Initial Study/Mitigated Negative Declaration

City Trunk Line North Project

Los Angeles Department of Water and Power
Environmental Affairs
111 North Hope Street, Room 1044
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CEQA Initial Study and Mitigated Negative Declaration

City Trunk Line North Project

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ACRONYMS AND ABBREVIATIONS

AQMP	Air Quality Management Plan
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CRHR	California Register of Historical Resources
CRMMP	cultural resources monitoring and mitigation plan
CTLN	City Trunk Line North
CTLS	City Trunk Line South
CWA	Clean Water Act
CWC	California Water Code
EIR	Environmental Impact Report
ERDIP	earthquake resistant ductile iron pipe
GHG	greenhouse gas emissions
HRI	California State Historic Resources Inventory
LADOT	City of Los Angeles Department of Transportation
LACTL	Los Angeles City Trunk Line
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAHCM	Los Angeles Historic-Cultural Monuments
LAPD	Los Angeles Police Department
MBTA	Migratory Bird Treaty Act
MRZ	Mineral Resource Zone
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
Pb	lead
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PM_{10}	particulate matter 10 microns in diameter or less
RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SO_2	sulfur dioxide
SWPPP	Storm Water Pollution Prevention Plan
TAC	toxic air contaminant
USACE	U.S. Army Corps of Engineers

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SECTION 1
PROJECT DESCRIPTION

1.1 Overview of the Project

The Los Angeles Department of Water and Power (LADWP) proposes to replace the northern extent of the existing Los Angeles City Trunk Line (LACTL) with approximately 33,000 linear feet of 54-inch-diameter trunk line (the City Trunk Line North [CTLN] Project, also referred to herein as the project or proposed project). The CTLN would originate at the LADWP Van Norman Complex in the Granada Hills community of Los Angeles and terminate adjacent to the LADWP Tujunga Spreading Grounds in the Sun Valley community of Los Angeles, where it would connect to the existing City Trunk Line South (CTLS).

1.2 California Environmental Quality Act

The California Environmental Quality Act (CEQA) applies to proposed projects initiated by, funded by, or requiring discretionary approvals from state or local government agencies. The proposed CTLN constitutes a project as defined by CEQA (California Public Resources Code Section 21000 et seq.). The CEQA Guidelines Section 15367 states that a lead agency is "the public agency which has the principal responsibility for carrying out or approving a project." Therefore, as a municipal utility with discretionary approval authority for the CTLN Project, LADWP is the lead agency responsible for compliance with CEQA for the project.

As CEQA lead agency for the CTLN Project, LADWP must complete an environmental review to determine if implementation of the project would result in significant adverse environmental impacts. To fulfill this purpose of CEQA, an Initial Study has been prepared to assist in such a determination. Based on the nature and scope of the proposed project and the evaluation included in the Initial Study environmental checklist (contained in Section 3 of this document), LADWP has concluded that a Mitigated Negative Declaration (MND) is the proper level of environmental documentation for this project. The Initial Study shows that impacts caused by the proposed project are either less than significant or significant but mitigable to a less than significant level with the incorporation of appropriate mitigation measures as defined herein. This conclusion is supported by CEQA Guidelines Section 15070, which states that an MND can be prepared when:

> *(a) the initial study shows that there is not substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or (b) the initial study identifies potentially significant effects, but (1) revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and (2) there is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.*

1.3 Project Location and Setting

The proposed project would be located in the northeastern portion of Los Angeles (Figure 1). The new trunk line would originate at the LADWP Van Norman Complex in Sylmar and terminate adjacent to the Tujunga Spreading Grounds in Sun Valley. The trunk line alignment generally extends north from Tujunga Spreading Grounds along Canterbury Avenue until Branford Street. At Branford Street, the trunk line alignment would be realigned east to Arleta Avenue and then continue north to Brand Boulevard. The trunk line would then be routed west along Brand Boulevard and San Fernando Mission Boulevard to Stranwood Avenue, continuing northwest on Stranwood Avenue into the LADWP-owned Van Norman Complex property.

1.4 Project Background

The original LACTL was installed in 1914 to serve the City of Los Angeles with water delivered by the Los Angeles Aqueduct to the Lower San Fernando Reservoir (later renamed the Lower Van Norman Reservoir), located in what is now the Van Norman Complex. The LACTL traversed the eastern San Fernando Valley from the reservoir to the Santa Monica Mountains, providing direct supply to areas of the eastern Valley as well as functioning as a primary transmission conduit for water for central areas of the City through connections to the Franklin Reservoir Tunnel and, later, the North Hollywood Pump Station. The portions of the LACTL from Tujunga Spreading Grounds to the Franklin Reservoir Tunnel have been or are in the process of being replaced under the CTLS Project.

The portion of the LACTL that would be replaced by the CTLN is a 72-inch-diameter riveted steel pipeline, which, at over 100 years in age, has severely corroded. Since 2000, it has experienced numerous leaks and ruptures, including a major collapse of approximately 400 feet of the pipeline within the Van Norman Complex. With the completion in 2012 of the new Sepulveda Trunk Line and Parthenia Trunk Line, as well Units 1 and 2 of the CTLS, trunk line supply pathways were established to bypass the northern portion of the LACTL. However, in order to maintain supplies to the service areas adjacent to the northern portion of the LACTL, it was converted to function as a distribution mainline, fed with restricted supplies from the Van Norman Complex on the north and Tujunga Pump Station on the south. This has reduced the operating pressure on the line and, thus, minimized the potential for leaks and ruptures (Figure 2).

Nonetheless, even functioning as a distribution mainline, this northern portion of the LACTL is reaching the end of its service life. Therefore, to avoid further leaks and ruptures and the associated loss of service and potential damage created, it must be replaced. As mentioned above, the Sepulveda and Parthenia trunk lines now provide a connection from the Van Norman Complex to the CTLS to deliver water to areas of the City to the south, but the proposed CTLN is required to continue to reliably provide water to the communities currently served by the northern portion of the LACTL.

In addition to this requirement for direct water supply to adjacent communities, seismic evaluations have indicated that the Sepulveda Trunk Line, which is located west of the LACTL, is crossed by several active earthquake faults that traverse the northeast San Fernando Valley. The relatively large surface displacements that could be created by these faults have the potential to cause severe damage or rupture to the Sepulveda Trunk Line, resulting in the possibly loss of service to areas of the City. Therefore, replacing the LACTL

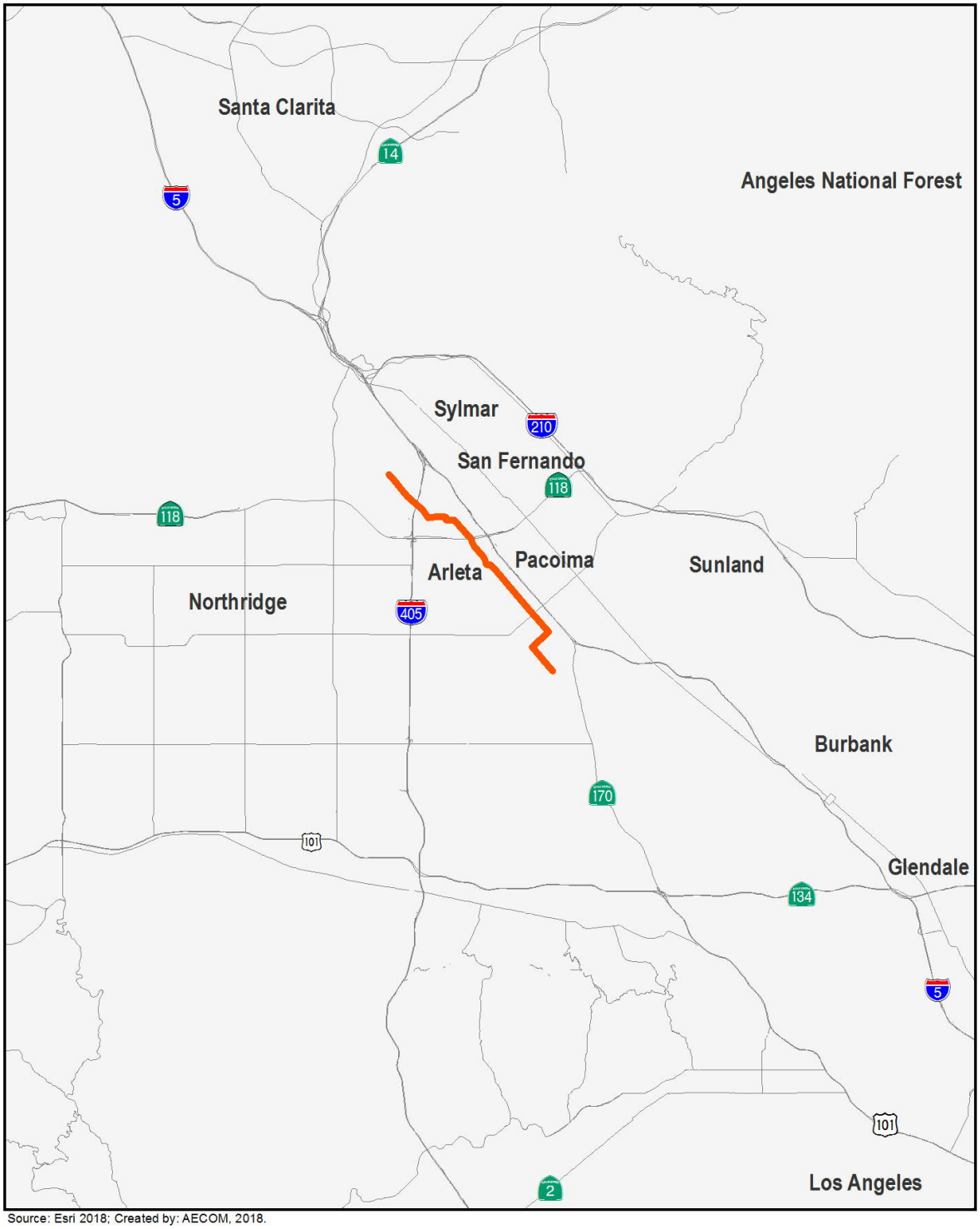

Figure 1
Regional Map

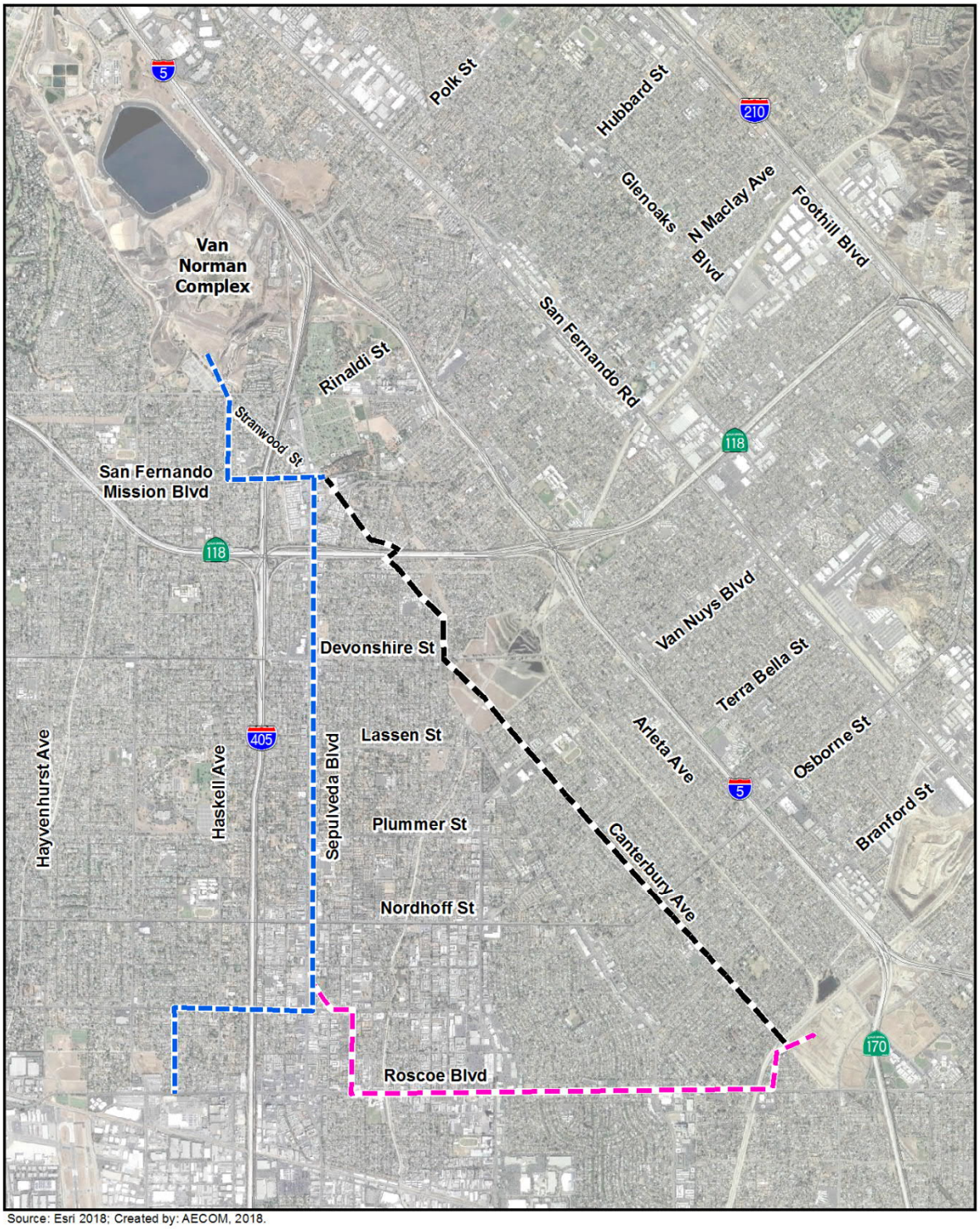

Figure 2
Existing Trunk Lines in Project Vicinity

with the 54-inch-diameter CTLN (rather than a 36-inch-diameter mainline that would be required for local distribution purposes) would provide trunk line system redundancy and resilience to help maintain service resulting from potential damage to one or more trunk lines during seismic events.

1.5 Project Objectives

The objectives of the project are to: 1) replace the existing LACTL from the Van Norman Complex to the connection with CTLS Unit 1; and 2) increase reliability and resiliency to the Los Angeles Reservoir service area.

1.6 Description of the Proposed Project

Proposed CTLN Route

The proposed route for the CTLN is depicted in Figure 3. It would originate at the northern end within the Van Norman Complex, where it would follow the alignment of the existing LACTL. The CTLN installation in the Van Norman Complex would be achieved by traditional open trench construction methods. This would entail removing the aboveground segment of the LACTL, excavating a trench approximately 10 feet in width and approximately 12 to 15 feet in depth, placing pipeline sections of nominally 40 feet in length in the trench, and backfilling the trench.

After leaving the Van Norman Complex, the route of the CTLN would continue to follow the existing LACTL alignment southeast along Stranwood Avenue between Rinaldi Street and San Fernando Mission Boulevard. Because it would follow the LACTL, this segment of the CTLN would be installed via a “slip-lining method” involving the placement of the new 54-inch-diameter CTLN (the “carrier” pipe) within the larger 72-inch-diameter LACTL (the “host” pipe). Launching and receiving pits would be excavated at generally widespread locations, depending on the straightness of the alignment, from which the CTLN pipe sections would be fed through the LACTL. The slip-lining method of pipeline installation reduces the extent of surface disruption when compared to open-trench construction. The slip-lining segment would include the region beneath the San Diego Freeway (I-405). This would require several launching/receiving pits excavated within the roadway but would not involve disturbance of most of the street surface in this segment.

Once reaching San Fernando Mission Boulevard, the CTLN route would diverge from the LACTL alignment, proceeding east along San Fernando Mission Boulevard and Brand Boulevard, southeast along Arleta Avenue, and southwest along Branford Street to Canterbury Avenue. Within this portion of the route, which would constitute the majority of the CTLN at about 27,000 feet, the pipeline would be installed entirely via open-trench construction because no host pipe (i.e., the existing LACTL) would be available to accommodate slip-lining. At major intersections, freeway underpasses, and flood-control channel crossings within this portion of the route, a jack and bore method would be employed, which involves installing the pipeline at greater depths from a launching pit and to a receiving pit, thus avoiding surface disruption between the pits.

Source: Esri 2018; Created by: AECOM, 2018.

Figure 3
Proposed Project

Once reaching Canterbury Avenue at Branford Street, the CTLN route would again follow the alignment of the existing LACTL to the southeast, and, therefore, it would be installed via the slip-lining method until reaching the Tujunga Spreading Grounds, where it would connect to the existing CTLS. This would require several launching/receiving pits but not excavation along most of the roadway in this segment.

Route Selection

The above described route was determined based on several factors, including trunk line system operations, the requirement to maintain adequate water service to the communities currently served by the LACTL, constructability considerations, and trunk line system resilience.

In order to establish the linkage within the trunk line system to functionally replace the northern portion of the LACTL and thereby serve as a transmission conduit for water to areas of the City south of the San Fernando Valley, the CTLN must originate at the Van Norman Complex on the north and connect to the CTLS adjacent to Tujunga Spreading Grounds on the south. However, in addition to providing a connection between these ends points, in order to continue to provide direct supply to the communities currently served by the LACTL, the CTLN must also be located centrally within the existing service area. These two factors established the primary parameters for the proposed route for the CTLN.

Where feasible, slip-lining is a preferred method for trunk line replacement compared to open-trench construction based on cost, time of installation, decreased conflicts with sub-structures, maintaining existing service alignments and connections, and reducing surface disruptions along the pipeline route. Therefore, slip-lining is proposed for the CTLN at the northern end of the proposed route, within the Van Norman Complex (except where the LACTL is currently exposed aboveground) and along Stranwood Avenue between Rinaldi Street and San Fernando Mission Boulevard, where the LACTL is located beneath and is accessible from existing roadways.

However, because the LACTL was built over 100 years ago, at a time when the San Fernando Valley was largely undeveloped, the pipeline alignment does not always follow existing roadways. This is the case for approximately 1 mile south of Stranwood Avenue, between San Fernando Mission Boulevard and San Jose Street, where the LACTL is located beneath existing commercial and residential properties that were developed since the LACTL was originally installed. Therefore, slip-lining, which would require access to the LACTL from launching/receiving pits located within the roadway, is not feasible within this segment, and it is necessary to reroute the CTLN away from the LACTL alignment at San Fernando Mission Boulevard and instead employ an open-trench construction method.

In general, wider roads are preferred for open-trench trunk line installation to minimize direct impacts to residential neighborhoods and allow for ease of access for construction and future maintenance activities. Sepulveda Boulevard is a wide road adjacent to the LACTL near San Fernando Mission Road. However, in addition to the inherent construction conflicts of rerouting the CTLN southerly along Sepulveda Boulevard because of the existing Sepulveda Trunk Line, this alignment would place the proposed CTLN outside the existing LACTL service area. Furthermore, as discussed above, one objective of the CTLN is to provide redundancy and resilience for the trunk line system in the eastern San Fernando Valley, which would not be achieved by routing the CTLN within the same corridor as the Sepulveda Trunk Line. Instead, the proposed project route along Arleta Avenue locates the

CTLN in a wide road while achieving the dual objectives of being located within the existing LACTL service area and providing a redundant trunk line pathway to increase system resilience in the event of potentially damaging seismic events.

South of the intersection of San Jose Street and Woodman Avenue, the LACTL is again located beneath existing roadways or the Pacoima Spreading Grounds until it reaches Tujunga Spreading Grounds. However, the majority of this alignment, between Pacoima Spreading Grounds and Branford Street, has been reserved for the installation of a proposed 42-inch-diameter recycled water pipeline as part of the Los Angeles Groundwater Replenishment Project. This recycled water pipeline had previously been proposed for installation in Arleta Avenue via open-trench construction beginning in 2020. However, its installation has now been deferred to approximately 2030, and its proposed alignment has been relocated to Canterbury Avenue because the material and size of the recycled water pipeline make it better suited for slip-lining within the existing LACTL. Canterbury Avenue, a relatively narrow-width roadway, cannot accommodate both the recycled water pipeline and the CTLN. Therefore, the CTLN would continue southeast along Arleta Avenue until Branford Street, bypassing the proposed alignment of the recycled water pipeline in Canterbury Avenue.

Because the CTLN must connect to the CTLS at the southwest side of Tujunga Spreading Grounds, it would be routed southwest along Branford, turning southeast along Canterbury, which runs along the southwest perimeter of the spreading grounds. Within Canterbury, the CTLN would again follow the LACTL alignment and, therefore, would be slip-lined.

Project Operations

The CTLN would remain pressurized at all times to supply water to the surrounding service area. Connections to various trunk lines would be opened as necessary to support the water transmission system. These functions would not require any additional supplies to the City's drinking water system. With the exception of minor appurtenant facilities that would be located above ground in the public right of way (such as utility cabinets), the CTLN would be located entirely underground and would not be visible. Activities associated with long-term operations and maintenance would be minimal, limited to scheduled maintenance or emergency repair. No additional permanent workforce would be required to operate the CTLN.

1.7 Construction Schedule and Procedures

The CTLN would be built in two units based on the type of pipe material employed. Unit 1 would extend from the Van Norman Complex to the intersection of Arleta Avenue and Terra Bella Street, a distance of approximately 21,000 feet (Figure 4). The proposed CTLN alignment would cross several active earthquake faults within Unit 1. Therefore, it has been determined that earthquake resistant ductile iron pipe (ERDIP) should be utilized to provide resilience during seismic events. ERDIP functions to maintain greater flexibility at the joints between pipe sections such that segments of the pipeline can expand, contract, and move laterally in response to movement of the earth caused by a seismic event, thus minimizing failures.

Source: Esri 2018; Created by: AECOM, 2018.

Proposed Jacking
Proposed Slip Line Pit
Proposed City Trunk Line North - Slip Line Pipe
Proposed City Trunk Line North - 54" Pipe - Open Trench

0 0.5 1 Miles

Figure 4

Proposed Unit 1 of CTLN

Approximately 2,700 feet of Unit 1 would be located within the Van Norman Complex, and the balance would be located with public streets. Based on preliminary estimates, approximately 14,000 feet of Unit 1 would be installed using traditional open-trench construction, approximately 5,000 feet by slip-lining the new pipe within the existing LACTL, and a total of approximately 2,000 feet using a jack and bore method at several sites along the alignment. Regardless of the method of installation, ERDIP would be employed. Based on preliminary schedules, construction on Unit 1 of the CTLN is anticipated to begin in early 2022 and end in late 2028. During this period, only relatively limited portions of the proposed route be would actually be under construction at any given time.

Unit 2 of the CTLN would extend from the intersection of Arleta Avenue and Terra Bella Street to the CTLS in Canterbury Avenue, just west of Tujunga Spreading Grounds, a distance of approximately 11,800 feet (Figure 5). The trunk line would not cross any active earthquake faults within Unit 2. Therefore, although pipe joints would be designed to withstand the applicable seismic loads, ERDIP is not required, and welded steel pipe would be utilized. All of Unit 2 would be located within public streets. Based on preliminary estimates, approximately 7,200 feet of Unit 2 would be installed using traditional open-trench construction, approximately 3,100 feet by slip-lining the new pipe within the existing LACTL, and a total of approximately 1,500 feet using a jack and bore method at several sites along the alignment. Construction on Unit 2 would be initiated before construction on Unit 1. Based on preliminary schedules, construction on Unit 2 is anticipated to begin in mid-2019 and end in mid-2026. As with Unit 1, only relatively limited portions of the proposed route be would actually be under construction at any given time during this period.

Because there would be an approximately 4-year overlap in the construction schedules for Unit 1 and Unit 2, construction within each unit would occur concurrently during this period. However, the zones under construction within each unit at a given time would likely be widely separated. The total construction time for the CTLN project is estimated to be approximately 9 years.

The installation of the CTLN would require the establishment of temporary construction work zones that would occupy traffic lanes, which, depending on the width of the roadway and the type of installation (i.e., open-trench, slip-lining, of jack and bore), would result in partial or complete street closures in the segment under construction.

Open-Trench Construction in Wider Streets

The segment of Branford Street between Canterbury Avenue and Arleta Avenue and the segment of Arleta Avenue between Branford Street and Fox Street are approximately 60-foot wide, four-lane thoroughfares, usually with parking along both sides of the street and a center turning lane. The CTLN installation within these segments would involve open-trench construction, which would occupy several lanes of traffic. At least one travel lane in each direction would be maintained at all times in the portion of the roadway under construction, but on-street parking lanes may be temporarily eliminated during construction.

Within these wider streets, construction work zones may be 1,000 feet or more in length, often delimited by street intersections. These large work zones allow for the continuous installation of the pipeline in longer spans without the requirement to frequently relocate barriers, equipment, and construction support functions and modify traffic control elements, which hampers the pipeline installation process but does not substantially improve the flow of traffic in the vicinity of the construction. In addition to the actual work zones, lane

Source: Esri 2018; Created by: AECOM, 2018.

Proposed Jacking
Proposed Slip Line Pit
Proposed City Trunk Line North - Slip Line Pipe
Proposed City Trunk Line North - 54" Pipe - Open Trench

0 1,500 3,000 Feet

Figure 5
Proposed Unit 2 of CTLN

transition zones of several hundreds of feet would be required extending outward from the work zone to shift approaching traffic to the single travel lane that would be available in each direction adjacent to the work zone.

The actual construction process within these areas would involve several steps. The only variation in this process between the use of ERDIP and welded steel pipe (i.e., between Unit 1 and Unit 2) is that the ERDIP has a bell-and-spigot type gasket joint that is essentially pushed together, while the steel pipe sections must be welded together. This variation would create no appreciable difference in the overall process or schedule for the trunk line installation.

The initial step of the installation would be establishing the construction work zone to allow for the safe and efficient installation of the pipe. This would be accomplished by first installing traffic controls, including restriping of lanes, signage, and traffic signal modifications to merge traffic and direct it around the work zone. K-rail barriers would then be installed around the actual work zone to demarcate the zone and provide a safe working area. Placing the barriers would require the use of a forklift or other means of construction equipment. Mobilization of the work zone would include delivering construction equipment and materials to the site and establishing field offices and other personnel support facilities necessary for construction to proceed.

Once the work zone has been established, subsurface utility exploration would be conducted to verify the vertical and horizontal location of underground utilities that must be avoided, protected, or relocated during the trunk line installation. This would involve using an excavator to remove the pavement and soil to expose the utilities. The pavement over the trench would be stripped using an excavator and a front loader. The pavement would be hauled from the site and either reclaimed for use as paving material or road base material, or it would be taken to a landfill as inert debris that can be recycled for beneficial uses, including as road base for internal landfill use.

Because of the depth of excavation (approximately 12 to 20 feet), shoring to support the walls of the trench would be required to provide a stable and safe working environment. The type of shoring system used would be dependent on soil conditions, but for planning purposes, it is assumed that steel H-beams supporting steel plates would be utilized. Prior to any excavation of the trench, the H-beams would be set as vertical piles along both edges of the trench, appropriately spaced to support the steel plates. The H-beam piles would be installed by either pre-augering holes or by using vibratory piling equipment. Installing the piles would be accomplished using a crane or vibratory piling equipment with various attachments, depending on the method.

The above steps, from traffic control to installing the shoring piles, would be completed before any of the actual pipe installation tasks begin and would take approximately one month for each separate construction work zone.

After the shoring piles are in place, work would begin on installing individual pipe sections, which are nominally 40 feet in length. First, a trench approximately 10 feet wide and 12 to 20 feet deep would be excavated, with the steel shoring plates lowered between the H-beams as the depth of trench increases. The excavated material would be loaded onto trucks parked adjacent to the trench and hauled from the work zone. It is anticipated that all excavated soils would be hauled to a local landfill. After a sufficient length of trench is excavated, a pipe section would be placed in the trench by a lattice-boom crawler crane and joined to the preceding pipe section. The ERDIP would be joined with a bell-and-spigot

gasket joint, and the steel pipes would be joined with a welded joint. Once the pipe joint is complete, cement slurry bedding material would be placed under the newly installed pipe section to secure its position.

The installation of a pipe section as described above would take approximately 5 days, including trench excavation, shoring, pipe segment placement, and pipe joining. However, as two pipe sections are being joined, the work on the succeeding pipe section would be initiated, beginning with the excavation of the trench. In this manner, the work associated with two adjacent pipe sections would overlap by about 2 to 3 days.

Once approximately five pipe sections have been installed, the trench would be backfilled with a cement slurry to below the top of pavement. The cement slurry would be delivered in concrete trucks. The backfilling operation would take approximately 4 days, but it would overlap with the continued installation of pipe sections in the forward segments of the trench. When approximately 15 pipe sections (about 600 feet) have been backfilled, the H-beam shoring piles would be extracted and the pile holes backfilled. This portion of the trench would then be graded and repaved.

In addition to the pipe sections, various appurtenances, such as valves, gages, and maintenance holes, would also be installed as required. The general process for installation of these appurtenances would be similar to the pipe sections and would occur within the designated work zones.

The above described process would be repeated until all the pipe had been installed within the designated construction work zone. The time-frames indicated above are approximate, and unforeseen conditions, such as previously undetected underground utilities, may affect the pace of construction. After completion of the work within a given work zone, equipment, materials, and facilities would be removed from the zone, the pavement would be restored and restriped, and the K-rail barriers would be removed. Depending on the length of the work zone and actual conditions, active construction within an individual work zone may last for approximately 7 to 10 months. The entire process would then be repeated for the next construction work zone, which may or may not be in an adjacent section of the roadway.

As mentioned above, various pieces of construction equipment would be used to accomplish the open-trench installation of the CTLN. These would include equipment such as an excavator, front loader, lattice-boom crawler crane, utility trucks, sweeper, hauling trucks, and generator. These pieces of equipment would not operate continuously during the day and generally would not operate simultaneously.

Trucks would haul debris and excavated material from the site and deliver construction materials to the site. The daily peak of haul truck trips would occur during the excavation of the trench for each pipe section, which may require about 20 dump trucks per day, assuming a 12-cubic yard truck capacity. The daily peak of delivery trucks would occur during the backfilling of the trench with the soil-cement slurry, which may require about 20 concrete trucks per day, assuming a 9-cubic yard truck capacity. The excavation and back-filling operations may occur simultaneously, which would result in a peak of 40 truck trips per day.

The open-trench installation would require approximately 20 construction personnel to complete. Additional supervisory personnel may also be present at times. All personnel vehicle parking would be accommodated within the construction work zone boundaries. In

addition, all materials laydown, equipment parking, and support facilities would also be accommodated within the work zone.

Open-Trench Construction in Narrower Streets

In some segments of the proposed CTLN route where an open-trench installation would be required, the width of the roadway may be too narrow to allow for the retention of traffic lanes during construction. Such areas would include Arleta Avenue north of Fox Street and portions of San Fernando Mission Boulevard between Noble Avenue and Stranwood Avenue. Because of the width of the trench and the required construction access and safety setbacks adjacent to the trench, the roadway would be entirely closed to through traffic in these locations during construction.

However, work in narrower roadways would be completed in smaller segments of several hundred feet, rather than the 1,000-foot or greater work zones that would occur in wider roadways. This would help maintain as much access along the roads, at intersections, and to driveways as possible and allow for a shorter timeframe to complete construction in a given work zone. While through traffic would be prohibited, local access to residences and businesses within the work zone would be maintained throughout construction. When practical, portions of the roadway under construction may also be reopened during non-work hours by removing barriers and placing steel plates over open trenches.

The general construction process for open-trench installation in narrower roadways would be similar to the process described above for wider roadways. That is, the work zone would be established; equipment, materials, and support facilities would be mobilized; subsurface utility exploration would be conducted; shoring piles would be set; excavation, shoring, pipe segment placement and joining, backfilling, and repaving would occur successively along the trench length; and the work zone would be removed and the street restriped as applicable. Even though the individual work zones would be smaller and under construction for a shorter time than in wider roads, because the process is similar, the numbers and types of equipment, truck trips, and personnel on a daily basis would be the same.

Jack and Bore Method

As mentioned above, a jack and bore method would be used to install the CTLN at several types of locations along the open-trench route. These would include crossing beneath large flood control channels, where an open trench would be precluded, and beneath major roadway intersections, where cross-traffic may be heavy and substructures, such as large pipes, may be more common. In addition, the Arleta Avenue underpass of the Ronald Reagan Freeway (SR-118) would not provide the necessary vertical clearance for the operation of an excavator or crane to excavate a trench and to lift and place pipe sections into the trench. Therefore, a jack and bore installation would also be used to pass beneath the freeway.

The jack and bore method entails excavating a launching pit and a smaller receiving pit, spanning the area to be avoided (i.e., intersection, flood control channel, or freeway underpass). The pits would be deeper than the typical trench depth, at 25 feet or greater, depending on conditions. The pits would be accommodated within the trenching construction work zone limits and would not necessitate the closure of additional traffic lanes. Because of the depth of excavation, interlocking, corrugated steel sheet piles would likely be used as shoring material to stabilize the pit walls. After the road pavement has

been stripped, the sheet piles would be installed prior to any excavation using a lattice boom crane and vibration-free hydraulic piling equipment. No impact piling-driving would be involved. After the piles have been installed, the pits would be excavated, and the excavated material would be loaded onto trucks parked adjacent to the pit and hauled from the construction work zone to a local landfill.

The jack and bore process involves the installation of a casing pipe between the launching and receiving pits. The new trunk line would then be placed within the casing pipe. The installation of the casing pipe would require the use of a hydraulic boring machine, which would be located at the bottom of the launching pit. The boring machine would push casing pipe sections forward through the ground towards the receiving pit, while an auger with a cutting head housed inside the casing pipe simultaneously bores into the earth. As each casing pipe section is pushed all the way forward, a new pipe section, also containing an auger, would be lowered into the pit, joined to the previous casing pipe section, and pushed forward by the boring machine. The spoils from boring process would be continuously transported back to the launching pit by the auger and deposited into a receptacle, which would be hoisted to the surface by an excavator and transferred to a dump truck to be hauled off site. Once the casing pipe emerges at the receiving pit, the auger sections would be pulled back to the launching pit, where they would be hoisted out.

After the casing pipe is in place, the new trunk line pipe sections would be pushed through from the launching pit to the receiving pit. Radial spacers would be strapped to the trunk line to maintain clearance between the edges of the casing pipe. Grout would be injected to permanently fill the gap between the casing pipe and trunk line. The boring equipment would be removed and transported from the work zone. There would generally be no more than one jack and bore location within a given trenching work zone.

Connections to the trunk line located in the sections of trench adjacent to the launching and receiving pits would be made, and bedding material would be placed under the newly installed pipe sections in the pits to secure them in position. The shoring piles would be removed, and the pits would be backfilled with soil-cement slurry to below top of pavement. The pits would be repaved during the repaving of the work zone.

Establishing the launching and receiving pits, including shoring, excavation, and placement of all equipment may take several weeks. Once the pits are established, the pipe casing would be installed at an average rate of about two to three pipe sections per day. The overall time to complete a jack and bore installation would depend on the actual site and the length of the bore required. For example, crossing beneath major intersections may be about 200 feet, while crossing beneath SR-118 may require about 400 feet of boring. However, on average, the entire jack and bore operation at a given location would be expected to take about 2 months.

As mentioned above, various pieces of construction equipment would be used to accomplish the jack and bore installation, including an excavator, front loader, lattice-boom crawler crane, utility truck, generator, and the hydraulic boring machine. These pieces of equipment would not operate continuously during the day and generally would not operate simultaneously. Trucks would haul excavated material from the pit and the spoils from the boring operation as well as deliver construction materials. The jack and bore installation would require approximately 10 construction personnel. All personnel vehicle parking would be accommodated within the construction work zone boundaries. In addition, all materials

laydown, equipment parking, and support facilities would also be accommodated within the work zone.

Slip-Lining

As mentioned above, slip-lining would occur where the proposed alignment for the CTLN coincides with the LACTL in Stranwood Avenue, at the north end of the proposed CTLN route, and in Canterbury Avenue, at the south end of the route. The slip-lining method would entail the use of launching pits, where the CTLN (the carrier pipe) would be inserted into the LACTL (the host pipe), and receiving pits, where the carrier pipe string would emerge at the end of a slip-lining span. The distance between the launching and receiving pits would depend primarily on bends in the LACTL and the desire to limit construction impacts at road intersections. However, spans of between 1,000 and 1,500 feet are anticipated.

During construction, service to the immediate area along Canterbury Avenue will be maintained by the parallel 6-inch and 8-inch main lines. The Fillmore and Sutter Regulator Station and the Montague and Glenoaks Regulator Station to east of the LACTL would be utilized to provide supply on the east side of the proposed alignment. Sepulveda TL will provide the supply on the west side of the proposed alignment via 12-inch connections to the distribution system.

Between the launching and receiving pit work zones, the road surface would not be disturbed, and all traffic lanes would remain open. Because Stranwood Avenue and Canterbury Avenue are relatively narrow streets (approximately 36 feet wide), the roadway would be entirely closed to through traffic at the launching pit work zone during construction to safely accommodate equipment and materials. However, local access to residences and businesses within the work zone would be maintained throughout construction. In addition, when practical, the roadway may also be reopened during non-work hours by removing barriers and placing steel plates over the pits. The road may remain partially open at the receiving pit location because little construction activity or equipment operations would occur there.

The general procedure for the slip-lining would be to establish the work zone surrounding the launching pit by placing barriers and traffic signage, and mobilizing equipment, materials, and construction and personnel support facilities. The work zone surrounding the launching pit may be approximately 200 feet long to accommodate construction operations, equipment, deliveries, and pipe section and other materials storage. The work zone surrounding the receiving pit would be smaller because little construction activity would occur at the receiving pit.

The launching pit would then be excavated to expose a section of the LACTL. Within the pit, a section of the LACTL would be removed to provide an opening for slip-lining the carrier pipe into the host pipe. The pit would be approximately 12 feet deep (the depth of the bottom of the LACTL) and approximately 15 feet wide and 40 feet long. Because of its depth, the pit would be shored to provide a safe working environment. A similar pit would be excavated and shored at the receiving end of the slip-lining span and a section of the LACTL would be removed. The pits would be located so as to not block intersections or driveway access.

Pipe sections would be lowered onto a cradle in the launching pit and pushed forward through the LACTL with a hydraulic pushing machine. Radial spacers would be strapped to the carrier pipe to maintain clearance from the sides and bottom of the host pipe. New

sections would be continuously added as the pipe string was slip-lined into the host pipe. After a pipe string had been installed between two pits, grout would be injected to permanently fill the gap between the carrier and host pipes.

When a slip-lining span is completed, the equipment would be removed from the launching pit, the launching pit would be backfilled with soil-cement slurry, the pavement would be returned to its previous condition, construction barriers would be removed, and the section of road would be reopened to traffic.

The above process would be repeated, with another launching pit constructed at the end of the next span and the pipe string pushed toward the original receiving pit. The pipe strings would be joined at the receiving pit, after which, the receiving pit would be backfilled, the barriers removed, and the road repaved. This process would continue, alternating launching and receiving pits, until the slip-lining section was complete. While only two pits would be in use at a given time for the actual slip-lining (i.e., a launching pit and a receiving pit), three pits may be open at once because the succeeding pit would be excavated while the preceding span was being slip-lined in order to allow construction to proceed without interruption once a span was complete.

Establishing the construction work zones and the launching and receiving pits, including shoring, excavation, and placement of all equipment may take several weeks. Once the pits are established, the pipe would be installed at an average rate of about two to three pipe sections per day. The overall time to complete the installation of a slip-lining span would depend on the length of the span. However, on average, the entire operation in one span between a launching and receiving pit would be expected to take about 2 to 3 months.

The slip-lining construction would require various pieces of equipment, including an excavator, front loader, lattice-boom crawler crane, utility truck, generator, and a hydraulic pushing machine. These pieces of equipment would not operate continuously during the day and generally would not operate simultaneously. Trucks would haul excavated material from the pit, as well as deliver construction materials. The slip-lining installation would require approximately 10 construction personnel. All personnel vehicle parking would be accommodated within the construction work zone boundaries. In addition, all materials laydown, equipment parking, and support facilities would also be accommodated within the work zone.

For the portion of alignment from the Van Norman Complex to San Fernando Mission Boulevard, a temporary pressure regulator station and two bulkheads at the north and south ends of the LACTL at San Fernando Mission Boulevard will be needed. These would allow for LADWP to evaluate the suitability of the pipe for sliplining. The northern bulkhead will isolate the LACTL north to the Van Norman Complex, while the southern bulkhead will allow the remaining LACTL to stay in service and will be supplied by the Sepulveda TL via the temporary pressure regulating station. The temporary pressure regulating station will be sized to provide supply to the LACTL service area.

Trunk Line Connections, Testing, and Commissioning

The CTLN would be connected to several existing trunk lines to provide redundant pathways for water supply. Within the Van Norman Complex, the CTLN would be connected to the 72-inch-diameter Lower Van Norman Bypass Trunk Line, the 60-inch bypass connection to the Stone Canyon Inlet Line, and the 60-inch Los Angeles Reservoir Outlet Line. At Tujunga Spreading Grounds, the CTLN would be connected to the 48-inch Truesdale Trunk Line, the

48-inch Tujunga Pump Station Low Side Discharge Line, and the 66-inch CTLS Unit 1 Trunk Line. The CTLN would also be connected to the Sepulveda Trunk Line at San Fernando Mission Road and Stranwood Avenue. All these connections would include butterfly valves to regulate flows.

To provide water to the existing LACTL service area, the CTLN would be connected to existing distribution mainlines at Stranwood Avenue and Sepulveda Boulevard, and along Arleta Avenue at Chatsworth Street, Van Nuys Boulevard, Terra Bella Street, Osborne Street, and Branford Street.

After the CTLN is installed, it would undergo testing and commissioning, including a hydrostatic pressure test to detect any potential leaks. The new line would then be flushed and disinfected with chlorinated water. Once the CTLN is commissioned, the existing LACTL would be decommissioned and disconnected from all supply lines, but it would be abandoned in place rather than physically removed.

Best Management Practices

The following best management practices (BMPs) would be employed during construction of the proposed project, to help minimize or eliminate potential impacts to the environment. BMPs are distinguished from mitigation measures because they are: 1) existing practices or measures required by law, regulation, or policy; 2) ongoing, regularly occurring practices; and 3) not unique to the proposed project.

- The proposed project would implement Rule 403 dust control measures required by the South Coast Air Quality Management District (SCAQMD), which would include the following:
    - Water shall be applied to exposed surfaces at least two times per day to prevent generation of dust plumes.
    - The construction contractor shall utilize at least one of the following measures at each vehicle egress from the project site to a paved public road:
        a. Pave the surface extending at least 100 feet and at least 20 feet wide;
        b. Utilize a wheel shaker/wheel spreading device consisting of raised dividers at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages; or
        c. Install a wheel washing system to remove bulk material from tires and vehicle undercarriages.
    - All haul trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions).
    - Construction activity on exposed or unpaved dirt surfaces shall be suspended when wind speed exceeds 25 miles per hour (mph).
    - Ground cover in disturbed areas shall be replaced in a timely fashion when work is completed in the area.
    - A community liaison shall be identified concerning on-site construction activity including resolution of issues related to PM_{10} (particulate matter 10 microns in diameter or less) generation.

  - Non-toxic soil stabilizers shall be applied according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for ten days or more).
  - Traffic speeds on all unpaved roads shall be limited to 15 mph or less.
  - Streets shall be swept at the end of the day if visible soil is carried onto adjacent public paved roads. If feasible, water sweepers with reclaimed water shall be used.

- A Storm Water Pollution Prevention Plan (SWPPP), which will include erosion and sediment Best Management Practices (BMPs), shall be developed and implemented for construction activities. The SWPPP may include, but would not be limited to, the following BMPs:
  - Minimizing the extent of disturbed areas and duration of exposure;
  - Stabilizing and protecting disturbed areas;
  - Keeping runoff velocities low; and
  - Retaining sediment within the construction area.

  Construction erosion control BMPs may include the following:
  - Temporary desilting basins;
  - Silt fences;
  - Gravel bag barriers;
  - Temporary soil stabilization with mattresses and mulching;
  - Temporary drainage inlet protection; and
  - Diversion dikes and interceptor swales.

- The proposed project may require a Los Angeles Regional Water Quality Control Board's (RWQCB) National Pollution Discharge Elimination System (NPDES) Construction Dewatering permit.

- Residences and businesses near the pipeline alignment would be notified prior to the start of construction (e.g., via flyers) of lane closures and parking restrictions in their vicinity. The notices would include a telephone number for comments or questions related to construction activities.

- The proposed project construction would incorporate source reduction techniques and recycling measures and maintain a recycling program to divert waste in accordance with the Citywide Construction and Demolition Debris Recycling Ordinance.

- LADWP would coordinate with all applicable agencies regarding construction schedules and worksite traffic control and detour plans, including but not limited to LADOT, the City of Los Angeles Department of Public Works, Bureau of Engineering, the City of Los Angeles Fire Department, and the City of Los Angeles Police Department.

1.8 Required Permits and Approvals

Numerous approvals and/or permits would be required to implement the proposed project. The environmental documentation for the project would be used to facilitate compliance with federal and state laws and the granting of permits by various state and local agencies having jurisdiction over one or more aspects of the project. These approvals and permits may include, but may not be limited, to the following:

City of Los Angeles Department of Public Works, Bureau of Engineering

- Excavation Permit
- Peak Hour Exemptions

City of Los Angeles Bureau of Street Lighting

- Street Lighting Permit

City of Los Angeles Bureau of Street Services

- Tree Trimming/Removal Permit
- Street Closure Permit

City of Los Angeles Department of Transportation

- Approval of Traffic and Signal Control Plan
- Approval of temporary road closures

Los Angeles County Flood Control District

- Flood Control Permit

State of California Department of Industrial Relations, Division of Occupational Safety and Health, Mining and Tunneling Unit

- Underground Classification Permit for tunneling and jacking locations

State of California Department of Transportation

- Encroachment Permit

State of California State Water Resources Control Board

- State wide General Permit for Storm Water Associated with Construction Activities
- State wide General Permit for Potable Water Discharges – includes hydrostatic test water discharges

State of California Los Angeles Regional Water Quality Control Board

- NPDES for Groundwater Dewatering
- Section 401 Water Quality Certification

United States Army Corps of Engineers

- Section 408 Permit

SECTION 2
INITIAL STUDY CHECKLIST

The following discussion of potential environmental effects was completed in accordance with Section 15063(d)(3) of the CEQA Guidelines to determine if the proposed project may have a significant effect on the environment.

CEQA INITIAL STUDY FORM

Project Title:
City Trunk Line North Project

Lead Agency Name and Address:
Los Angeles Department of Water and Power
Environmental Planning and Assessment
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Contact Person and Phone Number:
Jane Hauptman
Environmental Planning and Assessment
Los Angeles Department of Water and Power
(213) 367-0968

Project Sponsor's Name and Address:
Los Angeles Department of Water and Power
Water Engineering and Technical Services
111 North Hope Street
Los Angeles, CA 90012

Project Location:
The proposed project would be located in the northeastern portion of the San Fernando Valley in the City of Los Angeles with the trunk line originating at the LADWP Van Norman Complex in the Granada Hills community of Los Angeles and terminating adjacent to the LADWP Tujunga Spreading Grounds in the Sun Valley community of Los Angeles.

City Council District:
The proposed alignment of the proposed project would be located within Council Districts 6, 7, and 12.

Neighborhood Council District:
The proposed project would be located within the Granada Hills North, Mission Hills, Arleta, and Sun Valley Area Neighborhood Council Districts.

General Plan Designation:
The proposed project would be located primarily within the existing road right-of-way, except for approximately 2,700 feet that would be located within the LADWP Van Norman Complex. The properties adjacent to the proposed pipeline alignment include

the following designations: open space, public facilities, very low residential, low residential, low medium residential, limited commercial, community commercial, neighborhood office commercial, and limited manufacturing.

The proposed CTLN alignment would be located within the Granada Hills-Knollwood, Mission Hill-Panorama City-North Hills, Arleta-Pacoima, and Sun Valley-La Tuna Canyon Community Plan areas.

Zoning:
The properties along the proposed project alignment are zoned Open Space (OS), Public Facilities (PF), One-Family (R1), Suburban (RA and RS), Restricted Density Multiple Dwelling (RD), Limited Commercial (C1), Commercial (C2), and Limited Industrial (M1).

Description of Project:
The CTLN Project would replace the northern section of the LACTL with approximately 33,000 linear feet of 54-inch-diameter trunk line. The proposed CTLN alignment would follow the alignment of the LACTL at its northern and southern ends, where the new line would be slip-lined into the existing LACTL. The CTLN would be realigned to the east of the LACTL, primarily in Arleta Avenue, for the majority of its length. The realigned sections would be constructed using an open trench method. The CTLN would be built in two units. Unit 1 would extend from the Van Norman Complex to the intersection of Arleta Avenue and Terra Bella Street, a distance of approximately 21,000 feet. Unit 2 of the CTLN would extend from Terra Bella Street to the CTLS in Canterbury Avenue, just west of Tujunga Spreading Grounds, a distance of approximately 11,800 feet.

Surrounding Land Uses and Setting:
The installation of the proposed project would occur in public streets in the urbanized and fully developed communities of Granada Hills, Mission Hills, Arleta, and Sun Valley. The line would be located in public roadways within residential, commercial, light industrial, public facilities, and open space uses.

Reviewing Agencies:

- City of Los Angeles Department of Public Works, Bureau of Engineering
- City of Los Angeles Bureau of Street Lighting
- City of Los Angeles Bureau of Street Services
- City of Los Angeles Department of Transportation
- Los Angeles County Flood Control District
- State of California Department of Industrial Relations, Division of Occupational Safety and Health, Mining and Tunneling Unit
- State of California, Department of Transportation
- State of California, State Water Resources Control Board
- State of California, Los Angeles Regional Water Quality Control Board

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the Environmental Impacts discussion in Section 3.

☐ Aesthetics	☐ Agriculture & Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials	☐ Hydrology/Water Quality
☐ Land Use and Planning	☐ Mineral Resources	☐ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☐ Transportation/Traffic	☐ Tribal Cultural Resources	☐ Utilities/Service Systems
☐ Mandatory Findings of Significance		

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an environmental impact report is required.

☐ I find that the proposed project may have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Jane Hauptman for — 1/3/2019

Signature — Date

Charles C. Holloway
Manager of Environmental Planning and Assessment
Los Angeles Department of Water and Power

		Potentially Significant Impact	Less than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
I.	**AESTHETICS.** Would the project:				
a.	Have a substantial adverse effect on a scenic vista?				**X**
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				**X**
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?				**X**
d.	Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?				**X**
II.	**AGRICULTURE AND FORESTRY RESOURCES.** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				**X**
b.	Conflict with existing zoning for agricultural use, or a Williamson act contract?				**X**
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				**X**
d.	Result in the loss of forest land or conversion of forest land to non-forest use?				**X**
e.	Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				**X**
III.	**AIR QUALITY.** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a.	Conflict with or obstruct implementation of the applicable air quality plan?			**X**	

	Potentially Significant Impact	Less than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d. Expose sensitive receptors to substantial pollutant concentrations?			X	
e. Create objectionable odors affecting a substantial number of people?			X	
IV. BIOLOGICAL RESOURCES. Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
V. CULTURAL RESOURCES. Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?			X	
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?		X		

	Potentially Significant Impact	Less than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
d. Disturb any human remains, including those interred outside of formal cemeteries?			X	
VI. GEOLOGY AND SOILS. Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?				X
b. Result in substantial soil erosion, loss of topsoil, or changes in topography or unstable soil conditions from excavation, grading, or fill?			X	
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
VII. GREENHOUSE GAS EMISSIONS. Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impacts on the environment?			X	
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	
VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b. 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?			X	

	Potentially Significant Impact	Less than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X	
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?			X	
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X
IX. HYDROLOGY AND WATER QUALITY. Would the project:				
a. Violate any water quality standards or waste discharge requirements?			X	
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?				X
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?				X
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
f. Otherwise substantially degrade water quality?			X	

		Potentially Significant Impact	Less than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
g.	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h.	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				X
i.	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
j.	Expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow?				X
X.	**LAND USE AND PLANNING.** Would the project:				
a.	Physically divide an established community?				X
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
XI.	**MINERAL RESOURCES.** Would the project:				
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			X	
b.	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
XII.	**NOISE.** Would the project result in:				
a.	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 of other agencies?		X		
b.	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c.	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d.	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

	Potentially Significant Impact	Less than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
XIII. POPULATION AND HOUSING. Would the project:				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
XIV. PUBLIC SERVICES				
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?				X
ii) Police protection?				X
iii) Schools?				X
iv) Parks?				X
v) Other public facilities?				X
XV. RECREATION				
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				X
XVI. TRANSPORTATION/TRAFFIC. Would the project:				
a. 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?		X		

	Potentially Significant Impact	Less than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			X	
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e. Result in inadequate emergency access?			X	
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?		X		
XVII. TRIBAL CULTURAL RESOURCES. Would the project cause a substantial adverse change in the significance of a tribal cultural resources, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed of eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?				X
b. 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 Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?		X		
XVIII. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	

	Potentially Significant Impact	Less than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g. Comply with federal, state, and local statutes and regulations related to solid waste?				X
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b. Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.		X		
c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?			X	

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SECTION 3
ENVIRONMENTAL IMPACT ASSESSMENT

INTRODUCTION

The following discussion addresses impacts to various environmental resources in accordance with the Initial Study checklist questions contained in Appendix G of the CEQA Guidelines.

I. AESTHETICS

Would the project:

a) Have a substantial adverse effect on a scenic vista?

No Impact. The proposed project would not have an adverse effect on a scenic vista. Scenic views or vistas are panoramic public views of various natural features, including the ocean, striking or unusual natural terrain, or unique urban or historic features. Public access to these views may be from park lands, private and publicly owned sites, and public right-of-way.[1] No portion of the proposed CTLN is located within a scenic vista. Furthermore, the proposed CTLN would be located entirely underground and would have no impacts to aesthetic resources. The proposed project would not have an adverse effect on a scenic vista, and no impact would occur.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. Implementation of the proposed project would not damage scenic resources within a state scenic highway. No sections of Interstate 5, California Route 118, U.S. Highway 101, or California Route 170 within the project vicinity are designated as eligible California Scenic Highways.[2] Additionally, no portion of the proposed CTLN is located within a Designated Scenic Highway, as identified in the Mobility Plan 2035 of the City of Los Angeles General Plan.[3] Therefore, no scenic roadways would be altered as a result of the implementation of the proposed project, and no impact would occur.

[1] City of Los Angeles Department of City Planning, *City of Los Angeles General Plan, Conservation Element*, adopted September 26, 2001.

[2] State of California Department of Transportation. State Scenic Highway Program. Website: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm, accessed February 28, 2018.

[3] City of Los Angeles Department of City Planning, *Mobility Plan 2035, An Element of the General Plan*, adopted September 7, 2016

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

No Impact. The proposed CTLN would be located entirely underground and would not affect the visual character or quality of the site or surroundings. Therefore, the proposed project would not substantially degrade the existing visual character or quality of the site, and no impact would occur.

d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

No Impact. Implementation of the proposed project would not create a new source of light or glare that would adversely affect day or nighttime views. The proposed project would be constructed only during daylight hours, so no lighting would be required. The proposed CTLN would be located entirely underground and would not be visible once completed. No impact related to light or glare would occur.

II. AGRICULTURE AND FORESTRY RESOURCES

Would the project:

a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The proposed CTLN alignment is located within existing paved roadways in fully urbanized portions of the San Fernando Valley. The project area is designated as Urban and Built-Up Land on the "Important Farmland in California" map prepared by the California Resources Agency pursuant to the Farmland Mapping and Monitoring Program.[4] The proposed project would not be located on or near Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, the proposed project would not convert Farmland to a non-agricultural use, and no impact to farmland would occur.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The proposed project would be located within existing paved roadways in fully urbanized portions of the San Fernando Valley. Furthermore, the County of Los Angeles does not offer Williamson Act contracts.[5] Therefore, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impact would occur.

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4 State of California Department of Conservation, Division of Land Resource Protection, Farmland Mapping & Monitoring Program, Important Farmland in California, 2016 map. Website: https://maps.conservation.ca.gov/DLRP/CIFF/, accessed February 28, 2018.

5 State of California Department of Conservation, Division of Land Resource Protection, Current and Historic Data About Land Conservation (Williamson) Act Status. Website: http://www.conservation.ca.gov/dlrp/lca/Pages/stats_reports.aspx, accessed August 21, 2018.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. The proposed project would be located within existing paved roadways in a fully urbanized portion of the San Fernando Valley. No portion of the proposed CTLN alignment is zoned for or developed as forest land or timberland as defined in Public Resources Code Section 12220(g) and Government Code Section 4526, respectively.[6] Therefore, the proposed project would not conflict with existing zoning for or cause a rezoning of forest or timberland, and no impact would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The proposed project would be located within existing paved roadways in a fully urbanized portion of the San Fernando Valley. No portion of the proposed CTLN alignment is developed as forest land or located within or adjacent to forest lands.[7] Therefore, the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use, and no impact would occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. The proposed project would be located within existing paved roadways. No portion of the project site or surrounding area is identified as Farmland. No forest lands exist within or adjacent to the proposed CTLN alignment. Therefore, the proposed project would not change the existing environment in a way that would result in the conversion of Farmland to non-agricultural use or forest land to non-forest use, and no impact would occur.

III. AIR QUALITY

The following analysis is based on the *City Trunk Line North Replacement Project Air Quality and Greenhouse Gas Impact Study*, prepared by Terry A. Hayes Associates, Inc. This report is included as Appendix A of this IS/MND.

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan (e.g., the SCAQMD Plan or Congestion Management Plan)?

Less Than Significant Impact. The SCAQMD and the Southern California Association of Governments (SCAG) are responsible for preparing an Air Quality Management Plan (AQMP), which implements federal Clean Air Act and California Clean Air Act requirements, and details goals, policies, and programs for improving air

[6] City of Los Angeles Zoning Information and Map Access System (ZIMAS). Website: http://zimas.lacity.org/, accessed February 28, 2018.

[7] Ibid.

quality in the South Coast Air Basin. The 2016 AQMP was adopted by the SCAQMD Governing Board on March 3, 2017, and the California Air Resources Board (CARB) on March 23, 2017. The purpose of the 2016 AQMP for the South Coast Air Basin is to set forth a comprehensive program that will lead the region into compliance with federal air quality standards for 1-hour ozone (O_3), 8-hour ozone, and 24-hour and Annual particulate matter less than 2.5 microns in diameter ($PM_{2.5}$).[8] With respect to the determination of consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in the SCAG 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) regarding population, housing, and growth trends.[9]

According to the SCAQMD, there are two key indicators of consistency with the AQMP: (1) whether the project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP; and (2) whether the project will not exceed the assumptions in the AQMP based on the year of project buildout including consistency with AQMP land use policies and the population and employment growth projections upon which AQMP forecasted emission levels are based, or the inclusion of air quality mitigation measures.[10]

Localized emissions were analyzed for the proposed project to: (1) ascertain potential effects on localized concentrations; and (2) determine if there is a potential for such emissions to cause or affect a violation of the ambient air quality standards. Sulfur dioxide (SO_2) emissions, assessed as sulfur oxide (SO_X) within the SCAQMD thresholds, would be negligible during construction and long-term operations, and, therefore, would not have the potential to cause or affect a violation of the SO_2 ambient air quality standard. Since volatile organic compounds (VOCs) are not a criteria pollutant, there is no ambient standard or localized threshold for VOCs. Due to the role VOCs play in ozone formation, it is classified as a precursor pollutant, and only a regional emissions threshold has been established. As shown in Section III(b) below, localized emissions would not exceed the SCAQMD-recommended localized thresholds.

Additionally, the proposed CTLN has no potential to conflict with regional population, housing, and employment growth projections or land use policies. The proposed project would comply with all applicable regulatory standards (e.g., SCAQMD Rules 402, 403, 1166 and 1403) as required by the SCAQMD. As such, impacts would be less than significant.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact. The proposed project would not violate an air quality standard or contribute substantially to an existing or projected air quality violation. The proposed CTLN alignment is located within the Los Angeles County portion of the

[8] SCAQMD, 2016 Air Quality Management Plan, adopted March 23, 2017.
[9] SCAG, 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, April 2016.
[10] SCAQMD, The CEQA Air Quality Handbook, 1993.

South Coast Air Basin, which is designated as a non-attainment area for O_3, and $PM_{2.5}$, and particulate matter less than 10 microns in diameter (PM_{10}).[11]

Construction

The SCAQMD established maximum daily threshold values for air pollutant emissions from CEQA projects within the SCAB to assist in the evaluation of air pollutant emissions. Table 1 shows regional and localized significance thresholds for VOC, nitrogen oxides (NO_X), carbon monoxide (CO), SO_X, and particulate matter (PM_{10} and $PM_{2.5}$) established by SCAQMD. The localized significance threshold (LST) methodology document contains source receptor area (SRA)-specific values for maximum allowable on-site emissions (i.e., construction equipment and fugitive dust) during construction based on locally monitored air quality, the size of maximum daily disturbed area, and the proximity of sensitive receptors. Maximum on-site emissions resulting from construction activities were quantified and assessed against the applicable LST values for a one-acre project site having sensitive receptors within 80 feet of the project site boundary in SRA 7.

Table 1. SCAQMD Air Quality Significance Thresholds – Mass Daily Emissions

Pollutant	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Construction						
Regional Threshold (lb/day)	75	100	550	150	150	55
Localized Threshold (lb/day)	--	80	498	--	4	3
Operation						
Regional Threshold (lb/day)	55	55	550	150	150	55

Note: LST values selected for 1-acre daily disturbance based on equipment inventory and 25-meter receptor distance in SRA 7.
Source: SCAQMD, 2015.

Construction of the proposed project would implement three construction methods including open trench, jack and bore, and slip-lining. The proposed project would contribute construction air quality emissions through the use of heavy-duty construction equipment, truck delivery and haul truck trips, and vehicle trips generated by construction workers traveling to and from the proposed CTLN alignment. Fugitive dust emissions would primarily result from trenching or excavation activities along the proposed CTLN alignment. The active construction areas along the proposed CTLN alignment would be relatively small and the amount of equipment that could operate in one day would be limited by the size of the active construction zone. It has reasonably been assumed that each construction method would have three pieces of heavy-duty equipment continuously operating each day and one generator. Maximum daily truck trips include 20 haul trucks for open trench, 20 concrete trucks for open trench, four haul/delivery trucks for jack and bore, and four haul/delivery trucks for slip-lining. Open trench would require up to 20 worker trips per day and jack and bore and slip-lining would each require up to ten worker trips per day. It is anticipated that up to two open trench crews and one crew each for jack and bore and slip-lining could simultaneously operate along the alignment.

[11] SCAQMD, National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin, 2016. Website: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2, accessed September 5, 2018.

The emissions analysis includes Unit 1 activities in 2019 and the initiation of Unit 2 activities in 2022. Unit 1 activities would overlap with Unit 2 activities. However, similar to Unit 1 activities, it is not anticipated that there would be more than four construction crews active at one time. Those crews include two open trench crews and one crew each for jack and bore and slip-lining.

Tables 2 and 3 compare maximum daily emissions in 2019 and 2022 to the applicable SCAQMD air quality significance thresholds. Maximum daily emissions of air pollutants that would be generated by proposed project construction activities would not exceed any applicable regional or localized threshold values. Impacts would be less than significant.

Table 2. Daily Construction Emissions – Year 2019

Method	Daily Emissions (Pounds Per Day)					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Open Trench						
On-Site Emissions	1.1	11.0	10.1	<0.1	0.8	0.6
Off-Site Emissions	0.6	17.0	4.8	<0.1	1.3	0.4
Total	***1.7***	***28.0***	***14.9***	***<0.1***	***2.1***	***1.0***
Jack And Bore						
On-Site Emissions	1.1	12.1	9.0	<0.1	0.8	0.6
Off-Site Emissions	0.1	1.7	0.9	<0.1	0.2	0.1
Total	***1.2***	***13.8***	***9.9***	***<0.1***	***1.0***	***0.7***
Slip-Lining						
On-Site Emissions	1.3	13.2	8.6	<0.1	0.8	0.6
Off-Site Emissions	0.1	1.7	0.9	<0.1	0.2	0.1
Total	***13.2***	***14.9***	***9.4***	***<0.1***	***1.0***	***0.7***
Regional Analysis						
Maximum Regional Daily Emissions[a]	**17.8**	**84.7**	**49.1**	**<0.1**	**6.2**	**3.4**
Regional Significance Threshold	75	100	550	150	150	55
Exceed Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Localized Analysis						
Maximum Localized Daily Emissions[b]	**--**	**22.0**	**20.2**	**--**	**1.6**	**1.2**
Localized Significance Threshold	--	80	498	--	4	3
Exceed Localized Threshold?	**--**	**No**	**No**	**--**	**No**	**No**

[a] Maximum regional emissions would be generated by overlapping activities from two open trench crews, one jack and bore crew, and one slip-lining crew.

[b] Maximum localized emissions would be generated by two adjacent open trench crews.

Note: Emissions modeling files can be found in Appendix A.

Source: TAHA, 2018.

Table 3. Daily Construction Emissions – Year 2022

Method	Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Open Trench						
On-Site Emissions	0.8	7.8	9.7	<0.1	0.6	0.4
Off-Site Emissions	0.5	13.7	4.2	<0.1	1.2	0.4
Total	***1.3***	***21.5***	***13.9***	***<0.1***	***1.8***	***0.8***
Jack And Bore						
On-Site Emissions	0.9	8.4	8.7	<0.1	0.6	0.4
Off-Site Emissions	0.1	1.4	0.7	<0.1	0.2	0.1
Total	***1.0***	***9.8***	***9.4***	***<0.1***	***0.8***	***0.5***
Slip-Lining						
On-Site Emissions	0.9	9.2	8.2	<0.1	0.6	0.4
Off-Site Emissions	0.1	0.4	0.7	<0.1	0.2	0.1
Total	***1.0***	***9.6***	***8.9***	***<0.1***	***0.8***	***0.5***
Regional Analysis						
Maximum Regional Daily Emissions[a]	**4.6**	**62.4**	**46.1**	**<0.1**	**5.2**	**2.6**
Regional Significance Threshold	75	100	550	150	150	55
Exceed Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Localized Analysis						
Maximum Localized Daily Emissions[b]	**--**	**15.6**	**19.4**	**--**	**1.2**	**0.8**
Localized Significance Threshold	--	80	498	--	4	3
Exceed Localized Threshold?	**--**	**No**	**No**	**--**	**No**	**No**

[a] Maximum regional emissions would be generated by overlapping activities from two open trench crews, one jack and bore crew, and one slip-lining crew.

[b] Maximum localized emissions would be generated by two adjacent open trench crews.

Note: Emissions modeling files can be found in Appendix A.

Source: TAHA, 2018.

Operation

Table 1 also presents the operational mass daily thresholds applicable within the SCAQMD jurisdiction. Operation of the proposed project is not expected to generate air quality emissions as the proposed CTLN would be a passive use. Activities associated with long-term operations and maintenance would be minimal, limited to scheduled maintenance or emergency repair. No additional permanent workforce would be required to operate the CTLN. There is no potential for the proposed project to permanently increase air pollutant concentrations. Therefore, this impact would be less than significant.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less Than Significant Impact. The proposed project would not result in a cumulatively considerable net increase of a criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard. The proposed CTLN and the whole of the Los Angeles metropolitan area are located within the SCAB, which is characterized by relatively poor air quality. The SCAB is currently classified as a federal and state for non-attainment area for O_3 and $PM_{2.5}$, a state non-attainment area for PM_{10}, and a federal non-attainment area for lead (Pb). It is classified as a federal attainment/maintenance area for carbon monoxide

(CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and PM_{10}. It currently meets the state standards for CO and NO_2.[12]

As discussed in Section III(b) above, air pollutant emissions associated with construction of the proposed project would not exceed any applicable SCAQMD air quality thresholds of significance. Despite the region being in nonattainment of the ambient air quality standards for O_3, PM_{10}, and $PM_{2.5}$, the SCAQMD does not consider individual project emissions of lesser magnitude than the mass daily thresholds to be cumulatively considerable. The proposed project would not result in a cumulatively considerable net increase of nonattainment pollutants. Therefore, this impact would be less than significant.

Activities associated with long-term operations and maintenance would be minimal, limited to scheduled maintenance or emergency repair. No additional permanent workforce would be required to operate the CTLN. There is no potential for the proposed project to contribute to a cumulative impact. Therefore, operational impacts would be less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. CARB has identified the following groups who are most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, sensitive receptors include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive receptors are located within the 500-foot vicinity of the proposed CTLN alignment, which is located in an urban environment populated with residences, schools, community facilities, parks, medical facilities, and religious institutions.

The SCAQMD devised its LST values to prevent the occurrence of localized hot spots of criteria pollutant concentrations at sensitive receptor locations surrounding the project site. The LST values were determined using emissions modeling based on ambient air quality measured throughout the SCAB. If maximum daily emissions remain below the LST values during construction activities, it is highly unlikely that air pollutant concentrations in ambient air would reach substantial levels sufficient to create public health concerns for sensitive receptors. As shown in Tables 2 and 3, maximum daily emissions of criteria pollutants and O_3 precursors from sources located on the project site would not exceed any applicable LST values. Therefore, construction of the proposed project would not result in exposure of sensitive receptors to substantial concentrations of criteria pollutants.

With regards to emissions of air toxics, carcinogenic risks, and non-carcinogenic hazards, the use of heavy duty construction equipment and haul trucks during

[12] South Coast Air Quality Management District, White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution Appendix D: Cumulative Impact Analysis Requirements Pursuant to CEQA, August 2003.

construction activities would release diesel PM to the atmosphere through exhaust emissions. Diesel PM is a known carcinogen, and extended exposure to elevated concentrations of diesel PM can increase excess cancer risks in individuals. However, carcinogenic risks are typically assessed over timescales of several years to decades, as the carcinogenic dose response is cumulative in nature. Short term exposures to diesel PM would have to involve extremely high concentrations in order to exceed the SCAQMD air quality significance threshold of 10 excess cancers per million.[13]

The total construction time for the CTLN project is estimated to be approximately nine years. However, only relatively limited portions of the proposed alignment would actually be under construction at any given time as construction activities would typically move rapidly along the alignment. In addition, installation activities would be spread over 21,000 feet for Unit 1 and 11,800 feet for Unit 2. The exposure duration at any one location would be over days or weeks, not years. Construction activity would not occur with enough intensity and duration to significantly increase health risk. In addition, the proposed project would be subject to the regulations and laws relating to toxic air contaminants at the regional, state, and federal level that would protect sensitive receptors from substantial concentrations. Therefore, this impact would be less than significant.

Activities associated with long-term operations and maintenance would be minimal, limited to scheduled maintenance or emergency repair. No additional permanent workforce would be required to operate the CTLN. There is no potential for community exposure to air pollutants. Therefore, this impact would be less than significant.

e) Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. Potential sources that may emit odors during construction activities include exhaust from diesel construction equipment. Such odors may be a temporary source of nuisance to adjacent uses; however, odors from these sources would be localized and generally confined to the immediate area surrounding the project site and would not persist beyond the termination of construction activities. The proposed project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. In addition, as construction-related emissions dissipate away from the construction area, the odors associated with these emissions would also decrease and would be quickly diluted. Therefore, this impact would be less than significant. Operation of the proposed project would not be anticipated to generate new sources of objectionable odors as the proposed CTLN would be below-ground. Therefore, impacts associated with objectionable odors would be less than significant.

[13] South Coast Air Quality Management District, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions, December 2002.

IV. BIOLOGICAL RESOURCES

The following analysis is based on the *City Trunk Line North Biological Resources Memorandum*, prepared by AECOM. This report is included as Appendix B of this IS/MND.

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant Impact After Mitigation Incorporated. A significant impact could occur if the proposed project removed or modified the habitat for, or otherwise directly or indirectly affected, any species identified or designated as a candidate, sensitive, or special status species in local or regional plans, policies, or regulation, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS).

Special-status plant species include those listed as Endangered, Threatened, or Rare or those species proposed for listing (Candidates) by the USFWS, CDFW, or the California Native Plant Society (CNPS).[14,15,16] The CNPS listing is sanctioned by CDFW and serves as its list of "candidate" plant species that meet the definitions of the California Endangered Species Act (CESA), and are eligible for state listing.

Special-status wildlife species include those listed by the USFWS under the federal Endangered Species Act and by CDFW under CESA. USFWS and CDFW list species as either Threatened, Endangered, or as Candidates for listing. Additional species receive federal protection under the Bald and Golden Eagle Protection Act and the *Migratory Bird Treaty Act* (MBTA), and state protection under CEQA Section 15380(d). All birds, except European starlings, English house sparrows, rock doves (pigeons), and non-migratory game birds such as quail, pheasant, and grouse, are protected under the MBTA. Non-migratory game birds are protected under California Fish and Game Code (CFGC) Section 3503. Many other species are considered by CDFW to be California Species of Special Concern, and others are on a CDFW Watch List. The California Natural Diversity Database (CNDDB) also tracks species within California for which there is conservation concern, including many that are not formally listed, and assigns them a CNDDB rank. Although Species of Special Concern, CDFW Watch List species, and some species that are tracked by the CNDDB are not formally listed or afforded official legal status, they may receive special consideration during the CEQA review process. CDFW further classifies some species as "Fully Protected," indicating that the species may not be taken or possessed except for scientific purposes, under

[14] Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (Title 50 Code of Federal Regulations [CFR] 17.12 [listed plants], Title 50 CFR 17.11 [listed animals] and includes notices in the Federal Register for proposed species).

[15] Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (Title 14 California Code of Regulations 670.5).

[16] Plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code Section 1900 *et seq*.).

special permit from CDFW. Additionally, CFGC Sections 3503, 3505, and 3800 prohibit the take, destruction or possession of any bird, nest, or egg of any bird except English house sparrows and European starlings unless authorization is obtained from the CDFW.

A search of relevant regional databases for special-status biological resources in the vicinity of the project area was conducted. The proposed project occurs primarily in the United States Geological Survey's San Fernando quadrangle, extending south into the upper portion of the Van Nuys quadrangle. Searches of these two quadrangles in CDFW's CNDDB[17] and CNPS's online inventory of rare plants[18] were conducted. The searches indicated that a combined total of 22 plant species from the CNDDB and CNPS, and 23 wildlife species from the CNDDB have been documented from the San Fernando and Van Nuys quadrangles. CNDDB and CNPS lists are included in Appendix B.

The proposed project is located in the heavily-urbanized communities of Granada Hills, Mission Hills, Arleta, and Sun Valley, with its alignment within paved roadways adjacent to residential, commercial, light industrial, public facilities, and open space uses. No natural vegetation communities exist within the proposed CTLN alignment. Ornamental vegetation, including primarily street trees and lawns, lie adjacent to the proposed alignment.

The CNDDB search indicates very few records of special-status species that coincide with the proposed alignment or immediately adjacent areas, and those that have been recorded, are 35 plus years old and are likely extirpated due to the urban developed nature of the project site and lack of potentially suitable habitat to support any special-status species. Therefore, the proposed project would not result in a substantial adverse impact to listed, candidate, or other sensitive special-status plant or wildlife species.

However, ornamental trees along the project alignment may provide suitable nesting habitat for non-special-status birds protected under the MBTA. Since construction would only occur within the paved road surface, and no trees would be removed, direct impacts to potentially suitable nesting habitat would not occur. However, noise and dust generated during construction could indirectly impact nesting birds resulting in increased nestling mortality due to nest abandonment or decreased feeding frequency. Such indirect impacts due to construction activities occurring during the nesting bird season, generally considered to extend from February 15 through September 15, would be avoided by complying with existing regulations (i.e. MBTA, CFGC) that protect nesting birds. Since entirely avoiding the nesting bird season is not possible due to the nature of the project, compliance would be achieved through the implementation of Mitigation Measure BIO-1, below. With implementation of BIO-1, the indirect impacts of construction on nesting birds would be reduced to less than significant.

[17] California Department of Fish and Wildlife. California Natural Diversity Database. 2018. Full report for San Fernando and Van Nuys, CA quadrangles. Generated September 6, 2018.

[18] California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Accessed September 6, 2018.

Mitigation Measures

The proposed project would implement the following mitigation measure to reduce impacts to biological resources during construction:

BIO-1: To avoid or minimize impacts to nesting birds protected under the MBTA and the CFGC, when construction activity occurs during the nesting bird season (generally February 15 through September 15), a pre-construction nesting bird survey shall be conducted by a qualified biologist within 3 days prior to the start of construction activities to determine if active nests are present directly adjacent to the project construction zone. All active nests found shall be recorded, and the biologist shall monitor such nests to ensure nesting activities are not adversely affected during construction, or that construction activities in proximity of the nests would be postponed until the biologist determines that the nest is no longer active.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. Sensitive natural communities are those that are designated as rare in the region by the CNDDB, support sensitive plant or wildlife species, and/or receive regulatory protection (e.g., Section 404 of the Clean Water Act [CWA] and/or Sections 1600 et seq. of the CFGC).

The proposed project would be located within existing paved roadways in a fully urbanized portion of the San Fernando Valley. No riparian habitat or other sensitive natural communities occur within or adjacent to the project alignment. Therefore, implementation of the proposed project would not result in direct or indirect impacts to any riparian habitat or other sensitive natural vegetation communities. No impacts to riparian habitat or other sensitive natural communities would occur.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The CWA of 1997, as amended, provides for the restoration and maintenance of the physical, chemical, and biological integrity of the nation's waters. The CWA sets up a system of water quality standards, discharge limitations, and permit requirements. Activities that have the potential to discharge dredge or fill materials into jurisdictional waters of the U.S., which include those waters listed in 33 Code of Federal Regulations 328.3 (Definitions), are regulated under Section 404 of the CWA, as administered by United States Army Corps of Engineers (USACE). Section 401 of the CWA requires a water quality certification from the state for all permits issued by USACE under Section 404 of the CWA. The RWQCB is the state agency in charge of issuing a CWA Section 401 water quality certification or waiver.

The Porter-Cologne Water Quality Control Act (Porter-Cologne) is the basic water quality control law for California and works in concert with the CWA. Under Section

13000 et seq. of Porter-Cologne, the RWQCB is the agency that regulates discharges of waste and fill material within any region that could affect a water of the state (California Water Code [CWC] 13260[a]), including wetlands and isolated waters, as defined by CWC Section 13050(e). A permit under Porter-Cologne is required prior to a project's implementation for any impacts to water bodies and riparian habitat. Additionally, under Section 1602 of the CFGC, a Streambed Alteration Agreement from CDFW is required prior to any activity that would result in the modification of the bed, bank, or channel of a state stream, river, or lake, including water diversion and damming and removal of vegetation from the floodplain to the landward extent of the riparian zone. This permit governs both activities that modify the physical characteristics of the stream and activities that may affect fish and wildlife resource that use the stream and surrounding habitat (i.e., riparian vegetation or wetlands).

No federal or state protected wetlands occur along the project alignment; however, the proposed alignment would cross the Tujunga Wash Channel and the Pacoima Diversion Channel, both of which are concrete lined flood channels in the vicinity of the proposed CTLN. The Pacoima Diversion Channel and Tujunga Wash constitute potentially-regulated waters under federal and state jurisdictions; however, the proposed project would jack and bore the CTLN beneath these channels at the crossing locations. As such, no project work would occur in the channels. Therefore, no impacts to wetlands would occur, and no permit or authorization pursuant to Sections 404 and 401 of the CWA, Section 1602 of CFGC, or Porter-Cologne.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery/breeding sites?

Less Than Significant Impact After Mitigation Incorporated. A wildlife migration corridor can be defined as a linear landscape feature of sufficient width and buffer to allow animal movement between two comparatively undisturbed habitat fragments, or between a habitat fragment and some vital resources, thereby encouraging population growth and diversity. A viable wildlife migration corridor consists of more than a merely path between fragmented habitats but must also include adequate vegetative cover and food sources for transient species, as well as resident populations of less mobile animals, to survive. They must be extensive enough to allow for large animals to pass relatively undetected, be free of obstacles, and lack any other distraction that may hinder wildlife passage, such as lights or noise.

The proposed project would be located within existing paved roadways in a heavily urbanized environment with no adjacent natural vegetation communities. As a result, direct impacts to a wildlife movement corridor would not occur. However, as discussed in Section IV(c), the Pacoima Diversion Channel and Tujunga Wash intersects with the proposed CTLN alignment and could provide opportunities for local wildlife movement. Since no work would occur in the channels and no night work is proposed, project construction activities are not anticipated to impact the channels' potential to facilitate wildlife movement in the channels.

Additionally, increased noise, dust, and human presence associated with the project construction activities may result in some urban wildlife species (primarily birds) avoiding the immediate project vicinity; however, such indirect effects would be temporary in nature, restricted to the project construction period. As discussed in

Section IV(a) above, through implementation of Mitigation Measure BIO-1, the indirect impacts of construction on nesting activity would be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (e.g., oak trees or California walnut woodlands)?

Less Than Significant Impact. In response to the City's declining oak tree population, the City enacted an oak tree protection ordinance in 1982. To further slow the decline of native trees, the City amended the two City Municipal Code sections pertaining to oak trees in April 2006 to include southern California black walnut (*Juglans californica*), western sycamore (*Platanus racemosa*), and California bay (*Umbellularia californica*) (Section 17.02 of City Municipal Code). Additionally, trees must be four inches or greater in diameter at 4.5 feet above ground to be considered protected. The Board of Public Works must issue a permit before any alterations to protected trees are made that could cause them to be damaged, relocated or removed. Pruning also requires a permit and must comply with the pruning standards set forth by the Western Chapter of the International Society of Arboriculture.

Two coast live oak trees were documented within the project alignment, occurring in the center median of Brand Boulevard, between Noble and Arleta Avenues. One of these trees is of sufficient size to be categorized as "protected" under the ordinance. The other is a small specimen that does not meet the definition of a "protected" tree. Construction of the proposed project does not require the removal of any trees. Should the coast live oak in the center median require removal, or if it is determined that any other protected tree along the project alignment requires removal or trimming, LADWP would comply with provisions of this ordinance. As such, the project would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Impacts would be less than significant.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The proposed project occurs in a heavily urbanized environment and does not fall within the area of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any other approved local, regional, or state habitat conservation plan. Therefore, no impact to such plans would occur.

V. CULTURAL RESOURCES

The following analysis is based on the *City Trunk Line North Project Phase I Archaeological and Paleontological Assessment*, prepared by AECOM. This report is included as Appendix C of this IS/MND.

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations Section 15064.5?

Less Than Significant Impact. The project area and a study area encompassing a 0.5-mile radius around the proposed CTLN alignment were examined for cultural resource investigations and previously recorded cultural resource sites. The archival research included a review of previously recorded archaeological site records and reports, historic site and property inventories, and historic maps. Inventories for the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California State Historic Resources Inventory (HRI), California Historical Landmarks, Los Angeles Historic-Cultural Monuments (LAHCM), and Caltrans Historic Bridge Inventory were also reviewed to identify cultural resources within both the project and study areas.

The records search indicated that 23 cultural resources have been previously recorded within a 0.5-mile radius of the proposed CTLN alignment; however, these resources do not occur within the proposed CTLN alignment. Three landmarks, three LAHCMs, twelve historic properties, and five bridges were identified within the 0.5-mile radius of the proposed CTLN alignment. None of these resources occur within the proposed CTLN alignment.

Additionally, the project footprint and surrounding areas were surveyed for historic architectural and archaeological resources that have the potential to be impacted by the proposed project. No archaeological resources were encountered within the project area during the field survey. The field survey identified one cultural resource, an aboveground segment of the San Fernando Siphon of the City Trunk Line. This resource was evaluated and found not to be eligible for listing in either the NRHP or the CRHR. The resource does not meet the level of significance to meet NRHP criteria A through D or CRHR criteria 1 through 4 (see Appendix C). Although greater than 45 years in age, it is not considered a historical resource. The resource does not have specific associations with any historic events that have made a significant contribution to the broad patterns of local, state, or national history, or the cultural heritage of California or the United States (NRHP Criterion A/CRHR Criterion 1); have specific associations with a person whose life was important to local, California, or national history (NRHP Criterion B/CRHR Criterion 2); embody the distinctive characteristics of a type, period, or method of construction or represent the work of a master, or possess high artistic values (NRHP Criterion C/CRHR Criterion 3); or yield information important in the prehistory or history of the local area, California, or the nation (NRHP Criterion D/CRHR Criterion 4). In summary, the exposed segment of the San Fernando Siphon of the City Trunk Line does not meet any NRHP or CRHR criteria for designation and does not retain sufficient integrity to be eligible for the NRHP or CRHR. Additionally, this project would have no adverse effect on historic properties pursuant to Section 106 of the National Historic Preservation Act and its implementing

regulations (36 CFR 800.4). As such, there are no significant historical resources within the proposed project area. Therefore, the proposed project would not cause a substantial adverse change in the significance of a historical resource, and the impact would be less than significant.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations Section 15064.5?

Less Than Significant Impact With Mitigation Incorporated. Review of previous investigations in the vicinity of the proposed CTLN alignment and of the prehistoric context for the area provides an understanding of the potential for encountering prehistoric sites in the project area. Additionally, subsequent land use helps determine whether archaeological remains have been preserved.

In addition, a cultural resources field survey of the proposed CTLN alignment was conducted on April 25, 2018. The survey did not result in the identification of any previously unknown archaeological resources. Although no archaeological resources were identified within the project footprint from the background research and cultural resources field survey, potentially eligible buried archaeological resources may exist. Archaeological deposits can be buried with no surface indications of their existence, particularly in developed areas or in areas of alluvial deposits. The level of potential site preservation below the modern roads remains unknown.

Although no cultural resources are recorded within the project area, prehistoric and ethnographic sites are documented on the Van Norman Dam Complex property and in the vicinity of Mission San Fernando. In addition, the former stagecoach road from Fort Tejon formerly passed through the Van Norman Dam Complex Property and along today's Strathern Avenue to Mission San Fernando. Archaeological materials may have been left behind by people using this road. Artifacts may be buried and now covered by the asphalted modern roads through the project area. A segment of the project area follows San Fernando Mission Boulevard, cutting through former mission lands. Mission buildings are located immediately to the north of the project area. To the south of the project area, in Brand Park Memory Garden, are remains of mission structures, including a fountain and a soap oven. Other buildings and structures that no longer have remains visible on the surface are depicted on historic maps in what is now Brand Park. Moreover, maps show a mission canal or irrigation ditch passing through the project area on what is today San Fernando Mission Boulevard. Mission San Fernando and the former Lopez Stage Station are also documented as the sites of prehistoric villages. The proposed project's location relative to the nearby water sources would have provided access to important resources during all periods of prehistory. Subsequent land use has included modern and historic development. It is possible that archaeological resources could be buried beneath the ground surface, especially in areas where development has included only minimal ground disturbance where the roadway may have effectively capped buried prehistoric or historic resources.

Based on the results of the records search and the Native American contact program, the project area is culturally sensitive for prehistoric and/or historic archaeological resources, including Native American resources. Such resources may lie beneath the surface obscured by pavement or buried beneath alluvial sediment. Because the potential to encounter archaeological resources exists for this project, implementation

of Mitigation Measures CR-1 through CR-3 would ensure impacts to archaeological resources would be less than significant.

Mitigation Measures

CR-1 Archaeological monitoring shall occur during ground-disturbing activities over 10 feet in depth. The archaeological monitor shall have the authority to redirect construction equipment, in coordination with the construction manager, in the event potential archaeological resources are encountered. Pursuant to California Public Resources Code Section 21083.2(i) regarding provisions related to the accidental discovery of archaeological resources, the following procedures shall be followed if such resources are accidentally encountered during ground-disturbing activities. In the event archaeological resources are encountered, work within 25 feet of the discovery will halt until appropriate treatment of the resource is determined by a qualified archaeologist. If Native American cultural materials are encountered during project-related ground disturbance, a trained Native American consultant shall be engaged to monitor ground-disturbing work in the area containing the Native American cultural resources. This monitoring would occur on an as-needed basis and would be intended to ensure that Native American concerns are taken into account during the construction process.

CR-2 A qualified cultural resources specialist shall prepare a cultural resources monitoring and mitigation plan (CRMMP) for the project. The plan will outline areas of high sensitivity for the project and define monitoring locations. It will describe monitoring procedures and treatment measures for potential discoveries. Finally, it will establish key staff and notification procedures to ensure compliance with appropriate state and federal laws.

CR-3 Prior to construction, construction personnel and supervisory staff shall be given training on possible archaeological resources that may be present in the area in order to establish an understanding of what to look for during ground-disturbing activities.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact With Mitigation Incorporated. A consultation of the *U.S. Geological Survey Preliminary Geologic Map of the Los Angeles 30' X 60' Quadrangle, Southern California* and the *Geologic Map of the San Fernando and Van Nuys (North ½) Quadrangles* indicates that the surficial sediments of the project area consist of younger Quaternary Gravels and Alluvium and artificial fill.[19,20] The field visit did not reveal the presence of any local conditions that would contradict this assertion or require special consideration. These deposits are younger than 10,000 years old. Consequently, such deposits have a low probability of yielding fossils, including vertebrate fossils or other scientifically significant fossils.

[19] Yerkes, Robert F., and Russell H. Campbell (2005), 2005 Preliminary Geologic Map of the Los Angeles 30' x 60' Quadrangle, Southern California. U.S. Geological Survey Open-File Report 2005-1019. Available online: http://pubs.usgs.gov/of/2005/1019/ Accessed August 2, 2017.

[20] Dibblee, T. W., and H. E. Ehrenspeck, editors. 1991 Geologic Map of the San Fernando and Van Nuys (North 1/2) Quadrangles, Los Angeles County, California. Camarillo, CA: Dibblee Geological Foundation.

However, older alluvium underlies the younger alluvium at unknown depths. This older alluvium has the potential to contain significant fossil deposits. If paleontological deposits are encountered during excavation or ground-disturbing activities, the proposed project would require implementation of Mitigation Measure CR-4 to reduce impacts to less than significant.

Mitigation Measures

CR-4 If paleontological deposits are encountered during excavation or ground-disturbing activities, LADWP should contact a qualified paleontologist to evaluate and determine appropriate treatment for the resource in accordance with PRC Section 21083.2(i). If any paleontological resources are encountered during ground-disturbing activities, work within 25 feet of the find will be temporarily halted and the paleontologist will be called to the project site to examine and evaluate the resource in accordance with the provisions of CEQA. Work may continue on other parts of the project while consultation and treatment are conducted.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. A Sacred Lands File search and Native American contact program were conducted for the proposed project, and no dedicated cemeteries or other places of human internment are known to exist within the project area. No evidence of human remains was observed on the surface during the field survey. Although not expected, human remains could be encountered during construction. In the event that any human remains or related resources are discovered, such resources would be treated in accordance with state and local regulations and guidelines for disclosure, recovery, relocation, and preservation, as appropriate, including CEQA Guidelines Section 15064.5(e). Work within 25 feet of the discovery would be suspended until the remains are evaluated by the county coroner as to the nature of the remains. If the remains are determined to be of Native American origin, the Native American Heritage Commission would be contacted and a Most Likely Descendent identified pursuant to Public Resources Code Section 5097.98 and California Code of Regulations Section 15064.5. Compliance with existing regulations would ensure that impacts related to the discovery of human remains would be less than significant.

VI. GEOLOGY AND SOILS

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less Than Significant Impact. The proposed project would not expose people or structures to new adverse effects associated with the rupture of a known

earthquake fault. There are numerous known earthquake faults in the vicinity of the proposed CTLN alignment, but the proposed CTNL alignment does not cross an Alquist-Priolo Earthquake Fault Zone, as indicated on the maps issued by the State Geologist for the San Fernando and Van Nuys area.[21] However, a small portion of the CTLN at the northern end of the proposed alignment is located in a City-designated fault rupture zone.[22] Furthermore, several active faults are known to cross the route of CTLN. One purpose of the proposed project is to increase seismic resilience of the City's water distribution system, including through the replacement of the LACTL, which, based on age and materials, is more susceptible to potential damage from a seismic event. Consequently, those portions of the proposed CTLN that would be crossed by faults, would utilize ERDIP. Additionally, the proposed CTLN and all appurtenances would be constructed in accordance with applicable state and local seismic related standards, including, but not limited to, appropriate pipe joint design and adequate excavation shoring during construction. Therefore, the proposed project would result in a less than significant impact related to fault rupture.

ii) Strong seismic ground shaking?

Less Than Significant Impact. The proposed CTLN alignment is located within the seismically active Southern California region, and like all locations within the area, is subject to strong seismic ground shaking. However, as discussed in Section VI(a)(i) above, the CTLN and all appurtenances would be constructed in accordance with the latest version of the City of Los Angeles Building Code and other applicable federal, state, and local codes associated with seismic criteria. This includes the use of ERDIP in portions of the alignment crossed by known earthquake faults. As such, the proposed project would result in a less than significant impact related to fault rupture.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. The proposed CTLN alignment does not cross any known liquefaction areas.[23] However, as discussed above, the proposed CTLN and all appurtenances would be designed and constructed in compliance with the latest version of the City of Los Angeles Building Code and other applicable federal, state, and local codes to minimize impacts related to seismic ground failure. The impact would be less than significant.

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21 State of California Department of Conservation, California Geological Survey, Regulatory Maps for San Fernando and Van Nuys. Website: http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps, accessed March 5, 2018.

22 City of Los Angeles Department of City Planning, *City of Los Angeles General Plan Safety Element*, Exhibit A, adopted November 26, 1996. Website: http://planning.lacity.org/cwd/gnlpln/saftyelt.pdf, accessed March 5, 2018.

23 City of Los Angeles Department of City Planning, *City of Los Angeles General Plan Safety Element*, Exhibit B, adopted November 26, 1996. Website: http://planning.lacity.org/cwd/gnlpln/saftyelt.pdf, accessed March 5, 2018.

iv) Landslides?

No Impact. The proposed CTLN alignment is located within existing paved roadways and does not traverse any hillside areas. No portion of the proposed CTLN alignment is located within or adjacent to a designated landslide or hillside area.[24] Therefore, no impact related to landslides would occur.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The proposed project would be located within existing paved roadways. Construction activities would include trenching for the proposed CTLN within these roadways. The soil removed during excavation would not be stockpiled on site but immediately loaded onto trucks and hauled to a local landfill for proper disposal, or to another construction site in the region for reuse as fill material. Since soil exposed through excavation would be entirely contained within the trenches, which would be properly shored to retain the trench walls, substantial erosion or loss of topsoil would not occur. The impact would be less than significant.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact. As discussed above in Sections VI(a)(iii) and VI(a)(iv), the proposed CTLN alignment is not located within areas with potential for liquefaction or landslides. Lateral spreading is a type of liquefaction-induced ground failure on mildly sloping ground.

Subsidence is the lowering of surface elevation due to changes occurring underground, such as the extraction of large amounts of groundwater. When groundwater is extracted from aquifers at a rate that exceeds the rate of replenishment, overdraft occurs, which can lead to subsidence. However, dewatering during construction is not anticipated because the groundwater table along the proposed CTLN alignment is substantially below the depth of excavation required to install the trunk line. Therefore, subsidence would not occur.

Collapsible soils consist of unconsolidated, low-density materials that may collapse and compact under the addition of excessive water or loading. These types of soils are not expected to be encountered within the proposed CTLN alignment. Furthermore, in areas of open-trench installation, the trench would be backfilled with high-density soil-cement slurry, which is not subject to collapse. Therefore, the impact would be less than significant.

[24] City of Los Angeles Department of City Planning, *City of Los Angeles General Plan Safety Element*, Exhibit C, adopted November 26, 1996. Website: http://planning.lacity.org/cwd/gnlpln/saftyelt.pdf, accessed March 5, 2018.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less Than Significant Impact. Expansive soils are clay-based soils that tend to expand (increase in volume) as they absorb water and contract (lessen in volume) as water is removed. The proposed CTLN alignment is not underlain by such clay-based soils.[25] Furthermore, in areas of open-trench installation, the trench would be backfilled with a stable soil-cement slurry, which is not subject to expansion and contraction. Therefore, the impact would be less than significant.

e) Have soils incapable of adequately supporting use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The proposed project would not include septic tanks or other alternative wastewater disposal systems. Therefore, no impacts associated with septic tanks or alternative wastewater disposal systems would occur. No further analysis is required.

VII. GREENHOUSE GAS EMISSIONS

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. Greenhouse gas (GHG) emissions refer to a class of emissions that are generally believed to affect global climate conditions. The greenhouse effect compares the Earth and the atmosphere surrounding it to a greenhouse with glass panes. The glass panes in a greenhouse let heat from sunlight in and reduce the amount of heat that escapes. GHGs, such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), keep the average surface temperature of the Earth close to 60 degrees Fahrenheit. CO_2 is the most abundant pollutant that contributes to climate change through fossil fuel combustion. The other GHGs are less abundant but have higher global warming potency than CO_2. To account for this higher potential, emissions of other GHGs are frequently expressed in the equivalent of CO_2, denoted as CO_2e. CO_2e is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect.

As the City of Los Angeles has not established screening thresholds for GHG emissions, this analysis uses the applicable significance thresholds developed by the SCAQMD. The SCAQMD developed a 10,000 metric tons CO_2e ($MTCO_2e$) per year threshold for industrial projects under the purview of the SCAQMD as the lead agency for CEQA projects. These industrial projects are typically power plants or related to rule making activities. The proposed project is not an industrial project as it relates to the 10,000 $MTCO_2e$ per year threshold. The GHG CEQA Significance Threshold

[25] City of Los Angeles Department of Public Works Bureau of Engineering, Navigate LA, *Soil Types Map*. Website: http://navigatela.lacity.org/common/mapgallery/pdf/Soil_Types_revised_021015.pdf, accessed March 6, 2018.

Stakeholder Working Group also recommended options for evaluating non-industrial projects, including thresholds for residential, commercial, and mixed-use projects. These draft thresholds include a threshold of 3,000 $MTCO_2e$ per year for non-industrial projects. The SCAQMD recommends that construction emissions associated with a project be amortized over the life of the project (typically 30 years). This analysis uses the more conservative 3,000 $MTCO_2e$ per year threshold to determine significance.

The GHG analysis focused on construction emissions. Activities associated with long-term operations and maintenance would be minimal, limited to scheduled maintenance or emergency repair. No additional permanent workforce would be required to operate the CTLN. There is no potential for new operational GHG emissions.

Construction emissions were estimated using the same methodology as previously discussed in Section III, Air Quality. However, unlike the air quality analysis, the GHG analysis consists of the total emissions for the entire construction process. It is anticipated that active construction would involve 1,060 days of open trench activities, 117 days of jack and bore activities, and 203 days of slip-lining activities. CalEEMod has higher emission rates for equipment and trucks in 2019 than 2022 partially due to the slow turnover of the countywide construction fleet. Because a detailed schedule is not available at this time in the planning process, the analysis conservatively assumes that all GHG emissions would be generated in 2019. Table 4 presents the estimated emissions of GHGs that would be released to the atmosphere on an annual basis.

Table 4. Estimated Annual Greenhouse Gas Emissions

Method	Annual GHG Emissions ($MTCO_2e$ per Year)
Open Trench	3,097
Jack and Bore	141
Slip-Lining	216
Total Emissions	3,454
Amortized Annual Emissions[a]	**115**
SCAQMD Draft Interim Significance Threshold	**3,000**
Exceed Threshold?	No

[a.] Based on SCAQMD guidance, the emissions summary also includes construction emissions amortized over a 30-year span.

Source: TAHA, 2018.

Construction of the proposed project would produce approximately 2,302 $MTCO_2e$, or 77 $MTCO_2e$ annually over a 30-year period. This mass rate is substantially below the most applicable quantitative draft interim threshold of 3,000 $MTCO_2e$ per year as recommended by the SCAQMD. Therefore, impacts related to GHG emissions would be less than significant.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. There is no potential for the proposed project to conflict with GHG reduction plans. As discussed in Section VII(a), the proposed project would not permanently increase emissions. GHG emissions are regionally cumulative in nature and it is highly unlikely that construction of any individual project would generate GHG emissions of sufficient quantity to conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Standard

construction procedures would be undertaken in accordance with SCAQMD and CARB regulations applicable to heavy duty construction equipment and diesel haul trucks. Adhering to requirements pertinent to construction equipment maintenance and inspections and emissions standards, as well as diesel fleet requirements including idling time restrictions and maintenance, would ensure that construction of the proposed project would not conflict with GHG emissions reductions efforts. Therefore, impacts would be less than significant.

VIII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact. Construction of the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Construction activities would include the use hazardous materials typical of construction (i.e., fuel and lubricants for construction equipment). These materials are not considered acutely hazardous. All handling, storage, and disposal of these materials are regulated by the California Department of Toxic Substances Control, EPA, and the Los Angeles Fire Department. Construction of the proposed project would also involve the excavation and transport of paving materials (e.g. asphalt, concrete, road bed fill materials (that could possibly be contaminated by vehicle-related pollution (e.g. oil , gasoline, diesel, other automotive chemicals). The transport, use, and disposal of construction-related hazardous materials would comply with applicable health and safety laws and regulations. Operation of the proposed project would not require the routine transport, use, or disposal of hazardous materials as the proposed CTLN would carry drinking water. With adherence to applicable regulations, the impact related to the routine transport, use, or disposal of hazardous materials would be less than significant.

b) 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 Significant Impact. Construction activities for the proposed project would involve the limited transport, storage, and use of hazardous materials, such as fuel for construction equipment. These types of materials, however, are not acutely hazardous, and all storage, handling, and disposal of these materials would comply with existing regulations. The operation of the CTLN would not involve the use of hazardous materials. Compliance with regulations would ensure a less than significant impact related to creating a significant hazard to the public through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment with regard to construction of the proposed project.

c) 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 Significant Impact. Portions of the proposed CTLN alignment are located within one-quarter mile of schools. However, as discussed in Sections VIII(a) and (b)

above, construction of the proposed project would involve the limited use of hazardous materials, such as fuel and lubricants, which are not considered acutely hazardous, and would not emit hazardous emissions. These materials would be handled in accordance with applicable federal, state, and local regulations regarding storage, use, and disposal. Compliance with existing regulations would ensure a less than significant impact related to handling of these materials within one-quarter mile of an existing school.

d) 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, would it create a significant hazard to the public or the environment?

Less Than Significant Impact. The proposed project would be located primarily within public roadway rights-of-way, except for approximately 2,700 feet that would be located within the Van Norman Complex. Two Leaking Underground Storage Tank (LUST) cleanup sites are located adjacent to the proposed CTLN alignment, including Al-Sal Oil Co. #15, located at the northwest corner of Arleta Avenue and Osborne Street, and LA City Fire Station #75, located at north of San Fernando Mission Boulevard at Stranwood Avenue.[26] Both LUST cleanup sites are completed and closed. Therefore, the proposed project would not be located on a hazardous materials site and would not result in a hazard to the public or the environment. As such, the impact would be less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Less Than Significant Impact. The closest airport to the proposed CTLN is Whiteman Airport, located approximately 1.3 miles east of the southern portion of the CTLN alignment. However, the proposed project would be located primarily within public roadway rights-of-way and would be entirely underground once completed. As such, the proposed project would not result in a safety hazard for people residing or working in the project area, or pose a hazard to aircraft operations. The impact would be less than significant.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. No private airstrip is located within the vicinity of the proposed CTLN. The nearest private airstrip is located approximately 27 miles south of the project site in Carson, CA. As such, the proposed project would not result in a safety hazard for people residing or working in the project area related to a nearby private airstrip.[27] No impact would occur.

[26] State of California, State Water Resources Control Board, GeoTracker. Website: https://geotracker.waterboards.ca.gov/, accessed March 5, 2018.

[27] Airnav.com, Airports search by location, available at: https://www.airnav.com/airports/, accessed April 25, 2018.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The proposed project involves installation of a trunk line within public roadway rights-of-way. As previously discussed, the installation of the proposed CTLN would require the establishment of temporary work areas that would occupy traffic lanes, which, depending on the width of the roadway, would result in partial or complete street closures in the segment under construction. The temporary lane closures could have an effect on designated disaster routes. However, a Traffic Management Plan would be prepared in coordination with the City of Los Angeles Department of Transportation (LADOT) for the proposed project and would detail construction traffic control and detour methods. Implementation of the Traffic Management Plan during construction would ensure that impacts related to emergency response plans would be less than significant. Following installation of the proposed CTLN, all roadways would be returned to their existing conditions. Therefore, no long-term impacts would result from operation of the proposed project. The impact would be less than significant.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The proposed project is located within urban areas of the City of Los Angeles. According to the Selected Wildfire Hazard Areas map within the City's General Plan, the proposed CTLN alignment is not located within a City-designated Mountain Fire District or Fire Buffer Zone.[28] Additionally, according to the California Department of Forestry and Fire Protection Fire Hazard Severity Zone map for the City of Los Angeles, the proposed CTLN alignment is not located within very high fire hazard severity zones.[29] Therefore, the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, and no impact would occur.

IX. HYDROLOGY AND WATER QUALITY

Would the project:

a) Violate any water quality standards or waste discharge requirements?

Less Than Significant Impact. The proposed project would require earthwork including trenching and grading for installation of the trunk line, which may temporarily increase the potential for soil erosion. Construction activities would result in the disturbance of more than one acre of soil and would be required to obtain a

[28] City of Los Angeles Department of City Planning, *City of Los Angeles General Plan Safety Element*, Exhibit D, adopted November 26, 1996. Website: http://planning.lacity.org/cwd/gnlpln/saftyelt.pdf, accessed March 2, 2018.

[29] California Department of Forestry and Fire Protection, Fire Resource and Assessment Program, Fire Hazard Severity Map for the City of Los Angeles. Website: http://www.fire.ca.gov/fire_prevention/fhsz_maps/FHSZ/los_angeles/Los_Angeles.pdf, accessed March 2, 2018.

Construction General Permit, issued by the State Water Resources Control Board. In accordance with the Construction General Permit, a project-specific SWPPP would be developed and implemented to control pollutants in stormwater discharges during construction activities. The SWPPP would identify structural and nonstructural BMPs, such as erosion and sediment control, general housekeeping practices, and inspection for leaks and spills from construction vehicles and equipment that would be implemented during construction of the proposed project. Adherence to existing requirements and implementation of the SWPPP and BMPs would ensure a less than significant impact.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

No Impact. Construction activities would require water for dust control. Water for these activities would be from existing water supplies and is anticipated to require a relatively small volume in relation to the existing supplies. Because the depth to groundwater in the area is substantially below the depth of trench excavation, no dewatering is anticipated. There would be no operational impacts to groundwater supply because the CTLN would replace an existing trunk line and would not increase the consumption of drinking water. As such, the project would not substantially deplete groundwater supplies or interfere with groundwater recharge, and no impact would occur.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?

No Impact. The proposed CTLN alignment would be located primarily within the existing road right-of-way, except for approximately 2,700 feet that would be located within the Van Norman Complex, and as such, is not expected to alter the existing grade or drainage pattern of the area. Neither open-trench nor slip-lining construction methods are expected to result in substantial erosion. Once completed, the proposed CTLN would be underground, and no impacts to drainage patterns or an existing stream are anticipated to occur. Therefore, the impact would be less than significant.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?

No Impact. The proposed CTLN alignment would be located primarily within the existing road right-of-way, except for approximately 2,700 feet that would be located within the Van Norman Complex, and as such, is not expected to alter the existing grade or drainage pattern of the area. Neither open-trench or slip-lining construction methods are expected to result in a substantial increase in the rate of surface runoff, or result in on- or off-site flooding. Once completed, the proposed CTLN would be underground, and no impacts to drainage patterns or an existing stream are anticipated to occur. Therefore, there the impact would be less than significant.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant Impact. Construction of the proposed project would use water to control fugitive dust, which would result in minimal quantities of discharge water. The discharge water would drain into existing storm drains. BMPs would be identified in the SWPPP developed for the proposed project pursuant to NPDES permit requirements to control runoff from the project site during construction. Once completed, the proposed project would not result in any increases in runoff since the pipeline would be located underground. Therefore, the impact would be less than significant.

f) Otherwise substantially degrade water quality?

Less Than Significant Impact. The proposed project would require earthwork including trenching and grading for installation of the trunk line. It is not anticipated that construction of the CTLN alignment would encounter groundwater. As discussed above, BMPs would be identified in the SWPPP developed for the proposed project pursuant to NPDES permit requirements. Adherence to existing requirements and implementation of the SWPPP and BMPs would ensure a less than significant impact.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. A 100-year flood is a flood defined as having a 1.0 percent chance of occurring in any given year. The proposed CTLN alignment crosses the Tujunga Wash Channel, which is designated as a 100-year flood hazard within the confines of the channel.[30] However, the proposed project does not include a residential component; therefore, it would not place housing within a 100-year flood hazard area, and no impact would occur.

h) Place within a 100-year flood area structures to impede or redirect flood flows?

No Impact. As discussed above, the proposed CTLN alignment crosses the Tujunga Wash Channel, which is designated as a 100-year flood hazard area within the confines of the channel. The proposed CTLN would be located underground, including beneath the channel, and would not impede or redirect flows. Therefore, the proposed project would not place structures within a 100-year flood area to impede or redirect flood flows, and no impact would occur.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less Than Significant Impact. The majority of the proposed CTLN alignment is located within City-designated inundation areas from the potential failure of dams,

[30] Federal Emergency Management Agency, FEMA Flood Map Service Center. Website: https://msc.fema.gov/portal, accessed March 6, 2018.

including the Los Angeles Reservoir dam, Hansen Dam, and Sepulveda Dam.[31] However, the proposed project would be located primarily within existing roadways and would not increase the risk from inundation or other flooding. Once completed, the proposed CTLN would be located underground and would not expose people or structures to a significant risk of loss, injury or death involving flooding. Therefore, the impact would be less than significant.

j) Expose people or structure to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow?

No Impact. Seiches are oscillations generated in enclosed bodies of water usually as a result of earthquake-related ground shaking. A seiche wave has the potential to overflow the sides of a containing basin to inundate adjacent or downstream areas. Seiches primarily cause damage to properties that are adjacent to a body of water. Due to the distance between the proposed CTLN and the nearby bodies of water, including Los Angeles Reservoir and Hansen Dam Reservoir, there would be a low risk of seiche resulting in damage to the proposed project.

Tsunamis are large ocean waves caused by sudden water displacement that results from an underwater earthquake, landslide, or volcanic eruption. Tsunamis affect low-lying areas along the coastline. The Santa Monica Mountains separate the proposed CTLN alignment from the Pacific Ocean and the proposed CTLN is not located within a designated Tsunami Hazard Area.[32]

As discussed in Section VI(a)(iv) above, no portion of the proposed CTLN alignment is located within a City-designated landslide or hillside area. As such, the proposed project would not be subject to mudflow.

Therefore, construction and operation of the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving inundation, seiche, tsunami, or mudflow. There would be no impact.

X. LAND USE AND PLANNING

Would the project:

a) Physically divide an established community?

No Impact. The proposed project would not physically divide an established community. The proposed CTLN alignment would be located primarily within existing roadways, except for approximately 2,700 feet that would be located underground within the Van Norman Complex. Following installation of the proposed CTLN, the roadways would be returned to their existing condition. No streets would be permanently closed as a result of the proposed project, and no separation of uses or disruption of access between land use types would occur. As such, the proposed

[31] City of Los Angeles Department of City Planning, *City of Los Angeles General Plan Safety Element*, Exhibit G, adopted November 26, 1996. Website: http://planning.lacity.org/cwd/gnlpln/saftyelt.pdf, accessed March 5, 2018.

[32] Ibid.

project would not physically divide an established community, and no impact would occur.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The proposed CTLN alignment would be located entirely underground and primarily within the boundaries of existing roadways. Thus, the proposed project would not conflict with existing land use or zoning designations as it would not affect use of adjacent land per the applicable land use regulations. Therefore, no impact to applicable land use plans, policies, or regulations would occur.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The proposed project occurs in a heavily urbanized environment and does not fall within the area of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any other approved local, regional, or state habitat conservation plan. No impact would occur.

XI. MINERAL RESOURCES

Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Less than Significant Impact. The southernmost portion of the proposed CTLN alignment passes through an area identified by the City as a Mineral Resource Zone (MRZ) 2, which is an area where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists.[33] According to the State of California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, no wells are known to exist within or adjacent to the proposed CTLN alignment.[34] Implementation of existing City Codes and regulatory requirements would ensure that the proposed project would not result in the loss of availability of known mineral resources. Therefore, impacts would be less than significant.

[33] City of Los Angeles Department of City Planning, Environmental and Public Facilities Maps, *Areas Containing Significant Mineral Deposits* Map, September 1996.

[34] State of California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, DOGGR Online Mapping System, available at: http://www.conservation.ca.gov/dog/Pages/WellFinder.aspx, accessed March 5, 2018.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. The proposed CTLN alignment is located primarily within existing roadways. According to the City of Los Angeles General Plan, the southernmost portion of the proposed CTLN alignment is located in an area identified as an MRZ-2 area. The General Plan states that much of the MRZ-2 designated sites were developed prior to MRZ classification and, as a result, are unavailable for extraction.[35] The portion of the proposed CTLN alignment identified as an MRZ-2 area is located within the Sun Valley – La Tuna Canyon Community Plan area. The Sun Valley – La Tuna Canyon Community Plan does not identify any active mineral extraction sites near the proposed CTLN alignment.[36] The proposed project would not change the existing land uses on or adjacent to the proposed CTLN alignment. As the proposed project would not alter the existing conditions or function of the project site or surrounding area, it would not result in the loss of availability of a locally important mineral resource recovery site delineated on any land use plan. No impact would occur.

XII. NOISE

The following analysis is based on the *City Trunk Line North Replacement Project Noise and Vibration Impact Study*, prepared by Terry A. Hayes Associates, Inc. This report is included as Appendix D of this IS/MND.

Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of applicable standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact With Mitigation Incorporated. A significant impact would occur if the proposed project would expose persons to or generate noise levels in excess of standards established in the City's General Plan, noise ordinance, or other applicable standards.

Construction

The City of Los Angeles regulates noise through several sections of its municipal code. These include Section 41.40, which establishes time prohibitions on noise due to construction activity, Section 112.04, which prohibits the use of loud machinery and/or equipment within 500 feet of residences, and Section 112.05, which establishes maximum noise levels for powered equipment and powered hand tools. According to Section 41.40, no construction activity that might create loud noises in or near residential areas or buildings will be conducted before 7:00 a.m. or after 9:00 p.m. on

[35] City of Los Angeles Department of City Planning, *City of Los Angeles General Plan Conservation Element*, adopted September 2001, available at: https://planning.lacity.org/cwd/gnlpln/consvelt.pdf, accessed March 5, 2018.

[36] City of Los Angeles Department of City Planning, *Sun Valley – La Tuna Canyon Community Plan*, adopted August 1999, available at: https://planning.lacity.org/complan/pdf/svycptxt.pdf, accessed March 5, 2018.

weekdays, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday or City holidays. The time restriction will 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.

Construction activity is anticipated to begin in mid- 2019 and take approximately 9 years to complete.

Open-Trench. Construction equipment associated with open-trench activity would likely involve the use of a backhoe, front end loader, dump truck, pickup trucks, and generators. Construction noise associated with open-trenching activity would typically occur around the work zone and not throughout the entire corridor. Installation of each pipe section would take approximately five days, including trench excavation, shoring, pipe segment placement, and pipe joining.

Slip-Lining. Construction equipment associated with slip-lining activity would likely involve the use of use of a crane, excavator, front end loader, generator, hydraulic pushing machine, and pickup trucks. Construction noise associated with slip-lining activity would largely be limited to the launching and receiving pits. Once the pits are established, the pipe would be installed at an average rate of about two to three pipe sections per day. The overall time to complete the installation of a slip-lining span would depend on the length of the span. However, on average, the entire operation in one span between a launching and receiving pit would be expected to take about two to three months.

Jack and Bore. Construction equipment associated with jack and bore activity would likely involve the use of a crane, excavator, front end loader, generator, hydraulic pushing machine, and pickup trucks. Construction noise associated with pipe jacking activity would largely be limited to the launching and receiving pits. On average, the entire jack and bore operation at a given location would be expected to take about two months.

Typical noise levels from various types of equipment that may be used during construction are listed in Table 5 by activity. The table shows noise levels at distances of 50 feet from the construction noise source.

Construction activities typically require the use of numerous pieces of noise-generating equipment. The noise levels shown in Table 6 take into account that multiple pieces of construction equipment would be operating simultaneously. However, not all of the equipment shown in the table would operate every day. The active construction areas along the alignment would be relatively small and the amount of equipment that could operate in one day would be limited by the size of the active construction zone.

The impact analysis is based on the construction limits outlined in the Los Angeles Municipal Code (LAMC). Construction activity would comply with the allowable hours of construction in LAMC Section 41.40, including 7:00 a.m. to 9:00 p.m. Monday through Friday, 8:00 a.m. to 6:00 p.m. on Saturday, and no construction activity on

Sundays or federal holidays. LAMC Section 112.05 limits powered equipment noise levels to 75 dBA at 50 feet unless technically infeasible. Noise levels from individual pieces of equipment would typically range from 71.0 to 82.6 dBA L_{eq} at 50 feet. Unmitigated noise levels would typically exceed the allowable noise level stated in the LAMC. The noise levels associated with each construction component and activity are discussed below.

Table 5. Noise Level Ranges of Typical Construction Equipment

Construction Equipment	Noise Level at 50 feet (dBA)
Open-Trench Construction	
Concrete Saw	82.6
Crane	72.6
Excavator	76.7
Front End Loader	75.1
Generator	77.6
Pickup Truck	71.0
Vacuum Excavator (Vac-truck)	81.3
Slip-Lining	
Crane	72.6
Excavator	76.7
Front End Loader	75.1
Generator	77.6
Hydraulic Pushing Machine (Auger Drill Rig)	77.4
Pickup Truck	71.0
Pipe Jacking	
Crane	72.6
Excavator	76.7
Front End Loader	75.1
Generator	77.6
Hydraulic Pushing Machine (Auger Drill Rig)	77.4
Pickup Truck	71.0

Source: FHWA, *Roadway Construction Noise Model*, Version 1.1, 2008.

Table 6. Typical Outdoor Construction Noise Levels by Activity

Construction Method	Noise Level at 50 feet (dBA, L_{eq})
Open-Trench Construction	86.9
Slip-Lining	83.5
Jack and Bore	83.5

Source: FHWA, *Roadway Construction Noise Model*, Version 1.1, 2008

Unit 1. Construction of the proposed project would generally occur within the public right-of-way and the Van Norman Complex. Construction activity within the public right-of-way would typically be located at least 50 feet away from sensitive receptors on either side of the street. Noise levels at sensitive receptors near construction activities associated with Unit 1 are shown in Table 7 by street segment. Construction within the Van Norman Complex would primarily include open-trench construction, with slip-lining at the north and south of the complex. The majority of construction within the Van Norman Complex would typically occur at distances of 500 feet or more, but slip-lining activity may be as close as 50 feet. The closest receptors to construction in the Van Norman Complex would be multi-family residences to the east along Midwood Drive. Open-trench activity would generate noise levels of approximately 66.9 dBA L_{eq} at 500 feet. Slip-lining activity would generate noise levels of approximately 83.5 dBA L_{eq} at

50 feet. The existing noise level along Midwood Drive is 55.8 dBA L_{eq}. When added to the existing noise level construction activity would result in increases of 11.4 to 31.1 dBA for open-trench construction and 27.7 dBA for slip-lining activity.

Table 7. Unit 1 Typical Construction Noise Levels at Receptors - Unmitigated

Sensitive Receptor	Activity	Distance (feet)[a]	Maximum Noise Level (dBA)	Existing Ambient (dBA, L_{eq})	New Ambient at Receptor (dBA, L_{eq})	Increase (dBA)
Construction In Van Norman Complex						
Residences along Midwood Drive	Open-Trench	Adjacent to the ROW	86.9	55.8	86.9	31.1
	Slip-Lining	Adjacent to the ROW	83.5	55.8	83.5	27.7
	Open-Trench	500	66.9	55.8	67.2	11.4
Construction Along Stranwood Street						
Residence	Slip-Lining	Adjacent to the ROW	83.5	57.0	83.5	26.5
		Adjacent to the ROW	83.5	58.6	83.5	24.9
Construction Along San Fernando Mission Boulevard and Brand Boulevard						
Residences	Open-Trench	Adjacent to the ROW	86.9	68.0	87.0	19.0
Bishop Alemany High School	Open-Trench	500	86.9	68.0	70.5	2.5
Construction Along Arleta Avenue						
Residences	Open-Trench	Adjacent to the ROW	86.9	57.3	86.9	29.6
			86.9	62.1	86.9	24.8
			86.9	63.6	86.9	23.3
Residences	Jack and Bore	Adjacent to the ROW	83.5	57.3	83.5	26.2
			83.5	62.1	83.5	21.4
			83.5	63.6	83.5	19.9

[a] Distance is the setback of the receptor from the roadway.

Source: TAHA, 2018

Construction along Stranwood Street would primarily involve slip-lining. Slip-lining launch and receiving sites would be located along Stranwood Street, which would begin at Rinaldi Street and be completed at San Fernando Mission Boulevard. Existing noise levels along Stranwood Street are between 57.0 dBA L_{eq} and 58.6 dBA L_{eq}. When added to the existing noise level slip-lining activity would result an increase of 24.9 dBA to 26.5 dBA.

Construction along San Fernando Mission Boulevard and Brand Boulevard would primarily involve open-trench activity. The existing noise level along San Fernando Mission Boulevard and Brand Boulevard is 68.0 dBA L_{eq}. When added to the existing noise level open-trench activity would result in an increase of 19.0 dBA.

Construction along Arleta Avenue would primarily involve open-trenching and pipe jacking. Existing noise levels along Arleta Avenue range from 57.3 dBA L_{eq} to 63.6 dBA L_{eq}. Typical open-trench activity would result in an increase of 23.3 to 29.6 dBA at adjacent residential uses. Construction along Arleta Avenue would also include pipe jacking at Chatsworth Drive, the SR-118 Freeway, Devonshire Street, Filmore Street, Van Nuys Boulevard, and Terra Bella Street. Jack and bore activity would result in an increase of 19.9 to 26.2 dBA at adjacent residential uses.

Unit 2. Similar to Unit 1, construction of Unit 2 would occur within the public right-of-way would typically be located at least 50 feet away from sensitive receptors on either side of the street. Noise levels at sensitive receptors near construction activities associated with Unit 2 are shown in Table 8 by street segment. Construction along Arleta Avenue would primarily involve open-trenching and jack and bore activity. Existing noise levels along Arleta Avenue range from 65.0 dBA L_{eq} to 66 dBA L_{eq}. Typical open-trench activity would result in an increase of 20.9 to 21.9 dBA at adjacent residential uses and an increase of 6.4 dBA at Vena Avenue Elementary School. Construction along Arleta Avenue would also include jack and boring activity at Osborne Street. Jack and bore activity would result in an increase of 17.6 to 18.6 dBA at adjacent residential uses. Jack and Bore activity would not result in an audible increase at Vena Avenue Elementary School as the nearest pipe jacking site would be located approximately 1,200 feet away with several rows of intervening buildings that would act as a buffer between the school and pipe jacking activity.

Table 8. Unit 2 Typical Construction Noise Levels At Receptors - Unmitigated

Sensitive Receptor	Activity	Distance (feet)[a]	Maximum Noise Level (dBA)	Existing Ambient (dBA, L_{eq})	New Ambient at Receptor (dBA, L_{eq})	Increase (dBA)
Construction Along Arleta Avenue						
Residences	Open-Trench	Adjacent to the ROW	86.9	65.0	86.9	21.9
			86.9	66.0	86.9	20.9
Vena Avenue Elementary School[b]		480	61.3	56.0	62.4	6.4
Residences	Jack and Bore	Adjacent to the ROW	83.5	65.0	83.6	18.6
			83.5	66.0	83.6	17.6
Construction Along Branford Street						
Residences	Open-Trench	Adjacent to the ROW	86.9	66.0	86.9	20.9
	Jack and Bore	Adjacent to the ROW	83.5	66.0	83.6	17.6
Construction Along Canterbury Avenue						
Residences	Slip-Lining	Adjacent to the ROW	86.9	61.4	83.5	22.1
	Jack and Bore	Adjacent to the ROW	83.5	61.4	83.5	22.1

a. Distance is the setback of the receptor from the roadway.
b. Intervening building reduction of -4.5 dB for first row of buildings and -1.5 dB for each subsequent row.
Source: TAHA, 2018

Construction along Branford Street would be similar to Arleta Avenue. Existing noise levels along Arleta Avenue were recorded at 66 dBA L_{eq}. Typical open-trench activity would result in an increase of 20.9 dBA at adjacent residential uses. Construction along Branford Street would also include jack and bore activity, which would occur near the Pacoima Diversion Channel. Branford Street would result in an increase of 17.6 dBA.

Construction along Canterbury Avenue would involve slip-lining as well as jack and bore activity near the Pacoima Diversion Channel. Existing noise levels along Canterbury Avenue were recorded at 61.4 dBA L_{eq}. Slip-ling activity and jack and boring activity would result in an increase 22.1 dBA.

Unmitigated noise levels would typically exceed the allowable noise level stated in the LAMC. Mitigation Measures NOI-1 through NOI-7 are designed to reduce construction noise levels. When the line-of-sight would be blocked from the equipment to the receptor, the barriers associated with Mitigation Measure NOI-1 would reduce construction noise levels by approximately 10 dBA for slip-lining and jack and bore sites. The equipment mufflers associated with Mitigation Measure NOI-2 would reduce construction noise levels by approximately 3 dBA. Mitigation Measures NOI-3 through NOI-7, although difficult to quantify, would also reduce and/or control construction noise levels. Temporary noise barriers were considered for placement along open-trench work zones. However, such barriers were determined to be infeasible for multiple reasons, including safety at intersections and cost effectiveness given the transient and short-term nature of the proposed construction activity in any one location. Table 9 and Table 10 show mitigated noise levels by street segment.

Table 9. Unit 1 Typical Construction Noise Levels at Receptors - Mitigated

Sensitive Receptor	Activity	Distance (feet)[a]	Maximum Noise Level (dBA)[b]	Existing Ambient (dBA, L_{eq})	New Ambient at Receptor (dBA, L_{eq})	Increase (dBA)
Construction In Van Norman Complex						
Residences along Midwood Drive	Open-Trench	Adjacent to the ROW	83.9	55.8	83.9	28.1
	Slip-Lining	Adjacent to the ROW	70.5[c]	55.8	70.6	14.8
	Open-Trench	500	63.9	55.8	64.5	8.7
Construction Along Stranwood Street						
Residence	Slip-Lining	Adjacent to the ROW	70.5[c]	57.0	70.7	13.7
		Adjacent to the ROW	70.5[c]	58.6	70.8	12.2
Construction Along San Fernando Mission Boulevard And Brand Boulevard						
Residences	Open-Trench	Adjacent to the ROW	83.9	68.0	84.0	16.0
Bishop Alemany High School	Open-Trench	500	59.4	68.0	68.6	0.6
Construction Along Arleta Avenue						
Residences	Open-Trench	Adjacent to the ROW	83.9	57.3	83.9	26.6
			83.9	62.1	83.9	21.8
			83.9	63.6	83.9	20.3
Residences	Jack and Bore	Adjacent to the ROW	70.5[c]	57.3	70.7	13.4
			70.5[c]	62.1	71.1	9.0
			70.5[c]	63.6	71.3	7.7

a. Distance is the setback of the receptor from the roadway.
b. A 3 dB reduction has been applied for equipment mufflers.
c. A 10 dB reduction has been applied for sound barriers.

Source: TAHA, 2018

Table 10. Unit 2 Typical Construction Noise Levels at Receptors - Mitigated

Sensitive Receptor	Activity	Distance (feet)[a]	Maximum Noise Level (dBA)[b]	Existing Ambient (dBA, L_{eq})	New Ambient at Receptor (dBA, L_{eq})	Increase (dBA)
Construction Along Arleta Avenue						
Residences	Open-Trench	Adjacent to the ROW	83.9	65.0	84.0	19.0
			83.9	66.0	84.0	18.0
Vena Avenue Elementary School[c]		480	58.3	56.0	60.3	4.3
Residences	Jack and Bore	Adjacent to the ROW	70.5[d]	65.0	71.6	6.6
			70.5[d]	66.0	71.8	5.8
Construction Along Branford Street						
Residences	Open-Trench	Adjacent to the ROW	83.9	66.0	84.0	18.0
	Jack and Bore	Adjacent to the ROW	70.5[d]	66.0	71.8	5.8
Construction Along Canterbury Avenue						
Residences	Slip-Lining	Adjacent to the ROW	70.5[d]	61.4	71.0	9.6
	Jack and Bore	Adjacent to the ROW	70.5[d]	61.4	71.0	9.6

a. Distance is the setback of the receptor from the roadway.
b. A 3 dB reduction has been applied for equipment mufflers.
c. Intervening building reduction of 4.5 dB for first row of buildings and 1.5 dB for each subsequent row.
d. A 10 dB reduction has been applied for sound barriers.

Source: TAHA, 2018.

As shown in Tables 9 and 10, construction noise levels would exceed 75 dBA at some receptors even after mitigation. LAMC Section 112.05 specifies that noise levels shall not exceed 75 dBA at a distance of 50 feet. However, the noise limitation does not apply where compliance is technically infeasible, meaning the noise limitation cannot be met despite the use of mufflers, shields, sound barriers and/or any other noise-reduction device or techniques during the operation of equipment. As discussed above, Mitigation Measures NOI-1 through NOI-7 would reduce construction equipment noise impacts to the greatest extent technically feasible. Additionally, the proposed project would comply with LAMC Section 41.40, which limits the hours that construction activities may occur to 7:00 a.m. to 9:00 p.m. Monday through Friday, 8:00 a.m. to 6:00 p.m. on Saturday, and no construction activity on Sundays or federal holidays. Therefore, compliance with existing regulations and implementation of Mitigation Measures NOI-1 through NOI-7 would ensure that impacts related to construction equipment noise would be less than significant.

Off-Site Trucks. In addition to on-site construction activities, noise would be generated off-site by construction-related trucks and construction worker vehicles. Construction trucks generate higher noise levels than construction worker-related traffic. For example, one heavy-duty truck, traveling 35 miles per hour, generates the equivalent noise of 31 passenger vehicles.[37]

It is acknowledged that project-related truck trips would instantaneously increase the ambient noise levels along haul routes. A doubling of traffic volume is typically needed

37 California Department of Transportation, *Technical Noise Supplement*, November 2009.

to audibly increase noise levels along a roadway segment. The impact analysis is based on the potential for truck activity to result in prolonged noise exposure. Open-trenching activity is anticipated to generate the maximum number of haul truck trips per day, which would be approximately 40 trips per day. Multiple work sites would be active along the corridor and haul truck trips would be distributed along several roadways. No more than five haul truck trips per hour are anticipated to occur at any work site. Jack and bore activity and slip-lining activity would only require four haul truck trips per day. Haul truck trips associated with open-trenching activity, slip-lining, and jack and bore activity would not audibly increase ambient noise levels over a prolonged period of time due to the low number of hauls trucks at a work site at any given time. Daily traffic volumes are not anticipated to double along any roadway segment and off-site vehicle activity is not anticipated to audibly change ambient noise levels. Furthermore, all truck activity would occur during daytime hours, which would be less impactful to nearby residents. Therefore, impacts related to off-site noise would be less than significant.

Operation

Following installation of the trunk line, there would be no operational component of the proposed project beyond routine maintenance activities. The CTLN would be connected to several existing trunk lines to provide redundant pathways for water supply. With the exception of minor appurtenant facilities that would be located above ground in the public right of way (such as utility cabinets), the CTLN would be located entirely underground and would not be visible. Activities associated with long-term operations and maintenance would be minimal, limited to scheduled maintenance or emergency repair. No additional permanent workforce would be required to operate the CTLN. The pipeline would be subterranean and would not generate audible noise. Therefore, no impact would occur.

Mitigation Measures

NOI-1 For construction activities lasting more than one month in one location and within 500 feet of a sensitive receptor, temporary barriers (e.g., noise blankets) shall be placed between the equipment and sensitive receptor.

NOI-2 Construction equipment shall be properly maintained and equipped with mufflers.

NOI-3 Rubber-tired equipment shall be used rather than tracked equipment.

NOI-4 Equipment shall be turned off when not in use for an excess of five minutes, except for equipment that requires idling to maintain performance.

NOI-5 A public liaison shall be appointed for project construction will be responsible for addressing public concerns about construction activities, including excessive noise. As needed, the liaison shall determine the cause of the concern (e.g., starting too early, bad muffler) and implement measures to address the concern.

NOI-6 The public shall be notified in advance of the location and dates of construction hours and activities.

NOI-7 Truck routes shall be limited to major arterial roads located within non-residential areas when feasible.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. A significant impact would occur if the proposed project would cause excessive vibration levels. Vibration levels rarely affect human health. Instead, most people consider vibration to be an annoyance that may affect concentration or disturb sleep. Additionally, high levels of vibration may damage fragile buildings. The peak particle velocity is most frequently used to describe vibration impacts to buildings and is measured in inches per second.

Construction

Construction activity can generate varying degrees of vibration, depending on the procedure and equipment. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of a construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, and to slight damage at the highest levels. In most cases, the primary concern regarding construction vibration relates to damage. Community parks are not typically considered sensitive to short-term vibration levels.

On-Site Equipment. The FTA provides vibration levels for various types of construction equipment with an average source level reported in terms of velocity.[38] Jack and bore sites would include the use of vibration-free hydraulic piling equipment and no impact pile driving would be required. Equipment used for boring pipe tunnels would be most similar to a caisson drill. Table 11 provides estimates of vibration levels for a wide range of soil conditions. The reference levels were used to estimate vibration levels at the sensitive receptors most likely to be impacted by equipment at each location of construction activity.

Table 11. Vibration Velocities for Construction Equipment

Equipment	PPV at 25 feet (Inches/Second)	Approximate L_v at 25 feet[a]
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

RMS velocity in decibels (VdB) related to 1 micro-inch/second.
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006

Construction activity would occur within the public right-of-way, approximately 50 feet from residences on either side of the street. No impact pile-driving would be necessary for open-trench construction, slip-lining, or jack and bore sites. Installing piles would be accomplished using an excavator with various attachments, depending on the method. Vibration generating equipment used for trenching, slip-lining, and jack and bore sites

[38] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

would be similar and would be best characterized by caisson drilling, loaded trucks, jackhammers and small bulldozers, as shown in Table 11. Vibration damage to structures is the primary concern when operating heavy equipment. Table 12 shows vibration levels and impacts at structures closest to the proposed project alignment. The majority of structures along the alignment are constructed of engineered concrete and masonry, which is held to a 0.3 inches per second vibration damage thresholds. However, there are also historic structures in close proximity to construction activity, such as a structure associated with the Mission San Fernando Rey De España and a fountain associated with the Brand Park Community Garden. No impacts were identified at historic structures or non-historic structures near the alignment. Therefore, impacts related to on-site equipment vibration would be less than significant.

Table 12. Vibration Velocities for Construction Equipment

Receptor	Activity	Equipment[a]	Distance (ft)	Reference Vibration Level (Inches/ Second)	Vibration Damage Threshold (Inches/ Second)	Vibration Level at receptor (Inches/ Second)	Impact?
Non-historic structures	Open-Trench	Loaded Trucks	50	0.076	0.3	0.027	No
	Slip-Lining	Caisson Drilling	50	0.089	0.3	0.031	No
	Jack and Bore	Caisson Drilling	50	0.089	0.3	0.031	No
Bishop Alemany High School	Open-Trench	Loaded Trucks	500	0.076	0.3	0.001	No
Mission San Fernando Rey de España Structure	Open-Trench	Loaded Trucks	20	0.076	0.12	0.106	No
Brand Park Community Garden Fountain	Open-Trench	Loaded Trucks	20	0.076	0.12	0.106	No

[a] Most vibration intensive equipment for activity occurring near receptor.
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

Off-Site Trucks. In addition to on-site construction activities, construction trucks on the roadway network have the potential to expose vibration-sensitive land uses located near the proposed project access route. As shown in Table 10, loaded trucks generate vibration levels of 0.076 inches per second at a distance of 25 feet. Rubber-tired vehicles, including trucks, do not generate significant roadway vibrations that can cause building damage. It is possible that trucks would generate perceptible vibration at sensitive receptors adjacent to the roadway. However, these would be transient and instantaneous events typical to the roadway network. This level of activity is not considered substantial enough to generate a vibration annoyance. Therefore, impacts related to off-site vibration would be less than significant.

Operation

The primary sources of proposed project operational-related vibration would include vehicles traveling to the project site for routine inspection and maintenance activities. Vehicular movements would generate similar vibration levels as existing traffic conditions. The proposed project would not introduce any significant stationary sources of vibration, including mechanical equipment that would be perceptible at

sensitive receptors. Therefore, impacts related to operational vibration would be less than significant.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

No Impact. A significant impact would occur if the proposed project would cause a substantial permanent increase in noise levels above existing ambient levels. As discussed in Section XII(a) above, operation of the proposed project would not create new permanent sources of noise. Following installation of the trunk line, there would be no operational component of the proposed project beyond routine maintenance activities. Therefore, the proposed project would not create a substantial permanent increase in noise levels above existing ambient levels, and no impact would occur.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact With Mitigation Incorporated. A significant impact would occur if the proposed project would result in a substantial temporary or periodic increase in ambient noise levels. As discussed in Section XII(a) above, construction activities could result in temporary increases in noise levels along the proposed CTLN alignment. Sensitive receptors adjacent to the construction work zones would experience increased noise levels associated with construction. Construction noise impacts would be temporary in nature, but equipment noise levels would exceed 75 dBA at the nearest sensitive receptors. Therefore, with the implementation of Mitigation Measures NOI-1 through NOI-7, impacts related to temporary and periodic increases in ambient noise levels would be less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. A significant impact would occur if the proposed project would expose people residing or working in the project area to excessive noise levels from a public airport or public use airport. The closest airport to the proposed CTLN alignment is Whiteman Airport, located approximately 1.3 miles northeast of the project site.[39] The proposed project would not include occupied facilities that would expose people to excessive noise levels related to aircraft use. Therefore, no impacts related to exposing people residing or working in the project area to excessive noise levels from a public airport would occur.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. A significant impact would occur if the proposed project would expose people residing or working in the project area to excessive noise levels form a private

[39] Airnav.com, Airports search by location, available at: https://www.airnav.com/airports/, accessed March 6, 2018.

airstrip. There are no private airstrips located near the project site. The nearest private airstrip is located approximately 27 miles south of the project site in Carson, CA.[40] Therefore, no impact would occur.

XIII. POPULATION AND HOUSING

Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less than Significant Impact. Construction of the proposed project is scheduled to begin in 2019 and is anticipated to last approximately 9 years. The number of daily on-site workers would range from a low of 10 personnel to a high of 40 personnel, depending on the number of active construction crews working on Unit 1 and Unit 2. Given the temporary nature of construction industry jobs, the relatively large regional construction industry, and the relatively nominal total number of construction workers needed during any construction phase, it is likely that the labor force from within the region would be sufficient to complete project construction without a substantial influx of new workers and their families, and any such relocation within the region would be minimal. Accordingly, construction employment generated by the proposed project would not impact population in the heavily-populated Los Angeles region. Therefore, construction of the proposed project would not directly induce substantial population growth, and the impact would be less than significant.

The proposed project does not include construction or operation of any residential or commercial land uses and, therefore, would not result in a direct population increase. The proposed project would replace existing aging water conveyance infrastructure in the project area, and would serve existing customers. Since the proposed project would provide no additional water supply to the City, it would not indirectly induce population growth. Therefore, no impact to population growth during project operation would occur.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. Construction activity would primarily occur within existing road rights-of-way, except for approximately 2,700 feet that would be located within the LADWP Van Norman Complex. The proposed project would not require the removal of existing housing. Therefore, implementation of the proposed project would not affect the number or availability of existing housing in the area, and would not necessitate the construction of replacement housing elsewhere. No impact would occur.

[40] Airnav.com, Airports search by location, available at: https://www.airnav.com/airports/, accessed April 25, 2018.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. As discussed in Section XIII(b) above, construction of the proposed project would occur primarily within existing road rights-of-way. No persons would be displaced as a result of implementation of the proposed project. As such, construction of replacement housing would not be necessary, and no impact would occur.

XIV. PUBLIC SERVICES

Would the project:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i) Fire protection?

No Impact. Fire protection services in the City are provided by the City of Los Angeles Fire Department (LAFD). There are several LAFD fire stations serving the project area. The proposed project does not include new housing or non-residential development that would substantially increase the residential or employee populations in the area; thus, the demand for emergency services would not substantially increase. As the proposed project would replace existing water conveyance infrastructure along a new alignment, it would not generate population growth. Therefore, construction and operation of the proposed project would not require the construction of additional fire protection facilities or expansion of existing facilities, and no impact would occur.

ii) Police protection?

No Impact. The City of Los Angeles Police Department (LAPD) is the local law enforcement agency responsible for providing police protection services in the City. Several LAPD Community Police Stations serve the project area. As previously stated, the proposed project does not include new housing or non-residential development that would substantially increase the residential or employee populations in the area; thus, the proposed project would not generate population growth, and the demand for emergency services would not substantially increase. Therefore, construction and operation of the proposed project would not require the construction of additional police protection facilities or expansion of existing police services or facilities, and no impact would occur.

iii) Schools?

No Impact. The demand for new or expanded school facilities is generally associated with an increase in housing or population. As the proposed project does not include development of any residential uses, no direct increase in residential population would occur. Construction workers are anticipated to be

drawn from the existing workforce throughout the region. As such, construction of the proposed project would not generate new permanent residents that would increase the demand for schools. No additional workers would be employed for project operations as the trunk line is a passive use. Additionally, as the proposed project would provide no additional water supply to the City, it would not indirectly induce population growth. No new students would be generated, and no increase in demand for local schools would result. No impact to schools would occur.

iv) Parks?

No Impact. As previously stated, the proposed project does not include development of any residential uses. Construction and operation of the proposed project would not generate new permanent residents that would increase the demand for parks and recreational facilities. Therefore, no impact to parks would occur.

v) Other public facilities?

No Impact. Demand for other public facilities, such as libraries, is generally associated with increased housing or population. As previously discussed, the proposed project does not include a component that would generate an increase in housing or population. The proposed project would not result in indirect population growth that could increase demand for other public facilities. Therefore, neither construction nor operation of the proposed project would result in substantial adverse physical impacts associated with the provision of new or expanded public facilities. No impact would occur.

XV. RECREATION

Would the project:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The proposed project involves the replacement of existing water conveyance infrastructure along a new alignment. Construction workers are anticipated to be largely drawn from the existing workforce in the region, and no additional workers would be required for operation of the proposed project. Neither construction nor operation of the proposed project would generate new permanent residents that would increase the use of existing parks and recreational facilities. Therefore, substantial physical deterioration of these facilities would not occur or be accelerated with implementation of the proposed project. No impact would occur.

b) Include recreational facilities or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The proposed project does not include development of any recreational facilities. Further, since the proposed project would provide no additional water supply

to the City, it would not induce growth that could require the construction or expansion of recreational facilities. Therefore, no impact would occur.

XVI. TRANSPORTATION/TRAFFIC

The following analysis is based on the *City Trunk Line North Construction Traffic Impact Analysis*, prepared by Translutions, Inc. This report is included as Appendix E of this IS/MND.

Methodology

The following traffic analysis focuses on the construction of the proposed project. On wider streets involving open-trench construction (i.e. Branford Street between Canterbury Avenue and Arleta Avenue and the segment of Arleta Avenue between Branford Street and Fox Street), construction work zones may be 1,000 feet or more in length, often delimited by street intersections. In addition to the actual work zones, lane transition zones of several hundreds of feet would be required extending outward from the work zone to shift approaching traffic to the single travel lane that would be available in each direction adjacent to the work zone. On narrower streets involving open trench construction (i.e. Arleta Avenue north of Fox Street and portions of San Fernando Mission Boulevard between Noble Avenue and Stranwood Avenue), construction would be completed in smaller segments of several hundred feet, rather than the 1,000-foot or greater work zones that would occur in wider roadways. This would help maintain access along the roads, at intersections, and to driveways as possible and allow for a shorter timeframe to complete construction in each work zone. Therefore, only a limited portion of the entire pipeline route would be under construction at a given time, and construction would move along the pipeline route once construction in a given area is completed and the roadway is returned to normal operating conditions.

Due to the limited impacted area of the roadway, the purpose of this analysis is to determine whether sufficient options exist such that traffic can be diverted along several alternative routes to maintain adequate flow both along the pipeline route itself and along suggested detour routes during construction. If there are sufficient options for drivers in this area during construction of the proposed project, disruption to traffic flows can be minimized. Therefore, the traffic analysis identifies effects of lane reductions during construction, and then provides residual capacities at adjacent alternative routes to identify if the circulation system as a whole would be sufficient to maintain acceptable operations during construction of the proposed project.

The following traffic analysis evaluates existing operations at roadway segments along the proposed project route as well as potential detour routes. This analysis also identifies residual capacities at potential detour routes and identifies (1) if the reduction of lanes during construction result in unacceptable levels of service; (2) if it results in unacceptable levels of service, how much traffic is likely to detour on to adjacent roadways; (3) if traffic detours to other area roadways, will the adjacent roadways still operate at satisfactory conditions; and (4) how the detours should be planned to not exceed capacity at adjacent roadways.

Level of Service

Level of service (LOS) is a measure of the quality of operational conditions within a traffic stream and is generally expressed in terms of such measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Levels range from A to F, with LOS A representing excellent (free-flow) conditions and LOS F representing extreme congestion. The analysis of traffic operations at roadway segments was conducted by using vehicle-to-capacity (V/C) ratios based on the capacity of each roadway. The LOS criteria and corresponding V/C ratios are shown in Table 13.

Table 13. Level of Service Definitions

LOS	Flow Condition	V/C Ratio
A	This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable, or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.	0.00 - 0.60
B	This level is assigned when the volume-to-capacity ratio is low and either progression is highly favorable, or the cycle length is short. More vehicles stop than with LOS A.	0.61 - 0.70
C	This level is typically assigned when progression is favorable, or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	0.71 - 0.80
D	This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective, or the cycle length is long. Many vehicles stop, and individual cycle failures are noticeable.	0.81 - 0.90
E	This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.	0.91 - 1.00
F	This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	Over 1.00

The City of Los Angeles uses LOS D as the acceptable threshold for roadway segment and intersection operations. When the LOS of a facility is lower than LOS D, the City uses a sliding scale of impacts for development projects. Since construction impacts are temporary, this analysis identifies segments that will fall below LOS D during construction and identifies how traffic can be rerouted to adjacent roadways while maintaining LOS D or better at those roadways.

Would the project:

a) 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?

Less Than Significant Impact with Mitigation Incorporated. The proposed project would originate at the LADWP Van Norman Complex in the Granada Hills community of Los Angeles and terminate adjacent to the LADWP Tujunga Spreading Grounds in Sun

Valley community of Los Angeles, where it would connect to the existing CTLS. For this analysis, the CTLN route was divided into several construction areas. These construction areas are generally based on potential construction segments based on location and major intersections. Based on these construction segments, the following 13 analysis segments were identified within the project route:

1. Canterbury Avenue between Tonopah Street & Branford Street
2. Branford Street between Canterbury Avenue & Arleta Avenue
3. Arleta Avenue between Branford Street & Osborne Street
4. Arleta Avenue between Osborne Street & Terra Bella Street
5. Arleta Avenue between Terra Bella Street & Van Nuys Boulevard
6. Arleta Avenue between Van Nuys Boulevard & Devonshire Street

7A. Arleta Avenue between Devonshire Street & Paxton Street
7B. Arleta Avenue between Paxton Street & Chatsworth Street
8A. Arleta Avenue between Chatsworth Street & Fox Street
8B. Arleta Avenue between Fox Street & Chatsworth Drive

9. Arleta Avenue between Chatsworth Drive & Brand Boulevard
10. Brand Boulevard between Arleta Avenue & Noble Avenue
11. Mission between Noble Avenue & Stranwood Avenue

To identify potential detour routes, in addition to the analysis segments listed above, the following locations were evaluated for residual capacity to accommodate traffic that may divert from the actual construction segments:

1. Canterbury Avenue South of Branford Street
2. Branford Street between Canterbury Avenue & Arleta Avenue
3. Wentworth West of Arleta Avenue
4. Osborne Street West of Arleta Avenue
5. Arleta Avenue South of Branford Street
6. Canterbury Avenue North of Branford Street
7. Branford Street West of Laurel Canyon Boulevard
8. Arleta Avenue South of Osborne Street
9. Beachy Avenue South of Osborne Street
10. Beachy Avenue South of Terra Bella Street
11. Laurel Canyon Boulevard South of Terra Bella Street
12. Beachy Avenue South of Van Nuys Boulevard
13. Laurel Canyon Boulevard South of Van Nuys Boulevard
14. Bartee Avenue South of Van Nuys Boulevard
15. Woodman Avenue Ave South of Devonshire Street
16. Laurel Canyon Boulevard South of Paxton Street
17. Devonshire Street East of Woodman Avenue
18. Woodman Avenue South of Chatsworth Street
19. Laurel Canyon Boulevard North of Paxton Street
20. Sharp Avenue South of Paxton Street
21. Filmore Street East of Arleta Avenue
22. Fox Street West of Arleta Avenue
23. Laurel Canyon Boulevard South of Chatsworth Drive

24. Sharp Avenue South of Chatsworth Drive
25. San Jose East of Arleta Avenue
26. Arleta Avenue South of Brand Boulevard
27. Laurel Canyon Boulevard South of Brand Boulevard
28. Chatsworth Street West of Arleta Avenue
29. Fox Street North of Arleta Avenue
30. Sepulveda Boulevard North of 118
31. Laurel Canyon Boulevard South of Mission Boulevard
32. Columbus Avenue South of Mission Boulevard
33. Mission Boulevard near Stranwood Avenue
34. Rinaldi Street near Sepulveda Boulevard
35. Brand Boulevard near Columbus Avenue
36. Canterbury Avenue between Branford Street & Osborne Street
37. Osborne Street east of Arleta Avenue
38. Terra Bella Street east of Arleta Avenue
39. Terra Bella Street west of Arleta Avenue
40. Van Nuys Boulevard east of Arleta Avenue
41. Van Nuys Boulevard west of Arleta Avenue
42. Paxton Street east of Arleta Avenue
43. Chatsworth Drive east of Arleta Avenue
44. Chatsworth Drive west of Arleta Avenue
45. Brand Boulevard east of Arleta Avenue
46. Brand Boulevard west of Arleta Avenue

Existing Traffic Conditions

Existing traffic volumes are based on peak hour intersection turn movement counts and daily roadway segment counts collected in May 2016. The number of lanes, peak hour volumes, V/C ratios, and LOS for roadway segments within the project area are shown on Table 14.

Table 14. Existing Construction Area Segment Peak Hour Intersection LOS

No.	Intersection	Peak Hour	Existing Conditions	
			V/C or Delay	LOS
1	Canterbury Avenue between Tonopah Street & Branford Street	AM	0.226	A
		PM	0.235	A
2	Branford Street between Canterbury Avenue & Arleta Avenue	AM	0.651	B
		PM	0.570	A
3	Arleta Avenue between Branford Street & Osborne Street	AM	0.600	A
		PM	0.656	B
4	Arleta Avenue between Osborne Street & Terra Bella Street	AM	0.523	A
		PM	0.523	A
5	Arleta Avenue between Terra Bella Street & Van Nuys Boulevard	AM	0.476	A
		PM	0.448	A
6	Arleta Avenue between Van Nuys Boulevard & Devonshire Street	AM	0.631	B
		PM	0.528	A
7A	Arleta Avenue between Devonshire Street & Paxton Street	AM	0.393	A
		PM	0.450	A
7B	Arleta Avenue between Paxton Street & Chatsworth Street	AM	0.181	A
		PM	0.199	A
8A	Arleta Avenue between Chatsworth Street & Fox Street	AM	0.068	A
		PM	0.080	A
8B	Arleta Avenue between Fox Street & Chatsworth Drive	AM	0.280	A
		PM	0.282	A
9	Arleta Avenue between Chatsworth Drive & Brand Boulevard	AM	0.181	A
		PM	0.183	A
10	Brand Boulevard between Arleta Avenue & Noble Avenue	AM	0.361	A
		PM	0.347	A
11	Mission between Noble Avenue & Stranwood Avenue	AM	1.351	F
		PM	0.897	D

As shown in Table 14, all roadway segments currently operate at satisfactory LOS except Mission Boulevard between Noble Avenue and Stranwood Avenue during the a.m. peak hour.

Construction Year Traffic Conditions

Construction of the proposed project is anticipated to begin in 2019 and end in 2028. To conduct a conservative analysis, the traffic analysis is based on 2028 conditions, and includes potential growth in traffic volumes over 10 years. Construction year traffic volumes were calculated by applying growth rates for the San Fernando, Granada Hills, Sylmar, and Tujunga area. Number of lanes, peak hour volumes, v/c ratios and LOS for roadway segments within the project area are shown in Table 15.

Table 15. Future (Construction Year) without Project Construction Peak Hour Intersection LOS

No.	Intersection	Lanes	Capacity	Peak Hour	Future w/o Project Conditions		
					Vol.	V/C or Delay	LOS
1	Canterbury Avenue between Tonopah Street & Branford Street	2	1,200	AM	278	0.232	A
				PM	289	0.241	A
2	Branford Street between Canterbury Avenue & Arleta Avenue	4	3,200	AM	2,133	0.667	B
				PM	1,870	0.584	A
3	Arleta Avenue between Branford Street & Osborne Street	4	3,200	AM	1,966	0.614	B
				PM	2,151	0.672	B
4	Arleta Avenue between Osborne Street & Terra Bella Street	4	3,200	AM	1,716	0.536	A
				PM	1,743	0.545	A
5	Arleta Avenue between Terra Bella Street & Van Nuys Boulevard	4	3,200	AM	1,560	0.488	A
				PM	1,467	0.458	A
6	Arleta Avenue between Van Nuys Boulevard & Devonshire Street	4	3,200	AM	2,067	0.646	B
				PM	1,731	0.541	A
7A	Arleta Avenue between Devonshire Street & Paxton Street	4	3,200	AM	1,289	0.403	A
				PM	1,476	0.461	A
7B	Arleta Avenue between Paxton Street & Chatsworth Street	4	3,200	AM	594	0.186	A
				PM	653	0.204	A
8A	Arleta Avenue between Chatsworth Street & Fox Street	4	3,200	AM	223	0.070	A
				PM	263	0.082	A
8B	Arleta Avenue between Fox Street & Chatsworth Drive	2	1,200	AM	344	0.287	A
				PM	346	0.288	A
9	Arleta Avenue between Chatsworth Drive & Brand Boulevard	2	1,200	AM	222	0.185	A
				PM	224	0.187	A
10	Brand Boulevard between Arleta Avenue & Noble Avenue	4	3,200	AM	1,184	0.370	A
				PM	1,137	0.355	A
11	Mission between Noble Avenue & Stranwood Avenue	2	1,200	AM	1,661	**1.384**	**F**
				PM	1,102	**0.918**	**E**

As shown in Table 15, all roadway segments are forecast to operate at satisfactory LOS except Mission Boulevard between Noble Avenue and Stranwood Avenue during the a.m. and p.m. peak hours.

Construction Traffic Conditions

During the course of construction, especially where the open trench method is used, 4-lane roadways will be reduced to 2-lane roadways. On narrower streets, traffic will be restricted to local access only. Since the number of local trips are unknown, to present a worst-case analysis, the entire traffic volume on such streets have been assumed to be detoured over to other streets. Number of lanes, peak hour volumes, v/c ratios and LOS for roadway segments within the project area are shown in Table 16. Table 16 also shows the volume of traffic that would be required to detour to other roadways to maintain LOS D or better along the construction corridor.

Table 16. Future (Construction Year) with Project Construction Peak Hour Intersection LOS

No.	Intersection	Lanes	Capacity	Peak Hour	Future w/o Project Conditions			
					Vol.	V/C or Delay	LOS	Detour Vol.
1	Canterbury Avenue between Tonopah Street & Branford Street	0	0	AM	278	*Local Only*	--	278
				PM	289	*Local Only*	--	289
2	Branford Street between Canterbury Avenue & Arleta Avenue	2	1,600	AM	2,133	**1.333**	**F**	693
				PM	1,870	**1.169**	**F**	430
3	Arleta Avenue between Branford Street & Osborne Street	2	1,600	AM	1,966	**1.229**	**F**	526
				PM	2,151	**1.344**	**F**	711
4	Arleta Avenue between Osborne Street & Terra Bella Street	2	1,600	AM	1,716	**1.073**	**F**	276
				PM	1,743	**1.089**	**F**	303
5	Arleta Avenue between Terra Bella Street & Van Nuys Boulevard	2	1,600	AM	1,560	**0.975**	**E**	120
				PM	1,467	**0.917**	**E**	27
6	Arleta Avenue between Van Nuys Boulevard & Devonshire Street	2	1,600	AM	2,067	**1.292**	**F**	627
				PM	1,731	**1.082**	**F**	291
7A	Arleta Avenue between Devonshire Street & Paxton Street	2	1,600	AM	1,289	0.806	D	0
				PM	1,476	**0.923**	**E**	36
7B	Arleta Avenue between Paxton Street & Chatsworth Street	2	1,600	AM	594	0.371	A	0
				PM	653	0.408	A	0
8A	Arleta Avenue between Chatsworth Street & Fox Street	2	1,600	AM	223	0.139	A	0
				PM	263	0.164	A	0
8B	Arleta Avenue between Fox Street & Chatsworth Drive	0	0	AM	344	*Local Only*	--	344
				PM	346	*Local Only*	--	346
9	Arleta Avenue between Chatsworth Drive & Brand Boulevard	0	0	AM	222	*Local Only*	--	222
				PM	224	*Local Only*	--	224
10	Brand Boulevard between Arleta Avenue & Noble Avenue	2	1,600	AM	1,184	0.740	C	0
				PM	1,137	0.711	C	0
11	Mission between Noble Avenue & Stranwood Avenue	0	0	AM	1,661	*Local Only*	--	1,661
				PM	1,102	*Local Only*	--	1,102

As shown in Table 16, the following six segments would operate at unsatisfactory conditions during construction:

- Branford Street between Canterbury Avenue & Arleta Avenue
- Arleta Avenue between Branford Street & Osborne Street
- Arleta Avenue between Osborne Street & Terra Bella Street
- Arleta Avenue between Terra Bella Street & Van Nuys Boulevard
- Arleta Avenue between Van Nuys Boulevard & Devonshire Street
- Arleta Avenue between Devonshire Street & Paxton Street

Construction impacts are temporary in nature and the reduction in capacity would be temporary. As such, this analysis includes an evaluation of alternative routes to reduce delays and improve LOS and traffic flow. Detour routes have been identified for the impacted segments identified above. In addition, routes to detour through traffic at roadways which will be restricted to local traffic only have also been identified. Traffic will be restricted to local access only at the following segments:

- Canterbury Avenue between Tonopah Street & Branford Street
- Arleta Avenue between Chatsworth Drive & Brand Boulevard
- Brand Boulevard between Arleta Avenue & Noble Avenue
- Mission Boulevard between Noble Avenue & Stranwood Avenue

Potential Detour Routes During Construction

Canterbury Avenue between Tonopah & Branford Street: During construction, Canterbury Avenue between Tonopah & Branford Street would be restricted to local traffic only. Since Canterbury terminates approximately 0.5-mile south of Branford Street, most of the traffic on the segment is local traffic. The traffic volumes are very low along this segment and are anticipated to be less than 300 vehicles during the peak hours. It is not anticipated that this traffic would detour to other streets.

Branford Street between Canterbury Avenue & Arleta Avenue: Branford Street between Canterbury Avenue & Arleta Avenue is anticipated to operate at unsatisfactory LOS during construction. Approximately 693 vehicles during the a.m. peak hour and 430 vehicles during the p.m. peak hour would be required to be rerouted to maintain satisfactory LOS. Wentworth west of Arleta Avenue has a residual capacity of 714 vehicles during the a.m. peak hour and 749 vehicles during the p.m. peak hour. Arleta Avenue South of Branford Street has a residual capacity of 1086 vehicles during the a.m. peak hour and 985 vehicles during the p.m. peak hour. Canterbury Avenue between Tonopah Street & Branford Street has a residual capacity of 922 vehicles during the a.m. peak hour and 911 vehicles during the p.m. peak hour. These roadways would accommodate the detouring traffic for this segment.

Arleta Avenue between Branford Street & Osborne Street: Arleta Avenue between Branford Street & Osborne Street is anticipated to operate at unsatisfactory LOS during construction. Approximately 526 vehicles during the a.m. peak hour and 711 vehicles during the p.m. peak hour would be required to be rerouted to maintain satisfactory LOS. Canterbury Avenue between Branford Street & Osborne Street has a residual capacity of 2809 vehicles during the a.m. peak hour and 2806 vehicles during the p.m. peak hour. Beachy Avenue South of Osborne Street has a residual capacity of 719 vehicles during the a.m. peak hour and 606 vehicles during the p.m. peak hour. Osborne Street west of Arleta Avenue has a residual capacity of 407 vehicles during the a.m. peak hour and 440 vehicles during the p.m. peak hour. Terra Bella Street west of Arleta Avenue has a residual capacity of 972 vehicles during the a.m. peak hour and 1074 vehicles during the p.m. peak hour. These roadways would accommodate the detouring traffic for this segment.

Arleta Avenue between Osborne Street & Terra Bella Street: Arleta Avenue between Branford Street & Osborne Street is anticipated to operate at unsatisfactory LOS during construction. Approximately 276 vehicles during the a.m. peak hour and 303 vehicles during the p.m. peak hour would be required to be rerouted to maintain satisfactory LOS.

Osborne Street east of Arleta Avenue has a residual capacity of 273 vehicles during the a.m. peak hour and 439 vehicles during the p.m. peak hour. Osborne Street west of Arleta Avenue has a residual capacity of 407 vehicles during the a.m. peak hour and 440 vehicles during the p.m. peak hour. Terra Bella Street east of Arleta Avenue has a residual capacity of 1066 vehicles during the a.m. peak hour and 1185 vehicles during the p.m. peak hour. Terra Bella Street west of Arleta Avenue has a residual capacity of 972 vehicles during the a.m. peak hour and 1074 vehicles during the p.m. peak hour. Beachy Avenue South of Terra Bella Street has a residual capacity of 744 vehicles during the a.m. peak hour and 778 vehicles during the p.m. peak hour. Laurel Canyon Boulevard South of Terra Bella Street has a residual capacity of 808 vehicles during the a.m. peak hour and 886 vehicles during the p.m. peak hour. These roadways would accommodate the detouring traffic for this segment.

Arleta Avenue between Terra Bella Street & Van Nuys Boulevard: Arleta Avenue between Terra Bella Street & Van Nuys Boulevard is anticipated to operate at unsatisfactory LOS during construction. Approximately 120 vehicles during the a.m. peak hour and 27 vehicles during the p.m. peak hour would be required to be rerouted to maintain satisfactory LOS. Beachy Avenue South of Van Nuys Boulevard has a residual capacity of 638 vehicles during the a.m. peak hour and 688 vehicles during the p.m. peak hour. Laurel Canyon Boulevard South of Van Nuys Boulevard has a residual capacity of 751 vehicles during the a.m. peak hour and 789 vehicles during the p.m. peak hour. Bartee Avenue South of Van Nuys Boulevard has a residual capacity of 868 vehicles during the a.m. peak hour and 938 vehicles during the p.m. peak hour. Terra Bella Street east of Arleta Avenue has a residual capacity of 1066 vehicles during the a.m. peak hour and 1185 vehicles during the p.m. peak hour. Terra Bella Street west of Arleta Avenue has a residual capacity of 972 vehicles during the a.m. peak hour and 1074 vehicles during the p.m. peak hour. Van Nuys Boulevard east of Arleta Avenue has a residual capacity of 723 vehicles during the a.m. peak hour and 1009 vehicles during the p.m. peak hour. Van Nuys Boulevard west of Arleta Avenue has a residual capacity of 733 vehicles during the a.m. peak hour and 899 vehicles during the p.m. peak hour. These roadways would accommodate the detouring traffic for this segment.

Arleta Avenue between Van Nuys Boulevard & Devonshire Street: Arleta Avenue between Van Nuys Boulevard & Devonshire Street is anticipated to operate at unsatisfactory LOS during construction. Approximately 627 vehicles during the a.m. peak hour and 291 vehicles during the p.m. peak hour would be required to be rerouted to maintain satisfactory LOS. Devonshire Street East of Woodman Avenue has a residual capacity of 819 vehicles during the a.m. peak hour and 895 vehicles during the p.m. peak hour. Van Nuys Boulevard east of Arleta Avenue has a residual capacity of 723 vehicles during the a.m. peak hour and 1009 vehicles during the p.m. peak hour. Van Nuys Boulevard west of Arleta Avenue has a residual capacity of 733 vehicles during the a.m. peak hour and 899 vehicles during the p.m. peak hour. Paxton Street east of Arleta Avenue has a residual capacity of 1822 vehicles during the a.m. peak hour and 1726 vehicles during the p.m. peak hour. Woodman Avenue South of Chatsworth Street has a residual capacity of 1877 vehicles during the a.m. peak hour and 1952 vehicles during the p.m. peak hour. Laurel Canyon Boulevard South of Paxton Street has a residual capacity of 293 vehicles during the a.m. peak hour and 630 vehicles during the p.m. peak hour. These roadways would accommodate the detouring traffic for this segment.

Arleta Avenue between Devonshire Street & Paxton Street: Arleta Avenue between Devonshire Street & Paxton Street is anticipated to operate at unsatisfactory LOS during construction. The a.m. peak hour would operate acceptably while 36 vehicles during the p.m. peak hour would be required to be rerouted to maintain satisfactory LOS. Devonshire Street East of Woodman Avenue has a residual capacity of 819 vehicles during the a.m. peak hour and 895 vehicles during the p.m. peak hour. Chatsworth Street West of Arleta Avenue has a residual capacity of 2626 vehicles during the a.m. peak hour and 2611 vehicles during the p.m. peak hour. Filmore Street East of Arleta Avenue has a residual capacity of 966 vehicles during the a.m. peak hour and 941 vehicles during the p.m. peak hour. Fox Street West of Arleta Avenue has a residual capacity of 393 vehicles during the a.m. peak hour and 353 vehicles during the p.m. peak hour. Woodman Avenue South of Chatsworth Street has a residual capacity of 1877 vehicles during the a.m. peak hour and 1952 vehicles during the p.m. peak hour. Laurel Canyon Boulevard North of Paxton Street has a residual capacity of 32 vehicles during the a.m. peak hour and 522 vehicles during the p.m. peak hour. Sharp Avenue South of Paxton Street has a residual capacity of 949 vehicles during the a.m. peak hour and 929 vehicles during the p.m. peak hour. These roadways would accommodate the detouring traffic for this segment.

Arleta Avenue between Fox Street & Chatsworth Drive: During construction, Arleta Avenue between Fox Street & Chatsworth Drive would be restricted to local traffic only. Approximately 344 vehicles during the a.m. peak hour and 346 vehicles during the p.m. peak hour would be required to be rerouted to other streets to/from their destinations. Chatsworth Drive east of Arleta Avenue has a residual capacity of 2043 vehicles during the a.m. peak hour and 1942 vehicles during the p.m. peak hour. Chatsworth Drive west of Arleta Avenue has a residual capacity of 2231 vehicles during the a.m. peak hour and 2099 vehicles during the p.m. peak hour. Chatsworth Street West of Arleta Avenue has a residual capacity of 2626 vehicles during the a.m. peak hour and 2611 vehicles during the p.m. peak hour. Sharp Avenue South of Chatsworth Drive has a residual capacity of 911 vehicles during the a.m. peak hour and 907 vehicles during the p.m. peak hour. These roadways would accommodate the detouring traffic for this segment.

Arleta Avenue between Chatsworth Drive & Brand Boulevard: During construction, Arleta Avenue between Chatsworth Drive & Brand Boulevard would be restricted to local traffic only. Approximately 222 vehicles during the a.m. peak hour and 224 vehicles during the p.m. peak hour would be required to be rerouted to other streets to/from their destinations. Most of this traffic is likely to be local traffic. Chatsworth Drive east of Arleta Avenue has a residual capacity of 2043 vehicles during the a.m. peak hour and 1942 vehicles during the p.m. peak hour. Chatsworth Drive west of Arleta Avenue has a residual capacity of 2231 vehicles during the a.m. peak hour and 2099 vehicles during the p.m. peak hour. Brand Boulevard east of Arleta Avenue has a residual capacity of 2065 vehicles during the a.m. peak hour and 2012 vehicles during the p.m. peak hour. Brand Boulevard west of Arleta Avenue has a residual capacity of 2016 vehicles during the a.m. peak hour and 2063 vehicles during the p.m. peak hour. Laurel Canyon Boulevard South of Brand Boulevard has a residual capacity of 1024 vehicles during the a.m. peak hour and 664 vehicles during the p.m. peak hour. Chatsworth Street West of Arleta Avenue has a residual capacity of 2626 vehicles during the a.m. peak hour and 2611 vehicles during the p.m. peak hour. Fox Street North of Arleta Avenue has a residual capacity of 477 vehicles during the a.m. peak hour and 426 vehicles during the p.m. peak hour. Sepulveda Boulevard North of 118 has a residual capacity of 2113

vehicles during the a.m. peak hour and 1419 vehicles during the p.m. peak hour. These roadways would accommodate the detouring traffic for this segment.

Mission Boulevard between Noble Avenue & Stranwood Avenue: During construction, Mission Boulevard between Noble Avenue & Stranwood Avenue would be restricted to local traffic only. Mission Boulevard currently operates at unsatisfactory LOS. Approximately 1,661 vehicles during the a.m. peak hour and 1,102 vehicles during the p.m. peak hour will require to be rerouted to other streets to/from their destinations. Rinaldi Street near Sepulveda Boulevard has a residual capacity of 592 vehicles during the a.m. peak hour and 32 vehicles during the p.m. peak hour. Brand Boulevard near Columbus Avenue has a residual capacity of 1771 vehicles during the a.m. peak hour and 1605 vehicles during the p.m. peak hour. Sepulveda Boulevard North of 118 has a residual capacity of 2113 vehicles during the a.m. peak hour and 1419 vehicles during the p.m. peak hour. These roadways would accommodate the detouring traffic for this segment.

Based on the above detour route analysis, while several segments are likely to operate at less than satisfactory operations during construction due to reduction in number of lanes, the surrounding roadways have sufficient capacity to allow for efficient detouring, which would reduce impacts on the study roadway segments during construction. Additionally, to minimize the disruption to traffic during construction and guide vehicles to potential detour routes, a traffic management plan (TMP) would be prepared for the proposed project to identify satisfactory detour routes, as outlined in Mitigation Measure TRA-1. Implementation of Mitigation Measure TRA-1 would ensure that impacts to traffic during construction would be less than significant.

Mitigation Measure

TRA-1 LADWP, prior to the start of construction, shall coordinate with LADOT to prepare a Traffic Management Plan (TMP). The TMP shall be prepared by a registered traffic or civil engineer, as appropriate, based on City of Los Angeles permit guidelines. The TMP shall be prepared with the goals of minimizing traffic delay or time spent in queue; maintaining traffic flow throughout the project corridor and the surrounding areas; and providing a safe environment for the work force and motoring public. The TMP shall identify satisfactory detour routes for segments that are likely to operate at less than satisfactory operations during construction. The TMP shall remain active throughout the construction of the project. The TMP shall be updated if substantial changes to the project scope occur affecting the function or adequacy of the TMP or if elements of the TMP need to be adjusted to adequately address congestion at the project site. The following elements shall be prioritized in the TMP to reduce traveler delay and enhance traveler safety:

1. Public Awareness Campaign
2. Motorist Information Strategies
3. Incident Management
4. Contingency Plans

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less Than Significant Impact. Project related traffic impacts would only occur during construction activities. No traffic impacts would occur during operation of the proposed project. The County of Los Angeles Congestion Management Program level of significance thresholds are not intended to be applied to construction activities. As such, the proposed project would not exceed the significant impact thresholds defined by the County's Congestion Management Program. The proposed project would not generate any new measurable and regular vehicle trips during project operation. The impact would be less than significant.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The proposed project would not result in a change in air traffic patterns. Construction and operation of the proposed project would not generate air traffic. Further, the proposed project would not include any high-rise structures that could act as a hazard to aircraft navigation. No impact would occur.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The proposed project would primarily be constructed within existing roadways. No design changes to the existing roadways or use of roadways would occur. Although construction of the proposed project would require temporary roadway lane closures and detours, the proposed project does not include any permanent alterations of roadways. Once construction within a segment of roadway has been completed, these facilities would be returned to their original conditions. Therefore, no impact related to an increase in hazards due to a design feature or incompatible uses would occur.

e) Result in inadequate emergency access?

Less Than Significant Impact. Installation of the proposed trunk line would require temporary partial and complete lane closures during the construction period, which could have an effect on emergency access. Additionally, emergency services may be needed at a location where access is temporarily blocked by the construction zone. However, work would be completed in smaller segments of several hundred feet to maintain as much access as possible at a given time along the roads, at intersections, and to driveways along the alignment. When practical, portions of the roadway under construction may also be reopened during non-work hours by removing barriers and placing steel plates over open trenches. LADWP would consult with emergency service providers (e.g., LAPD, LAFD, etc.) regarding construction schedules, and worksite traffic control and detour plans. Following installation of the proposed trunk line, all roadways would be returned to their existing conditions. Development of such plans and consultation with emergency service providers would ensure that impacts related to emergency response and access during construction would be less than significant.

f) 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 Impact with Mitigation Incorporated. Construction of the proposed project would primarily occur within existing roadways and would require the closure of traffic lanes and would result in temporary traffic restrictions. These construction activities are also anticipated to temporarily affect public transit, bicycle, or pedestrian facilities along the proposed project alignment. The TMP outlined in Mitigation Measure TRA-1 would include provisions for the temporary relocation of any public transit stops and any necessary bicycle and/or pedestrian facility detours. Implementation of Mitigation Measure TRA-1 would ensure that impacts to public transit, bicycle, and pedestrian facilities during construction would be less than significant.

No long-term impacts to public transit, bicycle, or pedestrian facilities would occur during project operation.

XVII. TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resources, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

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

No Impact. As discussed in Section V(a), no resources eligible for listing were identified within the project area. A records search identified no resources which are listed or eligible for listing in the California Register of Historical Resources or a local register which could be identified as tribal cultural resources associated with the project site. A Sacred Land File search conducted by the Native American Heritage Commission did not result in the identification of any documented sacred lands within 0.5 miles of the proposed project. However, there is a low potential that archaeological resources which could be identified as tribal cultural resources may be encountered during ground disturbing activities for the proposed project. If any Native American cultural material is encountered within the project site, consultation with interested Native American parties will be conducted to apprise them of any such findings and solicit any comments they may have regarding the appropriate treatment and disposition of the resources. Therefore, the proposed project would not result in a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in a state or local register of historical resources. No impact would occur.

b) 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 Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less Than Significant Impact with Mitigation Incorporated. As discussed in Section XVII(a) above, no tribal cultural resources were identified within the project area; however, Assembly Bill 52 consultation with the Native American Heritage Commission and Native American contacts in the project area is ongoing. In March 2018, emails and letters were sent to eight Native American contacts classified by the Native American Heritage Commission as potential sources of information related to cultural resources in the vicinity of the project area. The letters advised the tribes and specific individuals of the proposed project and requested information regarding cultural resources in the immediate area, as well as feedback or concerns related to the proposed project. To date, LADWP received a request from the Fernandeño Tataviam Band of Mission Indians to be notified if Native American resources are encountered during ground-disturbing activities.

No specific tribal cultural resources have been identified, but the project area is identified as being sensitive for tribal cultural resources. During the construction of the proposed project, unknown tribal cultural resources could potentially be encountered, particularly during ground-disturbing activities. Therefore, Mitigation Measure TCR-1 would be implemented during construction and would include consultation with Native American parties. With implementation of Mitigation Measure TCR-1, and ongoing consultation with Native American representatives, impacts to tribal cultural resources would be less than significant.

Mitigation Measure

TCR-1 If Native American cultural materials are encountered during project-related ground disturbance, a representative from the Fernandeño Tataviam Band of Mission Indians shall be engaged to monitor ground-disturbing work in the area containing the Native American cultural resources. This monitoring would occur on an as-needed basis and would be intended to ensure that Native American concerns are taken into account during the construction process. Native American involvement shall also be addressed in the project CRMMP.

XVIII. UTILITIES AND SERVICE SYSTEMS

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less than Significant Impact. As discussed in Section IV(a), the proposed project would be required to prepare a SWPPP outlining the BMPs to be implemented to avoid or minimize runoff discharges. Any water discharged from construction of the proposed project would comply with the NPDES permit requirements. Compliance with these existing regulations would ensure that the proposed project would not

exceed wastewater treatment requirements; therefore, impacts would be less than significant.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant Impact. The proposed project would involve the installation of a trunk line in an existing roadway to replace an existing aging trunk line, and the construction and operation of the proposed project would not result in the need for additional water or wastewater treatment facilities. Construction of the proposed project is scheduled to begin in 2019 and is anticipated to last approximately 9 years. The number of daily on-site workers would range from a low of 10 personnel to a high of 40 personnel, depending on the number of active construction crews working on Unit 1 and Unit 2. During construction, water would be required for activities such as dust control. However, these activities are limited and temporary and would not consume large amounts of water requiring construction of new water treatment facilities. Sanitary waste related to the temporary increase in on-site workforce during project construction would be handled through the use of portable chemical toilets, the waste from which would be removed by a private contractor and disposed at an approved off-site location that would comply with the wastewater treatment requirements of the RWQCB. Due to the temporary nature of the construction activities and the relatively low number of construction workers, the amount of construction-related wastewater that would be generated is not expected to have a significant impact related to the capacity of existing wastewater treatment facilities. In addition, no additional workers are anticipated for project operation. Therefore, impacts would be less than significant.

c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. As discussed in Section IX(e), all drainage flows would be routed through existing storm infrastructure serving the project site and surrounding areas. Following construction, storm water flows would be similar to existing conditions. Therefore, the proposed project would not require or result in the construction or expansion of storm water drainage facilities, and no impact would occur.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less Than Significant Impact. Construction of the proposed project would require a limited quantity of water for dust control, excavation, and other construction-related activities. Existing water resources provided by LADWP would be sufficient to meet those needs. Once completed, the proposed CTLN would not require new water supplies or increase the demand for water use. Therefore, impacts would be less than significant.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. Construction of the proposed project would generate nominal amounts of wastewater that would not require an increase in demand for wastewater treatment capacity. Once complete, the pipeline would convey existing potable water to existing customers. Therefore, no impacts to wastewater treatment capacity would occur.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. The proposed project would require excavation for the installation of the proposed CTLN. Construction activities would generate construction waste, including demolished asphalt and soils. The proposed project would incorporate source reduction techniques and recycling measures, as well as maintain a recycling program to divert waste in accordance with the Citywide Construction and Demolition Debris Recycling Ordinance. These measures would minimize the amount of construction debris generated by the proposed project that would need to be disposed of in an area landfill. Excavated soils would be hauled off-site to another construction site in the region for reuse as fill material or disposed of in an area landfill approved to accept spoils. The proposed project would utilize Calabasas Landfill, located at 5300 Los Hills Road in Agoura, California. The Calabasas Landfill has a maximum permitted throughput of 3,500 tons per day. As of December 2014, the remaining capacity was approximately 14,500,000 cubic yards and the expected cease operation date is the year January 2029.[41] The amount of debris is generated during construction is anticipated to be minimal and is not anticipated to significantly impact landfill capacities. Once construction is complete, the operation of the pipeline would not generate solid waste. Therefore, impacts would be less than significant.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. The proposed project would comply with federal, state, and local statutes and regulations regarding solid waste. As discussed in Section XVIII(f) above, construction debris would be recycled or disposed of according to local and regional standards. All materials would be handled and disposed of in accordance with existing local, state, and federal regulations. No impact would occur.

[41] CalRecycle, Facility/Site Summary Details: Calabasas Landfill (19-AA-0056). Website: http://www.calrecycle.ca.gov/SWFacilities/Directory/19-AA-0056/Detail/, accessed March 8, 2018.

XIX. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact with Mitigation Incorporated. The project is located in the heavily-urbanized communities of Arleta, Mission Hills, and Granada Hills. No natural vegetation communities exist within the project area. Ornamental vegetation, including primarily street trees and lawns lie adjacent to the proposed CTLN alignment. The CNDDB search conducted for the proposed project indicates very few records of special-status species that coincide with the proposed alignment or immediately adjacent, and those that have been recorded, are 35 plus years old and are likely extirpated due to the urban developed nature of the project site and lack of potentially suitable habitat to support any special-status species. As a result, the proposed project would not result in a substantial adverse impact to listed, candidate, or otherwise sensitive special-status plant or wildlife species. However, noise and dust generated during construction could indirectly impact nesting birds resulting in increased nestling mortality due to nest abandonment or decreased feeding frequency. Such indirect impacts due to construction activities occurring during the nesting bird season, generally considered to extend from February 15 through September 15, would be avoided by complying with existing regulations (i.e. MBTA, CFGC) that protect nesting birds. Since entirely avoiding the nesting bird season is not possible due to the nature of the project, compliance would be achieved through the implementation of Mitigation Measure BIO-1, which would require pre-construction surveys be conducted to ensure compliance with the MBTA and CFCG. With implementation of BIO-1, the indirect impacts of construction on nesting birds would be reduced to less than significant.

As discussed in Section V(a) above, one cultural resource was identified within the project area. However, the above-ground segment of the San Fernando Siphon of the City Trunk Line was evaluated and found not to be eligible for listing in either the NRHP or the CRHR. This resource does not meet the level of significance to meet NRHP criteria A through D or CRHR criteria 1 through 4. This resource does not have specific associations with any historic events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States (Criterion A/1); has specific associations with a person whose life was important to local, California, or national history (Criterion B/2); embodies the distinctive characteristics of a type, period, or method of construction or represent the work of a master, or possess high artistic values (Criterion C/3); or yield information important in the prehistory or history of the local area, California, or the nation (Criterion D/4). However, Based on the results of the records search and the Native American contact program, the project area is culturally sensitive for prehistoric and/or historic archaeological resources. Such resources may lie beneath the surface obscured by pavement or buried beneath alluvial sediment. Because the potential to encounter archaeological resources exists for this project, implementation of Mitigation Measures CR-1 through CR-3 would

ensure impacts to archaeological resources would be less than significant. Additionally, Mitigation Measure TCR-1 would require Native American monitoring if Native American cultural materials are encountered during ground-disturbing activities. In addition, the older alluvium in the project area has the potential to contain significant fossil deposits. If paleontological deposits are encountered during excavation or ground-disturbing activities, the proposed project would require implementation of Mitigation Measure CR-4 to reduce impacts to less than significant.

b) Does the project have environmental effects that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less Than Significant Impact with Mitigation Incorporated. As discussed in Section III(c) above, the proposed project is located within the Los Angeles County portion of the South Coast Air Basin, which is designated a non-attainment area for O_3, PM_{10}, and $PM_{2.5}$. In order to maintain attainment status of the South Coast Air Basin and comply with the State Implementation Plan, the SCAQMD has developed project-level thresholds of significance for criteria pollutants. The proposed project would not generate regional construction emissions in excess of the SCAQMD thresholds. Therefore, no cumulatively considerable impact would occur during construction. The proposed project does not include an operation component beyond maintenance activities or emergency repair. As such, no cumulatively considerable air quality impact would occur during operations.

As discussed in Section VII(a) above, GHG emissions contribute to the global condition known as the greenhouse effect. Because this issue is by its very nature cumulative, CARB established a threshold of significance and climate reduction strategies. The proposed project would generate short-term emissions of GHGs during construction. However, these emissions would be far less than the thresholds of significance. The cumulative impact would be less than significant.

As discussed in Section XII(c) above, the proposed project would not require additional site staff for maintenance activities. Noise levels could result in temporary noise levels at the project site; however, construction noise impacts would be temporary in nature and implementation of Mitigation Measures NOI-1 through NOI-7 would reduce impacts to less-than-significant levels. As such, there would be no permanent increase in ambient noise levels, and the proposed project would not result in cumulatively considerable noise impact.

As discussed in Section XVI(a) above, the cumulative traffic analysis considered the addition of background traffic growth and other proposed projects combined with project construction traffic. Construction activities would result in less than significant impacts on project area roadways with implementation of Mitigation Measure TRA-1.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact. As discussed throughout Section III of this MND, the proposed project would predominantly be temporary in nature driven by construction activities. As such, the proposed project would not result in potentially significant impacts to the environment that would result in substantial adverse effects on human beings, either directly or indirectly. Therefore, impacts would be less than significant.

SECTION 4
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