
Hazards and Hazardous Materials				
Impact 1: Could create a significant hazard to public or environment through reasonably foreseeable upset or accident?	Less than Significant with mitigation	No impact	Less than Significant with mitigation (not within NPL site so less than proposed Project)	Less than Significant with mitigation
Impact 2: Emit hazardous emissions or handle hazardous materials within one-quarter mile from a school?	Less than Significant with mitigation	No Impact	Less than Significant with mitigation	Less than Significant with mitigation
Impact 3: Site located on hazardous materials site per Government Code Section 65962.5?	Less than Significant	No Impact	Less than Significant with mitigation (not within NPL site so less than proposed Project)	Less than Significant with mitigation
Noise and Vibration				
Impact 1: Would construction generate a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards?	Significant and Unavoidable with mitigation	No Impact	Significant and Unavoidable with mitigation	Significant and Unavoidable with mitigation
Impact 2: Would construction result in the generation of excessive groundborne vibration or groundborne noise levels?	Significant and Unavoidable with mitigation - Human Annoyance Less than Significant with mitigation - Structures	No Impact	Significant and Unavoidable with mitigation - Human Annoyance	Significant and Unavoidable with mitigation - Human Annoyance
Transportation and Traffic				
Impact 1: Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system?	Significant and Unavoidable with mitigation	No Impact	Significant and Unavoidable with mitigation	Significant and Unavoidable with mitigation (slightly fewer intersection impacts at one time compared to those of proposed Project)
Impact 2: Result in inadequate emergency access?	Less than Significant with mitigation	No Impact	Less than Significant with mitigation	Less than Significant with mitigation

Table 6-2: Comparison of Impacts Associated with the Alternatives and Impacts of the Proposed Project

Impact by Resource Area	Proposed Project Impact ¹	Alternative 1: No Project	Alternative 2: Oxnard Alignment ¹	Alternative 3: Two-Phased Construction ¹
Impact 3: Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	Less than Significant with mitigation	No Impact	Less than Significant with mitigation	Less than Significant with mitigation

Source: CDM Smith, 2019.

¹ All impacts are after mitigation (all build alternatives are assumed to require the same mitigation as the proposed Project).

Table 6-3 ranks the alternatives on the basis of a comparison of their environmental impacts with those of the proposed Project. The ranking is based on the significance determinations for each resource area for the proposed Project, as discussed in Chapter 3 and the qualitative analysis of the alternatives provided above and reflects differences in the levels of impact among alternatives. This ranking also takes into consideration the number of impacts that remain significant after mitigation and the relative intensity of impacts. As shown in Table 6-3, Alternative 1 (the No Project Alternative) would have fewer significant impacts than the proposed Project or Alternatives 2 and 3. Of the build alternatives, Alternative 3 would have reduced significant impacts than the proposed Project.

Table 6-3: Comparison of Alternatives to the Proposed Project

Environmental Resource Area*	Alt 1: No Project	Alt 2: Oxnard	Alt 3: Two-Phased
Air Quality			
Construction	-2	0	-1
Cultural Resources and Tribal Cultural Resources			
Construction	-2	0	0
Greenhouse Gases and Energy			
Construction and Operation	-1	1	0
Hazards and Hazardous Materials			
Construction	-2	-1	0
Noise and Vibration			
Construction	-2	1	0
Transportation and Traffic			
Construction	-2	1	-1
Total	-11	2	-2

Notes: The analysis includes project-level impacts, not cumulative effects.

(-2) = Impact considered to be substantially less when compared with the proposed Project.

(-1) = Impact considered to be somewhat less when compared with the proposed Project.

(0) = Impact considered to be equal to the proposed Project.

(1) = Impact considered to be somewhat greater when compared with the proposed Project.

(2) = Impact considered to be substantially greater when compared with the proposed Project.

(in some cases, there are differences at the individual impact level, such as differences in number of impacts or relative intensity)

6.8 Environmentally Superior Alternative

Section 15126.6(e)(2) of the State CEQA Guidelines indicates that an analysis of alternatives to a proposed project shall identify an environmentally superior alternative among the alternatives evaluated in an EIR. The State CEQA Guidelines also state that should it be determined that the No Project Alternative is the environmentally superior alternative, the EIR shall identify another environmentally superior alternative among the remaining alternatives. With respect to identifying an environmentally superior alternative among those analyzed in this EIR, the range of alternatives includes Alternative 1 - No Project, Alternative 2 - Oxnard Alignment, and Alternative 3 - Two-Phased Construction.

Based on the above comparison of environmental impacts associated with each alternative, the No Project Alternative would avoid all the construction-related impacts of the proposed Project and is therefore environmentally superior to the build alternatives. Of the build alternatives, Alternative 3 - Two-Phased Construction is considered to be the environmentally superior alternative as it would slight lessen the significant impacts to air quality and potentially traffic circulation that would otherwise occur under the proposed Project. However, Alternative 3 would extend construction impacts by constructing the Vineland and Laurel Canyon pump stations/diversions and connecting sewers at a later date and would still not lower impacts to air quality and traffic to a less than significant level compared to the proposed Project.

Chapter 7

Other CEQA Considerations

7.1 Introduction

Pursuant to Sections 15130 and 15126.2 of the State CEQA Guidelines, this chapter identifies significant environmental effects which cannot be avoided if the proposed Project is implemented and describes significant irreversible environmental changes and growth-inducing impacts.

7.2 Significant Unavoidable Impacts

Based on the detailed analysis provided in Sections 3.1 through 3.6 and Chapter 5, Cumulative Impacts Analysis of this Draft EIR, the proposed Project would result in the following significant and unavoidable impacts during construction of the Project:

- **Air Quality**

- **Construction** – Construction of the proposed Project would result in significant impacts for regional NO_x emissions in all construction years, as well as localized NO₂, PM₁₀, and PM_{2.5} emissions for construction years 2021 and 2022 and localized PM₁₀, and PM_{2.5} for construction year 2023 after implementation of mitigation measure MM-AQ-1, which would serve to reduce air pollutant emission, but not to a less than significant level. Emissions are primarily attributable to combustion exhaust from construction equipment. There are no other feasible means to mitigate the emissions. As such, the proposed Project would violate an air quality standard or contribute substantially to an existing or projected air quality violation; therefore, construction of the proposed Project would result in ***significant and unavoidable*** impacts.
- **Cumulative Impacts – Construction** – Several large related-projects in the vicinity of the proposed Project could be constructed concurrently. Construction of these related-projects are likely to generate criteria pollutants that exceed the SCAQMD’s significance thresholds, and thus, the related-projects would result in a significant cumulative impact to air quality during construction. With implementation of mitigation measure MM-AQ-1, construction emission would be reduced; however, emissions would still exceed the SCAQMD’s regional NO_x emission threshold, as well as the LST thresholds for PM₁₀, PM_{2.5}, and NO₂ emissions. Construction of the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact to air quality after mitigation measure MM-AQ-1, which would be ***significant and unavoidable***.

- **Cultural Resources and Tribal Cultural Resources**

- **Construction** – Construction of the proposed Project has the potential to encounter unknown archaeological resources, which would be considered to be significant. Mitigation measures MM-CR-2 and MM-CR-3 would be implemented; however, potentially ***significant and unavoidable*** impacts to archaeological resources from the

Project excavation would remain. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.

- Construction of the proposed Project has the potential to encounter unknown paleontological resources at deep excavation locations that can extend down into older Quaternary Alluvium (Tujunga Wash microtunnel, Kester Avenue microtunnel, and EVIS junction), would be considered to be significant. Mitigation measures MM-CR-2 and MM-CR-4 would be implemented; however, potentially ***significant and unavoidable*** impacts to paleontological resources from the Project excavation would remain. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.
- The Gabrieleño Band of Mission Indians – Kizh Nation identified the potential for a Project impact on tribal cultural resources in the Project area. Construction of the proposed Project has the potential to cause a substantial adverse change in the significance of a tribal cultural resource, as either a site, feature, place, or 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, which would be a potentially ***significant and unavoidable*** impact, even after implementation of mitigation measure MM-CR-5. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.
- **Cumulative Impacts – Construction** – As the other related-projects would be located in the San Fernando Valley and could be located near historic waterways and areas of past Native American activities (including village sites, trade routes, etc.), the related projects could also adversely affect such resources; therefore, construction of the related-projects could result significant cumulative impacts to tribal cultural resources. Even with implementation of mitigation measure MM-CR-5, the proposed Project’s contribution to a significant cumulative impact to tribal cultural resources with cultural value to a California Native American tribe could be cumulatively considerable, which would be ***significant and unavoidable***.
- **Noise and Vibration**
 - **Construction** – Construction of the force main and related Project elements in Victory Boulevard would result in temporary elevated noise levels during construction. Even with implementation of mitigation measure MM-NV-1, construction noise impacts would be ***significant and unavoidable***. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.
 - Construction of the force main and related Project elements in Victory Boulevard would result in increased vibration levels during construction, in particular pavement breaking, drilling, and truck loading. The increases in vibration levels on nearby sensitive receptors or structures could exceed the vibration significance thresholds (for annoyance and/or architectural damage). Mitigation measure MM-MV-2 would reduce potential vibration impacts to structures to a less than significant level; however, construction vibrations could still exceed the significance threshold for vibration annoyance at some sensitive

receptors after mitigation, which is considered **significant and unavoidable**. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.

- **Cumulative Impacts – Construction** – Related-projects could occur close to the Project site, which could result in additive noise level increases relative to ambient levels at nearby noise sensitive receptors and structures. Mitigation measure MM-MV-2 would reduce potential vibration impacts to structures to a less than significant level; however, construction vibrations could still exceed the significance threshold for vibration annoyance at some sensitive receptors after mitigation, which would still be **significant and unavoidable**; therefore, construction of the proposed Project could make a cumulative considerable contribution to a significant cumulative vibration impact.
- **Transportation and Traffic**
 - **Construction:** Construction of the proposed Project would reduce the level of service at study intersections and segments beyond LOS thresholds, and therefore would make a temporary but **significant and unavoidable** impact even after implementation of mitigation measure MM-TRA-1. In addition, some drivers are likely to voluntarily divert to other streets as alternative travel routes to Victory Boulevard during construction. Although temporary, there is a potential that rerouted traffic would reduce the LOS on other streets in the Project area, which could also be significant and unavoidable. There are no other feasible means to mitigate the potential impact associated with construction of the proposed Project.
 - **Cumulative Impacts – Construction** – Various related-projects are expected to require construction within the streets in the Project area that would overlap with Project construction. These related-projects can result in temporary reductions in transportation system capacity, which can in turn can cause levels of service to temporarily fall below acceptable levels. As a consequence, construction of the related-projects can result in significant temporary cumulative impacts to the transportation system. Construction of the proposed Project would overlap with construction of the related-projects, which would result in reduced capacity along Victory Boulevard segments and intersections. In addition, there is a potential that rerouted traffic associated with the combined related-projects and proposed Project would reduce the LOS on other streets in the Project area such that although temporary could be significant. As a consequence, construction of the proposed Project would make a temporary **significant and unavoidable** impact; therefore, a cumulative considerable contribution to a significant cumulative traffic impact could occur.

7.3 Significant Irreversible Environmental Effects

An evaluation of significant irreversible environmental effects that would be caused by implementation of the proposed Project is required under State CEQA Guidelines Section 15126.2(c). As indicated in Section 15126.2(c):

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The environmental effects related to the implementation of the proposed Project are discussed in Chapters 3 and 5 of this Draft EIR. The Project site is located within the public right-of-way. The proposed Project would not result in a new commitment of land. However, implementation of the proposed project would require the short-term commitment of resources such aggregate (sand and gravel), metals (e.g., steel, copper, lead), and petrochemical construction materials (e.g., plastics). This would represent the loss of renewable, and non-renewable resources that are generally not retrievable.

Construction and operation of the proposed Project would also require energy resources such as electricity, natural gas, and various transportation-related fuels. This would represent the loss of non-renewable resources, which are generally not retrievable. Non-renewable resources, such as natural gas, petroleum products, asphalt, petrochemical construction materials, steel, copper, and other metals, rock, and sand and gravel are considered to be commodities that are available in a finite supply. The processes that created these resources occur over a long period. Therefore, replacement of these resources would not occur over the life of the Project. To varying degrees, the aforementioned materials are all readily available and some materials, such as asphalt or sand, and gravel, are abundant. Other commodities, such as metals, natural gas, and petroleum products, are also readily available, but they are finite in supply, given the length of time required by the natural process to create them.

The demand for all such resources is expected to increase regardless of whether or not the Project is developed. SCAG forecasts that the population of Southern California will increase 14 percent between 2016 and 2040.¹ These increases in population would directly result in the need for more public, commercial, and residential facilities in order to provide the needed services associated with this growth. If not consumed by this Project, these resources would likely be committed to other projects in the region intended to meet this anticipated growth. Therefore, the proposed Project would not increase energy consumption above what population growth itself would do. No increases in inefficiencies or unnecessary energy consumption are expected to occur as a direct or indirect consequence of the proposed Project. Further, since the proposed Project would facilitate increased recycled water production that would lessen the need to import water, the proposed Project would also result in a commensurate reduction in energy consumption that would have been required to import that water.

¹Southern California Association of Governments (SCAG). 2016. *2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS) Final Growth Forecast by Jurisdiction*. Available: http://www.scag.ca.gov/Documents/2016_2040RTPSCS_FinalGrowthForecastbyJurisdiction.pdf

7.4 Growth-Inducing Impacts

State CEQA Guidelines, Section 15126.2(e) requires the discussion of the ways in which the proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. This includes ways in which the proposed Project would remove obstacles to population growth or trigger the construction of new public service facilities or infrastructure that could cause significant effects. As discussed below, the proposed Project serves an existing need to divert additional wastewater to DCTWRP to increase the production of recycled water. This would serve an existing City need to increase the production and use of recycled water in the City to help address concerns over the long-term reliability of imported water and would not induce population growth in the area.

7.4.1 Direct Growth-Inducing Impacts

A project would directly induce growth if it would remove barriers to population growth (e.g., a change to a General Plan and Zoning Ordinance that allowed new residential development to occur) or if it would result in economic growth that triggers an increase in population and housing through new housing construction and/or an influx of workers from outside the region.

The proposed Project is a sewer line that would divert and convey wastewater from the eastern portions of the San Fernando Valley to the DCTWRP to generate recycled water. The proposed Project does not include the development of new housing or population-generating uses or infrastructure that would directly encourage such uses. The proposed Project is considered an infrastructure project that supports the City's General Plan and population. The population growth within the City anticipated by the General Plan necessitates water supply reliability, and it is the City's goal to increase the use of recycled water to reduce reliance on imported water supplies. The proposed Project would not extend public service infrastructure into new areas or eliminate or change a regulatory obstacle that could result in new population growth.

The proposed Project would create new short-term employment opportunities. During project construction, design, engineering, and construction-related jobs would be created. This would be a temporary situation, lasting until Project construction is completed. Short-term construction impacts would directly affect employment in the area. However, short-term employees would likely come from the existing large labor pool within the Los Angeles area and would not result in new workers relocating to the area. Maintenance of the sewer after completion of the proposed Project would be performed by City operation and maintenance employees and would not require additional staffing. Therefore, no significant increase in population and housing would be triggered by implementation of the proposed Project. The proposed Project would not result in a significant growth in population in the vicinity of the Project site.

7.4.2 Indirect Growth-Inducing Impacts

A project would indirectly induce growth if it would foster economic or population-expanding activities, which would lead to further development that taxes existing facilities and eventually requires construction of new facilities (e.g., an increase in population as a result of development authorized by approval of a general plan).

Construction activities under the proposed Project would generate numerous temporary jobs over the 30-month construction period. The proposed Project would not involve development of

housing and would not result in substantial direct increases in employment in the regional workforce, the proposed Project would not have any significant effects on population growth that would tax existing facilities or require the construction of new facilities.

Construction of the proposed Project could indirectly increase earnings to firms and households throughout the region. For example, indirect effects from short-term construction incrementally increase activity in nearby retail establishments as a result of workers patronizing local establishments. While the increase in spending may contribute to the expansion of existing businesses or creation of new businesses, this growth would occur in a highly urbanized area with a large and integrated economy and local workforce. Therefore, overall, the proposed Project would not generate significant indirect growth-inducing impacts.

7.5 Effects Not Found to Be Significant

Section 15128 of the State CEQA Guidelines states that an EIR shall contain a brief statement indicating reasons that various possible significant effects of a project were determined not to be significant and, therefore, were not discussed in detail in the EIR. A NOP was prepared for the proposed Project and is included in Appendix A of this Draft EIR. The NOP provides a detailed discussion of potential environmental impact areas and identifies both the topics to be addressed in the EIR as well as those topics that were determined to not require analysis in the EIR, for the reasons explained therein. In the NOP, the City determined that impacts of the proposed Project would be less than significant for following resource areas: aesthetics, agricultural and forestry resources, biological resources, geology and soils, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, and utilities and service system.

Chapter 8

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Chapter 9

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Chapter 10

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
A.D.	anno Domini ('in the year of our Lord')
AB	Assembly Bill
ADT	average daily traffic
AM	morning
APE	Area of Potential Effect
AQMP	Air Quality Management Plan
BCE	Before Common Era
BP	Before Present
°C	degrees Celsius
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
California Register	California Register of Historical Resources
CalOSHA	California Division of Occupational Safety and Health
Caltrans	State of California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CE	Common or Current or Christian Era
CEQ	Council of Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
CFR	Code of Federal Regulations
CH ₄	Methane
City	City of Los Angeles
CMP	Congestion Management Program
CNEL	community equivalent noise level

CNRA	California Natural Resources Agency
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	Carbon dioxide equivalent
Cortese	Hazardous Waste and Substances Site
CRHR	California Register of Historic Places
CVC	California Vehicle Code
dB	decibel
dBA	A-weighted sound levels in decibels
DCTWRP	Donald C. Tillman Water Reclamation Plant
DIP	ductile iron pipe
DTSC	California Department of Toxic Substances Control
EIR	Environmental Impact Report
EO	Executive Order
EPCRA	Emergency Planning and Community Right to Know Act
EVIS	East Valley Interceptor Sewer
EWVIS	East West Valley Interceptor Sewer
°F	degrees Fahrenheit
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GCC	global climate change
GHG	greenhouse gas
GWP	global warming potential
H ₂ S	hydrogen sulfide
H&SC	California Health & Safety Code
HCM	Los Angeles Historical-Cultural Monument
HFC	hydrofluorocarbon
HTP	Hyperion Treatment Plant
Hz	Hertz
I-405	San Diego Freeway/Interstate 405
IS	Initial Study
IPCC	United Nations Intergovernmental Panel on Climate Change
IWG	Interagency Working Group
LABOE	Los Angeles Bureau of Engineering

LACM	Museum of Natural History of Los Angeles County
LADOT	Los Angeles Department of Transportation
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAMC	Los Angeles Municipal Code
LASAN	City of Los Angeles Bureau of Sanitation
lbs/day	pounds per day
LCFS	Low Carbon Fuel Standard
Leq	equivalent noise level
LEV	low emission vehicle
Lmax	maximum sound level
Lmin	minimum sound level
LOS	level of service
LST	local significance threshold
LTN	long-term noise measurement locations
LUST	leaking underground storage tank
MD	mid day
MGD	million gallons per day
mpg	miles per gallon
MT	metric tons
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List (Federal Superfund Sites)
NRHP or National Register	National Register of Historic Places
O ₃	Ozone
OHP	Office of Historic Preservation
OPR	California Governor's Office of Planning & Research

OSHA	Occupational Safety and Health Administration
Pb	Lead
PCE	tetrachloroethylene
PEA	USEPA's Programmatic Environmental Assessment for the WIFIA Program
PFC	perfluorocarbon
PM	late afternoon
PM _{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter (fine PM)
PM ₁₀	particulate matter less than 10 microns in aerodynamic diameter
Ppb	parts per billion
Ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
RCNM	FHWA's Roadway Construction Noise Model
RCRA	Resource Conservation and Recovery Act
RMS	root mean square
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCAB	Southern California Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SF ₆	sulfur hexafluoride
SFB	San Fernando Valley Groundwater Basin
SIP	State Implementation Plan
SO _x	sulfur oxide
SO ₂	sulfur dioxide
SR-170	State Route-170
SRA	sensitive receptor area
SRF	Clean Water State Revolving Fund Program

SSRP	Secondary Sewer Renewal Program
STN	short-term noise measurement location
STV	short-term vibration measurement location
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TCE	trichloroethylene
TIS	Traffic Impact Study
TNM	FHWA's traffic noise prediction model
UNFCCC	United Nations Framework Convention on Climate Change
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
V/C	volume-to-capacity
VdB	vibration decibel units
VDECS	CARB-verified diesel emission control strategies
VOC	volatile organic compound
VORS	Valley Outfall Relief Sewer
VSR	vibration sensitive receptors
WIFIA	USEPA's Water Infrastructure Finance and Innovation Act
ZEV	zero emission vehicle
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter

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